

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

This Report on the Observance of Standards and Codes on Data Module for **Greece** 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 16, 2003**. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of **Greece** or the Executive Board of the IMF.

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

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Price: \$15.00 a copy

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

INTERNATIONAL MONETARY FUND

GREECE

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

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September 16, 2003

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## ACRONYMS

BOG	Bank of Greece
BOP	Balance of Payments
<i>BPM5</i>	<i>Balance of Payments Manual</i> , fifth edition
CPI	Consumer Price Index
DES	Division of Economic and Short Term Indicator Statistics
DQAF	Data Quality Assessment Framework
DSBB	IMF's Dissemination Standards Bulletin Board
ECB	European Central Bank
EMU	Economic and Monetary Union
<i>ESA 95</i>	<i>European System of Accounts 1995</i>
EU	European Union
Eurostat	Statistical Office of the European Communities
GAO	General Accounting Office of the Ministry of Economy and Finance
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
HBS	Household Budget Survey
ITRS	International Transaction Reporting System
IMF	International Monetary Fund
MEF	Ministry of Economy and Finance
MFI	Monetary Financial Institution
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
NAD	National Accounts Department of General Secretariat of the National Statistical Service of Greece
NSSG	General Secretariat of the National Statistical Service of Greece
OMFI	Other Monetary Financial Institution
PPI	Producer Price Index
ROSC	Report on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard
WPI	Wholesale Price Index

## EXECUTIVE SUMMARY

This Report on the Observance of Standards and Codes (ROSC) data module provides a review of Greece's data dissemination practices against the IMF's Special Data Dissemination Standard (SDDS), complemented by the in-depth assessment of the quality of Greece's national accounts, consumer price index (CPI), producer price index (PPI), and government finance, monetary, and balance of payments statistics (BOP). The agencies that compile the statistics assessed in this report, working within the context of Greece's memberships in the European institutions, are the General Secretariat of the National Statistical Service of Greece (NSSG), the Ministry of Economy and Finance (MEF), and the Bank of Greece (BOG). The assessment was carried out by a mission from the IMF Statistics Department that visited Athens from October 29 to November 12, 2002.

The mission reached the following conclusions:

- **SDDS observance:** Greece became the fifty-first subscriber to the SDDS on November 8, 2002. It meets the SDDS specifications for coverage, periodicity, and timeliness of the data, and for advance release calendars. Greece is using its two flexibility options for the periodicity and timeliness of data on central government financing operations, and the timeliness of the international investment position.
- **Prerequisites of quality:** Statistics-producing agencies in the main have a legal and institutional environment that supports statistical quality; however, no single agency is responsible for compiling and disseminating comprehensive government finance statistics. Staff resources are under pressure in the Monetary and Finance Statistics Division of the BOG and the NSSG's Public Accounts Division of the National Accounts Directorate in the face of the evolving statistical requirements of the European Union (EU) and the European Economic and Monetary Union (EMU). More staff are needed to develop financial accounts and resolve cross sector data inconsistencies. For other statistics, resources are commensurate with existing statistical programs. In all agencies quality awareness is evidenced by management's close tracking of the timely implementation of EU regulations and other EU-wide guidelines.
- **Integrity:** All agencies demonstrate professionalism and are transparent in their practices and policies. In particular, the strong laws protecting confidentiality, rules for civil servants, and internal regulations of the central bank provide a clear set of ethical standards for staff.
- **Methodological soundness:** All statistics largely follow internationally accepted guidelines on concepts and definitions, scope, classification/sectorization, and basis for recording. Government finance, and balance of payments statistics could come closer to the relevant guidelines in several respects.

- **Accuracy and reliability:** Short-term source data are lacking in national accounts statistics, and in some cases the statistical techniques rely on outdated ratios. Source data and statistical techniques could usefully be strengthened for prices, and source data improved for government finance statistics and monetary statistics. Balance of payments statistics are reasonably accurate and reliable.
- **Serviceability:** Statistics are available on a timely basis with good frequency. However, reconciliation across datasets could be improved for government finance, monetary, and balance of payments statistics. Relevance of government finance statistics could be improved by the availability of detailed classifications, while balance of payments statistics could benefit from regular user feedback. Most statistics are not accompanied by a clear statement of the revision policy and practice.
- **Accessibility:** All statistics are readily available to the public. However, statistical presentations could be improved in most cases to facilitate analysis and understanding. Also, service to users could be further enhanced by dissemination of more detailed metadata including wider identification in press releases and publications of contact persons to answer inquiries.

## I. INTRODUCTION

1. The data module of this ROSC provides a summary of Greece's dissemination practices relative to the SDDS. It is complemented by an assessment of the quality of national accounts, consumer and wholesale price indices, government finance, monetary, and balance of payments statistics. This report is based on information provided prior to and during a staff mission from October 29 to November 12, 2002,<sup>1</sup> as well as publicly available information.
2. Section II provides the assessment of Greece's data dissemination practices against the SDDS. Section III presents the summary assessment of the quality of the principal macroeconomic datasets. Finally, Section IV sets out recommendations to achieve further improvements in Greece's statistics.

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

3. Greece became the fifty-first subscriber to the SDDS on November 8, 2002 and started posting its metadata on the Dissemination Standards Bulletin Board (DSBB). Greece

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<sup>1</sup> The mission team was headed by Mr. Robert Di Calogero and included Messrs. Paul Austin, Sarmad Khawaja, Vincent Marie and Ms. Wipada Soonthornsima (all STA), Mr. Kari Manninen (expert), and Mrs. Niccole Braynen-Kimani (STA—Administrative Assistant).

is in observance of the SDDS, having met the specifications for the coverage, periodicity and timeliness of the data, and for the dissemination of advance release calendars. The Data Template on International Reserves and Foreign Currency Liquidity and the National Summary Data Page were hyperlinked to the DSBB on November 8, 2002.

4. Three official institutions are responsible for the compilation and dissemination of the SDDS prescribed data categories. The General Secretariat of the National Statistical Service of Greece (NSSG) compiles and disseminates data on the national accounts, industrial production index, labor market, price indices, merchandise trade, and population. The BOG has responsibility for the analytical accounts of the banking sector, the analytical accounts of the central bank, interest rates, balance of payments, international investment position, and international reserves. The General Accounting Office of the Ministry of Economy and Finance (GAO) is responsible for data on central government operations and central government debt. The data template on international reserves and foreign currency liquidity is compiled by the BOG using both internally-sourced information and data provided by the MEF. General government operations data are compiled by the NSSG on the basis of input from the MEF. The Athens Stock Exchange compiles and disseminates the share price index.

5. These data can be accessed in a variety of publications and on the following Internet websites:

- Greece's National Summary Data Page (NSDP) (<http://www.mnec.gr/sdds/users.asp>)
- NSSG's website (<http://www.statistics.gr>)
- BOG's website (<http://www.bankofgreece.gr>)
- MEF's website (<http://www.mof-glk.gr>)
- Athens Stock Exchange's website (<http://www.ase.gr>)

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

6. Greece meets the SDDS specifications for the data dimension, using flexibility options for the periodicity and timeliness of the financing of central government operations and the timeliness of the international investment positions (see Table 1). Periodicity and timeliness more than fulfill the requirements of the standard for some data categories.

#### **Access dimension**

7. Greece meets the requirements of the SDDS in terms of access to data by the public. Advance release calendars are disseminated both in hard copy format as well as on the Internet websites of NSSG and BOG. These advance release calendars are supplemented by a quarter-ahead presentation of release dates on the DSBB. For the MEF, a one-quarter-ahead calendar of release dates is disseminated on the DSBB; notice informing the public of this calendar is given on the MEF's website.

Table 1. Greece—Overview of Current Practices Regarding Coverage, Periodicity, and Timeliness of Data Compared to the SDDS

SDDS Data Category	Coverage (meets SDDS requirement)	Periodicity		Timeliness		Comments
		SDDS	Greece	SDDS	Greece	
<b>Real Sector</b>						
National accounts	Yes	Q	Q	1Q	1Q	Timeliness of data is approximately 70 days.
Production index/indices	Yes	M	M	6W (M encouraged)	6W	
Employment	Yes	Q	Q	1Q	1Q	
Unemployment	Yes	Q	Q	1Q	1Q	
Wages/earnings	Yes	Q	Q	1Q	1Q	
Consumer price index	Yes	M	M	1M	Within 10 days	Timeliness exceeds SDDS requirements.
Wholesale price index	Yes	M	M	1M	1M	
<b>Fiscal sector</b>						
General government operations	Yes	A	A	2Q	2Q	
Central government operations	Yes	M	M	1M	1M	Flexibility option utilized for the periodicity and timeliness of data on financing.
Central government debt	Yes	Q	Q	1Q	1Q	
<b>Financial sector</b>						
Analytical accounts of the banking sector	Yes	M	M	1M	1M	
Analytical accounts of the central bank	Yes	M (W recommended)	M	2W (W encouraged)	2W	
Interest rates	Yes	D	D	1/	D	Both daily and monthly data are disseminated.
Stock market	Yes	D	...	1/	...	Both daily and monthly data are disseminated.
<b>External Sector</b>						
Balance of payments	Yes	Q	M	Q	6W	Periodicity and timeliness exceed SDDS requirements.
International reserves	Yes	M (W recommended)	M	1W	1W	
Reserves template	Yes	M	M	1M	1M	
Merchandise trade	Yes	M	M	8W (4-6W encouraged)	8W	
International investment position	Yes	A (Q recommended)	A	2Q (Q encouraged)	3Q	Flexibility option for timeliness utilized.
Exchange rates	Yes	D	D	1/	D	
Addendum: population	Yes	A	A	...	6M	

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

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

8. Data are released simultaneously to all interested parties, generally on the websites of the relevant agencies and on Greece's national summary data page, which is maintained by the MEF (<http://www.mnec.gr/sdds/users.asp>).

### **Integrity dimension**

9. Information on terms and conditions that govern the collection, compilation, and dissemination of data, including the confidentiality of the data collected, is available to the public in English and Greek.

10. Procedures on internal government access to the data prior to public release are disseminated on the DSBB. According to Greece's SDDS metadata, there is no internal government access to the data prior to public release, except for data on CPI. The CPI data are provided to the Minister of National Economy and Finance one hour before the press release. In accord with EU requirements, certain data are provided to the Statistical Office of the European Communities (Eurostat) and the European Central Bank (ECB) in advance of their release to the public.

11. Data released by the statistical agencies are not accompanied by ministerial commentary.

### **Quality dimension**

12. Summary methodology statements for all SDDS data categories, except wages/earnings, have been provided to the IMF and posted on the DSBB. In addition, methodological information is disseminated by the NSSG, BOG, and MEF.

### **Monitoring of data**

13. In accordance with the IMF Executive Board's Third Review of the Fund's Data Standards Initiatives, the IMF staff began monitoring subscribers' performance under the SDDS in July 2000. Monitoring is carried out against the release dates stated in the advance release calendars and the metadata, i.e., to verify not only that the data are released according to the calendar, but also that the data disseminated correspond to the metadata posted on the DSBB. Greece's dissemination practices were in observance of SDDS at the time of its subscription.

## **III. SUMMARY ASSESSMENT OF DATA QUALITY**

14. An assessment of six macroeconomic datasets—national accounts, consumer price index, wholesale price index, government finance, monetary, and the balance of payments statistics—was conducted using the Data Quality Assessment Framework (DQAF). This framework, developed by the IMF's Statistics Department, provides a structure and common language to assess data quality. It comprises a generic framework and a set of dataset-specific

frameworks that cover five dimensions of data quality—integrity, methodological soundness, accuracy and reliability, serviceability, and accessibility—and a set of prerequisites.<sup>2</sup>

15. As will become apparent in the assessments, Greece’s memberships in the EU and in the EMU shape Greek official statistics and statistical policy in a number of ways.

- In some areas, the European requirements reinforce already existing national practices. For example, Greek agencies' already strong protection for the confidentiality of individual data is reinforced by regulations from the European level.
- In other areas, the EU and EMU memberships transfer the focus from the national to the European level. Most obvious is the transfer of monetary policymaking authority to the ECB, one result of which is that the ECB now has a major voice as a user of statistics. In line with the needs of European-level policy makers, there is a strong push to increase the scope and timeliness of statistics and to further harmonize members’ statistics.
- Especially where the focus has transferred to the European level, Greek statisticians participate with colleagues from other member countries in working groups and other fora to arrive at common decisions, often sharing good practices and extending the reach of professionalism.
- In statistical methodology, Eurostat and the ECB issue a range of documents that provide guidelines and recommendations. Some of these allow substantial room for national practices in the collection and compilation of required statistical outputs. Others mandate specific practices in data collection and compilation.
- The important role played by quantitative guidelines and targets—such as the fiscal guidelines set by the Stability and Growth Pact, and the ECB's goal of measured inflation of less than 2 percent—highlights not only the need for accurate statistics, but also the need for statisticians to guard their independence vigorously and to avoid pressures or temptations to arrive at “acceptable” figures.

16. Substantial progress has been made in statistical methodologies and compilation practices aimed at fulfilling Greece’s responsibilities for compiling and reporting data to the ECB and Eurostat. This progress forms a sound basis from which further improvements in accessibility and usefulness of statistics for both domestic and other international users can be fashioned.

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<sup>2</sup> See the Generic Framework in Appendix II of the accompanying Detailed Assessments volume to this report.

17. Information resulting from the application of the assessment framework to the Greek statistical system is presented below, following the structure of the DQAF. Conclusions are also presented in summary tables in which the assessment of data practices is made using a four-part scale (see Table 2 and Tables 1–6 in the detailed assessment volume).

18. In summary, Greece's macroeconomic statistics are of generally good quality. However, the IMF staff identified some shortcomings that might detract from the accurate and timely analysis of economic and financial developments and the formulation of appropriate policies.

### **Prerequisites of quality**

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

19. The NSSG is responsible for compiling and disseminating the national accounts, price statistics, and other socio-economic statistics. The legal and institutional environment for collecting, processing and disseminating statistics is provided by two laws adopted in 1956 (Decree No. 3627) and 1996 (Decree No. 2392), and by the Presidential Decrees of 1986 (No. 224) and 2000 (No. 226), which clearly describe the role and responsibilities of the NSSG, including the compilation and dissemination of national accounts statistics. The confidentiality provisions of these laws are further strengthened by the law of 1997 (No. 2472) on the protection of the fundamental rights and freedoms of individuals. Coordination among data producing agencies for compiling national accounts statistics is adequate. Staff and other resources are generally adequate for the current national accounts and price statistics programs. However, more staff are required to further expand the scope of national accounts. Management's quality awareness is evidenced by its close tracking of the timely implementation of EU regulations and other EU-wide guidelines to develop national accounts and price statistics. A Statistical Council is envisaged in the law but it is not working.

20. No single agency is responsible for compiling and disseminating a comprehensive and integrated set of government finance statistics. The MEF has a legal and institutional environment that generally supports the compilation and dissemination of budgetary execution reports and data on central government debt. The NSSG, which has the legal mandate for compiling the national accounts, compiles general government sector and subsector data on an accruals basis. Reporting from government respondents appears adequate and should further improve with the scheduled revision of questionnaires and introduction of electronic reporting.

21. The NSSG is the lead institution, in cooperation with the MEF and the BOG, for reporting to the European Commission deficit and debt data and nonfinancial accounts for general government. It also reports other *European System of Accounts 1995 (ESA 95)* government accounts statistics to Eurostat in the context of the EU statistical transmission

program. Data sharing and coordination among data producing agencies are reported adequate. Staffing in the MEF appears adequate for monitoring budgetary execution. Staff resources are under strain in the NSSG; they have not increased despite additional demands in the context of Greece's adhesion to EMU.<sup>3</sup> In this context, meeting deadlines to report to the EU Commission receives the highest priority.<sup>4</sup> In both institutions computing capacity is reported adequate. Neither agency has mechanisms for the formal evaluation of the efficiency of resource use. Quality awareness is evidenced by implementation of EU standards and the scheduled upgrade of the working environment. However, there is no procedure for monitoring data quality.

22. The legal and institutional environment underpinning the **BOG's** compilation and dissemination of national monetary and balance of payments statistics provides the pre-requisites for sound statistical systems. Laws promulgated to meet the requirements of the Treaty on European Union strengthen the BOG's legal basis for data collection, and provide assurances of confidentiality. Data sharing and coordination stemming from membership in the EMU also are addressed; data collection for balance of payments statistics is supported by adequate data sharing and coordination among reporting agencies. Staff, financial and computer resources are commensurate with current statistical programs for balance of payments statistics, but additional staff are needed for monetary statistics. The recent approval of additional staff resources to lessen the workload and to undertake the compilation of financial accounts to meet the Eurostat deadline in 2005, is a welcome step. Within the BOG's Statistics Department, project budgeting, requiring approval from the BOG's General Council, is used. Line managers are expected to efficiently use resources under their supervision.

23. Quality awareness within the BOG's Statistics Department is primarily driven by work undertaken by the ECB and Eurostat. Procedures to monitor the quality of collection and processing exist, but no formal processes are in place to monitor the quality of statistics disseminated by the BOG. Assurance of data quality is enhanced by the periodic compliance assessments of methodological practices and accuracy undertaken by the ECB and Eurostat. The BOG's management recognizes the tradeoffs among dimensions of quality and gives

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<sup>3</sup> However, after the ROSC mission, the NSSG has started the procedure to recruit 37 qualified statisticians.

<sup>4</sup> As with other EU Member States, the data on deficit and debt reported under the EDP are reviewed by Eurostat. This review, during which the treatment of specific transactions is examined, can lead to revisions to the reported data. In the case of Greece, discussions with Eurostat led to an upward revision of the reported debt to gross domestic product ratio for 2001 of 7.5 percentage points.

priority to the timeliness dimension in meeting the ECB reporting requirements for both monetary and balance of payments.

## **Integrity**

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

24. The **NSSG** follows high standards of professionalism, which is supported by adequate legislation. The national accounts and price statistics staff is highly competent. The choice of source data and statistical techniques is based solely on statistical considerations, including EU regulations. Transparency of the NSSG's policies and practices is promoted by making the rules governing the collection and dissemination of statistics widely available through the NSSG website and its information service. The national accounts data and consumer and wholesale price indices are released to all the users at the same time, and are always attributed to the NSSG. The strong laws protecting confidentiality and the rules for civil servants provide a clear set of ethical standards for the staff.

25. The **MEF** staff, including the staff of the NSSG, evidence professionalism. Recruiting is generally competitive. Staff is free to respond publicly to erroneous interpretations of the data.

26. The integrity of central government data relies on the strict application of accounting rules and budgetary classifications, including budgetary control and audit of the budgetary outcome by the Hellenic Republic Court of Audit. This emphasis on accounting processes provides technical guidelines that contribute to impartiality and transparency. Laws and ministerial decisions governing the production of accounting data are made public.

27. All government finance data published by the MEF and NSSG are labeled as products of the respective agencies. The producer of the data is generally identified in tables on government finance statistics published by other agencies. Ethical standards are provided by the Code of Conduct for Civil Servants that applies to both MEF and NSSG staff.

28. Staff of the **BOG** adhere to a long tradition of professionalism in compiling and disseminating statistics on an impartial basis. Staff select source data and methodology based solely on statistical considerations, including compliance with the ECB's regulations and requirements. They provide comments on erroneous interpretations and misuse of statistics. The BOG operates under clear and transparent statistical policies; the *BOG Statute* and the ECB's regulations are widely disseminated on the Internet. Staff operate under strict ethical standards as specified in the *BOG Statute* and internal regulations.

## **Methodological soundness**

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

29. The concepts and definitions of **national accounts** statistics follow *ESA 95*. The scope of the national accounts extends beyond the recommended range of annual and quarterly tables, including annual regional accounts and simplified provincial accounts, annual accounts for agriculture, detailed tables relating to environmental issues, and a Social Accounting Matrix (for 1997). Input-output tables are published regularly. The classification/sectorization and basis for recording follow international standards.

30. The concepts and definitions employed in the **consumer price index** are in line with the EU regulations and international best practices. The scope of the index covers the expenditures of all residents except collective households and tourists. Classification and basis for recording accord with international best practices.

31. The **wholesale price index** is broadly based on *ESA 95* concepts and definitions for valuation and time of recording. Its scope covers the market sales of goods producing resident enterprises. Classifications used for establishments and products, and basis for recording weights and prices are broadly in line with EU requirements and international best practices.

32. **General government sector statistics** are compiled on an accrual basis by the NSSG according to the concepts and definitions of *ESA 95* as part of the broader preparation of the national accounts. However, these data are not produced in the context of a comprehensive and fully integrated fiscal analysis framework. The scope of the data broadly follows EU standards, however no data on financial flows and balance sheets are prepared. Classification of annual data follows *ESA 95* rules without being complemented by a “government finance” classification. MEF data follow a national classification broadly conforming to the 1986 GFS recommendations. Regarding basis for recording, NSSG are recorded on an accrual basis and MEF data are produced on a cash basis according to national public accounting standards. For both sets of data, market prices are used.

33. The BOG’s analytical framework for **monetary statistics** reflects concepts and definitions that adhere to the ECB’s requirements and broadly conform to the *Monetary and Financial Statistics Manual (MFSM)*. The scope follows closely the ECB’s standard that is generally consistent with the *MFSM* recommendations. The classification of financial instruments and sectorization of institutional units are based on the ECB’s requirements and the *1995 ESA*, mostly consistent with *MFSM*. Deviations from the *MFSM* include the classification of monetary gold, loan loss provisions, and SDRs, as well as financial

derivatives not separately identifiable. Sectorization is also on a more aggregate basis than the MFSM standard. The basis for recording accords largely with the *MFSM*'s recommendations on market or market-equivalent valuation. In conformity with the ECB regulation, financial transactions are recorded on gross and accrual bases.

34. Greece's national **balance of payments** statistics are compiled in broad conformity with the concepts and definitions of the IMF's *Balance of Payments Manual*, fifth edition (*BPM5*). While resident institutional units are classified in accord with *BPM5* guidelines, the exclusion of reinvested earnings and undistributed branch profits limits the scope of published monthly statistics in their coverage of all resident-nonresident transactions.<sup>5</sup> Data published by the BOG also do not follow *BPM5* classifications of merchandise trade, and investment income.<sup>6</sup> Data limitations preclude the recording of income on trade credits, the interest share in leasing payments, and income on intercompany loans. The basis for recording monthly balance of payments transactions departs from accrual accounting as is typical with the use of bank settlements-based reporting systems. Data on interest payments for government debt are also reported on a cash basis.

#### **Accuracy and reliability**

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

35. The source data for compiling **national accounts** statistics come from the extensive survey program of the NSSG, supplemented with administrative data. The survey program is adequately supported by an up-to-date business register. The response rates to the surveys are very good, and timeliness of the source data is within the EU limits. However, the short-term data sources lack the data on changes in inventories. The statistical techniques for compiling quarterly accounts by expenditure components rely on disaggregation/autoregressive models using short-term indices. The quarterly accounts are revised as more reliable data become available, which frequently results in sizeable fluctuations in the estimates. The annual gross domestic product estimates by activity and by expenditure components are derived independently at a detailed level, and reconciled in a supply-use framework. However, in some cases there is reliance on ratios that are more than five years old, such as the ratios used from the ad-hoc survey of retail trade of 1988. Routine assessment and validation provide

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<sup>5</sup> Reinvested earnings are not a requirement for monthly reporting to the ECB. However, annual data on reinvested earnings are compiled on the basis of the annual surveys of foreign direct investment, but are not yet included in the balance of payments series.

<sup>6</sup> These classifications were reported to the Fund (for the years 1999-2001), for redissemination in the *Balance of Payments Yearbook*.

adequate monitoring of the survey processes. Revision studies are undertaken, but not published.

36. Extension in geographical coverage of the **consumer price index** to include rural households was achieved in the latest revision. Source data for the weights are based on a comprehensive household budget survey (HBS) conducted every five years. Use of statistical methods in sampling and adjusting quality changes could further help NSSG to make more efficient use of its resources and add to the accuracy of the index. Source and intermediate data are routinely validated during the compilation.

37. The **wholesale price index** combines results from several surveys and censuses as source data for its weights. Revisions are made every five years, but timeliness to complete the revisions need to be improved to ensure a representative picture of the market structure. Due to the rapidly changing nature of some industries, new goods when they become important in the market should be added between weight revisions. To better cover all market enterprises, sampling of small and household unincorporated enterprises could be undertaken. Processes to assess and validate the price data are in place but more emphasis could be placed on assuring the uniformity of source data.

38. Source data for *ESA 95*-based **general government sector statistics** consist of budget execution statements of the MEF published in the annual draft budget and final accounts, budget execution reports of other government entities, and of comprehensive questionnaires sent to social security funds and local authorities. Source data do not generally provide information on financial flows, and, for local authorities and social security funds, relate to only one year of data, thereby precluding meaningful revisions. Data are therefore minimally revised, but according to a set schedule, and statistical discrepancies are investigated. Consistency checks of the government sector data with other sectoral accounts provide validation. Participation of the NSSG in working groups and other fora of the European statistical system provides further assurance of accuracy and reliability. Furthermore, routine review by Eurostat of statistics reported under the EDP help ensure that *ESA 95* methodology is correctly implemented, as was the case last year when the data reported under the EDP September notification were significantly revised (see paragraph 21). Because no financial accounts are compiled (see paragraph 32), the consistency between nonfinancial and financial balances, and across data sets cannot be ascertained. Therefore, while the validation of source data is adequate, assessment and validation of statistical output would be strengthened by the compilation of financial accounts. Revision studies are not routinely done.

39. Central government data are compiled by aggregating accounting data and no special statistical techniques are required. Revisions are minuscule. Assessment and validation of data depend on established verification procedures and audit mechanisms.

40. The source data for **monetary statistics** are derived from comprehensive accounting records of the BOG and OMFIs and have complete institutional coverage. The compilation of source data follows the ECB framework. The BOG indicated that the source data are based

on the residency of the account holder and allow for classification/sectorization of financial instruments. However, reporting inconsistencies among MFIs result in relatively large interbank discrepancies and relative high levels of other assets/total assets and other liabilities/total liabilities signal the need to improve source data. Statistical techniques are sound. Electronic reporting and data processing, automated validation procedures, and documentation of data compilation practices have contributed to the production of timely monetary statistics. Assessment and validation of source and intermediate data, as well as statistical output, is carried out on a regular basis, which allows for necessary investigation of inconsistencies in source data. Revision studies are part of normal operations to investigate deviations, omissions and other potential sources of problems in the data. In practice, the size of revisions has been small.

41. **Balance of payments statistics** are compiled on the basis of a closed international transactions reporting system (ITRS) based on banks' settlements reporting. In response to the introduction of the euro, and to provide coverage for external transactions of resident institutional units outside the domestic banking sector, the ITRS has been increasingly supplemented by data collections from direct declarants, periodic surveys and secondary sources. Source data are timely, and effective data management procedures support overall accuracy. They are also assessed periodically for comprehensiveness, and this has led, for example, to the introduction of a frontiers travel survey in 2002 aimed at enhancing the coverage of cross-border travel transactions. Statistical techniques are sound. Within the context of compiling and disseminating monthly balance of payments statistics, assessment and validation of intermediate data and statistical outputs are adequate. Although formal revision studies are not conducted, major revisions arising from changes in methodology and source data are assessed before inclusion in the balance of payments series.

### **Serviceability**

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

42. The relevance of **national accounts statistics** is recognized in the context of EU regulations. Feedback is obtained from users informally. Timeliness and periodicity of national accounts follow SDDS. Data are released simultaneously to all interested parties. Consistency of the national accounts is established through iterative balancing procedures relying on the supply-use framework. The external trade data in the national accounts are not consistent with the balance of payments data because of different coverage and valuations. Although a regular schedule for revision policy and practice is being established, the analyses of revisions are not made public.

43. Users' needs are generally well met for the **consumer price index** and the **wholesale price index**. However, for wholesale price index, there are no processes that would permit

dialogue between the users to regularly assess the relevance of the statistics. Timeliness and periodicity are consistent with the SDDS requirements. Data are released simultaneously to all interested parties. Revision policy and practice are in place, however advance notice is not given. For the wholesale price index, linking of old indices could be done at a more disaggregated level to allow better use of long time series. Aggregation methods used guarantee the consistency of both indices.

44. The relevance of **government finance statistics** could be significantly improved by adopting an analytical framework and more detailed classification suited for fiscal analysis. Central government data are not sufficiently broken down to follow fiscal developments, except at the most aggregated level, and time series are usually not published. The fact that component detail and time series are available on demand from the MEF is not indicated in publications. Periodicity and timeliness follow the SDDS, except in the case of central government financing data, which are disseminated only annually rather than monthly. Data are released simultaneously to all interested parties.

45. The presentation of general government according to the *ESA 95* sequence of accounts is not useful for fiscal analysis. The *Government Finance Statistics Manual 2001 (GFSM 2001)* framework could be derived in great part from the *ESA 95* data and has more relevance for this purpose. The NSSG sees Eurostat as a main user of its statistics and does not actively seek opinions of users within the general public.

46. Consistency within the dataset and with other statistical frameworks cannot be ascertained for lack of financial accounts. Serviceability is further hampered by the publication of different government finance statistics presentations. These presentations should be unified or explanatory notes and bridge tables should explain the links between these presentations. Revision policy and practice is guided by EU reporting requirements, and publications do not indicate revisions.

47. The relevance of **monetary statistics** has improved significantly since the reformatting of the data presentation during the past few years, not only to meet the ECB's requirement but to follow more closely the *MFSM's* recommendations. The BOG relies on close informal contact with major users to obtain feedback on monetary statistics. It also relies on the ECB's procedures to ensure relevancy of the statistics to users. Timeliness and periodicity are consistent with the SDDS. However, consistency needs improvement, especially with other sectors. Revision policy and practice follows broadly the schedule established by the ECB. However, documentation on revision policy and practice is not published. The BOG plans to improve further the information regarding revision policy and practice in the *Monthly Bulletin*.

48. The BOG does not seek regular feedback from users to assess the relevance of its **balance of payments statistics**, but staff participation at international statistical fora provide mechanisms for gauging the relevance and practical utility of balance of payments statistics. Monthly data are disseminated within six weeks after the end of the reference month, thereby

exceeding the SDDS requirements for periodicity and timeliness. While the data are internally consistent, errors and omissions exhibit volatility (in both sign and magnitude). Consistency with the national accounts aggregates is not observed.<sup>7</sup> Revision policy and practice do not follow a regular, well established and transparent schedule, and the status of the data are not identified in high-frequency hard copy publications. While no systematic revision studies are conducted, breaks in series, unusual changes in economic trends and significant transactions in the financial account are drawn to users' attention.

### **Accessibility**

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

49. Although data accessibility of the **national accounts** has improved with the new dedicated national accounts publication, it does not have charts and tables, nor analysis of current-period developments, which are concerns of users. Description of current period developments is covered in other publications, such as *Current Developments and Prospects of the Greek Economy* and the *Stability and Growth Program*. Inadequate metadata accessibility is also of concern since the current metadata do not adequately explain source data and statistical techniques. Information on data biases, response rates to the main surveys, and linkages with other data systems is not disseminated. Although assistance to users is not monitored through periodic surveys of users, the assistance provided by national accounts staff is very good. Information about the contact person is not widely available.

50. The data accessibility of the **consumer price index** and the **wholesale price index** is good. They are released on a pre-announced schedule and made available to all users at the same time. Metadata accessibility is adequate. However, statistical publications do not publicize contact persons. Assistance to users is constantly being improved by expanding the information available over the Internet.

51. While data accessibility for **government finance statistics** is broadly adequate, it is hindered by the inadequate content and format of some publications. Annual government finance statistics are presented in a national accounts format rather than according to a government finance statistics presentation. Metadata accessibility is inadequate. No formal sources and methods documentation is published, and documentation for central government

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<sup>7</sup> Between 1995 and 2002, annual changes in the current account balance (as a share of gross domestic product generated between the two statistical systems—BOG's settlements-based current account and the NSSG's external accounts—were of the same sign in only two of seven years, and absolute differences in the annual changes were in excess of one percentage point of gross domestic product in four of the seven years.

data exists only in the form of laws, budget nomenclature, and codes. Assistance to users is provided on demand, but this service is not advertised in publications. Contact persons are not identified in national publications and websites. However, the Public Debt Bulletin provides a generic departmental e-mail address for queries.

52. The **monetary statistics** are readily accessible both from the BOG's website and in publications. Statistics are presented with charts and tables that facilitate analysis. However, use of terminology is not consistent across statistical tables. For example, the term "resident" means Euro area residents in some tables, but Greek residents in others. More explanation with the data would be useful especially regarding comparability of data before and after joining the Euro area and the concept of consolidation in the context of the Euro area with the extended resident term, i.e., "Greek resident plus other Euro residents." Statistics are released on a preannounced schedule and made available to all users at the same time. Nonpublished statistics are available upon request. Metadata accessibility from the BOG's website meets users' needs for basic information with further references to more detailed information. Assistance to users is adequate.

53. Accessibility for the **balance of payments statistics** is hindered by aggregative and limited time series presentations that depart in some instances from *BPM5* structure and classifications and are not conducive to meaningful temporal comparisons. Dissemination media and formats are adequate, but the use of the Internet as a medium for disseminating detailed balance of payments data, and historical time series is not fully exploited. Statistics are released on a pre-announced schedule and made available to all users at the same time. The ECB's *European Union Balance of Payments/International Investment Position Statistical Methods (2001)* provides the most comprehensive and up to date published metadata, and is available online. However, national statistical publications are devoid of methodological notes. A contact person for balance of payments statistics is identified on the BOG's Internet website, but not in the BOG's statistical publications. Assistance to users is adequate.

#### IV. STAFF'S RECOMMENDATIONS

##### General Recommendations

###### *High Priority*

- Establish procedures for cross checking consistency among national accounts, government finance, monetary and balance of payments statistics; this could be in the form of an inter-agency working group.
- For all statistics except price indices, disseminate statements about revision policy and practice; consolidate and update existing information from various sources. Clearly identify the status (provisional/revised/final) of balance of payments statistics across all statistical publications.
- Undertake and disseminate revision studies routinely to shed light on accuracy of statistics.

- Compile and disseminate consistent and comprehensive documentation on concepts and definitions, scope, classification/sectorization, basis for recording, source data and statistical techniques. Deviations from international guidelines should be clearly identified in these metadata.

*Other*

- Implement the Statistical Council, as envisaged under law, to provide guidance on quality, in particular on improving the serviceability and accessibility of national statistics.
- In addition to participation in official committees and task forces at the national and European levels, regularize contacts with users of national accounts, price, government finance and balance of payments statistics to learn about their data needs. This can be effected by, inter alia, users' surveys.
- Widely publicize contact persons in all statistics-producing agencies.
- Disseminate more detailed and time series statistics for government finance, price and balance of payments statistics.

**National Accounts**

*High Priority*

- Improve the short-term source data, in particular develop short-term statistics on changes in inventories.
- Improve data accessibility by providing charts and tables, and analysis of current-period developments.

*Other*

- Reduce the reliance of statistical techniques on outdated ratios.

**Consumer Price Index**

*High Priority*

- Improve the accuracy of the index through prompt use of statistical methods to respond to quality changes.

*Other*

- Investigate the use of statistical methods for sample selection.

**Wholesale Price Index**

*High Priority*

- Improve timeliness of source data and weight revisions.
- Establish a formal process to permit dialogue between compilers and users on a regular basis, such as users' survey.

*Other*

- Use sampling techniques to cover small enterprises.

## **Government Finance Statistics**

### *High Priority*

- Compile and disseminate a full set of financial accounts for the general government sector and its subsectors.
- Compile and disseminate monthly financing data for the central government cash data.
- Improve the serviceability of general government statistics by adopting a migration path towards the *GFSM 2001*, with *ESA 95* data as a starting point for the full implementation of the system.
- Integrate GFS codes and nomenclature in the Treasury accounting system.

### *Other*

- Assign to one agency the main responsibility for compiling and disseminating a comprehensive and integrated set of government finance statistics, including statistics on financing transactions (i.e. financial accounts). The BOG would continue to be responsible for financial accounts statistics under the lead of the designated agency.
- Publish a dedicated annual, or quarterly, government finance statistics publication.

## **Monetary Statistics**

### *High Priority*

- Increase staff resources to allow for the development and implementation of a longer-term statistical work program, including compilation of financial accounts and improving source data.
- Improve accuracy of source data by resolving inconsistencies in the reports of OMFIs to reduce interbank discrepancies, thereby lowering the level of other assets and other liabilities.

### *Other*

- Use consistent terminology and provide more explanation, e.g., concerning intertemporal comparability of data and their consolidation.
- Identify as a memorandum item data on financial derivatives and accrued interest, as well as claims on and liabilities to public nonfinancial corporations.

## **Balance of Payments Statistics**

### *High Priority*

- Introduce estimates for reinvested earnings and undistributed branch profits into the balance of payments statistics.
- Report data on interest payments for government debt on an accrual basis.

### *Other*

- Supplement existing balance of payments tables with more comprehensive presentations in which classifications for goods and investment income according to *BPM5* are disseminated.

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

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

Element	National Accounts Statistics (NAS)	Consumer Price Index (CPI)	Wholesale Price Index (WPI)	Government Finance Statistics (GFS)	Monetary Statistics (MS)	Balance of Payments Statistics (BOP)	Comments
<b>0. Prerequisites of quality</b>							
0.1 Legal and institutional environment	O	O	O	LO	O	O	See paragraph 20.
0.2 Resources	O	O	O	LNO	LO	O	See paragraphs 21, 22.
0.3 Quality awareness	LO	LO	LO	LO	O	O	See paragraphs 19, 21.
<b>1. Integrity</b>							
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	
<b>2. Methodological soundness</b>							
2.1 Concepts and definitions	O	O	O	LO	O	O	See paragraph 32.
2.2 Scope	O	O	O	LO	O	LO	See paragraphs 32, 34.
2.3 Classification/sectorization	O	O	O	LO	O	LO	See paragraphs 32, 34.
2.4 Basis for recording	O	O	O	O	O	O	
<b>3. Accuracy and Reliability</b>							
3.1 Source data	LO	O	LO	LO	LO	O	See paragraphs 35, 37, 38, 40.
3.2 Statistical techniques	LO	LO	LO	O	O	O	See paragraphs 35, 36, 37.
3.3 Assessment and validations of source data	O	O	O	O	O	O	
3.4 Assessment & validation of intermediate data & statistical outputs	O	O	O	O	O	O	
3.5 Revision studies	LO	O	O	NA	O	O	See paragraph 35.
<b>4. Serviceability</b>							
4.1 Relevance	O	O	LO	LO	O	LO	See paragraphs 43, 44, 48.
4.2 Timeliness and periodicity	O	O	O	LO	O	O	See paragraph 44.
4.3 Consistency	O	O	O	LO	LO	LO	See paragraphs 46, 47, 48.
4.4 Revision policy and practice	LO	O	O	LO	LO	LO	See paragraphs 42, 46, 47, 48.
<b>5. Accessibility</b>							
5.1 Data accessibility	LO	O	O	LO	LO	LO	See paragraphs 49, 51, 52, 53.
5.2 Metadata accessibility	LO	O	O	LNO	O	LO	See paragraphs 49, 51, 53.
5.3 Assistance to users	LO	LO	LO	LO	O	O	See paragraphs 49, 50, 51.

INTERNATIONAL MONETARY FUND

GREECE

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

**Response by the Authorities**

September 16, 2003

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## GENERAL RECOMMENDATIONS

General recommendations deals with comments by the General Accounting Office (GAO), National Statistical Service of Greece (NSSG) and the Bank of Greece (BOG). Comments on national accounts, consumer and wholesale price index, were received by the NSSG. On monetary statistics and balance of payments statistics were prepared by the BOG.

### Statements by all agencies

#### *High priority*

*Establish procedures for cross-checking consistency among national accounts, government finance and balance of payments statistics, this could be in the form of an inter-agency working group.*

All three agencies agree with this recommendation for cross-checking among national accounts, government finance, monetary and balance of payments statistics. Ministry plans to contact with the BOG, NSSG and the GAO with the purpose to form a working group with the above mentioned duties.

*For all statistics except price indices, disseminate statements about revision policy and practice; consolidate and update existing information from various sources. Clearly identify the status (provisional/revised/final) of balance of payments statistics across all statistical publication.*

The statements about the revision policy and practice for the national accounts are described extensively in the inventory of ESA95. The Division of National Accounts follows the procedures, which are being decided in the framework of the European Statistical System with respect to the writing up of the inventories as well as the Quality Reports of the final results. At the moment, the ESA95 Inventory is subject to several improvements under the auspices of Eurostat. When it is finalized, it will be on the Eurostat's web site available to the public. The status of balance of payments statistics disseminated through the SDDS is already clearly identified, while the BOG is planning to introduce similar identifications in all its publications which are currently under review.

*Undertake and disseminate revision studies routinely to shed light on accuracy of statistics.*

The NSSG agrees with this recommendation and plans to implement it in the report of the final results where the main reasons of several revisions will be explained. Major revisions are always discussed and explained by the BOG in its publications. However, at the Eurostat and the ECB, discussions are currently held on the implementation of common revision policies within the EU, and it will be adopted by the BOG.

*Compile and disseminate consistent and comprehensive documentation on concepts and definitions, scope, classification/sectorization, basis for recording, source data and statistical techniques. Deviations from international guidelines should be clearly identified in these metadata.*

This recommendation will be implemented by the NSSG for the national accounts, with the finalization and dissemination of the inventories (as described above). Comments on this subject by GAO can be found below. Sources and methods employed by the BOG for compiling monetary and balance of payments statistics are in accordance with the ECB guidelines and they are clearly described in the relevant documents published by the ECB.

### ***Other***

*Implement the Statistical Council, as envisaged under law, to provide guidance on quality, in particular on improving the serviceability and accessibility of national statistics.*

The implementation of the Statistical Council is currently under review.

*In addition to participation in official committees and task forces at the national and European levels, regularize contacts with users of national accounts, price, and government finance and balance of payments statistics to learn about their data needs. This can be effected by, inter alia, users' surveys.*

Although contacts with users are not taking place in a systematic way, it is within the priorities of the NSSG to apply this recommendation as a general policy. The GAO takes into consideration the reaction of users for the improvement of the data offered, as they are expressed in the media of mass communication. Nevertheless it recognizes that a permanent framework of contact with users is useful. The design of such a framework will be considered as well as its completion, hopefully in 2004. The BOG is also considering to implement this recommendation and to undertake regular users surveys, instead of the ad hoc ones that is currently contacting.

*Widely publicize contact persons in all statistics-producing agencies.*

The NSSG and the BOG already comply. Contact persons are already publicized in all press releases. GAO agrees on the need to identify knowledgeable persons in publications and will work to this end in the next months.

*Disseminate more detailed and time series statistics for government finance, price and balance of payment statistics.*

Although detailed data and time series are provided to users upon request, the NSSG is planning to introduce this recommendation into its dissemination policy. The GAO commits itself to investigate the possibility of publishing more detailed monthly and time series

statistics for government finance. The BOG will disseminate more detailed balance of payments statistics as described below on the section on Balance of Payments statistics (see **Other**).

### **NATIONAL ACCOUNTS (Statements by NSSG)**

#### ***High Priority***

*Improve the short-term source data, in particular develop short-term statistics on changes in inventories.*

The development of analytical quarterly accounts, among other things, will include a system of creating short-term statistics on changes in inventories on a continuous basis.

*Improve data accessibility by providing charts and tables, and analysis of current-period developments.*

The application of this recommendation has taken place in the press release of ANA and QNA. The production of publications of the national accounts (based on the ESA95 system) has started recently and any recommendations regarding the provision of charts, tables and the analysis of current-period developments will be taken into consideration.

#### ***Other***

*Reduce the reliance of statistical techniques on outdated ratios.*

This recommendation will be implemented with the creation of a new base year for the national accounts, possibly 2000 or 2001, which is one of the main priorities of the Division of National Accounts.

### **CONSUMER PRICE INDEX (Statements by NSSG)**

#### ***High Priority***

*Improve the accuracy of the index through prompt use of statistical methods to respond to quality changes.*

The NSSG is fully aware of the importance of adjusting for quality changes in the consumer price index (CPI) and is going to conduct a study of the use of different quality adjustment techniques treating quality in the CPI, in collaboration with the University of Athens (Statistics Department).

***Other***

*Investigate the use of statistical methods for sample selection.*

The NSSG is willing to investigate the possibility to introduce scientific sampling techniques and especially the possibility of introducing a probabilistic design of the outlet and products sample, considering the cost associated with different options. It has to be underlined that efforts and great steps have been made in the last revision of CPI where the geographical coverage was extended to the whole Greece as:

- increase in the number of items
- increase in the number of outlets
- increase in the number of price collection cities

The NSSG is going to conduct a study of the use of statistical methods for sample selection in the CPI, in collaboration with the University of Athens (Statistics Department).

**WHOLESALE PRICE INDEX (Statements by NSSG)**

***High Priority***

*Improve timeliness of source data and weight revisions.*

Presently the NSSG updates the weights of the wholesale price statistics using mainly the results of structural surveys. The NSSG intends to improve the timeliness of the structural surveys, by accelerating the data collection and elaboration procedures, in order to be available on time for the revision of the weights of the wholesale price index.

*Establish a formal process to permit dialogue between compilers and users on a regular basis, such as users' survey.*

The NSSG agrees with the recommendation of the mission and will work towards this direction by establishing a formal process to permit dialogue between compilers and users on a regular basis.

***Other***

*Use sampling techniques to cover small enterprises.*

The Economic and Short Term Indicators Division of NSSG in collaboration with the Methodology Division is examining the implementation of sampling techniques to cover small enterprises, taking into account the cost parameter and the time variable in the collection of data procedure.

## GOVERNMENT FINANCE STATISTICS (Statements by all agencies)

### ***High Priority***

*Compile and disseminate monthly financing data for the central government cash data. Integrate GFS codes and nomenclature in the Treasury accounting system.*

The GAO will exhaust the possibilities of preparing and presenting the budget accounts according to the GFS. This framework will define comprehensively the concept, definitions, institutional coverage, classification, accounting base, the sources of data and their discrepancies from the GFS. An examination will be carried out for the compilation and dissemination of monthly financing data for the central government. The GAO will pursue the incorporation of codes and nomenclature in the new accounting system, which is under development. To this end, the GAO will investigate the possibility of assigning to a separate unit the handling of the relevant issues.

*Improve the serviceability of general government statistics by adopting a migration path towards the GFSM 2001, with ESA95 data as a starting point for the full implementation of the system.*

The NSSG takes seriously into consideration this recommendation of improving the serviceability of general government statistics and plans to implement it in the future.

### ***Other***

*Assign to one agency the main responsibility for compiling and disseminating a comprehensive and integrated set of government finance statistics, including statistics on financing transactions (i.e. financial accounts). The BOG would continue to be responsible for financial accounts statistics under the deal of the designated agency.*

Greece supports this recommendation of assigning to one agency, among NSSG, BOG and GAO, the main responsibility for compiling and disseminating a comprehensive and integrated set of government finance statistics, including statistics on financing transactions and proposes the creation of a working group having the responsibility of validating the compiled data.

*Publish a dedicated annual, or quarterly, government finance statistics publication.*

The NSSG supports the recommendation of publishing a dedicated publication on annual or quarterly basis of the government finance statistics. It further considers that one of the three involved agencies should be responsible for the compilation and dissemination of this publication.

## MONETARY STATISTICS (Statements by Bank of Greece)

### **High Priority**

*Increase staff resources to allow for the development and implementation of a longer-term statistical work program, including compilation of financial accounts and improving source data.*

The Bank of Greece has already started the procedure for increasing the staff of the Statistics Department. A public announcement for the recruitment of 10 highly qualified statisticians/economists was made in April 2003. The Bank has received a relatively large number of applications from suitable candidates which are currently being reviewed.

*Improve accuracy of source data by resolving inconsistencies in the reports of OMFIs to reduce interbank discrepancies, thereby lowering the level of other assets and other liabilities.*

The problem of interbank deposit and loans discrepancies has been addressed in close collaboration with the major banks. Following this collaboration and the constant monitoring of interbank positions reported by the larger banks, we have seen a clear improvement in the quality of the data as of the beginning of 2003.

### **Other**

*Use consistent terminology and provide more explanation, e.g., concerning intertemporal comparability of data and their consolidation.*

The inconsistencies in the definition of residents across the tables of the 'Bulletin of Conjunctural indicators' have already been removed.

*Identify as a memorandum item data on financial derivatives and accrued interest, as well as claims on and liabilities to public nonfinancial corporations.*

Data on financial derivatives and accrued interest will be published in the 'Monthly Statistical Bulletin' following a major revision of the monetary and banking statistics contained in this publication, which will be implemented in the beginning of 2004. There are currently no plans to publish data on claims and liabilities to public non-financial corporations. These data are no longer collected by the Bank of Greece following the major restructuring of reporting forms introduced in the years 2000 and 2002. The principal aim of the new reporting is to collect the data that meet ECB's requirements.

## **BALANCE OF PAYMENTS STATISTICS (Statements by Bank of Greece)**

### ***High Priority***

*Introduce estimates for reinvested earnings and undistributed branch profits into the balance of payments statistics.*

Reinvestment earnings will be reported on the basis of the outcome of the annual FDI Stock survey for 2002. The compilation of these data is expected to be finalized by the first quarter of 2004, in conjunction with the data for accrual income. Back series to 1999 will also be provided.

*Report data on interest payments for government debt on an accrual basis.*

Income: Accruals reporting. The Bank of Greece will implement as of January 2004, a full accruals reporting system for income flows related to external portfolio investment debt/equity assets and liabilities. The system will be based on income estimates derived from changes in monthly stocks of estimated portfolio investment assets/liabilities reported by resident custodians, banks, stock brokers, investment companies, and mutual funds. Reporting will be on a security-by-security basis using ISIN Codes. The debtor approach will be used. The system will be built on the existing reporting requirements for the above-mentioned respondents, but periodicity will change from quarterly to monthly reporting. A pilot survey will be used for testing purposes in November and full implementation is envisaged for January 2004. Income flows derived from ITRS and Bank of Greece administrative sources will continue to be produced and are to be used for checking purposes.

### ***Other***

*Supplement existing balance of payments tables with more comprehensive presentations in which classifications for goods and investment income according to BPM5 are disseminated.*

The Bank will supplement as of January 2004 the existing balance of payment tables in the SDDS website with a breakdown of goods and investment income items. Furthermore, the balance of payments (BOP) section in the Monthly Statistical bulletin will be restructured so that to include supplementary information on key BOP items.

INTERNATIONAL MONETARY FUND

GREECE

**Detailed Assessments Using the Data Quality Assessment Framework (DQAF)**

Prepared by the Statistics Department

Approved by Carol S. Carson and Michael Deppler

September 16, 2003

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

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## ACRONYMS

<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
BIS	Bank of International Settlements
BOG	Bank of Greece
BOP	Balance of Payments
<i>BPM5</i>	<i>Balance of Payments Manual</i> , fifth edition
CPI	Consumer Price Index
COFOG	Classification of Functions of Government
COICOP	Classification of Individual Consumption by Purpose
DES	Division of Economic and Short Term Indicator Statistics
DOR	Division of Organization, Methodology and Internal Relations of the General Secretariat of the National Statistical Service of Greece
DQAF	Data Quality Assessment Framework
DSBB	IMF's Dissemination Standards Bulletin Board
ECB	European Central Bank
EMU	Economic and Monetary Union
<i>ESA 95</i>	<i>European System of Accounts 1995</i>
ESCB	European System of Central Banks
EU	European Union
Eurostat	Statistical Office of the European Communities
GAO	General Accounting Office of the Ministry of Economy and Finance
GDP	Gross Domestic Product
GNP	Gross National Product
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
HICP	Harmonized Index of Consumer Prices
HBS	Household Budget Survey
ILO	International Labour Organization
ITRS	International Transaction Reporting System
IMF	International Monetary Fund
ISIC	International Standard Industrial Classification of all Economic Activities
LFS	Labor Force Survey
MEF	Ministry of Economy and Finance
MFI	Monetary Financial Institution
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
MFSD	The Monetary and Financial Statistics Division
MMF	Money Market Funds
NACE	Standard Classification of Economic Activities within the European Communities
NAD	National Accounts Department
NSSG	General Secretariat of the National Statistical Service of Greece
ODC	Other Depository Corporation
OECD	Organization for Economic Cooperation and Development
OMFI	Other Monetary Financial Institution
PPI	Producer Price Index

PRODCOM	List of Products of the European Communities
ROSC	Report on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard
SITC	Standard International Trade Classification
SPE	Special Purpose Enterprises
VAT	value-added tax
WPI	Wholesale Price Index

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

The following detailed information on indicators of statistical practices in the areas of the national accounts, prices, government finance, money and banking, and balance of payments statistics was gathered from publicly available documents and information provided by Greek 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 Greece's Report on the Observance of Standards and Codes (ROSC)—Data Module.

### I. NATIONAL ACCOUNTS 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*

There is no single law on statistics. Although Greek official statistics have a long history<sup>1</sup> the main legal document relating to the General Secretariat of the National Statistical Service of Greece (NSSG) (Legislative Decree No. 3627, Official Journal No. 278/16-11-56, Volume A) was adopted in 1956. The 1956 law was followed by two laws in 1996 and 1997 that relate to statistics and confidentiality of statistics (see 0.1.2 and 0.1.3). The 1956 law places the NSSG at the center of the statistical system, which includes the Statistical Services in the Ministries, and the Statistical Services in the regions (prefectures). It also gives the NSSG exclusive responsibility to collect, process and disseminate statistical information. Two subsequent Presidential Decrees established the General Secretariat of the NSSG in the Ministry of National Economy in 1986 (No. 224, Official Journal No. 91/10-7-86, Volume A), and in 2000, mandated the National Accounts Department (NAD) to implement the system of national accounts statistics (No. 226/8-9-2000, Official Journal No. 195, Volume A).<sup>2</sup>

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<sup>1</sup> The first population census was conducted in 1828. A Statistics Section was set up in the Bureau of Public Finances in 1860, which was shifted to the Ministry of National Economy in 1910. Later, the section was upgraded to the Department of Statistics. In 1925, the General Statistical Service of Greece was created in the Ministry of National Economy. Since 1929 and 1930, the Monthly Statistical Bulletin, and the Statistical Yearbook of Greece have been published.

<sup>2</sup> The Ministry of Economy and the Ministry of Finance were later merged into a single ministry—the Ministry of Economy and Finance (MEF).

As part of the European Statistical System,<sup>3</sup> the NSSG is required to compile national accounts statistics (EC Council regulation No. 2223/96 of June 25, 1996), and to report the national accounts data to the European Commission (EC Council regulation No. 332/97 of February 17, 1997).

The Annual Statistical Program of the NSSG, that is issued by the Minister of Economy and Finance, details the NSSG's responsibility for, among other things, the national accounts statistics. The national accounts component of the program outlines the tasks to be completed for compiling national accounts statistics and the time required, in person-days, to complete the tasks, as well as the dates for producing and disseminating the final products.

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

The laws of 1956 and 1996 (Law 2392/9-4-96) (Official Journal No. 60, Volume A) contain provisions on data sharing and coordination among data producing agencies. They give the NSSG the necessary legislative support to obtain the data from administrative sources and other data producing agencies. The laws of 1956 and 1996 also provide for a National Statistical Council that could play a useful role in facilitating data exchange among data producing agencies. Formal and informal agreements between the MEF and other data producing agencies allow the NSSG to access state registers, archives of the providers of public services and other data sources. For example, an agreement between the (former) Ministry of Economy and the Ministry of Finance (Joint Ministerial Decision No. 12833/C-528/1966) allows the NAD to use the fiscal data submitted by the enterprises from the value-added tax (VAT) archives. The NSSG cooperates closely with the Bank of Greece (BOG), government ministries and other public agencies to establish data sharing agreements.

The NAD is satisfied with the level of cooperation it receives from these agencies. There is no evidence of duplication of statistical effort among the various data producing agencies. A working group made up of representatives from MEF, BOG, and other data producing agencies coordinates the provision of the data to, and sharing of the data with the Statistical Office of the European Communities (Eurostat).

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<sup>3</sup> The System consists of Eurostat and the statistical offices, central banks, and other official statistics-producing agencies of EU member countries (plus Iceland, Norway, and Liechtenstein), and covers almost all statistical areas. The February 1997 regulation of the EU Council defines the roles of national statistical offices and Eurostat. The regulation is based on Article 285 of the Treaty of Amsterdam, which stipulates that the EU Council "...shall adopt measures for the production of statistics where necessary for the performance of the activities of the Community."

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

Confidentiality of the respondents' data is protected by Article 8 of the 1996 law. The Article disallows the dissemination of individual data without the prior permission of the respondent. Articles 6 and 7 require that report forms that are used to collect the data from respondents must also state whether the information supplied may be used for fiscal purposes or in connection with military conscription. If not, the contents are considered confidential and may not be used by the government to check income tax returns or in connection with legal disputes. Following the confidentiality provisions of the European Union (EU) Council regulations on community statistics and on the transmission of the data to the Statistical Office of the European Union (EU) (No. 322/97 of February 1997 and No. 1588/90 of June 11, 1990). Eurostat maintains the confidentiality of the nonpublished national accounts data provided by the NSSG. The European Central Bank (ECB) may receive these data, under embargo and for internal use only, prior to their release to the public.

The Committee on Statistical Confidentiality, which implements the confidentiality provisions of the law, has put in place adequate office procedures to safeguard confidentiality of the data during data collection, processing, dissemination, and storage. It has strengthened the rules to prevent the accidental destruction and improper use of the data, and unauthorized access to the data. Special aggregation rules are used to ensure that the individual data are not disclosed when data are presented. In the case of enterprises, this means that the aggregated data for less than three units are not disseminated. Access to the individual data is restricted only to the staff who require the information in the performance of duties.

Further assurances for the confidentiality of the individual data are provided by the law on the protection of the fundamental rights and freedoms (No. 2472) that was adopted in 1997. The law implements the EC directive 95/46/EC concerning the processing and protection of individual data. According to this law, during statistical surveys, the respondents must be informed in writing of their rights and obligations with regard to the provision of the information provided by them, and they are assured that the information they provide will be used for statistical purposes only (Article 11). Violations of the law are punishable by imprisonment for a maximum of one year and a fine of €8,804.108.

Notwithstanding the above legal provisions, access to the survey data for research purposes is allowed, but only after concealing references to individual data, and after approval by the Committee on Statistical Confidentiality. These provisions are in line with EC Regulation 831/2002 that allows access to administrative data for purposes of EC statistics and for research.

Detailed source data are accessible to the national accounts staff. All workstations are password protected.

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

Articles 2 and 3 of the 1996 law require individuals, legal entities, government agencies, bodies, and administration offices to supply any data and information for surveys that are conducted by the NSSG. Separate legal provisions/inter-ministerial protocols acknowledge NSSG's power to access administrative, even computerized, files of public offices and government agencies (see 0.1.2). The penalties for nonreporting or misreporting are sufficiently large, though legal proceedings have never been initiated against any individuals or other reporting units. The NAD is satisfied with the legal and other arrangements for obtaining data for national accounts purposes.

**0.2 Resources**

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

Of the 37 NAD staff, 29 are directly involved in national accounts compilation.<sup>4</sup> The staff is very well trained and highly qualified. The NAD staff is in contact with international agencies and fully aware of international best practices in the compilation and processing of national accounts statistics. Senior staff of NAD have participated in Eurostat's working groups/task forces on the following: national accounts, social accounting matrices, input-output tables, purchasing power parities, regional accounts, quarterly accounts, financial accounts, balance of payments statistics, etc. The staff also participates in the working of the gross national product (GNP) committee, and the committee on agricultural accounts, etc. The staff has also conducted technical assistance missions in the area of national accounts statistics in the context of the TACIS program. Because of the extensive requirements of implementing the *European System of Accounts 1995 (ESA 95)* the work of the NAD has expanded in recent years in terms of the quantity of the data produced and their scope. To address these requirements, the NAD has requested an additional 15 staff to improve the coverage of tourism-related activities, develop satellite accounts, and compile social accounting matrices on a regular basis, etc.

Computing resources are sufficient. All staff involved in statistical work has access to a workstation. IT systems and ongoing technical support for national accounts staff is adequate.

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

The NAD staff is fully occupied in the task of implementing the guidelines and recommendations of Eurostat and other EU agencies. Management fully supports these

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<sup>4</sup> The NSSG employs a total staff of 1,118 of which 800 belong to the central service and 318 to the regional offices (prefectures).

efforts. The NSSG was recently reorganized to improve accuracy and comparability of its statistical products. It also aimed to restrict undue expenses and to avoid duplication of statistical work through better coordination and central programming.

The Division of Organization, Methodology and Internal Relations (DOR) is mandated to ensure that the design of surveys is accurate, the processing errors are minimized, and the concepts and methodologies used by different NSSG divisions are consistent.

Although the financial aspects of individual statistical series are not tracked all the statistical projects, including the compilation of national accounts, business and household surveys are planned and budgeted in the Annual Statistical Program (also see 0.3.2). Computing resources are effectively used.

### **0.3 Quality awareness**

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

Management's awareness of quality is evidenced by its close tracking of the timely implementation of EU regulations and other EU-wide guidelines to develop national accounts statistics. The senior NSSG staff also participate in working parties/task forces of the European Statistical System (see 0.1.1) for harmonizing statistical activities, improving the quality of adjustment techniques, sampling, etc. Although there is no formal NSSG-wide quality program, and comprehensive internal or independent quality reviews are not conducted, the DOR ensures that quality issues are highlighted in each statistical program. The high response rate of the surveys is indicative of the public trust in the NSSG.

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

The sampling and certain nonsampling errors are tracked by the DOR. It also establishes uniform standards for statistical publications. Annually, the implementation of the Annual Statistical Program is reviewed and published (*Statistical Projects Carried Out*). The main purpose of the exercise is to determine whether the priority projects were achieved in the context of the NSSG's overall aim of improving "the services provided to the users of statistical data."

The individual NSSG divisions reportedly receive feedback from users through informal contacts (also see 4.1.1). There are no formal users' surveys to obtain feedback on issues related to the collection, processing and dissemination of statistics. Certain aspects of quality are monitored by the working groups for each statistical program. A Statistical Council that could provide guidance on the quality of the statistical series and on strategies for improving data production is envisaged in the law (see 0.1.1), but it is not operational.

At the European level, the quality of the national accounts statistics is scrutinized by the GNP Committee (consisting of representatives of all member states), which evaluates the quality

of the national accounts estimates, and may also provide recommendations to national authorities for further improving the estimates. In 1997, the European Court of Auditors reviewed the comparability and reliability of the member states' national accounts statistics, and presented its findings to the GNP Committee in June 1998.<sup>5</sup>

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

Although the improvement of data quality is the focus of the NSSG's future work programs the users' views are seldom taken into consideration in formulating the programs.

**1. Integrity**

**1.1 Professionalism**

*1.1.1 Statistics are compiled on an impartial basis*

The NSSG follows high standards of professionalism, which are supported by adequate legislation. Constitutionally, the NSSG is set up as a General Secretary of the MEF, but is professionally independent. The NSSG's impartiality is the cornerstone of the 1956 law. According to the Presidential Decree of 1986 (see 0.1.1) the head of the NSSG—General Secretary—is appointed by the Prime Minister in consultation with the Minister of Economy and Finance and reports to the minister. The minister also issues the Annual Statistical Program. However, this does not affect the professional independence of the NSSG. The General Secretary is responsible for ensuring professionalism in statistical activities. Decisions on professional matters are taken independently by the NSSG taking into account international best practices and, in particular, Eurostat guidelines and recommendations.

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<sup>5</sup> At the European level two processes took place in monitoring the quality awareness of the NAD produced statistics: (a) annual national accounts—in the framework of the quality awareness on the national accounts statistics, the National Accounts Division participated in a pilot study organized by the GNP Committee regarding the compilation of a processes table on the quality assurance of the produced statistics. This table has already been sent to Eurostat by March 2003; and (b) regional accounts statistics—two quality reports, one on the GVA and GFCF and the other on employment, have been produced by the Department of Quarterly, Regional and Satellite Accounts regarding the compilation and the quality assurance of the produced regional data. In addition, two methodological reports have been compiled, one on GVA and GFCF and the other on employment, regarding the methodological aspects of producing these statistics. These two quality reports, as well as the accompanying methodological parts, have been sent to Eurostat by July 2002.

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

There is no evidence that NSSG is subject to outside pressure in its choice of sources and statistical techniques. The national accounts staffs' choice of source data and statistical techniques is based solely on statistical considerations, including EU regulations.

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

The NSSG seeks to prevent misinterpretation or misuse of statistics by providing explanations and materials, as necessary. Erroneous interpretations or misuse of the data are commented upon.

**1.2 Transparency**

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

The transparency of the NSSG's policies and practices is promoted by making the rules governing the collection and dissemination of statistics widely available through the NSSG website and its information service. The website describes the main aspects of laws and decrees that form the NSSG's legal and institutional framework. The main laws relating to statistics may be obtained by the public from the NSSG's Statistical Information and Publication Division.

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

Government agencies do not have access to the national accounts data prior to the release of the data. Eurostat has access to the preliminary quarterly national accounts data (including information on final consumption, gross fixed capital formation, exports, imports, and inventories) prior to the release of the data to the public (also see 5.1.4). The provision of the data to Eurostat is not considered as violation of the principle of equal access to all users.

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

The NSSG products are identified as being produced by NSSG. This includes hard copies of special tables/data as well as the data provided electronically.

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

Changes in the methodology, source data, and statistical techniques that were implemented by the NSSG in the context of the five-year program of developing statistics agreed with the

Statistical Program Committee (SPC)<sup>6</sup> were explained to users by the NAD staff in seminars that were conducted during 2001, following the preparation of the national accounts statistics in line with *ESA 95* guidelines. The public is informed of changes in the methodology in the news release at the time the data using the new methodology are disseminated.

### **1.3 Ethical standards**

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

Although there are no formal guidelines on staff behavior, the strong laws on confidentiality and the rules for civil servants provide a clear set of ethical standards for the staff. The requirements for ethical conduct and the consequences for breaching confidentiality are established in the law for civil servants' laws No. 2190 (1994, Official Journal No. 28, Volume A) and No. 2683 (1999, Official Journal No 19, Volume A), and in the laws which regulate the NSSG (see 0.1.1, 0.1.2 and 0.1.3). These documents are well known to the staff. The new staff are made aware of them in obligatory introductory seminars arranged for new employees.

## **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*

Since 1999, the concepts and definitions of national accounts statistics follow *ESA 95*.<sup>7</sup> Data according to *ESA 95* are available from 1995 onward.<sup>8</sup>

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<sup>6</sup> The Statistical Program Committee is part of the European Statistical System. It includes Eurostat and the heads of the member states' statistical offices. Its five-year program includes the development of common classifications, methodology and definitions, implementation of common statistical surveys based on harmonized methods, and collection, analysis, and dissemination of statistical data for the European Union.

<sup>7</sup> This followed EC Regulation No. 2223/96 of June 25, 1996 that obliged member states to implement *ESA 95* from April 1999 with 1995 as the reference year.

<sup>8</sup> To achieve harmonization of definitions, methodology, and classification with the Eurostat guidelines and recommendations the NSSG has successfully followed a five-year program agreed with the Statistical Program Committee (see 1.2.4).

## 2.2 *Scope*

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

The scope of the national accounts extends beyond the recommended range of annual and quarterly national accounts tables, and includes annual regional accounts<sup>9</sup> and simplified provincial accounts, annual accounts for agriculture, detailed tables relating to environmental issues, and Social Accounting Matrix (for 1997). Input-output tables are published regularly.

The national accounts statistics cover all tables and accounts that the Intersecretariat Working Group on National Accounts has determined as a minimum requirement for implementing the System of National Accounts 1993 (*1993 SNA*). They include the following annual data:

- value added and gross domestic product (GDP) at current and constant prices by activity,
- expenditures of GDP at current and constant prices,
- value added components at current prices by industry,
- sequence of accounts for the total economy (up to financial accounts), and
- rest of world accounts (up to net lending).

The quarterly GDP estimates are compiled at current and constant prices by expenditure components. The national accounts cover current transactions and the capital account. The BOG is expected to compile annual financial accounts for institutional sectors from 2005. There are no plans to prepare balance sheets of institutional sectors in the short-term. Annual input-output tables are available for the period 1988–1998. For the period 1995–1998, the tables are according to *ESA 95*. The tables have 60 industry groups, but in published form they are aggregated by 31 industry groups.

The concept of residence used in national accounts is in accordance with the *1993 SNA* (and the fifth edition of the *Balance of Payments Manual*). The economic territory is correctly defined and, in particular, includes the following:

- territorial enclaves, such as Greek embassies in the rest of the world,
- bonded warehouses and free trade zone activities, and
- workers who work only part of the year in another country.

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<sup>9</sup> The accounts are compiled for 13 regions at the second digit level of the EU Nomenclature of Territorial Units, and for 52 provinces (prefectures). Separate data are compiled for local authorities (around 1,100). For regions, the goods and services as well as employment data are prepared by 17 industries.

The production boundary generally follows the *1993 SNA*, except for own-account production of households. In this case, *ESA 95* (paragraph 3.08) is followed. Own-account production of households is limited to the production, storage, and processing of agricultural products and to the construction of dwellings. In particular, the following items are in scope for output measurement:

- own-account production of goods for own final consumption,
- research and development on own-account,
- output of goods for own-account fixed capital formation,
- mineral exploration,
- production of entertainment, literary, or artistic originals, and
- production of computer software.

Estimates of unrecorded activities are included in the national accounts (see 3.2.2). The asset boundary is in accordance with the *1993 SNA*. In particular, the following items are included:

Among tangible assets:

- defense related assets that could be used for civilian purposes,
- valuables, and
- sale of historical monuments.

Among intangible assets:

- mineral exploration (whether successful or not),
- systems and standard applications computer software and data bases (purchased or built in-house),
- entertainment, literary, or artistic originals,
- patented entities, and
- leases and other transferable contracts.

## **2.3 Classification/sectorization**

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

The classification of institutional units and transactions is in accordance with *ESA 95*. Industries are classified according to the Greek Standard Industrial Classification (that identifies 113 industry groups and 380 product groups and follows International Standard Industrial Classification of all Economic Activities (ISIC) Rev. 3). The first four digits (and in some cases three digits) coincide with the corresponding levels of standard classification of economic activities within the European Communities (NACE) Rev.1. Health and education activities are further classified by market and nonmarket categories. Capital

formation is shown in six broad categories according to *ESA 95*. Foreign trade data are classified at the eight-digit level of the national Combined Nomenclature that follows the Harmonized System at the six-digit level. Household expenditure is classified by Classification of Individual Consumption by Purpose (COICOP). Classification of Functions of Government (COFOG) is used to classify functions of government.

## **2.4 Basis for recording**

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

The valuation rules used for recording flows are in accordance with *ESA 95*. Market output and output for own-use are valued at basic prices. Output and value added are also compiled at basic prices. The valuation of intermediate consumption is at purchasers' prices (including sales, excise taxes, and nondeductible value-added taxes). The deductible part of value-added taxes is excluded from the valuation of final uses.

Transactions in foreign currency are converted to the domestic currency using the exchange rate at the time of the transactions.

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

Flows are, in principle, recorded on an accruals basis.

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

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

## **3. Accuracy and Reliability**

### **3.1 Source data**

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

The source data for compiling national accounts statistics come from the extensive survey program of the NSSG supplemented with administrative data. The survey program is adequately supported by an up-to-date Business Register. The response rates to the surveys are very good, and the timeliness of the source data is within the EU limits. However, the short-term data sources are inadequate, in particular the data on changes in inventories.

The sample frame for enterprise surveys is the Business Register. It includes around 425,000 enterprises that are classified at the four-digit level using the national industrial classification (see 2.3.1). Since 1995, the Business Register is compiled from the VAT register of the MEF,

which, in turn, is based on mandatory declarations submitted by incorporated enterprises. The declarations provide information on the name and address, legal status, activity, turnover, and VAT code. The information on turnover is updated using data from the annual surveys that are available 12 months after the reference year, which is six months earlier than required by EU regulation. Inactive enterprises<sup>10</sup> are removed from the Business Register on the basis of the feedback provided by enumerators, and using administrative sources. Aggregate and nonconfidential information from the register is available to users on demand. NAD staff considers the register to be comprehensive, up-to-date, and reliable for conducting surveys.

The main sources of data for compiling annual and quarterly national accounts statistics are given in Tables A and B.<sup>11</sup> The coverage of the economic activities by regular business statistics is fairly high. The data for 1995 show that for the annual accounts almost all the activities were covered in the case of agriculture, electricity, gas and water supply, public administration, and defense. In the cases of mining and quarrying, manufacturing, transport, storage and communications, and education, health and social work the coverage was 92 percent, 71 percent, 48 percent, and 48 percent respectively.

Annual enterprise surveys (and ad-hoc surveys) are the main source for compiling national accounts statistics for fishing, mining and quarrying, manufacturing, electricity, gas and water, construction, wholesale and retail trade, hotels and restaurants, transport, storage and communications, real estate, and the private sector components of education, health and social work, and other services. The surveys typically collect information on turnover, profit and loss statement, balance sheet, own-account production of capital goods, goods purchased for resale, changes in inventories (sales and inventories of finished goods and work-in-progress, purchases and inventories of raw materials), wages and workers' compensation, employment, assets, and liabilities. The data are sufficiently detailed to derive national accounts aggregates such as gross output, intermediate consumption, and value added as required by *ESA 95*.

The Household Budget Survey (HBS) includes a sample of about 6,000–6,500 households and uses random sampling procedures. The sample is derived from the latest population census of 2001. The HBS is conducted every four years. The last survey was conducted in 1999 using COICOP for classification purposes. It covers all regions and socio-economic groups. The survey follows EU standards. The data collected include household's expenses

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<sup>10</sup> Following Eurostat guidelines, inactive enterprises are defined as those with no turnover during the reference year—determined from their tax contributions—and no employment.

<sup>11</sup> The NSSG is presently implementing a five-year program to develop statistical surveys based on methods that are harmonized within the European Statistical System (see 0.1.1). The program was agreed with the Statistical Program Committee (see 1.2.4). It concludes in 2003.

on durable and nondurable items, housing and valuables, value of goods produced for own-consumption, capital formation, etc.

As in the case of other surveys, the HBS uses reliable sampling frames and methods (see 0.2.2 and 0.3.2). The nonresponse is addressed using proper imputation methods. Grossing-up factors are based on the sample design—in the case of enterprise surveys these are derived from employment data by type of enterprise.

The General Accounts Office of the MEF provides annual revenue and expenditure data for the central government. Other government entities—social security funds, extra budgetary funds, regional and local government offices report the data directly to NSSG.

The main source data for the exports and imports of goods and services are INTRASTAT (for EU countries) and the customs data,<sup>12</sup> and the balance of payments data of the BOG. A complete range of wholesale price indices, the consumer price index (CPI), and price indices of external trade are available on timely basis. Monthly retail sales data are available with a time lag of 45 days. In addition, the production index is available 45 days after the reference month. The index covers 385 products and around 2,500 enterprises (accounting for 40 percent of the value added at the four-digit level of activity, and over 70 percent at the two-digit level).

Table A. National Accounts—Main Sources for the Annual Accounts

Production Approach	
NACE Rev 1. section	Main source
Agriculture, hunting, and forestry	- Annual crop and livestock surveys - Annual agricultural statistical survey - Agricultural prices (Ministry of Agriculture) - Ministry of Agriculture (volume indices) - Agricultural Bank of Greece (loans, investments)
Fishing	- Monthly survey of sea fishing
Mining and quarrying	- Annual survey of mining and quarrying
Manufacturing	- Annual industrial survey (manufacturing establishments)
Electricity, gas, and water supply	- Annual financial reports of enterprises - Detailed data from the Public Electric Power Company
Construction	- Annual survey of building activity - Public works survey/budget data - Administrative sources-licenses of new buildings
Wholesale and retail trade, repair of motor vehicles, and personal and household goods	- Ratios from ad hoc survey of retail trade (1988) - Manufacturing survey (information on repairs)
Hotels and restaurants	- Survey of hotels (ad hoc survey of 1988) - HBS
Transport, storage, and communication	- Survey of sea transport - Ministry of Transport

<sup>12</sup> The Customs data are processed in the NSSG by the Trade and Services Division.

Table A. National Accounts—Main Sources for the Annual Accounts

Production Approach	
NACE Rev 1. section	Main source
	- Financial reports of enterprises - Ratios from survey of public transportation (taxis) (1988)
Financial intermediation	- Annual survey of banks and credit institutions - Annual survey of insurance enterprises
Real estate, renting, and business activities	- HBS - Ad-hoc surveys of rents (1995) - Income tax data
Public administration and defense; compulsory social security	- Central government budget - Budgets of other government entities - Survey of local authorities and social security institutions
Education/ Health and social work	- HBS - Ad-hoc survey of private health (1988) - Budgets of public hospitals - Central government budget - Budgets of universities
Other community, social, and personal service activities	- HBS
Net taxes less subsidies on products	- Central government budget
Household final consumption expenditure	- HBS
Final consumption expenditure of nonprofit institutions serving households	- HBS
Government final consumption expenditure	- Budget data
Acquisitions less disposals of tangible fixed assets	- Budget, public investment program - Annual surveys - Administrative records (vehicle licenses)
Acquisitions less disposals of intangible fixed assets	- Annual surveys - Administrative records
Additions to the value of nonproduced nonfinancial assets	- Budget data - Agricultural Bank of Greece
Changes in inventories	- Annual surveys of establishments - Agricultural surveys - Administrative records
Acquisitions less disposals of valuables	
Exports and imports of goods	- External trade statistics (customs)
Exports and imports of services	- Balance of payments (Bank of Greece)

For the most important industrial groups, sub-annual surveys of establishments are conducted to obtain detailed quarterly/monthly indicators that are consistent with annual data, such as the retail trade volume indices, production index of capital goods. In addition, external trade data are obtained from the customs (merchandise trade) and from BOG (services). These data and indicators provide a reasonable basis for compiling the estimates of the expenditure components of GDP.

Table B. National Accounts—Main Sources for the Quarterly Accounts

Expenditure Approach	
Expenditure category	Main sources
Households' final consumption expenditure	- Retail trade volume indices - Volume and price index of imports
Final consumption expenditure by government and nonprofit institutions serving households	- Retail trade volume indices
Gross fixed capital formation	- Building permits issued by local offices (monthly) - Volume and price of imported capital goods - Production index of capital goods
Changes in inventories	- Estimated
Exports and imports	- Volume and price data on imports and exports - Balance of payments (Bank of Greece)

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

The source data are consistent with the definitions, scope, and classifications of national accounts. They are also consistent with the time of recording, reference periods, and valuation. The NAD provides input into the design of the surveys.

*3.1.3 Source data are timely*

The timeliness of the source data for quarterly accounts has improved recently as a result of implementing Eurostat's (and ECB's) Action Plan of 2000 to improve the quality, including promptness, of short-term economic statistics. The price indices, indices of retail sales, foreign trade price indices are timely.

For the flash estimates of the annual accounts the following data are available on a timely basis: provisional results of the agriculture survey (and information on Greece's agricultural quotas), production volume indices (which become available in two–three months after the end of the reference month), labor cost and employment data from the quarterly labor force survey, construction volume indices, and licenses for building construction, external trade values and quantity data that are available on a monthly basis, volume of loans for investment provided by the Agricultural Bank.

The results of the annual surveys of establishments become available within 18 months following the end of reference year, and are used in the compilation of the final national accounts estimates. The balance of payments, external trade and the government finance data are timely.

## 3.2 *Statistical techniques*

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

#### Production Approach Procedures

The output estimates are made for 113 industry groups. The estimates of intermediate consumption are also compiled at this level of detail. The annual GDP estimates by activity and by expenditure components are derived independently and reconciled in a supply-use framework. In the reconciliation process, adjustments are made iteratively to the GDP components for which the source data are either not available or not reliable. The balancing exercise also relies on the expert judgment of the staff. For example, for manufacturing products, the staff use the supply data (since data are from reliable surveys and Customs statistics). For services, the expenditure data are used. The adjustment procedure typically involves updating the base year values of the GDP components using year-to-year growth rates/or benchmark ratios/information on income elasticities etc., in conjunction with econometric techniques, and subsequently, fine-tuning them in the balancing exercise. In some cases, there is reliance on ratios/data structures that are old, such as the ratios used from the ad-hoc survey of retail trade of 1988.

The output of the owner-occupied dwellings is calculated by types of dwellings as the estimated rentals that tenants would pay for similar accommodation. The intermediate consumption is estimated as a percentage of the output of dwelling services (obtained from the input-output table), and deducted from gross output to derive value added. The data provided by the owner-occupiers are cross checked with actual rents from tax declarations, and corrected where necessary.

Output and intermediate consumption are adjusted for holding gains/losses accruing on inventories. The estimates of consumption of fixed capital are based on the perpetual inventory method.

Double deflation is used to compile the volume measures of GDP. The price indices used in deflation are: the CPI, the wholesale price index (WPI), the construction price indices, and the export and import price indices. Appropriate steps are taken to ensure that there is consistency between the valuation of market output at basic prices and the use of these indices. The base year for the constant price data is 1995. The current price series are deflated at the level of 380 products.

The 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. Trade data are deflated by applying fixed margins on the volume of traded goods.

### Expenditure Approach Procedures

The estimates of GDP by expenditure components are derived independently. In particular, independent estimates are made of household final consumption expenditure, and gross fixed capital formation.

The data on household final consumption expenditure are compiled at the six-digit level of COICOP but published with a breakdown of household final consumption expenditure into 38 purpose categories. Government final consumption expenditure is published at the one-digit COFOG level. Gross fixed capital formation is distinguished by six categories. Changes in inventories are prepared according to the analytical breakdown of products, as well as by type of the holders of inventories (producers, traders and final users), but they are published by 20 categories. The expenses of residents abroad are included in household final consumption expenditure.

### Specific Quarterly Compilation Techniques

The techniques used to compile estimates of quarterly accounts are similar to annual accounts but rely more on econometric estimation. The quarterly estimates are compiled with a breakdown by expenditure components using disaggregation techniques that extrapolate the previous year annual data using quarterly/ short-term indices for the relevant quarters. Autoregressive techniques are applied when the data are not available. The quarterly data are revised backwards when the annual national accounts data are finalized. The econometric procedures used for the revision assures that the sum of quarters is equal to the annual known values. The econometric model used for extrapolation is tested each year and modified, where necessary, to increase its accuracy.

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

GDP data cover the whole economy. Estimates of unrecorded activities are included in the national accounts implicitly as a result of using balancing procedures that generate consistent national accounts. Explicit estimates of the unrecorded activities in certain industries are made using employment data and included in the national accounts. The external trade data are adjusted to account for smuggling. However, an overall estimate of total unrecorded activities is not published.

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

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

Information about survey sampling errors is analyzed (see 0.3.2). If the errors become large, the sample is adjusted. Adjustments for nonresponse are properly imputed. Outlying observations are tracked and their effect on the overall results is limited. Post-enumeration checks are not done, but routine edit checks are made and followed up where necessary.

The NAD staff routinely review the budgetary data, international trade data, price statistics, and other secondary data sources used to compile national accounts statistics, and check the consistency of the source data with the national accounts with respect to definitions, valuation, reference periods, and classifications.

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

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

The main source data are checked with other primary/secondary sources where these are available.

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

The potential discrepancies in intermediate data are investigated and adequately addressed.

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

The supply-use framework is used to make GDP estimates by activity and expenditure components consistent. The balancing process involves the comparison of the detailed data in a supply-use framework at current and constant prices (see 3.2.1). The discrepancies are resolved at the product level. In the use-matrix the discrepancies are resolved using RAS procedures (also see 3.2.1)

### **3.5 Revision studies**

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

Although the differences in the preliminary and final data are tracked and taken into account in compiling the estimates of the subsequent periods the methods for revising the data are not documented or explained.

## **4. Serviceability**

### **4.1 Relevance**

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

The relevance of national accounts statistics is recognized in the context of EU regulations. Users' surveys are not conducted to assess the extent to which the national accounts program meets user needs, but feedback from them is obtained through various working groups/task forces on national accounts-related issues in which the NAD staff participates either officially or in an informal way (see 0.3.2). Following the implementation of *ESA 95* in 2001 several seminars were held to inform the users about the new national accounts statistics and to obtain feedback. The NAD also receives queries from official users of the data in the government ministries, BOG, and other government offices, research organizations, etc. Management is in constant contact with Eurostat and Organization for Economic Cooperation and Development (OECD), United Nations, and other international organizations to maintain the relevance of its products (also see 0.2.1).

In response mainly to Eurostat requirements and demands from some major users the NAD plans to further develop the satellite accounts for tourism, environment, and social accounting matrices on a regular basis.

### **4.2 Timeliness and periodicity**

#### *4.2.1 Timeliness follows dissemination standards*

The quarterly national accounts estimates are first released within three months after the reference quarter as prescribed under the Special Data Dissemination Standard (SDDS). The flash estimates of annual national accounts (aggregated data) are released through press release and published within three months after the reference year. The next release of the provisional annual data is within nine months after the end of the reference year, which is in line with Eurostat requirements. The data are finalized in three years. The data on regional accounts are released when they become available during this time.

#### *4.2.2 Periodicity follows dissemination standards*

The national accounts estimates are disseminated with quarterly periodicity as prescribed under the SDDS.

### **4.3 Consistency**

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

The national accounts are internally consistent. A set of consistent GDP estimates by activity and expenditure components is derived in an iterative balancing process using the supply-use framework (also see 3.2.1 and 3.4.3).

The estimates at current prices are consistent with the matching series at constant prices and the deflators. The quarterly GDP estimates add up to the annual estimates. The quarterly estimates are revised when the annual GDP data are finalized.

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

Consistent national accounts series according to *ESA 95* are available from 1995 onward. The publication of the national accounts data in major publications is accompanied by explanatory texts. The *ESA 95*-based national accounts series will be extended backward to 1988, and the main aggregates to 1980. Breaks in the series are explained to users (see 4.1.1).

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

The national accounts statistics are reconcilable with government finance statistics. The consistency of the national accounts with the balance of payments status is affected by differences in data sources and methodological frameworks. The NAD uses customs data to compile external trade aggregates, which value the transactions at the time of crossing the border, while the BOG values them at the time of payment. Another reason is the conflicting definitions used in *ESA 95* and *Balance of Payments Manual*, fifth edition (*BPM5*). For example, *ESA 95* treats an enterprise undertaking construction in a foreign country as residing in that country, while *BPM5* follows the residency rule of “staying in the country for more than a year.” In national accounts, the property income of mutual investment funds is treated as accruing to the shareholders, while *BPM5* does not make this imputation.

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

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

Although a regular schedule for revision policy and practice is being established following the recent implementation of *ESA 95* and new compilation of quarterly accounts, the analyses of revisions are not made public. The annual national accounts are released in time for use in the important *General Report on the Country's Economic Situation* that is presented to parliament at the beginning of the year. The early provisional estimates serve, among other things, to calculate the deficit/GDP ratio as required by the Maastricht agreement. The recent revision of the annual accounts in line with *ESA 95* and compilation of new quarterly accounts were widely publicized (see 2.1.1). It is expected that future major revisions will

take place with a five-yearly periodicity, in accordance with the decisions of the European Statistical System (see 0.1.1). New source data are incorporated as soon as they become available. Adequate documentation of revisions is not included in the publication of the statistical series.

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

NSSG's publications identify the preliminary data. The revised data are disseminated with the same detail as the preliminary data.

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

Although revisions to the national accounts data are explained by the NAD staff when asked by the users (also see 4.1.1), they are not described in the publication of the statistical series. Such information is useful in assessing the preliminary data, such as the main flows of data from the preliminary to the revised versions. The analysis of preliminary versus revised data is not published for major aggregates to allow assessment of the reliability of the preliminary data.

## **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)*

Although data accessibility of the national accounts has improved with the new dedicated national accounts publication it does not have charts and tables, nor analysis of current-period developments, which is an issue of concern to the users. The presentation of the national accounts statistics is clear. The data are published with various levels of detail and with time-series. The catalogue of NSSG publications includes those with national accounts data at different levels of detail. The dissemination of national accounts statistics to the EU follows a five year program agreed with the Statistical Program Committee (see 1.2.4).

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

The national accounts estimates—quarterly and annual—are disseminated regularly, through news releases, the national accounts publication—*National Accounts of Greece*, other general NSSG publications and electronically. The quarterly national accounts data at constant prices of 1995 are disseminated via press release, 70 days after the reference quarter (typically on the 10<sup>th</sup> day of June, September, December and March), and posted on the NSSG website. Flash estimates of the quarterly GDP by aggregate expenditure categories at constant prices are disseminated since November 15, 2002. Flash estimates of annual GDP are disseminated in March for the preceding reference year. Annual national accounts data with maximum detail and supply-use tables are disseminated via the *National Accounts of Greece*. Other

NSSG publications containing national accounts data include the *Statistical Yearbook of Greece*, *Monthly Statistical Bulletin*, *Concise Statistical Yearbook*. The detailed annual national accounts data on diskette are provided to the users for a fee.

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

An advance release calendar with precise release dates for the entire year is distributed to the press at the end of the previous year and also posted on the NSSG website. The calendar is available free of charge to all interested parties. There are only rare slippages in meeting the announced schedule.

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

National accounts data are released to the public through press release. Prior to this, the data are provided to Eurostat (see 1.2.2).

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

Nonconfidential data at various levels of detail are available to the users 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*

Inadequate metadata accessibility is an issue of concern to users since the current metadata do not explain data sources and statistical techniques. Information on data biases, response rates to the main surveys, linkages with other data systems is not disseminated. The current description of national accounts methodology is only in general terms. It is a summary of the main features of *ESA 95*, covering classifications, sequence of accounts, input-output framework, and valuation of transactions. Brief metadata on national accounts statistics with some information on sources and methods are also disseminated through the NSSG website. SDDS-related summary methodology has been prepared. However, such information as the biases in the data, information about response rates to the main surveys, and linkages with major data systems, such as the government finance statistics and balance of payments is not disseminated.

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

Metadata are available at two levels of detail: in summary form, the metadata are provided on the NSSG website. The maximum detail is published in the *National Accounts of Greece* and *Statistical Yearbook of Greece*. The NAD has recently drafted a comprehensive sources and methods document, which will be finalized in cooperation with Eurostat and subsequently published.

### **5.3 Assistance to users**

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

Prompt and knowledgeable service and support is available to users of national accounts statistics. Although the Head of the National Accounts Division is the contact person for national accounts statistics the information about the contact person is not publicized. The NSSG publications give the contact information for the Statistical Information and Publications Division from where further information can be obtained. The publications include details on mail, telephone, facsimile, e-mail addresses. However, the *National Accounts of Greece* does not have such information. Assistance to users is not monitored through periodic surveys of users.

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

The publications catalogue and information about other services provided by NSSG to users are available in hardcopy and on the NSSG website and updated regularly. Prices of the publications are shown.

Table 1. Data Quality Assessment Framework—Summary of Results for National Accounts Statistics

Elements	NA	Assessments				Comments
		O	LO	LNO	NO	
<b>Prerequisites of quality</b>						
0.1 Legal and institutional environment		X				A Statistical Council is envisaged in the law but it is not working. No formal user group.
0.2 Resources		X				
0.3 Quality awareness			X			
<b>1. Integrity</b>						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
<b>2. Methodological soundness</b>						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
<b>3. Accuracy and Reliability</b>						
3.1 Source data			X			The short-term data sources are lacking, in particular the data on changes in inventories. In some cases, there is reliance on old fixed ratios.
3.2 Statistical techniques			X			
3.3 Assessment and validation of source data		X				Revision studies are not explained.
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies			X			
<b>4. Serviceability</b>						
4.1 Relevance		X				Analysis of revisions are not made public.
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice			X			
<b>5. Accessibility</b>						
5.1 Data accessibility			X			The data are not accompanied by charts and tables, nor analysis of current period developments. Inadequate metadata are a concern of users. The metadata do not adequately explain data sources and statistical techniques. Contact person is not publicized.
5.2 Metadata accessibility			X			
5.3 Assistance to users			X			

Note: NA=Not Applicable; O=Practice Observed; LO=Practice Largely Observed; LNO=Practice Largely Not Observed; NO=Practice Not Observed

## I. PRICE STATISTICS (CONSUMER PRICE INDEX)

### 0. Prerequisites of quality

#### 0.1 *Legal and institutional environment*

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

There is no single law on statistics. Although Greek official statistics have a long history<sup>13</sup> the main legal document relating to the NSSG (Legislative Decree No. 3627, Official Journal No. 278/16-11-56, Volume A) was adopted in 1956. The 1956 law was followed by two laws in 1996 and 1997 that relate to statistics and confidentiality of statistics (see 0.1.2 and 0.1.3). The 1956 law places the NSSG at the center of the statistical system, which includes the Statistical Services in the Ministries, and the Statistical Services in the regions (prefectures). It also gives the NSSG exclusive responsibility to collect, process, and disseminate statistical information.

As part of the European Statistical system,<sup>14</sup> the NSSG is required to compile the Harmonized Index of Consumer Prices (HICP) in conformity with European Council Regulation (EC 2494/23-10-95) and relevant Commission Regulations (EC 1749/9-9-96 and EC 2214/20-11-96). The national CPI compiled by the NSSG is also used for readjustment of rents according to Law 2741/99 (Official Journal No. 199, Volume A).

The Annual Statistical Program of the NSSG issued by the Minister of Economy and Finance, details the NSSG's responsibility for, among other things, the CPI. The CPI component of the program outlines the tasks to be completed for compiling CPI and the time

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<sup>13</sup> The first population census was conducted in 1828. A Statistics Section was set up in the Bureau of Public Finances in 1860, which was shifted to the Ministry of National Economy in 1910. Later, the section was upgraded to the Department of Statistics. In 1925, the General Statistical Service of Greece was created in the Ministry of National Economy. During 1929 and 1930, the Monthly Statistical Bulletin, and the Statistical Yearbook of Greece were published. The Ministry of Economy and the Ministry of Finance were later merged into a single ministry—the Ministry of Economy and Finance.

<sup>14</sup> The System consists of Eurostat and the statistical offices, central banks and other official statistics-producing agencies of EU member countries (plus Iceland, Norway, and Liechtenstein), and covers almost all statistical areas. The February 1997 regulation of the EU Council defines the roles of national statistical offices and Eurostat. The regulation is based on Article 285 of the Treaty of Amsterdam, which stipulates that the EU Council "...shall adopt measures for the production of statistics where necessary for the performance of the activities of the community."

required, in person-days, to complete the tasks, as well as the dates for producing and disseminating the final products.

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

The laws of 1956 and 1996 (Law 2392/9-4-96) (Official Journal No. 60, Volume A) contain provisions on data sharing and coordination among data producing agencies. They give the NSSG the necessary legislative support to obtain the data from administrative sources and other data producing agencies. The laws of 1956 and 1996 also provide for a National Statistical Council that could play a useful role in facilitating data exchange among data producing agencies. Formal and informal agreements between the MEF (NSSG's parent body) and other data producing agencies allow the NSSG to access state registers, archives of the providers of public services, and other data sources. For example, an agreement between the (former) Ministry of Economy and the Ministry of Finance (Joint Ministerial Decision No. 12833/C-528/1966) allows the NAD to use the fiscal data submitted by the enterprises from the VAT archives. The NSSG cooperates closely with the BOG, government ministries, and other public agencies to establish data sharing agreements.

The Division of Economic and Short Term Indicator Statistics (DES), where the Greek consumer price indices are compiled, is satisfied with the level of cooperation it receives from these agencies. There is no evidence of duplication of statistical effort among the various data producing agencies. A working group made up of representatives from the MEF, the BOG, and other data producing agencies coordinates the provision of the data to, and sharing of the data with Eurostat.

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

Confidentiality of the respondents' data is protected by Article 8 of the 1996 law. The Article disallows the dissemination of individual data without the prior permission of the respondent. Articles 6 and 7 require that report forms that are used to collect the data from respondents must also state whether the information supplied may be used for fiscal purposes or in connection with military conscription. If not, the contents are considered confidential and may not be used by the government to check income tax returns or in connection with legal disputes. Following the confidentiality provisions of the EC Council regulations on community statistics and on the transmission of the data to the Statistical Office of the EU (No. 322/97 of February 1997 and No. 1588/90 of June 11, 1990) Eurostat maintains the confidentiality of the nonpublished CPI provided by the NSSG.

The Committee on Statistical Confidentiality, which implements the confidentiality provisions of the law, has put in place adequate office procedures to safeguard confidentiality of the data during data collection, processing, dissemination and storage. It has strengthened the rules to prevent the accidental destruction and improper use of the data, and unauthorized access to the data. Special aggregation rules are used to ensure that information on individual reporters is not disclosed when data are presented. In the case of enterprises, this means aggregate data based on fewer than three units is not disseminated. Access to the individual

data is restricted only to the staff who require the information in the performance of duties.

Further assurances for the confidentiality of the individual data are provided by the law on the protection of the fundamental rights and freedoms (No. 2472) that was adopted in 1997. The law implements the EC directive 95/46/EC concerning the processing and protection of individual data. According to this law, during statistical surveys, the respondents must be informed in writing of their rights and obligations with regard to the provision of the information provided by them, and they are assured that the information they provide will be used for statistical purposes only (Article 11). Violations of the law are punishable by imprisonment for a maximum of three years and a fine of €14,670.

Notwithstanding the above legal provisions, Articles 5 and 6 of the 1996 law allow access to the survey data for research purposes. Access is permitted only after concealing references to individual data, and after approval by the Committee on Statistical Confidentiality. These articles are in line with Articles 16 and 17 of the EC directive that allows access to administrative data for purposes of EU statistics and for research.

Detailed source data are accessible to the CPI staff. All workstations are password protected.

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

Articles 2 and 3 of the law of 1996 require individuals, legal entities, government agencies, bodies, and administration offices to supply any data and information for surveys that are conducted by the NSSG. Separate legal provisions/inter-ministerial protocols acknowledge NSSG's power to access administrative, even computerized, files of public offices and government agencies (see 0.1.2). The penalties for nonreporting or misreporting are sufficiently large, though legal proceedings have never been initiated against any individuals or other reporting units. The DES is satisfied with the legal and other arrangements for obtaining data for price index purposes.

**0.2 Resources**

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

Overall number of staff participating in the compilation of the CPI is adequate. The DES staff is in contact with international agencies and fully aware of international best practices in the compilation and processing of CPI. The DES has a total of 60 persons at headquarters<sup>15</sup>. Of these, 15 are working in CPI section that compiles the national CPI, the HICP and the purchasing power parities (PPPs). Of these 15, five have university degrees and two serving

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<sup>15</sup> The NSSG employs a total staff of 1,118 of which 800 belong to the Central Service and 318 to the regional offices (prefectures).

as technical support have computer qualification diplomas. Generally the staff is very well trained and highly qualified.

Additionally, there is a total of about 50 price collectors and regional staff who work in 25 cities through regional offices and collect prices and other data for all statistical programs, not only for the CPI.

Three persons from the CPI section regularly take part in international seminars and conferences and disseminate this information to the rest of the staff through regular internal meetings. Price collectors take part in yearly training seminars.

Financial resources are in general sufficient. In case of additional and unexpected needs more funding may be applied and some Eurostat funding has also been received for the compilation of the HICP. The requirements of the EU statistics have made a major claim on NSSG resources. With the CPI, these additional requirements have been met without increasing the number of staff. Financing for additional consultative outside advice is said to be available, if needed.

Computing resources are effectively used. The division provides each employer access to a workstation with local area network and internet access. Price collectors use the regional offices and send their data electronically. Besides regular computer support within the CPI section, no outside computing of the index takes place. All tasks are done within the CPI section from the computation of elementary indices through final press releases. However, the computation of the CPI is in the process of being integrated to a centralized system.

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

The DEI staff is fully occupied in the task of implementing the guidelines and recommendations of Eurostat and other EU agencies. Management fully supports these efforts. The NSSG was recently reorganized to improve accuracy and comparability of its statistical products. It also aimed to restrict undue expenses and to avoid duplication of statistical work through better coordination and central programming.

The DOR is mandated to ensure that the design of surveys is accurate, the processing errors are minimized, and the concepts and methodologies used by different NSSG divisions are consistent.

Although the financial aspects of individual statistical series are not tracked all the statistical projects, including the compilation of the CPI, are planned and budgeted in the Annual Statistical Program (also see 0.3.2).

### **0.3 Quality awareness**

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

Management's awareness of quality is evidenced by its close tracking of the timely implementation of EC regulations and other EC-wide guidelines to develop national accounts statistics. The senior NSSG staff also participates in working parties/task forces of the European Statistical System (see 0.1.1) for harmonizing statistical activities, improving the quality of adjustment techniques, sampling, etc. There is no formal NSSG-wide quality program, and comprehensive internal or independent quality reviews are not conducted, although the DOR seeks to ensure that quality issues are highlighted in each statistical program. The high response rate of the surveys is indicative of the public trust in the NSSG, but the role of the DOR could be usefully expanded to include a more comprehensive quality framework.

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

The sampling and certain nonsampling errors are tracked by the DOR. Together with the Division of Statistical Information and Publications (SID), it also establishes uniform standards for statistical publications. Annually, the implementation of the Annual Statistical Program is reviewed and published (*Statistical Projects Carried Out*). The main purpose of the exercise is to determine whether the priority projects were achieved in the context of the NSSG's overall aim of improving "the services provided to the users of statistical data."

There are no formal users' surveys to obtain feedback on issues related to the collection, processing and dissemination of statistics, but the individual NSSG divisions receive feedback from users through informal contacts (also see 4.1.1). Certain aspects of quality are monitored by the working groups for each statistical program. A high powered Statistical Council, envisaged in the law (see 0.1.1), to provide guidance on the quality of the statistical series and on strategies for improving data production, is not operational.

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

In the CPI department, the users' views from using the data on a daily basis are increasingly taken into consideration when formulating the work program. However, there is no one body covering all aspects of quality nor is there a comprehensive quality framework in place.

## **1. Integrity**

### **1.1 Professionalism**

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

The NSSG follows high standards of professionalism, which are supported by adequate legislation. The NSSG is located in the MEF, but is professionally independent. The NSSG's impartiality is the cornerstone of the 1956 law. According to the Presidential Decree of 1986 (see 0.1.1), the head of the NSSG—General Secretary—is appointed by the Prime Minister in consultation with the Minister of Economy and Finance and reports to the Minister of Economy and Finance. The minister also issues the Annual Statistical Program. Existing strong professional culture and ethics result in the independence of the NSSG. The General Secretary is responsible for ensuring professionalism in statistical activities. Decisions on professional matters are taken independently by the NSSG taking into account international best practices and, in particular, Eurostat guidelines and recommendations.

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

The CPI staff is highly competent, and its choice of source data and statistical techniques is based solely on statistical considerations, including EU regulations.

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

The NSSG seeks to prevent misinterpretation or misuse of statistics by providing explanations and materials, as necessary. Erroneous interpretations or misuse of the data are commented upon.

### **1.2 Transparency**

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

The transparency of the NSSG's policies and practices is promoted by making the rules governing the collection and dissemination of statistics widely available through the NSSG website and its information service. The website describes the main aspects of laws and decrees that form the NSSG's legal and institutional framework. The main laws relating to statistics may be obtained by the public from the SID. All statistical surveys include references to the statistical laws above and describe the main obligations of respondents and the NSSG.

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

There is no internal governmental access to the CPI data.<sup>16</sup> No one has access to the data prior to the release of the data through the CPI press release, except the Minister of National Economy and Finance is provided with a copy of the press release one hour before the release. A press conference is held at the Ministry of National Economy and Finance at 1:00 p.m. where the main information is presented either by the General Secretary of the NSSG or his appointee, or sometimes by the Minister of National Economy and Finance.

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

NSSG products are identified as being produced by the NSSG. This includes hard copies of special tables/data as well as the data provided electronically.

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

The national CPI undergoes revision with major changes only every five years. Advance notice of changes in coverage and methodology are not formally notified in advance, but at the time of the first news release. This has been considered sufficient because of the length of the revision process and regular contacts with users.

**1.3 Ethical standards**

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

Although there are no formal guidelines on staff behavior, the strong laws on confidentiality and the rules for civil servants provide a clear set of ethical standards for the staff. The requirements for ethical conduct and the consequences for breaching confidentiality are established in the law for civil servants' laws No. 2190 (1994, Official Journal No. 28,

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<sup>16</sup> As an internal quality control process, the Advisory Committee of the CPI reviews the press release. The committee is chaired by the General Director for the Statistical Surveys of the NSSG and represented by members from the Department of Economics of the University of Athens (member of the University faculty specialized in statistics), General Confederation of Labor, Ministry of Development, the Athens Chamber of Tradesmen, and the Greek Industries Association. The role of the committee is by the legislative frame, clear-cut, purely advisory to issues related to the data collection and the compilation of CPI. After the examination process of the Advisory Committee, the final CPI is signed by both the Head of the Economic and Short-Term Indicators Division and the General Director of the Statistical Surveys of the NSSG.

Volume A) and No. 2683 (1999, Official Journal No. 19, volume A), and in the laws which regulate the NSSG (see 0.1.1, 0.1.2 and 0.1.3). These documents are well known to the staff. The new staff is made aware of them in obligatory introductory seminars arranged for new employees.

## **2. Methodological Soundness**

The Greek HICP, which is required by EU and also published domestically, is compiled in line with EU regulations and best practices outlined in *The Compendium of HICP, reference documents (2/2001 B/5)*. The HICP source data and particularly the price collection mostly coincide with the national CPI. Only the latter is assessed in the present ROSC, but differences with the HICP are highlighted. The main differences between the two are base year, coverage, source data for the weights, and the frequency of weight updates. Coverage differences are slight.

### **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 employed in the CPI are in line with the requirements of the EU regulations and the guidance in *Consumer Price Indices, an International Labour Organization (ILO) Manual* (1989). The concepts and definitions of the national CPI as well as the HICP follow the guidelines and recommendations in defining goods and services as well as the prices collected.

The scope of the CPI differs with respect to weights and corresponding price collection from the *ESA 95* household expenditure concept by excluding imputed expenditures, in particular imputed rent and production for own account. Used durable goods such as used cars are excluded and net weights are not used for these shares. Furthermore, for some services the recording of prices may be different from the time of actual delivery. For example, public utility rates are measured only when rate changes occur. In these deviations from the usual practice, the NSSG practice is, however, in agreement with specific EU regulations and made public in various publications.

### **2.2 Scope**

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

The scope is broadly consistent with international standards and covers the expenditures of all residents, except persons in institutions, and of tourists. The inclusion of rural households was achieved in the latest revision.

Excluded from the scope of the CPI are owner occupied housing, own-account production of goods and services for own final consumption, used durable goods, and illegally sold goods and services as well as gambling. For the HICP, which covers all consumption expenditures taking place on the economic territory of Greece and includes expenditures by foreign visitors and expenditures by individuals living in institutions, national accounts data are used to cover these as well.

### **2.3 Classification/sectorization**

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

ESA 95 is used to classify institutional units and transactions. COICOP/HICP Rev. Dec. 99 is followed in the classification of household expenditure on individual products.

### **2.4 Basis for recording**

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

Consumer expenditure in the HBS used for the weights and in the CPI basket of goods and services are valued at market prices, including VAT less subsidies.

Where required, product specifications are provided in detail for the varieties so that price-determining characteristics for transactions at market prices can be defined (for example, mineral water with gas, plastic bottle, half liter).

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

All market prices of goods and services are recorded in the period goods and services are purchased. Collected prices correspond with prices actually paid, excluding the costs of credit card and consumer loan interest. Prices for some goods, such as electricity, telephone, and water, where prices are determined by local or central administration are updated only when price changes have occurred. These practices are explained in the publication *Revised Consumer Price Index (Base year 1999=100,0)*.

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

There are no such procedures since used durable consumer goods are not in the scope of the index. Gross expenditure weights from the HBS are used.

### **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 CPI weights are based on the results of the HBS, which is conducted by the NSSG on a sample of households from all over the country. The latest 1998/1999 HBS used the 1991 Population Census data as a sampling frame. The same census is also used for the geographical weight distribution of the CPI. A 2 per thousand sample consisting of 6,258 households was chosen from the census data by two-stage stratified sampling. The sample is determined separately for 13 different regions. At the first stage a sample of specific areas within each region is selected, and then a systematic household sample is drawn. The HBS is conducted every five years and is comprehensive, although excluding tourists and persons in institutions. Data from the 2001 census has just been finalized and will be used for the next HBS scheduled for period 2003/2004.

Weights for the HICP are based on the latest provisional National Accounts household consumption data available, and updated every year in accordance with the EU regulations (EC 2454/97). For the national CPI, weights are revised every five years when more comprehensive data from the latest HBS become available.

For *price collection*, the sample of outlets in each of the 25 cities is derived from an establishment list compiled by the retail sales volume index using VAT register data from the MEF. Outlets are selected on judgmental criteria of representativeness and sales volume. Items (goods and services) are chosen by expenditure share criteria from the HBS data, and varieties of each item from the outlets are chosen together with the help of outlets' personnel to ensure the most representative varieties for each item. Although no random sampling is used in the price selection process, detailed instructions from the central office are used. The number of prices collected from some 4,500 outlets (excluding rental apartments) for 725 items is around 50,000, and seems appropriate.

Survey prices are recorded at the visit of the price collectors within a defined period of the month or on a fixed day of the week. The prices for fresh fruits and vegetables, fresh fish, heating oil, and petrol are collected weekly. Prices for rents are collected twice a year<sup>17</sup>. For some public utility services (e.g., telephone, electricity, water supply rates, etc.) mean weighted rate changes for the whole country are calculated satisfying the HICP standards of EU regulation.

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<sup>17</sup> For rents there is a separate sample of 1,300 rental apartments of which a part is visited monthly on rotating basis.

The accuracy and efficiency of the overall index might benefit from further use of statistical methods of sample selection and allocation at different levels. The recent 20 percent increase in number of items (from 600 to 725) and 40 percent increase in the number of outlets (from 3,200 to 4,500) to better cover some expenditure groups, and the extension in geographical coverage to the whole of Greece are significant improvements and the current overall quality of source data is good.

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

The HBS is coordinated with national accounts and the CPI, so that it approximates the definitions, scope, classifications, valuation, and time of recording. In particular, the survey is representative of the entire population of households resident in Greece that are not institutionalized.

Data are collected on consumer expenditures at purchasers' prices and are properly aligned in time with the recall period of the survey. The scope of covered transactions comprises goods and services obtained by households in exchange for money.

The CPI price sample is representative of monetary transactions in all geographical areas for the goods and services used by households for final consumption. Owner occupied housing is excluded from the CPI.

*3.1.3 Source data are timely*

The HBS is conducted every five years and determines the time of the major CPI revisions and the weight updates. Yearly updates for the HICP weights are made on provisional national account data. Conducting the HBS more frequently, even with a smaller sample would benefit all the national CPI, HICP, and NA. The current index with reference year 1999 uses the data from 1998/1999 HBS, and was first published for January 2001.

The CPI price sample is timely and the processing lag short enough to permit the release of the index within 10 days of the end of the reference month, exceeding SDDS requirements.

**3.2 Statistical techniques**

*3.2.1 Data compilation employs sound statistical techniques*

CPI data compilation employs sound statistical techniques and broadly complies with international best practices.

The national average expenditure weights for goods and services are measured at least at the COICOP four-digit product group level. First, the local sub-indices of each specific item for each price collection city are compiled using geometric mean. Then population weights from the 1991 Population Census data are used to aggregate product indices over all price

collection cities as weighted averages. Finally, the national CPI is calculated using Laspeyres formula with the base year expenditure weights. The source data definitions, scope, and classifications of the HBS and CPI are broadly in accordance with *ESA 95*.

Since 1994, geometric means instead of arithmetic means have been used to calculate the elementary series for the CPI. A monthly overlap (December 2000 being the latest) is used to recalculate and link the old index to the new index. The new index (CPI 1999=100,0) is calculated using new weights and item sample from the beginning of 2001. For the years 1999 and 2000, the recalculation is based on the old weights and old sample of the CPI 1994=100,0 index.

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

For missing prices, the previous month's price is repeated to show no price change. If the price of a variety is not available for more than two months, the variety is changed and the base price adjusted based on targeted mean imputation, implicitly assuming that prior to the replacement the price of the new variety followed the movement of the rest of the group it belongs to. The same imputation is applied if a variety becomes unavailable for the reporting unit, and a new item replaces the old one. If the quality of an existing variety changes, expert judgment is used to quantify the pure price change.<sup>18</sup> The base year price for the changed variety is adjusted to account for the effect of the quality change.

Although generally in line with EU requirements, further and more prompt use of statistical methods to respond to quality changes could add to the accuracy of the index. This could include, on experimental basis, for example, adding common quality variables in connection with the price collection with some products to be used in the quality adjustment process. For the time being, loose item specifications are used. The price collectors are asked to select the most sold variety within the general product description in each particular shop and are obliged to give a detailed description of the characteristics composing the quality (brand, model, size, the package, etc). In case a sample product is no longer available, the successor is selected judgmentally in the same outlet. The price collectors select the most sold product within the same quality class as the disappeared product.

As with quality adjustments, the advantages of using sampling techniques in choosing enterprises, products and varieties could be investigated. Sampling may not be feasible for all selections, but, for example, choosing only the most representative outlets and varieties may not correctly capture the overall price movement if prices relative to those in other stores and of other varieties change.

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<sup>18</sup> Price collectors decide together with the outlet staff what is the quality effect of the price change. The decisions are finally approved at the central office.

For seasonal products of fresh fruit and vegetable, weights are changed monthly within their subgroups to reflect their occurrence in the market. For other seasonal products, such as clothing and footwear, cinema tickets, and heating oil, their last observed price is repeated for the months they are not available.

Regarding imputation for missing variety prices, repeating the last price is likely to be inferior to moving the last observed price by the movement of the item group. The quantitative effect of repeating the last price is to cause occasional short-term discontinuities in the item index when and if a price is found for the variety in a later month. Since, however, the last price is repeated for only two months before a replacement is inserted, these discontinuities should be small. The one exception is when no substitute product is found for one that has disappeared. In this case any bias from imputing no change during the period the discontinued item was missing will remain in the index.

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

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

Standard errors are available from the surveys used for the CPI weights, HBS, and population census. With generally very high response rates, nonresponse has not been a problem. The DOR regularly tries to assess other sources of nonsampling errors, although there is no continuous collection of nonsampling error indicators for the CPI.

Unusual changes in prices surveys are validated and confirmed with respondents. Price data are thoroughly checked and price collectors are instructed to report any unusual change to the central service senior staff. Explicit quantitative or qualitative criteria to guide or to automate the validation process of the CPI data have not been introduced. Validation of the weight data is done at the time of the revisions. A special ad hoc advisory committee (consisting of representatives from MEF, Ministry of Development, the BOG, Greek Industrial Association, Greek General Confederation of Labour, and Public Officials Union) assesses the consistency of the CPI and the HBS data. It also reviews and approves the latest revision of the consumer price index, i.e. the selection and classification of items, the calculation of weights, the computation of the index, etc. The accuracy of administrative data is discussed with corresponding agencies.

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

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

Unusual movements of the CPI are compared with comparable WPI. See also 3.4.2.

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

The price data for the CPI are first reviewed by regional Advisory Committees (chaired by the head of the local office and represented by members from local confederations of labor and local Chambers of Commerce and Industry) meeting each month. The Committees' role is to safeguard the quality and accuracy of the data. Price collectors are required to validate their own data for inconsistencies. During the calculation of the elementary indices, as well as during the further aggregation process, lists of suspiciously large variations and their effects on more aggregated sub-indices are validated against the source. This is done manually with the help from trained NSSG regional staff who visit the outlets and register the prices into special price collection forms. Explanations or confirmations, if needed, are sought either from the central or regional offices or by common knowledge of the markets. These findings are presented to the Advisory Committee of the CPI (chaired by the General Director for the Statistical Surveys and represented by members from the Department of Economics of the University of Athens, General Confederation of Labor, Ministry of Development, the Athens Chamber of Tradesmen, and Greek Industries Association), coming into session each month before the CPI press release for examination. The final CPI is signed by the Minister of Economy and Finance.

The CPI staff also regularly participates in Eurostat meetings on methodology, best practices, and review of implementation of concepts and definitions, as already has been mentioned.

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

The overall CPI for Greece is calculated product by product from regional price data and there are no inconsistencies in aggregation procedure.

## **3.5 Revision studies**

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

There are no revisions to the monthly CPI following its release. The weights, goods and services, and methods used in the CPI, however, are revised and updated every five years.

A methodological manual is usually published after the revision. With the first press release of the new index, a summary of methodological changes is also published.

## **4. Serviceability**

### **4.1 Relevance**

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

Users are broadly satisfied with the CPI, as indicated by the user survey. Some user groups are represented in regional and overall Advisory Committees of the CPI as well as in the Committee for Revision of the CPI. The NSSG also maintains good relationships and works closely with the data providers. Although the Advisory Committees and conversations with data providers are good means to get feedback, they do not permit dialogue with the users to regularly assess whether the CPI program meets the needs of all its users. As a regular tool for all statistical programs, NSSG could introduce users' surveys or seminars to periodically review the concerns and needs of data users.

High priority is given to addressing the concerns of international users, and the NSSG price statistics staff regularly participate in meetings and seminars organized by Eurostat and other organizations. English versions of methodological manuals and metadata are provided.

### **4.2 Timeliness and periodicity**

#### *4.2.1 Timeliness follows dissemination standards*

The CPI data are released within 10 days of the end of the reference month, exceeding the SDDS requirement.<sup>19</sup>

#### *4.2.2 Periodicity follows dissemination standards*

Periodicity of the monthly CPI is in accordance with the SDDS.

### **4.3 Consistency**

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

There are no discrepancies in the CPI aggregation.

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<sup>19</sup> With the exception of January index disseminated in the third week of February. This is due to the weight revision of the HICP for which the latest provisional National accounts data is used.

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

Data series are consistent over time between the five-year revisions. The old index with old weight is directly linked to the revised index using the relevant month's index point. The linked series is referenced to the new base year, causing a revision in the level, but not rates of change of historical data.

At the time of the latest revision, the scope of the CPI was broadened to include also nonurban households. These and other changes are explained in methodological notes.

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

Following *ESA 95* and other EU regulations, CPI data are broadly in line with national accounts deflators of household consumption. Although excluding some national accounts consumption categories such as owner occupied housing, the detailed CPIs are consistent with the NA deflators and are used to obtain constant prices estimates.

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

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

The policy is not to revise the monthly CPI data. The five-year schedule of comprehensive revision of weights and updates in the sample of goods and services is connected with the change of the base year.

The yearly changes in the HICP weights follow a regular, well-established, and transparent schedule required by Eurostat.

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

There are no preliminary estimates; published data are final.

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

The latest revision is documented in *Revised Consumer Price Index*. The main changes made in the revision are also published in the *Statistical Yearbook of Greece* and on the NSSG website. Descriptive analysis of revisions is made public in the form of comparative weight schemes and lists of new and disappearing goods in the CPI.

Analyses of quantitative impact resulting from the revision of weights are not done.

## **5. Accessibility**

### **5.1 Data accessibility**

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

CPI data are published in a generally clear manner. The data are presented through monthly press releases for the 12 major expenditure groups of COICOP with an overall index including charts for monthly and annual changes by main category. The main group level effects for monthly and 12-month changes are also analyzed and presented in tables. The English version of the press release is shorter, but provides the same information in charts and tables.

Detailed data above the main group level are published also on the NSSG website and in the Monthly Statistical Bulletin.

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

A press conference is held at the MEF at 1:00 p.m. according to the advance schedule. The main information is presented by either the NSSG Secretary General or his appointee, or sometimes by the Minister of Economy and Finance. Data are transmitted simultaneously by mail, electronic mail, and fax to all interested parties as in the press release. More detailed breakdowns of the data on the NSSG website are updated during the same day, and for most requested information an automated telephone service is also available. A printed publication “Monthly Statistical Bulletin” about two months later also provides more detailed information along with various other monthly statistics.

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

A release calendar for the next year is published on the NSSG website and on a published release calendar together with other publication dates.

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

Data are simultaneously available by a special CPI phone, pickup, mail or e-mail to all interested users. Press releases and more detailed breakdowns of data on the NSSG website are updated with as short lag as possible—within the same day. All users, including other divisions of the NSSG get the data at the same time as the public.

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

Unpublished, but nonconfidential special tabulations are made available upon request for a nominal fee. Requests for such tabulations can be made by phone or by fax or through the NSSG website.

## **5.2 Metadata accessibility**

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

Documentation on concepts, scope and classification is published in the NSSG website and in more detail in *Revised Consumer Price Index*. Information on differences with the HICP and country specific treatment with some goods and services are also included.

There is no systematic information about possible biases or response rates of the survey data used for the weights. The definitional and conceptual differences are published and referred to in the *Revised Consumer Price Index* in Greek and English.

The SDDS summary methodology is updated as necessary.

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

Summary documentation is published in the NSSG website in Greek and English and in more detail in *Revised Consumer Price Index*.

## **5.3 Assistance to users**

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

Contact numbers and e-mail addresses are available on the NSSG website, but not in the press release.<sup>20</sup> Monthly bulletin and other combined publications list general contact information.

The NSSG publication policy should be revised to add contact persons for each field to all releases.

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

Catalogue of publications including prices are available and updated on a publication. All products are also described on the website. The prices for special tabulations are nominal but not publicly disclosed.

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<sup>20</sup> After completion of the mission visit, the authorities have also provided contact information in the monthly press release of CPI.

Table 2. Data Quality Assessment Framework—Summary of Results for Consumer Price Index  
(Compiling Agency: National Statistical Service of Greece)

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	
<b>0. Pre-requisites of quality</b>						
0.1 Legal and institutional environment		X				No one body covering the quality of statistics or comprehensive quality framework is in place. No routine monitoring of users' concerns.
0.2 Resources		X				
0.3 Quality awareness			X			
<b>1. Integrity</b>						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
<b>2. Methodological soundness</b>						
2.1 Concepts and definitions		X				Owner occupied housing is excluded.
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
<b>3. Accuracy and reliability</b>						
3.1 Source data		X				Sample selection and/of quality adjustments methods may not correctly reflect reality of the market as a whole.
3.2 Statistical techniques			X			
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
<b>4. Serviceability</b>						
4.1 Relevance		X				
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice		X				
<b>5. Accessibility</b>						
5.1 Data accessibility		X				No specified contact persons identified in statistical releases.
5.2 Metadata accessibility		X				
5.3 Assistance to users			X			

## II. PRICE STATISTICS (WHOLESALE PRICE INDEX)

### 0. Prerequisites of quality

#### 0.1 *Legal and institutional environment*

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

There is no single law on statistics. Although Greek official statistics have a long history<sup>21</sup> the main legal document relating to the NSSG (Legislative Decree No. 3627, Official Journal No. 278/16-11-56, Volume A) was adopted in 1956. The 1956 law was followed by two laws in 1996 and 1997 that relate to statistics and confidentiality of statistics (see 0.1.2 and 0.1.3). The 1956 law places the NSSG at the center of the statistical system, which includes the Statistical Services in the ministries, and the Statistical Services in the regions (prefectures). It also gives the NSSG exclusive responsibility to collect, process, and disseminate statistical information.

As part of the European Statistical system,<sup>22</sup> the NSSG is required to compile and provide the European Commission (Eurostat) with certain output price indicators in compliance with the European Council regulation of Short Term Statistics (STS) EC 1165/98.<sup>23</sup> Commission regulation 588/2001 defines the concepts and compilation more closely and other regulations focus on the coverage and dissemination of data to the commission. The responsibility for NSSG comes through general legislation and the Annual Statistical Program of the NSSG details the task of compiling and disseminating the WPI monthly at certain dates.

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<sup>21</sup> The first population census was conducted in 1828. A Statistics Section was set up in the Bureau of Public Finances in 1860, which was shifted to the Ministry of National Economy in 1910. Later, the section was upgraded to the Department of Statistics. In 1925, the General Statistical Service of Greece was created in the Ministry of National Economy. During 1929 and 1930, the Monthly Statistical Bulletin, and the Statistical Yearbook of Greece were published. The Ministry of Economy and the Ministry of Finance were later merged into a single ministry—the Ministry of Economy and Finance.

<sup>22</sup> The System consists of Eurostat and the statistical offices, central banks, and other official statistics-producing agencies of EU member countries (plus Iceland, Norway, and Liechtenstein), and covers almost all statistical areas. The February 1997 regulation of the EU Council defines the roles of national statistical offices and Eurostat. The regulation is based on Article 285 of the Treaty of Amsterdam, which stipulates that the EU Council "...shall adopt measures for the production of statistics where necessary for the performance of the activities of the Community."

<sup>23</sup> NSSG calculated and disseminates to Eurostat certain producer price indices. These indices mostly coincide with the wholesale price indices assessed here.

The Annual Statistical Program of the NSSG, issued by the Minister of Economy and Finance, details the NSSG's responsibility for, among other things, the WPI. The WPI component of the program outlines the tasks to be undertaken for compiling CPI and the time required, in days, to complete the tasks, as well as the dates for producing and disseminating the final products.

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

The laws of 1956 and 1996 (Law 2392/9-4-96) (Official Journal No. 60, Volume A) contain provisions on data sharing and coordination among data producing agencies. They give the NSSG the necessary legislative support to obtain the data from administrative sources and other data producing agencies. The laws of 1956 and 1996 also provide for a National Statistical Council that it could play a useful role in facilitating data exchange among data producing agencies. Formal and informal agreements between the MEF (NSSG's parent body) and other data producing agencies allow the NSSG to access state registers, archives of the providers of public services and other data sources. For example, an agreement between the (former) Ministry of Economy and the Ministry of Finance (Joint Ministerial Decision No. 12833/C-528/1996) allows the NAD to use the fiscal data submitted by the enterprises from the VAT archives. The NSSG cooperates closely with the BOG, government ministries, and other public agencies to establish data sharing agreements.

The Division of Economic and Short Term Indicators (DES), where the Greek wholesale price indices are compiled, is satisfied with the level of cooperation it receives from these agencies. There is no evidence of duplication of statistical effort among the various data producing agencies. A working group made up of representatives from the MEF, the BOG, and other data producing agencies coordinates the provision of the data to, and sharing of the data with Eurostat.

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

Confidentiality of the respondents' data is protected by Article 8 of the 1996 law. The Article disallows the dissemination of individual data without the prior permission of the respondent. Articles 6 and 7 require that report forms that are used to collect the data from respondents must also state whether the information supplied may be used for fiscal purposes or in connection with military conscription. If not, the contents are considered confidential and may not be used by the government to check income tax returns or in connection with legal disputes. Following the confidentiality provisions of the EC Council regulations on community statistics and on the transmission of the data to the Statistical Office of the EU (No. 322/97 of February 1997 and No. 1588/90 of June 11, 1990) Eurostat maintains the confidentiality of the nonpublished data provided by the NSSG.

The Committee on Statistical Confidentiality, which implements the confidentiality provisions of the law, has put in place adequate office procedures to safeguard confidentiality of the data during data collection, processing, dissemination, and storage. It has strengthened

the rules to prevent the accidental destruction and improper use of the data, and unauthorized access to the data. Special aggregation rules are used to ensure that information on individual reporter is not disclosed when data are presented. In the case of enterprises, this means that the aggregate data based on fewer than three units is not disseminated. Access to the individual data is restricted only to the staff who require the information in the performance of duties.

Further assurances for the confidentiality of the individual data are provided by the law on the protection of the fundamental rights and freedoms (No. 2472) that was adopted in 1997. The law implements the EC directive 95/46/EC concerning the processing and protection of individual data. According to this law, during statistical surveys, the respondents must be informed in writing of their rights and obligations with regard to the provision of the information provided by them, and they are assured that the information they provide will be used for statistical purposes only (Article 11). Violations of the law are punishable by imprisonment for a maximum of three years and a fine of €14,670.

Notwithstanding the above legal provisions, Articles 5 and 6 of the 1996 law allow access to the survey data for research purposes. Access is permitted only after concealing references to individual data, and after approval by the Committee on Statistical Confidentiality. These articles are in line with Articles 16 and 17 of the EC directive that allows access to administrative data for purposes of EU statistics and for research.

Detailed source data are accessible to the WPI staff. All workstations are password protected.

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

Articles 2 and 3 of the law of 1996 require individuals, legal entities, government agencies, bodies, and administration offices to supply any data and information for surveys that are conducted by the NSSG. Separate legal provisions/inter-ministerial protocols acknowledge NSSG's power to access administrative, even computerized, files of public offices and government agencies (see 0.1.2). The penalties for nonreporting or misreporting are sufficiently large, though legal action has not been taken against any individuals or other reporting unit, up to now. The DES is satisfied with the legal and other arrangements for obtaining data for price index purposes.

## **0.2 Resources**

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

Overall number of staff participating in the compilation of the WPI is sufficient. The DEI has a total of 60 persons at headquarters<sup>24</sup>. Of these, 12 are working on the wholesale price and special indices section compiling the WPI. Four of them have university degrees and seven work on the collection of prices from the greater Athens area among their other tasks. WPI staff takes part in occasional seminars provided by the NSSG and price collectors take part in yearly training seminars. Generally the staff is well trained and highly qualified.

Additionally, a total of 45 price collectors from the regional staff are involved, working in 41 regional offices collecting prices as well as other data for all statistical programs, not only for the WPI.

Financial resources are in general sufficient. In case of additional and unexpected needs, more resources may be applied. The requirements of the EU statistics have made a major claim on NSSG resources. With the WPI, these additional requirements have been met without increasing the number of staff. Financing for additional consultative outside advice may also be applied, if needed.

Computer resources for the personnel working with the WPI are adequate. The division provides each employee access to a workstation with local area network and internet access. Price collectors use the regional offices and send their data either electronically or by regular mail. Final applications for the WPI in the new integrated computer system were introduced in 2002. Unlike the CPI, the WPI is already integrated with the new system. Data entry takes place at the responsible division together with actual calculation via a Java application provided by a contractor to the Division of Informatics. The system, still being implemented, integrates all data and metadata aiming both at reducing and upgrading the manual tasks of the WPI staff.

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

The DEI staff is fully occupied in the task of implementing the guidelines and recommendations of Eurostat and other EU agencies. Management fully supports these efforts. The NSSG was recently reorganized to improve accuracy and comparability of its statistical products. It also aimed to restrict undue expenses and to avoid duplication of statistical work through better coordination and central programming.

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<sup>24</sup> The NSSG employs a total staff of 1,118 of which 800 belong to the central service and 318 to the regional offices (prefectures).

The DOR is mandated to ensure that the design of surveys is accurate, the processing errors are minimized, and the concepts and methodologies used by different NSSG divisions are consistent.

Although the financial aspects of individual statistical series are not tracked all the statistical projects, including the compilation of WPI, are planned and budgeted in the Annual Statistical Program (also see 0.3.2).

### **0.3 *Quality awareness***

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

Management's awareness of quality is evidenced by its close tracking of the timely implementation of EC regulations and other EC-wide guidelines to develop national accounts statistics. The senior NSSG staff also participates in working parties/task forces of the European Statistical System (see 0.1.1) for harmonizing statistical activities, improving the quality of adjustment techniques, sampling, etc. There is no formal NSSG-wide quality program, and comprehensive internal or independent quality reviews are not conducted, although the DOR seeks to ensure that quality issues are highlighted in each statistical program. The high response rate of the surveys is indicative of the public trust in the NSSG, however the role of the DOR could be usefully expanded to include a more comprehensive quality framework.

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

The sampling and certain nonsampling errors are tracked by the DOR. Together with the Division of Statistical Information and Publications (DSI) it also establishes uniform standards for statistical publications. Annually, the implementation of the Annual Statistical Program is reviewed and published (*Statistical Projects Carried Out*). The main purpose of the exercise is to determine whether the priority projects were achieved in the context of the NSSG's overall aim of improving "the services provided to the users of statistical data."

There are no formal users' surveys to obtain feedback on issues related to the collection, processing, and dissemination of statistics, but the individual NSSG divisions receive feedback from users through informal contacts (also see 4.1.1). Certain aspects of quality are monitored by the working groups for each statistical program. A high powered Statistical Council, envisaged in the law (see 0.1.1), to provide guidance on the quality of the statistical series and on strategies for improving data production is not operational.

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

Although the improvement of data quality is the focus of the NSSG's future work programs the users' views are seldom taken into consideration in formulating the programs. There is no

one body covering all aspects of quality nor is there a comprehensive quality framework in place.

## **1. Integrity**

### **1.1 Professionalism**

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

The NSSG follows high standards of professionalism, which are supported by adequate legislation. The NSSG is located in the MEF but is professionally independent. The NSSG's impartiality is the cornerstone of the 1956 law. According to the Presidential Decree of 1986 (see 0.1.1) the head of the NSSG—General Secretary—is appointed by the Prime Minister in consultation with the Minister of Economy and Finance and reports to the Minister of Economy and Finance. The minister also issues the Annual Statistical Program. However, this does not affect the professional independence of the NSSG. The General Secretary is responsible for ensuring professionalism in statistical activities. Decisions on professional matters are taken independently by the NSSG taking into account international best practices and, in particular, Eurostat guidelines and recommendations.

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

The WPI staff is highly competent, and its choice of source data and statistical techniques is based solely on statistical considerations, including EU regulations.

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

The NSSG seeks to prevent misinterpretation or misuse of statistics by providing explanations and materials, as necessary. Erroneous interpretations or misuse of the data are commented upon.

## **1.2 Transparency**

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

The transparency of the NSSG's policies and practices is promoted by making the rules governing the collection and dissemination of statistics widely available through the NSSG website and its information service. The website describes the main aspects of laws and decrees that form the NSSG's legal and institutional framework. The main laws relating to statistics may be obtained by the public from the SID. All statistical surveys include references to the statistical laws above and describe the main obligations of respondents and the NSSG.

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

There is no internal governmental access to statistical data prior to their release. The producer price index (PPI) data are sent to Eurostat after the WPI has been published.

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

NSSG products are identified as being produced by the NSSG. This includes hard copies of special tables/data as well as the data provided electronically.

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

The WPI undergoes revisions only every five years. Advance notice of changes in coverage and methodology are not formally indicated in advance but only at the time of the new release. Because of the length of the revision process and regular contacts with the users this has been considered sufficient.

**1.3 Ethical standards**

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

Although there are no formal guidelines on staff behavior, the strong laws on confidentiality and the rules for civil servants provide a clear set of ethical standards for the staff. The requirements for ethical conduct and the consequences for breaching confidentiality are established in the law for civil servants' laws No. 2190 (1994, Official Journal No. 28, Volume A) and No. 2683 (1999, Official Journal No. 19, Volume A), and in the laws which regulate the NSSG (see 0.1.1, 0.1.2 and 0.1.3). These documents are well known to the staff. The new staff is made aware of them in obligatory introductory seminars arranged for new employees.

**2. Methodological Soundness**

Price indices for primary and intermediate goods have been published since 1963 with the base year of 1961. The coverage, definitions, and compilation processes have developed into what now are a set of Wholesale Price Indices: indices for domestic primary and industrial goods for domestic use; index of primary and industrial goods for export; and index of goods of foreign origin. Users are accustomed to the indices and within its scope the set of indices is consistent, differences from a standard producer price index (PPI) can be found mainly in the aggregation used. During the latest revision the requirements of European Council regulation for short term statistics and its additions for methodological unity were largely implemented and recommendations of *Eurostat Manual of Business Statistics* of 1998 (Section 3.0) generally followed. Requirements and recommendations include common product and industry classifications, price concepts, and calculation of the indices.

## **2.1 Concepts and definitions**

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

The WPI is an output price index generally referring to market output of the goods producing sector. The concepts and definitions for valuation and time of recording employed in the WPI fit within the requirements of the *ESA 95* (see 2.4) and broadly follow internationally accepted good practices. Since the weights of the WPI are based on sales value, changes in inventories, and own-account production of goods for own final consumption and capital formation are not included. The WPI thus is a PPI, as neither its weighting nor its valuation principles correspond to the sales of the distributive industries, as its name would seem to imply.

## **2.2 Scope**

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

The WPI covers agriculture, core mining, manufacturing, and energy generating activities (NACE Rev. 1. groups A-E). It excludes industries for weapons and ammunition, ship and aircraft building, all services, and illegal sales to willing buyers. A separate cost index is provided for construction activities. These omissions are common for PPIs and allowed by the EU.

## **2.3 Classification/sectorization**

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

Classification of transactions and establishment units follows the *ESA 95*.

Establishments are classified by NACE and the European CPA and List of Products of the European Communities (PRODCOM) classifications are used to classify products.

## **2.4 Basis for recording**

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

Weights and prices are valued at sales prices (ex-factory selling prices), excluding VAT, but including duties and taxes on goods as required by the European Commission regulation on Short Term Statistics (EC 586/2001).

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

Sales data used for weighting are recorded at the time of sale. Price data for products refer to the time of the transaction (or orders booked during the month, according to the *Eurostat Manual of Business Statistics*). For most products prices are recorded on fifteenth of each month, but for fuels, average prices of each month are used. For more complex products, the timing of the recording is done as close to the fifteenth as possible.

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

The Greek WPI is weighted on a gross basis. No stage of processing indices are produced, and thus no grossing or netting is done.

### **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 NSSG combines several surveys and census data for the weights of the WPI. For manufacturing activities an annual survey on production and sales of manufacturing products (PRODCOM) and an annual industrial survey are the main sources. The sales value data from the PRODCOM survey, as required by the EC 3924/91 regulation covers in most cases up to 90 percent of sales value for each relevant NACE four-digit group and all establishments employing over 10 persons.<sup>25</sup>

Establishments register for the PRODCOM survey is compiled from the business register supplemented by a comprehensive list based on VAT records received from the MEF. The WPI uses the results of the PRODCOM survey. For the purposes of both the PRODCOM survey and the WPI, mainly establishments employing over 10 persons are used.<sup>26</sup>

For agricultural and fishing activities the annual agricultural statistical survey, the monthly sea fishery survey and the quarterly survey on aquaculture production are used. Weights used

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<sup>25</sup> The PRODCOM survey is also a business census for the larger establishments. It includes all establishments employing over 10 persons and collects data on production quantity, sales quantity, and sales value.

<sup>26</sup> In some cases, smaller establishments are included in the PRODCOM survey to reach the desired 90 percent share of total output and 70 percent output value for the WPI price collection at NACE 4-digit industry level.

for the WPI are production quantity data valued at base year market prices. For mining and quarrying, results from the annual survey on mines are used.

Price survey collects a monthly sample of over 4,000 prices from 1,750 enterprises. Selection of products and establishments is made so that all sales accounting for up to 70 percent of total sales value of each relevant industry at the NACE four-digit level are covered. This cut-off sample is based only on the sales value and not geographical location. No further random sample of small enterprises is made, but chosen products and establishments are considered to represent the rest of the production. The PRODCOM survey also excludes small enterprises and household unincorporated enterprises.

Since no new products are added to the index between weight revisions, the structural change in some rapidly changing industries may go unnoticed and overall accuracy may be at risk. New goods could be added to the index between weight revisions, for example, when they reach certain market share.

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

The source data used for the weights of the WPI reasonably approximate the criteria for definition, scope, classification, valuation, and timing requirements of this indicator.

### *3.1.3 Source data are timely*

The final results of the PRODCOM survey are ready 11 months after the end of the reference year, but the process to derive the WPI weight data took up to two years during the latest revision. Further, it has taken three to four years after the reference year to have all the source data for the weights available. This results in finalizing the weight revision more than five years after the reference year. The first release of the new index after the latest WPI revision, based on data from 1995, was in August 2002.

The price data are sufficiently timely to release the index within the SDDS timeliness requirements of 30 days after the reference period. This has been achieved lately by speeding up the collection and cutting the processing lag. However, results from the source surveys should become available earlier for finalizing the weight revisions closer to the reference year.

## **3.2 Statistical techniques**

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

Wholesale price indices are calculated at the NACE four-digit industry level and aggregated to all higher levels of groups, divisions, sectors, and overall WPI. Product indices are calculated at six-digit CPA level. The Laspeyres index formula is used for all levels of aggregation with 1995 weights and base prices.

Elementary indices are calculated as an arithmetic average of variety price relatives. For the base year, an average price of the base year prices is used for each variety.

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

For missing prices the previous month's price is carried forward to show no price change. If the price of a variety is not available for a month, the variety is changed and the base price adjusted based on targeted mean imputation, implicitly assuming that since the replacement price of the new variety follows the movement of the rest of the group it belongs to. The same imputation is applied if a variety becomes unrepresentative for the reporting unit, and a new substituting item replaces the old one. If quality of an existing variety changes, expert judgment is used to quantify the pure price change.<sup>27</sup> The base year price for the changed variety is adjusted to count out the effect of the quality change.

Although generally in line with EU requirements, further and more prompts use of statistical methods to respond to quality changes could add to the accuracy of the index. This could include, on experimental basis if resources permit, e.g., adding quality variables in connection with the price collection with some products. Also, possible advantages of using sampling techniques in choosing enterprises, products, and varieties could be investigated. Sampling may not be feasible for all selections, but, for example, choosing only the most representative outlets and varieties may not correctly capture the overall price movement if prices relative to those in other stores and of other varieties change.

Regarding imputation for missing variety prices, repeating the last price is likely to be inferior to moving the last observed price by the movement of the item group. The quantitative effect of repeating the last price is to cause occasional short-term discontinuities in the item index when and if a price is found for the variety in a later month. Since, however, the last price is repeated for only two months before inserting a replacement, these discontinuities should be small. (The one exception is when no substitute product is found for one that has disappeared. In this case any bias from imputing no change during the period the discontinued item was missing will remain in the index.)

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<sup>27</sup> Price collectors decide together with the establishment staff what is the quality effect of the price change. The use of explicit quality adjustment is rare and usually a new variety is chosen instead.

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

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

Accuracy of the source data for the weights is not routinely investigated during the revision process. Generally, survey response rates have been over 95 percent, and repeated contacts with the establishment are used to make sure of the quality of individual data. Although sample errors for individual sample surveys are calculated, no formal and routine assessments combining nonsampling errors for the WPI weights are made.

Price collectors visit the enterprises and validate collected price data for consistency before sending the data to headquarters. The representativeness of the varieties is kept under review, and new varieties chosen if needed.

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

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

Disaggregated product indices are regularly checked against the comparable CPI sub-indices and source data. See also 3.4.2.

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

The DOR reviews and approves the methodology at the time of WPI revision. Price collectors are required to validate their own data for inconsistencies. During the calculation of the elementary indices, as well as during the further aggregation process, lists of suspiciously large variations and their effects on more aggregated sub-indices are validated against the source. This is done manually with the help from trained NSSG regional staff who visit the outlets and register the prices into special price collection forms. Large movements in the price relatives and in all aggregation levels of the WPI are investigated and large movements in individual products and their impact on the total index are described in the press release. Explanations or confirmations, if needed, are sought either from the central or regional offices or by common knowledge of the markets.

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

Imputation of missing prices is done at the level of individual varieties. Therefore aggregation is consistent either by product or industry.

### **3.5 Revision studies**

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

There are no revisions to the monthly WPI following release. The weights, industries, products and methods used in the WPI, however, are revised and updated about every five years.

A methodological manual is usually published after the revision. With the first press release of the new index, a summary of methodological changes is also published. An English version of the latest manual is currently under preparation.

## **4. Serviceability**

### **4.1 Relevance**

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

There are no processes that would permit dialogue between the users to regularly assess whether the WPI program meets the needs of its users. However, there is a well established base of users of the WPI who are generally informed about the index and continuous but informal contacts with users are maintained. As a regular tool for all statistical programs, the NSSG could introduce users' surveys or seminars to periodically review the concerns and needs of data users.

In the context of Short Term Statistics, the senior staff participates in the three to four yearly meetings at the EU level.

### **4.2 Timeliness and periodicity**

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

The WPI is released within 30 days of the end of the reference month, in accordance with the SDDS requirements.

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

Periodicity of the monthly WPI is in accordance with the SDDS.

### **4.3 Consistency**

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

There are no discrepancies in the WPI aggregation.

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

Data series are consistent over time. The old index with old weights is directly linked to the revised index using the relevant month's index point, and expressing long series based on the new base year. Data series with the new base year covering full long time series is done through linking the old with the new indices at the level of overall and partial sector indices. Sometimes the change of the classification codes and nomenclature used disallow the creation of consolidated series backwards at a more disaggregated level.

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

Use of common and compatible classifications ensures that the WPI series are generally consistent with other agricultural and industrial statistics. Where used as national account deflators the WPI broadly follows the *ESA 95* and EU regulations.

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

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

No revisions to monthly data are made. During the comprehensive revisions every five years, the NSSG updates the sample of goods and services along with the base year of the price relatives and the index weights. The authorities give no clear advance notice when these revisions occur, however.

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

There is no practice of preliminary estimates, and published data are final.

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

The latest revision is documented in Greek in *Revised Wholesale Price Index, 1995=100,0* and the English version is in preparation. The main changes in the revision are also published in the *Statistical Yearbook of Greece* and on the NSSG website. However, no further analysis of the impact of revisions is made public.

Quantitative measures resulting from the revision of weights are not done. More detailed studies of the impacts of weight revisions could be published, e.g., in the *Methodological Studies* publication.

## **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 WPI data is published in a generally clear manner. The data disseminated through monthly press releases are presented with easy-to-read tables. Release includes analysis of the products or sub-industries with the largest impact on each index. For industrial products, tabulations at the two-digit level of NACE are also included if confidentiality rules permit. Monthly and annual changes are presented in tables and charts for all four major indices.

The English version of the press release states only the aggregate changes of the four indices.

More detailed data are published later in the *Monthly Statistical Bulletin*, and are available on request. These detailed data could be made more readily available to public.

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

The WPI press release is available for all interested parties and subscribers by pick up, e-mail, fax or phone. Press releases are also posted on the NSSG website. A printed publication, *Monthly Statistical Bulletin*, about two months later also provides more detailed information along with various other monthly statistics.

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

A release calendar for the next year is published on the NSSG website and on a published release calendar together with other publication dates.

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

Statistics are made available to all users at the same time. Derived from the national WPI and required by the EU some PPI series are disseminated to Eurostat after the WPI is released.

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

Unpublished but nonconfidential special tabulations are made available upon request for a nominal fee. Requests for such tabulations can be made by phone and through the NSSG website.

## **5.2 Metadata accessibility**

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

Documentation on concepts, scope, and classification is published on the NSSG website and in more detail in *Revised Wholesale Price Indices*.

There is no information about response rates or biases of course and price data in the source data. The definitional and conceptual differences are published and referred to in the *Revised Wholesale Price Index* in Greek and to be published in English.

The SDDS summary methodology is updated as necessary.

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

Summary methodology is published on the NSSG website in Greek and in English and more detailed methodological manual in Greek is available. The English manual is in preparation.

## **5.3 Assistance to users**

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

Contact numbers and e-mail addresses are available on the NSSG website, but not in the press release. The monthly bulletin and other combined publications list general contact information.

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

A catalogue of publications including prices is available and updated on a publication. All products are also described on the website. The prices for special tabulations are nominal but not publicly disclosed.

Table 3. Data Quality Assessment Framework—Summary of Results for Wholesale Price Index  
(Compiling Agency: National Statistical Service of Greece)

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	
<b>0. Pre-requisites of quality</b>						
0.1 Legal and institutional environment		X				No one body covering the quality of statistics or comprehensive quality framework is in place. No routine monitoring of users' concerns.
0.2 Resources		X				
0.3 Quality awareness			X			
<b>1. Integrity</b>						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
<b>2. Methodological soundness</b>						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
<b>3. Accuracy and reliability</b>						
3.1 Source data			X			Processing lag of the source data is long. New products are not introduced to the index between weight revisions. Small enterprises are not covered. Sample selection and/or quality adjustments methods may not correctly reflect reality of the market as a whole.
3.2 Statistical techniques			X			
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
<b>4. Serviceability</b>						
4.1 Relevance			X			No regular users group.
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice		X				
<b>5. Accessibility</b>						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users			X			
						No specified contact persons identified in statistical releases.

### III. 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.*

There is no single agency in Greece responsible for compiling and disseminating a comprehensive and integrated set of government finance statistics.<sup>28</sup> Instead, the compilation of these statistics is shared by the NSSG, the MEF and the BOG. The Foundation Law of the NSSG (3627/56) and the subsequent law 2392/96 (on NSSG access to administrative sources) give that agency the responsibility for the compilation of the national accounts, which cover the statistics of the general government sector accounts on an accrual basis, and of its subsectors. This law is reinforced by the Presidential Decree 9226 of September 8, 2000 on the organization of statistical services, which, in its Article IV, gives the Public Finance Division of the National Accounts Directorate the responsibility for producing the accounts subsectors of government. The decree, which mentions specific accounts and aggregates under the responsibility of the NSSG, does not identify the financial accounts as part of this responsibility.

The NSSG, as the national statistics agency, participates in the European statistical system. Greece is bound by various EU Treaties (Maastricht and Amsterdam Treaty) and associated legislation to provide specific statistics to the European Commission. In this context, the NSSG is the lead agency for compiling and reporting statistics on general government deficit and debt on an accrual basis (*ESA 95*) to the European Commission under the Excessive Deficit Procedure. Annual financial accounts, for which Greece has a derogation until 2005, will be reported by the BOG. Under the June 10, 2002 parliament and council regulation, (EC) No.1221/2002, Greece started reporting last September 2002 its quarterly nonfinancial accounts.

As part of its fiscal management responsibilities, the MEF's General Accounting Office (GAO) produces statements on budgetary revenue and expenditures on a modified cash basis,

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<sup>28</sup> Two main sets of government finance statistics are compiled and disseminated by the Greek authorities: *ESA 95*-based general government accounts and monthly data on budgetary operations. The *ESA 95* general government accounts are also reported to the European Commission (Eurostat) under various reporting arrangements. The data sets are complemented by data on central government debt, as well as data on general government debt that are reported to the European Commission under the Excessive Debt Procedure.

and on the public debt. The content and presentation format of the revenue and expenditure statements are governed by accounting and budgetary legislation and procedures, notably by Law 2362/95, on public accounting and the budget, and Law 2187/94 on the public debt. No adjustments are made to the accounting data presented in these statements to bring them in closer harmony with internationally accepted statistical standards. The central government debt data are adjusted as needed to conform to Eurostat's *ESA 95 Manual on Government Deficit and Debt*.<sup>29</sup>

The responsibilities of the Public Debt Management Agency (PDMA) are set out in Law 2628/98 creating that agency.

Work is allocated according to the respective areas of specialization of the compilers, NSSG being responsible for the compilation of general government nonfinancial accounts concepts, and BOG being responsible for the compilation of financial accounts.

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

Law 2392/96 contains provisions on data sharing and coordination among the data-producing agencies. It allows the NSSG to obtain data from administrative sources and other data-producing agencies. It has also led to the establishment of the National Statistical Council, which includes representatives of major data agencies and which is the main instrument for data exchange among official data producers. There are also agreements allowing the NSSG to access state registers, archives, and other data sources, including an informal agreement with the BOG in matters of financial accounts. Statistical work with the European Commission (mainly Eurostat) is coordinated through a working group that includes the NSSG as the lead agency, other directorates of the MEF (GAO and PDMA for example) and the BOG. The staff of these agencies report good working relations and an adequate flow of information.

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

Confidentiality of individual responses is not generally an issue in government finance statistics. However, the NSSG treats its collection and processing for government statistics in the same way as data from other sources, and the comprehensive confidentiality provisions under Law 2392/96 (Article 6–8 in particular) are understood to apply to data from government agencies. (More detailed information on the confidentiality provisions of the law are given in the section on national accounts.) NSSG government sector statistics are compiled and disseminated for the general government sector and its subsectors and no data are disseminated on a particular agency; the breakdowns of transactions do not permit the

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<sup>29</sup> The debt data compiled for the EDP cover general government debt. The debt data disseminated monthly by Greece under the SDDS cover central government only. The two sets of data follow the same methodology.

identification of individual parties to the transactions.

The issue of confidentiality is generally not applicable to MEF data either, since these data are generally not collected by the MEF from public corporations or individuals. As regards central government data and data related to public/legal entities, their confidentiality is in principle ensured by provisions in the civil service oath of office and, in particular, the code of conduct, which cover matters of confidentiality. MEF statements of budgetary operations are produced by aggregating accounting entries classified according to the budget classification. Only the main aggregates are published in the MEF publications. MEF staff is forbidden to share with the public information on individual taxpayers (persons or companies).

In all of these cases, the information collected is solely for statistical use.

Respondents to statistical surveys and questionnaires are informed of these confidentiality provisions. The legislation mentioned above (published in Greece's Official Gazette as is all Greek legislation) and other public regulations provide these respondents with the necessary information concerning the confidentiality of the data and information they provide. In addition, reference to confidentiality rules are made in the text and the instructions that describe respondents' obligations in matters of statistical reporting. Respondents for government sector accounts purposes are reminded of the confidentiality provisions in the NSSG questionnaire.

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

Articles 2 and 3 of Law 2392/96 require individuals, legal entities, government agencies and other government bodies, including local authorities, social security funds and other public entities, to supply any data and information for surveys conducted by the NSSG. The law specifies such aspects as deadlines and penalties in case of nonresponse. Separate legal provisions and protocols give the NSSG the authority to access administrative records of public offices and government agencies.

MEF statements on budgetary operations are prepared in the context of the ministry's broader responsibility for fiscal management.

The reporting burden is not viewed as an obstacle to compiling government finance statistics, as the information required by the NSSG from compilers to produce nonfinancial general government accounts consists mostly of routinely produced accounting and other administrative records. Nevertheless reducing the burden of reporting is taken into consideration in revising the questionnaire used for compiling general government accounts.

## **0.2 Resources**

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

At the MEF, including the NSSG, recruiting of high quality staff is ensured through the use of competitive exams. Staff is encouraged to avail itself of educational and other professional services dispensed by the MEF training center. Compensation in the GAO, including bonuses, is reported to be relatively high, to motivate staff and to encourage retention. By comparison NSSG salaries were reported to be low in the ladder of civil service remuneration. However, because of relatively high unemployment the NSSG does not seem to experience a flight of staff. The staff of NSSG is encouraged to participate in seminars organized by the National Center of Public Administration or to obtain a Master or a PhD by studies in domestic or foreign universities.

The GAO staff interviewed did not in general report staffing problems in carrying out their tasks. Occasional capacity constraints occur, notably at the height of the budget cycle, but are not considered to present insurmountable problems. It was noted that a number of positions left vacant as a result of retirements had not been filled.

In the NSSG's National Accounts Directorate, the compilation of general government accounts is carried out by a staff of four statisticians to which the occasional contribution of the head of section and of the director must be added. This is considered insufficient to meet the increasing statistics requirements from Eurostat and the ECB. An additional staff of about five would be considered adequate and has been requested.<sup>30</sup>

Computing facilities are reported to be adequate both in the MEF and the NSSG. In order to improve and speed up data reporting, the NSSG plans to establish a nationwide electronic reporting system.

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

Most of the costs of collecting and compiling MEF data are inextricably part of the ministry's budget monitoring function, and cannot be identified separately and associated with a statistical responsibility.

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<sup>30</sup> After the completion of the mission, the NSSG has added another staff for the compilation of general government accounts. The new person is responsible for data entry. In the NSSG, the integrated information system is being developed and is expected to be completed by the end of 2003.

At the NSSG, efficiency in producing government sector accounts is ensured by good work practices. No formal assessment of cost is conducted. The emphasis on meeting EU requirements on a timely basis appears to be the driving force of current NSSG activities in government sector statistics.

### **0.3 Quality awareness**

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

Various aspects of the quality of MEF data are ensured by the integrity of the public accounting system. An accounting reform is being currently discussed, which is in itself an indication of the concern the authorities have regarding the relevance and accuracy of their data.<sup>31</sup>

The Fiscal Audit Office conducts extensive audits on ordinary and investment budget transactions. Data on revenue and expenditure are subject to monthly verification. Data on revenue are checked by the Tax Office. Final accounts for the previous year are prepared by the GAO by the end of September, forwarded to the Hellenic Republic Court of Audit, and the audited accounts are presented to parliament by the end of November. The Court is part of the judiciary and independent of the executive branch.

At the NSSG, quality in general government statistics depends in great part on the application of international standards (for example, *ESA 95*). Participation of NSSG staff in various technical working groups and other professional fora, including regular interaction with Eurostat, helps ensure that these standards are followed. As with other EU Member States, the data on deficit and debt reported under the EDP are reviewed by Eurostat. This review, during which the treatment of specific transactions is examined, can lead to revisions to the reported data. In the case of Greece, discussions with Eurostat in the fall of 2002 led to an increase of the reported debt to GDP ratio for 2001 of 7.5 percentage points. Efforts to improve the NSSG infrastructure are also evidence of concern about quality; in this connection the scheduled move early 2003 year to a new building with improved working conditions and the improvement of electronic data reporting means can be mentioned.

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

Because the MEF produces budgetary operation statements that, in principle, require no additional processing, the data are considered accurate at the time they are approved for publication. There is no procedure for monitoring the quality of data collection other than

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<sup>31</sup> This project is in its initiation stage, and no specific information was available concerning this reform.

through the regular verification procedures conducted monthly by the Fiscal Audit Office for expenditure and the Tax Office for revenue; the resulting revisions are usually negligible.

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

At the MEF, trade-offs between quality and other considerations (such as timeliness and accuracy) are not major factors taken into account when setting statistical priorities, as quality is viewed to be entirely determined by accounting processes and by the professionalism of the public accounting corps. In this connection, quality considerations concerning accounting are a major factor behind the public accounting reform being envisaged by 2006.

The NSSG recognizes the possible existence of trade-offs between quality and timeliness, notably in connection with reporting to the EU under very tight deadlines. The NSSG reports that its efforts at meeting these deadlines have no impact on quality, which is ensured by the application of *ESA 95* guidelines. Furthermore, routine review by Eurostat of statistics reported under the EDP helps ensure that *ESA 95* methodology is correctly implemented.

Emerging needs are often identified through permanent contacts with various bodies and through working groups, specialized committees, seminars, etc. In recent years, many of the NSSG needs in matters of general government sector statistics have been determined by EU regulations in the context of EMU.

## **1. Integrity**

### **1.1 Professionalism**

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

The latitude of NSSG's statisticians is greatly circumscribed by the mandatory guidelines that they must apply for the compilation of general government accounts data, such as *ESA 95* and the *ESA 95 Manual on Government Deficit and Debt*. Furthermore, regular contacts with international organizations and statisticians of other countries, including participation in various European fora, help ensure that *ESA 95*'s guidelines are followed.

The impartiality of MEF data professionals is determined by adhesion to accounting and reporting rules and by the probity of the accounting profession. Adhesion to these rules can be ascertained through the regular audit process.

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

Staff in the NSSG and the MEF report to be free from political or other influence in choosing the most appropriate sources and methods for compiling their respective data. To a large

extent MEF and NSSG staff have little latitude in this regard, since the data they provide necessarily emanate from written guidelines and entrenched accounting and other recording procedures.

The MEF does not resort to statistical techniques since the compilation and presentation of their data involves reorganizing the information contained in accounting records. The NSSG, on the other hand, uses sampling techniques in compiling preliminary data on public entities operations (public entities are extra budgetary central government units mostly financed by the budget) without hindering data accuracy.

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

Compilers of government finance statistics at the MEF and in the NSSG are available to provide expert advice on technical aspects of the statistics they produce. Each institution is allowed to respond publicly to any misinterpretation of the data. The MEF maintains a regular correspondence with members of parliament seeking clarification on central government budgetary operations and debt data.

**1.2 Transparency**

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

The terms and conditions under which statistics are produced by the NSSG and the MEF are set out in the legislation and regulations already mentioned.

All of these texts have been published and are available to the public. All laws and decrees are published in the Official Gazette of Greece. They are also available by subscription from a commercial website. Ministerial decisions are available on demand from the MEF. In addition, the public can obtain copies of Law 3627/56 and Law 2362/95 from the Statistical Information and Publication Division or from the MEF website <[www.statistics.gr](http://www.statistics.gr)>

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

There is no internal government access, other than by NSSG staff, to the national accounts data, including the statistics on general government, before their release to the public. Data on general government deficit and debt under the publicly known Excessive Deficit Procedure<sup>32</sup> and quarterly government revenue and expenditure (since last September) are forwarded to the European Commission before their release to the public.

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<sup>32</sup> The February 2002 notification to the EU Commission of deficit and debt data was followed in April by the publication of preliminary general government sector data in the March issue of *National Accounts of Greece 2001*.

The MEF monthly data are compiled for the government's own use in its conduct of fiscal policy, and the data are circulated as needed in the relevant government departments as they are produced. The public is not specifically informed of this practice.

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

Government finance statistics are disseminated in agency-specific publications and websites. General government sector statistics (*ESA 95*) are published by the NSSG in *National Accounts of Greece* (in Greek and English), in which general government sector accounts are clearly identified. Monthly data on central government budgetary operations are published by the MEF in *Budget Implementation Bulletin* and quarterly debt data in *Public Debt Bulletin*. Other MEF-specific publications of government finance data include *Government Budget Report* and *Executive Summary*. All the above publications are available in English. The complete *Government Budget Report* is available in Greek only, as well as the final accounts report (*Apologismos esodon kai exodon tou kratous*). Statistics compiled by another agency normally identify the source agency in a footnote to the tables.

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

There is no formal advance notification of major changes in methodology for general government data. The NSSG reports that, because of the perceived lack of interest on the part of the public, there is no regular or occasional public documentation on methodology that would serve as a medium for announcing methodology changes. Changes as significant as the adoption of *ESA 95* are widely and openly discussed, notably in the specialized media and through international and national conferences.<sup>33</sup> Other changes in the national accounts methodology used for government sector accounts are rare.

Major changes in methodology concerning government debt statistics are noted in the quarterly *Public Debt Bulletin*.

The budget nomenclature and coding system to be used is set out in an occasional publication following a ministerial decision (for example, *Kodikas katataxis ezodon kai exodon tou kratikou proupologismou, 2001, Nomenclature and Codification of revenue and expenditure...*, in Greek only).

Changes due to modification in accounting procedures are rare. Such changes usually require either a change in the accounting law or a ministry decision, which are all made public.

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<sup>33</sup> Eurostat's "Proceedings for the Seminar on the Implementation of *ESA 95*, (Athens December 1–4, 1997)" was mentioned in this respect. This document, however, contains little material devoted to government accounts.

### **1.3 Ethical standards**

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

Staff in the NSSG and the MEF are bound by the rules applying to all public servants as stipulated by the *Code of Conduct for Civil Servants* (law 2683/99) which provides for sanctions in case of breach of ethical conduct. Staff is informed of these codes of conduct upon recruitment. The specific regulation applying to each agency includes provisions for sanctions if the code of conduct or the oath of office is breached.

## **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 data on general government operations compiled by the NSSG follow the *ESA 95* methodology and the *ESA 95 Manual on Government Deficit and Debt*, which are closely harmonized with the *1993 SNA*. The debt data are compiled according to the guidelines provided by EU regulation (Council Resolution 3605/93 of 22 November 1993) and again by the *ESA 95 Manual on Government Deficit and Debt*. No migration path toward adopting the *Government Finance Statistics Manual 2001 (GFSM 2001)* methodology has been adopted or is being envisaged at this time. No consideration seems to have been given to taking the *GFSM 2001* methodology into account in the design of the new accounting chart that would accompany the accounting reform.

No law and regulation makes reference to an international standard for the production and dissemination of central government data by the MEF. While the monthly data are not formally based on any particular internationally accepted standard and definitions, the revenue and expenditure aggregates and the budget balance broadly correspond to the concepts of the *GFSM 1986*.<sup>34</sup>

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<sup>34</sup> From March 2004 the central government subsector will be presented on a consolidated basis, including both ministries and other legal entities with administrative and financial autonomy).

## 2.2 *Scope*

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

The NSSG annual national accounts data for the government sector account cover all general government units and transactions as defined according to *ESA 95*. The central government subsector includes ministries, units with administrative and financial autonomy such as universities, libraries, athletic centers, research institutes, and welfare entities (the so-called public entities). However, there is no presentation of statistics for consolidated central government, and the accounts of the “central government” (i.e., the budget) and the public entities are shown separately. The local government subsector covers all municipalities. The social security subsector covers all social securities funds and public hospitals.

NSSG general government sector data are consolidated according to the rules of *ESA 95*. In particular, interest, capital transfers, and other transfers within general government are eliminated in the consolidation process. Because the coverage of the monthly data compiled by the MEF excludes the operations of public entities financed by the budget, the question of consolidation does not arise for these data. The same applies to central government debt data, since the main government holders of government debt are the social security funds that are outside the central government subsector.

The *ESA 95*-based nonfinancial accounts data on government sector operations published by the NSSG in *National Accounts of Greece* show, for the general government sector and its subsectors, the uses and resources for the various nonfinancial accounts aggregates and balancing items for the following accounts (including their subaccounts): production account, the distribution and use of income account, and the capital account. As the sequence of national accounts does not normally identify government *revenue* and *expenditure*, this sequence is completed by two lines showing revenue and expenditure on an *ESA 95* basis. These two aggregates conform closely to the *GFSM 2001* concepts, definitions, recording basis, valuation, and netting/grossing procedures. No statistics on financial accounts, other economic flows accounts, and balance sheets are disseminated.

The monthly data compiled by the MEF cover the operation of the budget, which encompass most of central government operations (over 90 percent), as most of the extrabudgetary operations are financed from the budget. Because the data are on a modified cash basis they do not capture all flows recommended by an accrual-based system such as the *GFSM 2001*. However, since the coverage and scope of these data must conform to the guidelines set out by law for recording budgetary operations, no extension of this coverage or other adjustments are made to these data for statistical purposes. The monthly data are limited to revenue and expenditure and do not include financing. No revenue classification is shown.

## 2.3 *Classification/sectorization*

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

For the years 1995 onward, the institutional sectors for national accounts statistics, including the general government sector and its subsectors, are defined in accordance with *ESA 95* (S1311—distinguishing between S13111 and S13112, S1312, S1313)<sup>35</sup> and with Eurostat's *ESA 95 Manual on Government Deficit and Debt*, both of which are consistent with the guidelines of *SNA 1993*. Government revenue, expenditure and net lending/borrowing in the annual government sector statistics compiled by the NSSG are defined and classified according to *ESA 95* guidelines, which are in this respect generally the same as those of the *GFSM 2001*.

The coverage of the monthly data compiled by the MEF is close to the budgetary central government sector defined in *GFSM 2001* or in *ESA 95* (S13111). This coverage corresponds to the *budgetary* government subsector defined in the *GFSM 1986*, as it does not capture the detailed operations of public entities financed by the budget, only global transfers from the budget to these entities.

The monthly data compiled by the MEF do not normally include a detailed classification of revenue, which is broken down only into VAT and other revenue. Ordinary expenditure data are classified by ministry and according to economic categories; these economic categories correspond generally to the components of the *GFSM 1986* economic classification of expenditure. There is no breakdown of investment budget expenditures.

Central government debt data include some breakdown by instrument but not by institutional sector as recommended by international standards because of the difficulty of identifying nonresident counterparties in the eurozone and holders of debt acquired on the secondary market. These data are defined and classified according to the above mentioned Council Resolutions (EC) 3605/93, which refer to *ESA 95*, and according to Eurostat's *ESA 95 Manual on Government Deficit and Debt*.

## 2.4 *Basis for recording*

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

The national accounts statistics for the general government sector and its subsectors record transactions according to *ESA 95* valuation principles; i.e., production is calculated on the basis of cost (compensation of employees plus intermediate consumption plus consumption of fixed capital at current prices).

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<sup>35</sup> There is no dissemination of data for the **consolidated** central government sector (S1311).

The MEF statistics on central government operations reflect the valuation principles of the public accounting system where the price actually paid serves as valuation basis. This price generally corresponds to current market prices. Budgetary transactions in foreign currency are valued at the exchange rate used or prevailing at the time of the transaction. Outstanding debt data denominated in foreign currency are valued at the mid-point exchange rate on the last business day of the quarter.

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

The national accounts statistics for the general government sector and its subsectors are recorded on an accruals basis in accordance with *ESA 95* principles, i.e., when economic value is created, transformed, exchanged, transferred, or extinguished. To that end, several adjustments are made to the source data whenever they are not on an accrual basis, such as for employers' social security contributions.<sup>36</sup> Where applicable (and again according to *ESA 95* and the *ESA 95 Manual on Government Deficit and Debt*), transactions are recorded on a cash basis.

Budgetary transactions are generally recorded on a modified cash basis in the accounting system of the MEF. The source data are extracted from the accounts to produce revenue and expenditure statements without any adjustment. The recording of debt data follows the recommendations of *ESA 95 Manual on Government Deficit and Debt*. Because the recording of budgetary operations is on a near-cash basis, the resulting data are not as comprehensive as recommended in the *GFSM 2001*.

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

The grossing/netting procedures used for the NSSG government sector data follow the recommendations of *ESA 95* and of the *ESA 95 Manual on Government Deficit and Debt*.

MEF central government budgetary transactions are shown on a gross basis, except for tax refunds that are shown on a net basis.

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<sup>36</sup> Furthermore, imputed contributions are estimated for government employee pensions.

### 3. Accuracy and Reliability

#### 3.1 Source data

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

The source data are accounting data for budgetary operations and for the central government debt. MEF data reflect the structure and concepts used by the underlying accounting system. Mainly cash transactions are recorded. The accounting system does not produce source data that permit obtaining monthly financing data that agree with the deficit/surplus; this is currently possible only for annual data. There is no systematic compilation of a financial balance sheet, even though data on liabilities (debt), and possibly on some assets, are compiled.

ESA 95-based national accounts data for the government sector covering economic flows are extracted from administrative records for the central government and public entities and detailed questionnaires for local authorities and social security funds.

For the budget the main sources are (1) the draft budget for year N presented in November of year N-1 (*Kratikos proupologismos*), with final data for the previous year (N-2), and “semi-final” data for year N-1; (2) the final accounts presented also in November to parliament (*Apologismos esodon kai exodon tu kratous*) have final data for the penultimate year.<sup>37</sup> The response rate to the questionnaires sent to the public entities is such that extrapolating from the sample of response is necessary; preliminary data are revised as additional replies arrive.

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

MEF statements of operations are produced directly from the accounts and budget categories notably the budgetary nomenclature and coding (*Kodikas katataxis esodon kai exodon tou kratikou proupologismo*), which provide the scope, classification, valuation, and time of recording used in these statements. The MEF data publicly available on budgetary outcomes **constitute** the body of statistics for central government finance. There is currently no provision for deriving internationally recognized government finance statistics data automatically.

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<sup>37</sup> This information appears to be inconsistent since it implies that these two publications have data of different status. This seem also to be inconsistent with the SDDS metadata to the effect that revisions are made six times over three years, according to the EDP revision schedule.

Debt data are extracted from the records of the Public Debt Division of the GAO's General Directorate of Treasury and Budget.

The budgetary and accounting data in the source documents for budgetary and public entities operations do not generally conform to the definitions, scope, classification, and time of recording used in *ESA 95*. The NSSG compilers of general government accounts make the necessary changes to the source data to derive aggregates that conform to *ESA 95* (though changes from a cash to an accrual recording basis appear to be relatively unimportant). The questionnaires sent to local authorities and social security funds were designed for statistical purposes and, to a certain extent, already take *ESA 95* into account. Questionnaires do not generally request information on financial transactions. The revised questionnaire that is being developed will recognize the need to obtain financial transactions and stocks in order to compile the financial accounts.

As already indicated, *ESA 95* categories for budgetary operations are derived from the budget nomenclature and classification used in the draft budget and in the final accounts. This classification is checked every year for possible changes (generally minor) and the bridge tables are revised as needed. Expenditures according to COFOG were compiled for the first time from 1995–2000; 1999–2000 are being revised and data for 2001 will be compiled by the end of 2002.<sup>38</sup>

The questionnaire for local authorities and public entities is being revised in common with the BOG to improve the collection of data and serve other institutions, including the need for financial accounts compilation.

### *3.1.3 Source data are timely.*

MEF accounting records on monthly budgetary transactions are available about 20 days after the end of the month, thereby allowing dissemination of the data within 30 days in accordance with SDDS requirements.

The NSSG reports that data source are timely, but that improvement is sought by establishing a system of electronic reporting.

## **3.2 Statistical techniques**

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

The production of MEF statements on budgetary operations is based on accounting records, and no statistical techniques are used. Generally there is no missing record of budgetary

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<sup>38</sup> After the completion of the ROSC mission, and since June 2003, the NSSG has started to compile expenditure according to COFOG for the years 1990 to 1994.

transactions. In rare instances where this occurs, ad-hoc estimates are made, for example on the basis of the previous month or trends.<sup>39</sup>

For the general government accounts and for the years that are not marked as final, data on local government and social security funds and other public entities are based on a large sample of questionnaires received, completed by extrapolation based on trend and other information (known developments, measure introduced, etc.). For the years which are marked as final and for the local government and social security funds, data are based on the information provided by the questionnaires which cover all the local government units and social security funds. Adjustments are made as needed to take possible changes in the coverage of public entities into account. Intergovernmental transfers are eliminated according to *ESA 95* rules in the consolidation of general government and its subsectors.

Government capital consumption is calculated for general government as well as for other economic sectors by using *ESA 95* guidelines.

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

Data on central government finance consist of accounting-based budgetary statements and are not adjusted.

Cash data are adjusted to an accrual basis whenever possible, and noncash data, such as debt assumption, are taken into account for the derivation of *ESA 95* aggregates for general government. Tax revenue is generally estimated from assessments (on accrual basis);<sup>40</sup> employer's social security contributions are recorded on an accrual basis. For budgetary expenditure, the accrual data correspond generally to the cash data as the difference between accrual and cash is usually considered minimal. Some accrual adjustments are made to wage data. Relatively few adjustments are made to local authorities and social security's source data.

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<sup>39</sup> Final accounting data for taxes are available with a delay of about three months. Historically revisions have been small.

<sup>40</sup> After the completion of the ROSC mission and in February 2003, tax revenue is estimated using the cash time adjusted method.

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

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

Not applicable, as the central government data are extracted from accounting records.

There is a systematic, regular and continuous process of verification of accounting data conducted through the offices in each ministry and other government departments of the General Directory of Administration and Fiscal Auditing; proper recording of payments, including coding, is checked against amounts paid of recording of revenue against amounts collected. Budget outcomes are audited the following year by the Hellenic Republic Court of Auditors.

MEF data on budgetary operations are not subject to material gaps in coverage. Furthermore, because the MEF budgetary data are the result of accounting processes, data are deemed accurate upon release. Any subsequent revision is usually negligible. Nevertheless, data are first released as preliminary and are then revised on the basis of revisions in the accounting results whenever they occur. The data are deemed final after the review by the Hellenic Court of Auditors and their presentation to parliament in November of the following year in *Budget Outcome of Revenue and Expenditure* (in Greek only, *Apologismos esodon kai exodon tou kratous*).

For the general government sector data, the response rate to the annual questionnaires sent to local authorities and social security funds is generally very high; missing source data are sought directly by contacting important municipalities or social security funds that have not submitted their response to their questionnaire. The list of public entities is kept current to ensure proper coverage of the data.

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

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

The MEF data on budgetary operations are accounting results that are not assessed or validated in a statistical sense. Recording in the accounts is subject to regular and continuous verification by the GAO's Fiscal Control Office's extensions in place in every ministry and other government departments.

The general government sector accounts data are validated in the context of the national accounts; data need to be consistent across economic sectors. Central government data on an *ESA 95* basis are assessed against known budgetary developments. The absence of systematic financial accounts compilation, limits assessment of the consistency of government financing

with BOG data on banking sector claims and liabilities vis-à-vis the government.<sup>41</sup> This is somewhat compensated by the requirement of the Excessive Deficit Procedure, to explain the change in general government debt in terms of transactions (i.e., the deficit/surplus) and other economic flows (revaluations and volume changes).

*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.*

Not applicable to MEF data, as the data are extracted from accounting records. Furthermore, as no monthly financing data are produced, net credit to government from the monetary survey cannot be used as a potential indicator to which the government data could be compared.

Statistical discrepancies are investigated, such as for example differences of similar aggregates between sectors. Any important deviation from magnitudes relative to expected amounts on the basis of known fiscal policy developments and specific measures are also investigated.

**3.5 Revision studies**

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

No revision studies are carried out by the MEF as regards the data on budgetary operations and central government debt. Revisions are negligible.

Revisions to *ESA 95* general government data are generally small as they consist of replacing preliminary accounting data with final audited data for the budget data. Data compiled from questionnaire surveys are not revised; (this would not be possible as the questionnaire requests information for only one year of data). No systematic revision study is conducted. Following the introduction of *ESA 95*, national accounts data, including data for general government were revised back to 1995. Under a derogation from the European Commission, Greece will revise the remaining historical data by 2005.

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<sup>41</sup> After the completion of the ROSC mission, a new questionnaire is being prepared in order to provide the NSSG and BOG with data referring to financial and non financial transactions. This will significantly improve the consistency of financial and nonfinancial data. Furthermore, it will facilitate the compilation of reliable financial accounts of general government.

## 4. Serviceability

### 4.1 *Relevance*

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

No formal mechanism to monitor users is used at the MEF or the NSSG. Feedbacks from users are welcome both at the MEF and NSSG, and regular exchanges occur between other government and nongovernment users, including banks and the media; the feedbacks seem to be generally at the initiative of users. One important user of MEF statistics is the NSSG, with whom regular contacts are maintained regarding statistical matters. Meeting Eurostat's needs appears to be the main priority of the NSSG in matters of government sector statistics, and feedbacks from that institution are continuously delivered.

The national accounts format used in the NSSG publication of government sector accounts is not suited to the needs of fiscal analysis. There is no presentation of government operations broken into revenue, expenditure, deficit and financing, accompanied by relevant detail for revenue by type of tax and nontax revenue and expenditure according to the economic classification.<sup>42</sup> Such a presentation is available in one table of a MEF publication.<sup>43</sup>

The MEF monthly and cumulative monthly data on budgetary operations are compiled monthly, and the debt data quarterly. While these frequencies are in principle sufficient to follow fiscal developments, the level of detail of the data is inadequate to assess the degree to which government is achieving its stated social and fiscal policies. Unpublished component detail according to the budgetary nomenclature, which is available to the government for its own needs, is better suited for this purpose. This detail, according to the budget nomenclature, is published on an annual basis in the annual budget proposal and in the final accounts, and, therefore, with significant delay.

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<sup>42</sup> After the completion of the ROSC mission, and since March 2003, the NSSG has compiled a table for taxes with a breakdown to the main categories.

<sup>43</sup> *Current Trends and Outlook for Greece's Economy and the Global Economy*, published by the Department of Macroeconomic Analysis and Projections, General Directorate of Economic Policy, MEF. The data published in this table, however, are not compiled on the same basis as the national accounts data, according to NSSG staff.

## **4.2 Timeliness and periodicity**

### *4.2.1 Timeliness follows dissemination standards.*

Timeliness of monthly central government operations data is within one month after the reference period, except for central government financing; in this respect for the SDDS, Greece is using one of the flexibility options for periodicity and timeliness to which it is entitled, and will disseminate the central government financing data annually within one month after the end of the year.

Timeliness of quarterly central government debt data is within one quarter after the end of the reference quarter.

Timeliness of general government statistics is within four months after the end of the reference year.<sup>44</sup>

### *4.2.2 Periodicity follows dissemination standards.*

Central government budgetary operations data are published monthly, except for financing data that are disseminated annually (see above 4.2.1.). Statistics on general government operations are published annually.

Central government debt data, including guaranteed debt, are published quarterly.

General government data are disseminated in March and in September.

## **4.3 Consistency**

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

MEF budgetary data and NSSG *ESA 95* general government sector data are internally consistent. Aggregates are consistent with their components and balances are consistent with the aggregates. However, the MEF data on budgetary operations are not complete, do not show separate data for grants, lending minus repayments and financing, and only few breakdowns are shown. The scope for examining the internal consistency of this data set is therefore limited.

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<sup>44</sup> To the extent that the interim national accounts publication (*National Accounts of Greece, March 2002*) released in April 2002 shortly after the first annual EDP notification will be repeated every year, the timeliness of dissemination of government sector accounts mentioned in the SDDS metadata should be reduced to four months.

General government data are presented according to the sequence of *ESA 95* nonfinancial accounts in which components add up to the aggregates used to derive the various balancing items. The identities of this framework are shown on the left column of the table in terms of *ESA 95* codes.

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

Government finance statistics for broad aggregates are consistent over time. Because the MEF data on budgetary revenue and expenditure are produced by aggregating accounting entries, these data must reflect government transactions.

The *ESA 95* general government sector statistics have been produced for the first time for the year 1995 following the introduction of the *ESA 95* methodology. Greece has until 2005 under a Eurostat derogation to recast its remaining *ESA 79* historical national accounts data into *ESA 95* data, including government sector data. At present, national accounts government sector statistics are not reconcilable over a long time period.

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

In principle, the MEF monthly statistics on central government budgetary operations should show consistency with monetary and financial statistics and balance of payments data. However, the lack of monthly or quarterly financing data, and the lack of detailed breakdown permitting to identify transactions with nonresidents preclude a verification of this consistency. Consistency checks are performed between general government sector data and the rest of the world account.

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

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

Data on central government budgetary operations are provisional when first released and are revised in light of accounting revisions whenever they occur, which are usually minor. Final data are published in *Budget Outcome of Revenue and Expenditure* (in Greek only). The rules and regulations concerning accounting practices, including ministerial decisions, are made public.

Central government debt data are provisional when first released and are revised in the light of new information. In particular, the data of the last quarter of each year are usually finalized in the middle of the following year in *Annual Budget Report* and *State Balance Sheet*. Data disseminated on Greece's NSDP under the SDDS show two months of data and indicate, therefore if data for the previous month are revised.

The NSSG data for the general government sector account are provisional when first released. They are usually revised six times during the next three years according to a twice-

yearly schedule that follows the notification to the European Commission of Greece's deficit and debt data at the end of February and August. The data become final three years after the end of the reference year. As already indicated, an interim publication has been recently released to present the preliminary data for 2001 following the February EDP notification (*National Accounts of Greece*, March 2002, released in April 2002).

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

MEF monthly budgetary data are marked preliminary. However revisions are usually not significant and the preliminary data can be used with confidence. As already indicated, the data in the *Budget Implementation Bulletin* cannot be identified as revised since only one month of data (on a cumulative basis since the beginning of the year) is published at a time. Data disseminated on Greece's NSDP under the SDDS show two months of data and are identified as preliminary upon release. The same applies to quarterly central government debt data.

General government national accounts data are identified as being preliminary upon release

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

No systematic study or analysis of revisions is performed on MEF central government budgetary operations data and on debt data.

Studies of revisions are conducted at the NSSG, but are not made public. Revisions are usually small. The need for such publication is not felt, as new information explains revisions.

## **5. Accessibility**

### **5.1 Data accessibility**

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

There is no publication dedicated to government finance statistics, and these statistics are published as part of the sectoral national accounts.

National accounts statistics for the nonfinancial transactions of the government sector are presented in the 2001 *National Accounts of Greece* in million of drachmae at current prices for six years (1995–2000). This presentation could be improved. In addition to the fact that the national accounts format is not suitable for fiscal analysis, the manner in which the data are presented is confusing, and users unfamiliar with the national accounts sequence of accounts and transactions will probably find this presentation difficult to interpret. Transactions for a given year are presented in one column where *resources* and *uses* are superimposed rather than being shown separately in two columns; furthermore, there is no

sign convention distinguishing these two flows. The balancing item identities in terms of ESA codes are presented in the far left column. Table 200 of the Eurostat national questionnaire is compiled and published by sector by the NSSG.

While the analytical framework of the MEF data on budgetary operations in the *Budget Implementation Bulletin* is simple and clear (revenue, expenditure, deficit), the classification of the data is not sufficiently detailed to be useful for budgetary analysis and monitoring processes. For such purposes, unpublished data which are significantly more detailed are available to government officials but are not published. Furthermore, only one month of data is disseminated in each bulletin, thereby reducing the usefulness of this publication. However, the cumulative data since the beginning of the year pertaining to that month are published, as well as similar data for the previous year. No time series are published by the MEF. Time series for the same budgetary revenue and expenditure data are available, however, in the BOG's *Bulletin of Conjunctural Indicators*.

Descriptive notes in the MEF *Budget Implementation Bulletin* focus on total revenue and expenditure developments, including developments in main categories of expenditures. The tables on expenditures are accompanied by pie charts and a bar chart on the "absorption" of the ordinary budget.

While that data are disseminated in euros on Greece's NSDP under the SDDS, the *Public Debt Bulletin* does not provide information on the value of the central government outstanding debt in euros (but does so for guaranteed debt), but in percent of total debt. Nor is it related to a magnitude (e.g., percent of GDP) from which the amount outstanding could be derived.<sup>45</sup> The information on various compositions of central government debt as a percentage of total debt, accompanied by pie or bar charts, is quite useful. Also useful is the redemption schedule for government securities over the next 20 years (in the form of a bar chart in millions of euros).

The presentations of budgetary central government finance data in annual publications, notably in the draft budget (*Kratikos proupologismos*) and the final accounts (*Apologismos esodon kai exodon tou kratous*) are very extensive, but such publications are usually not geared to the general public and can be difficult to use.

The following publications should be mentioned as they somewhat compensate for the paucity of published data in government finance statistics:

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<sup>45</sup> After the completion of the mission, the authorities have improved the presentation of debt data and now provide debt figures in euros.

- The *Statistical Yearbook of Greece*, which aims at fulfilling the needs of nonspecialists, presents several years of annual data with a two year lag<sup>46</sup> on cash receipts and expenditures and main categories of financing. The analytical framework and classification of the data do not correspond to the GFS 1986 or 2001 guidelines; for example, some grants, including receipts from the EU, are included in financing, and the distinction is between the ordinary and investment budget rather than between current and capital expenditures.<sup>47</sup> Furthermore, some inconsistencies appear between tables; for example Table XIX.2 includes “Nato receipts” (10,487 million dra.) in financing, while Table XIX.3 includes “Nato special aid” (10,487 million dra.) in revenue. The source of these data, which is not stated in the tables, is unclear.<sup>48</sup> The yearbook also contains a long-term time series on public debt (1958, 1970–1983 and 1987–1998), broken down in foreign and domestic currency and some financial instruments. Finally, data on receipts and expenditure by subsector of local government are published.
- Time series for the MEF budgetary revenue and expenditure data are available in the BOG’s *Bulletin of Conjunctural Indicators*. Also, a fiscal presentation of annual data showing revenue, expenditure and financing with some breakdowns are published in the monthly BOG bulletin, but with a significant delay.

Annual data showing revenue and expenditure with breakdowns are shown in *Current Trends and Outlook for Greece’s Economy and the Global Economy* produced by the General Directorate of Economic Policy of the MEF. However, according to NSSG staff, these data are compiled on a different basis than the general government accounts.

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

MEF monthly data on government finance are published monthly, and quarterly data quarterly in dedicated hardcopy publications and on the Internet. However, there is no annual government finance statistical publication aimed at the general public. Currently, annual publications are the *Budget Report* (the annual draft budget) and the final accounts. The monthly MEF publications are generally available in PDF files on the MEF website (but are of limited value for fiscal analysis), as is the BOG *Bulletin of Conjunctural Indicators* data

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<sup>46</sup> The 2000 yearbook contains data for 1995–1998, 1994–1998, 1993–1998, and 1997–1998 depending on the tables..

<sup>47</sup> Some reclassification can be made by the reader as some of the transactions are shown separately.

<sup>48</sup> The introduction of the public finance section of the yearbook indicates that the data “have been compiled through the central or regional services of the Ministry of Finance,” but does not specify whether the compiling agency (e.g., the GAO).

time series. Subscription to the SDDS has also led Greece to post the prescribed data on monthly central government operations and central government debt on dedicated pages on the websites of the MEF (<http://www.mof-glk.gr>).

NSSG data on the general government sector are disseminated in hardcopy format and on the NSSG website.

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

The DSBB's Advance Release Calendar greatly improves this aspect of dissemination. The publication calendars currently used in Greece are incomplete or lack precise dates.

The government sector statistics compiled by the NSSG are disseminated as part of the publication of the annual national accounts for Greece. The national accounts for a particular year are usually published toward the end of the following year and the month of release is indicated on the NSSG's last version of the "Calendar of Press Releases."

The public does not appear to be formally informed of the dissemination policy relating to MEF statistics on central government budgetary operations and on central government debt. The dissemination of these data, however, occurs under known monthly and quarterly frequencies, respectively. The date of release of the MEF data on central government budgetary operations and debt are announced one quarter in advance in the release calendar posted on the IMF website <<http://dsbb.imf.org>> and on the MEF Website. The actual date of publication of MEF data on central government budgetary operations and debt meets the pre-announced date.

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

The NSSG releases its government sector data simultaneously to all interested parties through the annual *National Accounts of Greece*. At the same time the main tables are posted on the NSSG's website. There is no internal government access to the NSSG's government sector data before their release to the public; nor is there any other preferential release. However, general government sector data are reported ahead of their release to the general public to the European Commission under the Excessive Deficit Procedure and the recently introduced quarterly reporting of quarterly government revenue and expenditure.

In addition to being in hard-copy format in regular bulletins, MEF statistics on central government operations and debt are made available simultaneously to all users by posting on the IMF's DSBB <<http://www.dsbb.imf.org>>. MEF monthly budgetary statistics are also released simultaneously to all interested parties by posting on the ministry's website (Ministry of Economy and Finance—General Accounting Office <<http://mof-glk.gr>>). There is no preferential treatment of selected users.

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

Nonpublished nonconfidential NSSG and MEF data on government operations and debt are made available on request. The availability of nonpublished MEF data and the terms and conditions on which they are made available are not publicized in government finance statistics publications.

## **5.2 Metadata accessibility**

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

In general there is no published Sources and Methods document other than the metadata posted on the IMF's DSBB.

There is no published Source and Methods document relative to the NSSG statistics on general government accounts. The 2001 *National Accounts Statistics in Greece* contains a summary of the main *ESA 95* methodology and guidelines. However, this summary is overly general as it is not dedicated to government finance statistics and is not specific to Greece.

There is no Source and Methods document relative to the statistics on budgetary operations and debt disseminated by the MEF. Revisions to accounting methods and procedures which would affect the budgetary data would normally require a change in law or regulation that would automatically be made public.

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

As already indicated, the BOG disseminates time series in its *Bulletin of Conjunctural Indicators* and the NSSG disseminates central government data in its monthly bulletin with a greater detail of revenue than in the MEF's *Budget Implementation Bulletin*.

General government sector accounts data are published in *National Accounts Statistics in Greece* only, but, as already noted, the structure and level of detail does not meet the needs of government finance specialists.

## **5.3 Assistance to users**

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

No contact person is identified in the publications on MEF and the NSSG. Assistance regarding the compilation and interpretation of the data is reported given upon request by the GAO, PDMA and NSSG staff. While the public is not informed of this possibility, a tradition of openness exists in this regard, and the public is free to contact specialists for further

information. In the website of NSSG detailed information is provided regarding the divisions of the National Accounts Directorate, including staff names and their coordinates.

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

There is no formal catalogue of MEF statistical publications. However, some publications are available on line on the MEF website, but some are not. Some of the available publications are out-of-date. For example, the *Budget Implementation Bulletin* listed and available on line on October 17 is the August 2001 issue.

A catalogue of publications with a price list for the current year is available every January from the NSSG. The page for this catalogue on the NSSG website is currently under construction.

Table 4. Data Quality Assessment Framework—Summary of Results for Government Finance Statistics  
(Compiling Agency: National Statistical Service of Greece)

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	
<b>0. Pre-requisites of quality</b>						
0.1 Legal and institutional environment			X			No single agency is assigned responsibility for compiling and disseminating comprehensive and integrated government finance statistics. Shortage of resources at the NSSG to compile general government sector data. No systematic assessment of efficiency is in place. There are no systematic processes to monitor quality.
0.2 Resources				X		
0.3 Quality awareness			X			
<b>1. Integrity</b>						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
<b>2. Methodological soundness</b>						
2.1 Concepts and definitions			X			Statistics are compiled mainly in the context of national accounts, not in an integrated framework for fiscal analysis. The definition of central government differs between MEF and NSSG datasets. General government data follow a strict national accounts structure, not a “Government finance” structure.
2.2 Scope			X			
2.3 Classification/Sectorization			X			
2.4 Basis for recording		X				
<b>3. Accuracy and reliability</b>						
3.1 Source data			X			Source data do not contain comprehensive information on financial flows and stocks. Survey questionnaires request information on one year of data, thereby precluding meaningful revisions.
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies	X					Revisions are negligible.

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
<b>4. Serviceability</b>						
4.1 Relevance			X			Data have limited usefulness for fiscal analysis; No formal monitoring of users needs.
4.2 Timeliness and periodicity			X			No monthly financing data are published.
4.3 Consistency			X			Verification of internal consistency between net lending/ borrowing and financing cannot be performed. Not reconcilable with monetary and financial statistics and with balance of payments statistics.
4.4 Revision policy and practice			X			Revision policy tends to be driven by EU reporting schedules. National publications do not indicate a revision policy.
<b>5. Accessibility</b>						
5.1 Data accessibility			X			Data are not presented according to a GFS format, but rather to a national accounts format.
5.2 Metadata accessibility				X		No source and methods are disseminated.
5.3 Assistance to users			X			Contact information is not identified in statistical publications.

## IV. MONETARY STATISTICS

### 0. Prerequisites of quality

#### 0.1 *Legal and institutional environment*

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

The BOG is an independent agency as prescribed by Law 2548/97 (Article 3). As of 1 January 2001, Greece became a member of the Eurosystem, which consists of the ECB and the National Central Banks (NCBs) of Euro area Member States.<sup>49</sup> The Statute of the BOG,<sup>50</sup> which has the force of law, was amended by Laws 2548/97, 2609/98 and 2832/00 to meet the requirements of the Treaty on European Union.

The ECB, assisted by the NCBs, is responsible for monetary and related statistics in the euro system.<sup>51</sup> The ECB Statute requires that the statistical work be carried out, wherever possible, by the national central banks that have adopted the euro. Hence, the BOG collects source data from resident depository corporations, compiles aggregates at the national level, and transmits these to the ECB, which produces a consolidated balance sheet of the Monetary Financial Institutions (MFIs) sector at the euro area level.<sup>52</sup>

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<sup>49</sup> The “Eurosystem” is the term used to refer to the ECB and the national central banks of the member states, which have adopted the euro. The focus of the Eurosystem is policy responsibility in the euro area.

<sup>50</sup> The Statute of the Bank of Greece (Ninth Edition, Athens 2000) is available in English or in Greek at <http://www.bankofgreece.gr> under the heading "The Bank / Legal Framework / Statute of the Bank"

<sup>51</sup> Monetary statistics consist of data on the financial and nonfinancial assets and liabilities of an economy’s financial corporations sector. The financial corporations sector consists of all resident corporations or quasi-corporations engaged in financial intermediation or in related auxiliary financial activities.

<sup>52</sup> MFIs are defined in Regulation ECB/1998/16 as resident credit institutions as defined in community law, and other resident financial institutions whose business is to receive deposits and/or close substitutes for deposits from entities other than MFIs and, for their own account (at least in economic terms), to grant credit and/or make investments in securities. A credit institution is defined as (a) an undertaking whose business is to receive deposits or other repayable funds from the public and to grant credits for its own account; or (b) an electronic money institution [within the meaning of European Parliament and Council directives]. Money market funds are defined in Regulation ECB/1998/16 as collective investment

(continued)

The BOG has the legal authority and responsibility for the collection of money and banking statistics under Article 5 of the Protocol on the Statute of the European System of Central Banks (ESCB) and the ECB as provided for under the Maastricht Treaty. These regulations are the Council Regulation (EC) 2533/1998 of November 23, 1998 governing the collection of statistical information for the fulfillment of tasks of the ESCB, Regulation (EC) 2819/1998 of the ECB of December 1, 1998 concerning the consolidated balance sheet of the MFIs sector, and Regulation ECB/1998/16 governing the collection of data required by the ESCB.<sup>53</sup> These regulations authorize the BOG to compile statistics relating to the single currency area, which are then disseminated by the ECB.

The Bank of Greece Governor's Act 2495/28.05.2002 authorized the BOG to collect monthly balance sheet data from all credit institutions operating in Greece, in accordance with Presidential Decree 384/1992 "Banking Accounting Standards" as well as Presidential Decree 367/1994. The Decree 367/1994 was amended to comply with Directive 86/635/EEC and with the Fourth Banking Directive (78/660/EEC). The Bank of Greece Governor's Act 2482/10.10.2001 authorizes the BOG to collect data from money market funds (MMF).

In the BOG, the Statistics Department, established in October 2000, is responsible for statistical systems; the compilation and dissemination of monetary and financial statistics rests primarily with the Monetary and Financial Statistics Division (MFSD). Within Greece, the MFSD is responsible for the compilation methodology which follows strictly the methodology and standards prescribed by the ECB in the compilation of monetary statistics.

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

The BOG is the sole agency involved in producing national monetary statistics in Greece. As a member of Eurosystem, the BOG Statistics Department is represented in all ECB statistical committees and other EU level working groups, as appropriate, to ensure that issues pertaining to data sharing and coordination stemming from membership in the European Economic and Monetary Union (EMU) are addressed in a comprehensive manner during all stages of developing and implementing new regulations for MFIs. The BOG also works closely with Eurostat in data sharing.

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undertakings, the issued units of which are close substitutes of deposits, in terms of liquidity, for deposits and which primarily invest in money market instruments and/or in other transferable debt instruments with a residual maturity of up to and including one year, and/or in bank deposits, and/or which pursue a rate of return that approaches the interest rates on money market instruments.

<sup>53</sup> The Regulation of the ECB of November 22, 2001 concerning the consolidated balance sheet of the MFIs sector (ECB/2001/13) has replaced Regulation ECB/1998/16 with effect from January 1, 2003.

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

The BOG monetary statistics do not disclose the data of individual institutions or transactions, and the BOG has a strict legal provision on confidentiality. Articles 35A and 55C, Statute of the Bank of Greece, address the confidentiality issue for members of the Monetary Policy Council and the BOG staff. These Articles prohibit all individuals acting or having previously acted on behalf of the BOG disclosing to anyone the information or data reported to the Bank. However, the prohibition shall not apply to the disclosure, in aggregate form, of information and data, provided that the identification of the entities or persons to which the data refer is not revealed. Article 55C and Article 371 of the Penalty code prescribe penalties for the violation of confidentiality that include monetary fines. Also, rules on staff conduct and professional secrecy bind the employees of the BOG. Additionally, in the context of the Eurosystem, Council Regulation (EC) 2533/1998 governs the collection of statistical information for the fulfillment of ESCB tasks and includes a requirement for confidentiality (Article 8)

In the compilation of source data, BOG informs each respondent of their rights and obligations with regard to the provision of information by citing specific legal requirements. According to BOG, respondents are fully aware of the relevant law and legal requirements. In practice, necessary measures are in place to ensure that individuals' data are not disclosed. Only three staff of the MFSD directly responsible for compiling source data have access to individual data using a secret password. Procedures developed by the Information Technology Department ensure the security and authenticity of individual respondents' data by a password-protection system and secured access and editing rights. Data transmission will shortly be moving from magnetic media to electronic exchange, and secure transmission and storage will be effected by the use of file encryption and digital certification technologies.

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

The BOG has the legal authority to collect data to compile the monetary statistics. Article 2 and Article 5B of the Statute of the BOG and Article 5 of the Statute of the ESCB and of the ECB, authorize the BOG to collect the necessary data needed for their operations. The Council Regulation (EC) 2532/1998 and the ECB Regulation 2157/1999 regulate the power of the ECB and NCBs of the euro area member states to impose sanctions on reporting agents in case of noncompliance with the statistical requirements. There is no potential conflict between the legal authority to produce monetary statistics and other laws or provision that may create major impairment to data production.

To deter noncompliance, legal provisions exist to impose penalties for noncompliance, both in terms of fines and imprisonment. Article 55C of the Statute of the BOG requires data reporting to the BOG from all credit and financial institutions, natural persons, legal entities of other market participants, and government departments and services. The Article also

imposes penalties for noncompliance with the reporting requirements of the BOG. Furthermore, Article 55D allows the BOG the right to examine books and records of these entities to ensure accuracy of reporting data and provides for imprisonment with a minimum of three months for noncompliance.

Regarding reporting burden, sufficient consideration is made by the BOG and the ECB to minimize reporting burden and to provide assistance to respondents. The BOG, from time to time, meets with the Hellenic Banks' Association to discuss the reporting burden and the necessity for reporting data. Hence, the BOG receives satisfactory cooperation from the financial community regarding data reporting on a timely basis. The EU and ECB statistical regulations require a minimization of the reporting burden for MFIs. To this end, a formal procedure (Merits and Costs Exercise) is followed by the ESCB in order to assess the costs of implementing new statistical requirements for reporting agents against the merits for users of new statistical requirements, before they are introduced.

## **0.2 Resources**

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

The MFSD has insufficient human resources for the current workload, nevertheless, computer resources and technology support is commensurate with current operations. The MFSD has a total of 13 staff responsible for a rapidly increasing workload owing to a significant increase in reporting requirements and revisions of report formats from many international organizations, such as ECB and BIS. Of these, five staff are responsible for data reporting from 63 banks, 41 money market funds (MMF), 120 insurance companies, and 100 other financial intermediaries. The division is responsible for compilation of data on analytical accounts of MFIs, accounts of other financial institutions and intermediaries, and interest rates.

Regarding staff qualifications, the MFSD staff are qualified and have extensive experience in monetary statistics compilation. Staff are provided with training in the monetary statistics methodology and compilation methods by various organizations, including the ECB, Eurostat, and IMF. Staff turn over is very low and most staff have been with the MFSD over five years.

In recognition of the need for additional resources, the BOG management has approved a staff increase to implement a longer-term plan for the compilation of monetary statistics. Additional staff will undertake the compilation of financial accounts to meet the Eurostat deadline in 2005 and further improvement of monetary statistics. When feasible, future statistical development work, such as the development of financial accounts, has been incorporated in new data collection processes.

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

The Statistics Department prepares detailed project plans that are sent to the General Council of the BOG for approval. Directors and Division Chiefs are expected to ensure the efficient use of resources under their supervision, and to verify the degree to which operational plans have been effected. Close collaboration and participation of the staff from the Statistics Department with ECB data processing and compiling committees facilitate efficient work process. There is no formal periodic review of budgeting procedures to ensure that scarce resources are best employed in addressing major data problems or meeting new data priorities. Nevertheless, managers share their views with staff regularly on efficient use of resources as part of routine operations. Low staff turnover contributes to smooth communication and operations of the MFSD. The BOG works closely with the ECB, which provides valuable expert assistance to evaluate statistical methodologies and compilation systems.

## **0.3 Quality awareness**

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

The BOG managers are aware of the various dimensions of data quality. The MFSD focuses on the application of the ECB methodology, the compilation of data using the ECB's report forms, and on timely reporting to the ECB and the dissemination of statistics to the public.

In realization of the many changes in monetary statistics requirements associated with participation in the Euro area, the BOG's Statistics Department gives priority to educating other monetary financial institutions (OMFIs) of the methodology and importance of accurate reporting. The education process is an on-going effort given relatively high turnover of staff in the OMFIs.

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

Quality review is done both internally in the MFSD and in consultation with the Economic Research Department—the major internal users, on an ad hoc basis. The MFSD checks the evolution of data item by item from month to month for each bank and at the aggregate level by comparing the data with the reporting data of other sectors. In addition, the monetary statistics produced by the BOG are subject to review from the ECB to ensure quality in terms of methodology and accuracy of data. The ECB conducts an annual survey on national statistical practice on the compilation of monetary statistics to ensure adherence to its methodology. There is no periodic users' survey to systematically obtain feedback from users on data quality issues. However, the BOG interacts closely with the financial community in exchanging of financial information. Such interaction has provided an opportunity for the BOG to receive feedback from users. The MFSD receives information regarding usefulness of the monetary statistics from ECB from time to time on the Eurosystem basis.

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

The BOG management recognizes the trade-offs among dimensions of quality and gives priority to the timeliness dimension in meeting the ECB reporting requirement, and then the BOG's own dissemination of statistics. Trade-offs within quality dimensions are discussed in the context of the work of the relevant ECB committees and within the banking community. Improvement of data quality is taken into account in planning the forward work program, such as improvement of data consistency across sectors and development of a system of financial accounts.

**1. Integrity**

**1.1 Professionalism**

*1.1.1 Statistics are compiled on an impartial basis*

The Statutes of the BOG and the EC legislation give adequate legal provision for staff independence in the conduct of statistical functions. Professional independence is guaranteed under Article 5A of the *Statute of the Bank of Greece*, which states that “when carrying out the tasks conferred upon them, neither the BOG nor any member of its decision-making bodies shall seek to take instructions from the government or any organization. Neither the government nor any other political authority shall seek to influence the decision making organs of the Bank in the performance of their duties”. In practice, the BOG staff adhere to a long tradition of independence and culture of professionalism that is supported by the Bank's management. The IMF's ROSC for Monetary and Financial Policy Transparency (2001) indicates that the Eurosystem (i.e., the ECB and National Central Banks, including the BOG) is afforded a high degree of legal and operational independence.

The professionalism of staff of the BOG is supported by recruitment and promotion procedures that evaluate exclusively the merit and the potential of candidates and current employees. Professional competency plays a key role in recruitment policies, and the BOG has a formal system of annual performance review. The Statute of the BOG, Article 38 requires explicitly that a candidate for employment and promotion can be appointed only after passing a test of qualification.

To promote professionalism, staff in the MFSD also participate in a number of regional committees, working groups and task forces.

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

The choices of source data and statistical techniques are determined solely by statistical considerations in the appropriate ECB committees in which the BOG fully participates.

These committees, which have grown out of the consultative structures developed in the context of the European Monetary Institute (the predecessor of the ECB), are designed to ensure that the statistical techniques and harmonized definitions adopted are agreed upon with sufficient advance notice so as to allow all member states participating in the EMU to modify their internal organizational structures accordingly.

BOG's choice on the methodology for monetary statistics is explained to the public. The set of rules for completing the OMFIs report includes extensive information on the concepts, definitions, and methodologies used in the compilation of money and banking statistics. These rules are included in the Bank of Greece Governor's Act No 2495/28.05.2002.

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

The BOG is entitled to comment on instances of erroneous interpretation and misuse of monetary statistics. Such comments are usually made through the Office of the Governor, or the Deputy Governor. While the Statistics Department is alert to the financial press and other media, the BOG's Secretariat maintains a clipping service, and actively scouts major Greek, English, German and French language-based editions. The Secretariat also provides explanatory material sought by data users, and directs enquiries to the subject department/division when required.

**1.2 Transparency**

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

Law 2548/97, Article 3 clearly states that the BOG has to ensure the collection and compilation of monetary and financial statistics, particularly within the scope of its cooperation with the ECB. The dissemination of data from the Monthly Financial Statement of the BOG is governed by Article 52 of the BOG's Statute. These laws are available from the BOG.

The collection of statistical information for the fulfillment of the tasks of the ESCB is carried out under Council Regulation (EC) No 2533/98 concerning the collection of statistical information by the ECB and in accordance with the framework established under Regulation (EC) No 2819/98 of the ECB of 1 December 1998 concerning the consolidated balance sheet of the MFI sector (ECB/1998/16). The documentation published by the ECB is available on its website.

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

There is no internal government access prior to release. Prior to release, the aggregated statistical balance sheet of Greek MFIs is transmitted to the ECB for the compilation of the euro area monetary aggregates. The release of national contributions to the euro area

aggregates is subject to an embargo until the publication of the ECB's press release on the monetary aggregates for the euro area. Specific references to this practice are made in the metadata posted on the BOG website.

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

The BOG publications clearly identify the BOG as the data producing agency and if data are republished from other sources these are clearly indicated. The BOG assumes that as a general practice users will make reference to the BOG as the source if its data are used. However, BOG does not now explicitly request attribution when BOG statistics are used or reproduced in other formats. The BOG, however, plans to indicate explicitly in its publication that it requests attribution.

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

Major changes in methodology associated with the joining the eurozone are explained briefly in the BOG's Annual Report under "Statistical and Standards". The actual changes of methodology are explained at the time of the release of the affected data in the *Bulletin of Conjunctural Indicators*, available on the BOG website. Data released are mostly final with occasional minor revisions. Provisional data are clearly indicated. When major revision of data is made, there is a footnote to explain the reason. In cases of definitional changes or reclassifications, data may be revised over a longer time period and are so indicated in the opening pages of the *Bulletin of Conjunctural Indicators*.

## **1.3 Ethical standards**

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

Staff are required to take an oath to be bound by the *Statute of the Bank of Greece*, and are provided with copies of the *Statute* and the *General Conditions of Employment*, which was last revised in 2001. Under the oath, staff pledge not to disclose confidential information, even after they leave the BOG. Ethical standards are also discussed in orientation seminars held for new recruits and promoted staff.

## **2. Methodological Soundness**

### **2.1 Concepts and definitions**

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

The concepts and definitions used by the BOG to compile monetary statistics are strictly in accord with the ECB and *ESA 95* standards, which are in broad conformity with the guidelines set out in the IMF's the *Monetary and Financial Statistic Manual (MFSM)*.

Significant improvement has been made in the monetary statistics to follow international standards more closely. The BOG disseminates in the *Bulletin of Conjunctural Indicators* the following monetary statistics from full balance sheets: (i) the Greek contribution to the monetary aggregates (M1, M2 and M3) of the euro area; (ii) balance sheet of the BOG; (iii) consolidated balance sheet of OMFIs; (iv) consolidated balance sheet of MFIs. The balance sheets of (ii), (iii), and (iv) were first disseminated in the September/October 2002 issue of the *Bulletin of Conjunctural Indicators*.

As for the ECB concept, the broad money aggregate M3 of the euro area is composed of (i) a narrow monetary aggregate M1, consisting of currency in circulation and overnight deposits, (ii) other short-term deposits, namely saving deposits and redeemable at notice up to three months and deposits with an agreed maturity of up to two years, and (iii) marketable instruments, which comprise repurchase agreements, money market fund units, and debt securities with a maturity of up to two years. M3 and its components exclude holdings by nonresidents of the euro area of money market fund shares/units, money market paper, and debt securities with a maturity up to two years.

## **2.2 Scope**

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

The depository corporations, which consist of all resident financial corporations and quasi-corporations that issue liabilities included in broad money as specified in the *MFSM*, are included in the coverage of the Greek monetary statistics. The term depository corporations is equivalent to MFIs under the ECB concept, comprise the central bank and OMFIs. Other depository corporations, referred to as OMFIs in European monetary statistics, consist of all resident financial corporations (except the central bank) and quasi-corporations mainly engaged in financial intermediation, whose liabilities consist of deposits or financial instruments that are included in the definition of broad money. The national definition of broad money is thus fundamental to the methodology of the ECB standard and *MFSM*, in that it determines which units in the financial system are classified as other depository corporations.

Consistent with the *MFSM*, the Greek OMFI subsector has full institutional coverage comprising 104 institutions (63 banks and 41 money market funds). For each resident OMFI, the institutional coverage comprises the consolidation of domestic headquarters and domestic branches including domestic branches of foreign OMFIs. A list of the Greek OMFIs is maintained and disseminated on the ECB website. Adjustments to the list are made on a timely basis from the record of banking licenses granted and withdrawn.

In line with the *MFSM*, asset management companies, pension funds, securities firms, insurance corporations, and financial companies operating in the Greek financial system are

classified as other financial intermediaries. Their balance sheets are included in a financial corporations survey that extend the coverage beyond the central bank and MFIs.<sup>54</sup>

### **2.3 Classification/sectorization**

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

The BOG uses the residency criterion to distinguish between domestic and external accounts for the compilation of monetary statistics, consistent with the *1993 SNA*, *BPM5* and the *MFSM*. The residency criterion applied is euro area residency (domestic), reflecting the economic reality of the EMU in Stage III. As for source data in the report form, the domestic or Euro area resident sector is further sectorized as Greek domestic and other Euro area residents. During the past few years, the BOG had notably improved the compilation method of monetary statistics to meet the requirements of the ECB.<sup>55</sup>

The BOG disseminates monetary statistics to the public based on a sectorization of domestic institutional sectors that follows the Regulation ECB/1998/16,<sup>56</sup> consistent with *ESA 95* and broadly with *MFSM*.<sup>57</sup> The sectorization is on a more aggregate basis than that recommended

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<sup>54</sup> The ROSC exercise limits quality assessment only to the depository corporation survey and does not cover the financial corporation survey.

<sup>55</sup> For example, the BOG indicated that corrections had been made on the classification of the accumulated foreign exchange valuation losses of the BOG, and on foreign exchange swaps that affected the measurement of net foreign assets. The accumulated foreign exchange valuation losses of the BOG, which were assumed by the Greek government in 1993, are reported as loans and securities to the central government (in foreign exchange) and they are thus included in the net credit to the government. The foreign currency swaps agreements, which ended in December 2000, had affected the net foreign assets to the extent that these assets were deposited with non-Euro area banks.

<sup>56</sup> The Regulation of the ECB of November 22, 2001 concerning the consolidated balance sheet of the MFI sector (ECB/2001/13) replaces Regulation ECB/1998/16 with effect from January 1, 2003. The breakdowns of MFIs are by central banks and OMFIs. The breakdowns of non-MFIs are by general government sector (central government, State government, local government, social security funds) and other resident sectors (other financial intermediaries, insurance corporations, and pension funds, nonfinancial corporations, household and nonprofit institutions serving households.)

<sup>57</sup> The sectoral classification of resident units recommended in the *MFSM*, for the purpose of compiling monetary statistics, refers to the following subsectors: (i) central bank; (ii) other depository corporations; (iii) other financial corporations; (iv) central government; (v) state  
(continued)

by the *MFSM*, with no complete breakdown of central government and other levels of government, nor breakdowns of nonfinancial corporations into public nonfinancial corporations and other nonfinancial corporations.<sup>58</sup> Selective time series have further breakdowns by enterprises and households and by economic activity of domestic Greek private sector.

The classifications focus on concept of general government rather than central government. It is not possible to separately identify net claims on central government because central government is only separately identified on the liability side as deposits of euro area central governments. On the asset side, claims on central government are indistinguishably included in the claims on general government with further breakdowns by loan and securities. Nevertheless, the BOG has collected sufficient detailed source data that would allow more detailed sectorization. According to the BOG, presentation of monetary statistics following more closely to the *MFSM* will be made in the BOG's *Monthly Bulletin*<sup>59</sup> in the near future.

The classification of financial instruments used for monetary statistics disseminated by the BOG is in line with the Regulation ECB/1998/16, the ECB *Guideline for Money and Banking Statistics* of November 2000, and *ESA 95*. Except for a few items, the classification is also consistent with *MFSM*, but on a more aggregate basis. Financial instruments are classified based on the liquidity of the instrument and the underlying legal or contractual characteristics. Financial instruments are broken down by currency in circulation, overnight deposits, deposits redeemable at notice up to three months, time deposits up to two years, other deposits, repos, money market funds shares/units, and debt securities issued up to two years. In accordance with the *MFSM*, repos are recorded as collateralized loans if there is a firm commitment to reverse the operation. Gold swaps are treated as repos when monetary gold is exchanged for cash. The BOG does not use gold loans/deposits with no exchange of cash which other wise would be an off balance sheet item. There are presently no nonmarketable securities issued by MFIs.

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and local government; (vi) public nonfinancial corporations; (vii) other nonfinancial corporations; and (viii) other resident sectors.

<sup>58</sup> A disaggregation of the nonfinancial corporations subsector into “public” and “other” nonfinancial corporations, as recommended in the *MFSM*, permits more detailed analysis of the banks’ lending to nonfinancial corporations. The analysis, in some cases, might reveal excessive borrowing by nonfinancial corporations controlled by the government. Additionally, it could provide information concerning potential vulnerability of the government’s financial situation.

<sup>59</sup> The *Monthly Bulletin* has not been produced since December 2001 owing to the need to reformat and reclassify the statistics to reflect Greece as a member of the Eurosystem. The *Bulletin* normally provided more details statistics than the *Bulletin of Conjunctural Indicators*. The BOG is working on the new format of the monetary statistics.

The few deviations of the ECB's requirements from the *MFSM* include the treatment of the following: classification of monetary gold and holdings of SDR, financial derivatives, other accounts receivables/payables, and classification of loan-loss provision. In the balance sheet of the BOG, monetary gold and SDRs are not separately identifiable, but aggregated with 'claims on non-Euro residents.' Financial derivatives are indistinguishably classified with remaining assets and remaining liabilities as required by the ECB.<sup>60</sup> The *MFSM* recommends that all financial derivatives with market value or fair value, which are subject to on-balance-sheet recording, should be presented as a separate category in the sectoral balance sheets of MFIs. Other accounts receivables/payables are also aggregated with remaining assets and remaining liabilities. Loan-loss provision is classified with capital and reserves.<sup>61</sup>

## **2.4 Basis for recording**

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

The *MFSM* and the ECB recommend the valuation of financial assets and liabilities to be recorded at the market value or market-price equivalent. Valuation according to market-price equivalent (or fair value) is needed for valuing financial instruments that are not traded in financial markets. According to the *MFSM*, 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.

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<sup>60</sup> The *MFSM* recommends the classification of financial derivatives as major asset and liability categories on the balance sheet, rather than as other assets/liabilities. Given their distinct nature as financial instruments, the *MFSM* follows the *1993 SNA* (revised) in separately classifying financial derivatives. This practice is also consistent with the *ESA 95*. The ECB approach deviates from the *MFSM*, *1993 SNA*, and *ESA 95*.

<sup>61</sup> The *MFSM* treats provisions for loan-losses as part of the system's financial accounts. It follows international accounting standards that recommend recording provisions against loan-losses (called "allowances" rather than "provisions" in international accounting standards) as a separate liability item. In principle, the *1993 SNA* methodology does not make use of loan-loss provisions, which are subsumed within the general category of capital accounts. In contrast, the *MFSM* methodology explicitly accounts for provisions for loan-losses (under other liabilities) and reserves (within the shares and other equity). For reference, in the ECB framework, provisions represent internal funds of the report institution, accumulated from nondistributed profits, and, hence, are classified under the liability item "capital and reserves."

Following the ECB methodology and broadly in line with the *MFSM*, monetary statistics are compiled using market price or fair market value for all recommended financial instruments. The Governor's Act 2495/28.5.2002 and the instruction attached to the Governor's Act 2458/01.03.2000 specify that fixed and variable-yield securities and off-balance-sheet items are to be valued at market prices. Accordingly, marketable securities and monetary gold are valued on a monthly basis at market prices. Exceptions set by the ECB and the *MFSM* are loans and deposits to be at nominal value, while capital and reserves at book value. All foreign currency denominated assets and liabilities held with the BOG and credit institutions are translated into domestic currency at the market exchange rate existing at the end of the reference month. Unrealized gains and losses attributable to any valuation adjustment are recorded in the valuation account. Financial transactions are recorded when there is change of ownership, new securities are issued and/or securities are redeemed.

In conformity with the ECB's guidelines and different from the *MFSM*, the loan portfolios are valued according to the outstanding principal amount only, that is, excluding any accrued interest (see 2.4.2). In addition, loan valuation is not adjusted for expected loan-losses, and provisions for expected loan-losses are recorded in remaining liabilities.

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

Interest payable/interest receivable is recorded on the balance sheet as interest accrues. In accordance with the Regulation ECB/1998/16, accrued interest on loans and deposits is recorded in the balance sheet item other assets/other liabilities, with the exception of accrued interest on securities at discount, which are recorded in the underlying securities held or issued by MFIs. This recording of accrued interest deviates from the accrual accounting principles recommended in the *MFSM*, according to which interest due but not paid on financial instruments should be incorporated into the underlying amount of the financial asset or liability, rather than being treated as part of other accounts receivable/payable.<sup>62</sup> It also deviates from the *ESA 95* basis where accrued interest should be included in the instruments that generated them.

It should be noted that source data identify separately accrual interest by instruments on loans deposits securities issued and securities held. Data are not broken down by sector since the

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<sup>62</sup> The *MFSM* approach provides an economically meaningful way to obtain an accurate measure of the value of the asset/liability at a given point in time. The value of an instrument at any moment equals the discounted value of the future payments (interest and/or capital). Therefore, an instrument that is valued to include accrued interest reconciles past economic flows with future expected economic flows. The ECB framework results in inconsistencies in the valuation of different types of financial instruments (e.g., loans and deposits vs. zero-coupon bonds). The *MFSM* approach is also consistent with the *ESA 95*, although *ESA 95* states that the national practices can differ.

ECB does not require such breakdowns. The BOG reports these accrual interest separately to ECB. As for the data disseminated to the public, users cannot identify this accrued interest separately, so adjustment to conform with the *MFSM* is not possible.

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

In line with the general principle of the *MFSM*, assets and liabilities of the BOG and other MFIs are collected and compiled on a gross basis. Claims on particular transactors are thus not netted against liabilities to those transactors.

For the compilation of the sectoral balance sheets of the BOG and other MFIs, the data on financial assets and liabilities are aggregated into major categories (e.g., claims classified by debtors and deposits classified by creditors in accordance with the ECB's requirements).

### **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 MFSD collects accounting records from the comprehensive institutional coverage of MFIs for the production of monetary statistics. No survey is used. It reviews the data source on a regular basis to ensure that the data collection program remains comprehensive. The Accounting Department provides comprehensive balance sheet data for the BOG to the MFSD by hard copies. The MFSD makes necessary adjustments manually. All OMFIs submit their balance sheet data to the MFSD on a monthly and quarterly basis by electronic media.

To enhance the accuracy of reporting, the BOG issues detailed reporting instructions and templates with references to accounting codes from the Chart of Accounts. The accounting rules followed by the BOG—in line with the other NCBs of the euro area—have been established by the Governing Council of the ECB. The accounting rules followed by the MFIs in drawing up their accounts are laid down in the national transposition of Council Directive 86/635/EEC of December 8, 1986 on the annual accounts and consolidated accounts of banks and other financial institutions, and any other international standards applicable.

The accounting records of MFIs are reclassified and sectorized according to Regulations ECB/1998/16 and ECB/2001/13. Instrument and sector classification are broadly consistent with the *MFSM*. It should be noted that the reporting guidelines could be improved to provide more details on the classification of derivatives. Even though the derivative market is relatively small, the MFSD recognizes the need for better reporting guidelines to avoid inconsistencies among reporters.

The financial press is monitored for information on developments in financial markets that may be of relevance for the compilation of monetary statistics. The Statistics Department also keeps close contact with the ECB's Money and Banking Statistics Division in order to keep abreast of developments in the financial markets and, if necessary, any changes of reporting systems. In this context, the Statistics Department recently discussed with OFMIs the future requirements for MFI interest rate statistics laid down in the new Regulation ECB/2001/18, which defines the statistical standards according to which MFI interest rates on deposit and lending business should be collected and produced.<sup>63</sup>

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

The source data from all MFIs reasonably approximate the definitions, classifications, valuation, and time of recording, but accuracy could be improved to reduce the size of other assets and other liabilities. The BOG indicated that monetary statistics are compiled on the basis of residency of the account holder. However, given the recent introduction of new report forms in September 2002, the MFSD experienced reporting inconsistencies among credits institutions and MMF. For example, the total deposits of MMF with credit institutions as reported by MMF are significantly different from those reported by the credit institutions. Other inconsistencies are deposits of OMFI as recorded by the BOG against the record of OMFIs, and cross checking of deposits among OMFIs. In the consolidation of OMFIs and of MFIs, the differences of deposits are classified in other assets and other liabilities, contributing to a relatively large value of other assets as compared with total assets, and of other liabilities as compared with total liabilities (i.e., around 13 percent). Inaccurate source data also result in relatively large average interbank discrepancies (around 16 percent during 1999 to April 2002) as compared the euro area average (around 0.2 percent). It is anticipated that source data will improve soon with the implementation of a new Chart of Accounts.

With respect to derivatives, the source data from the BOG report form provide for separate reporting items for derivatives, but with limited guidelines for compilation. The BOG instructs that only the market value of all tradable derivatives should be reported on the balance sheet, but more specific instruction is needed to clearly classify derivatives as on- or off-balance sheet items. The Annex 1 of report form also requires off balance sheet items for liabilities for nominal values, including options. It is likely that in the absence of more clear compilation guidelines OMFIs are not reporting different kinds of derivatives consistently.

With the introduction of euro banknotes in January 2002, the reported value of banknotes in circulation does not coincide with the actual amount of euro banknotes physically put into

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<sup>63</sup> First reporting under this Regulation was to begin with monthly statistical information for January 2003. However, the BOG had already compiled the data according to the new Regulation since September 2002.

circulation by the BOG, but follows a specific allocation procedure set out in Regulation ECB/2001/15. Pursuant to the accounting regime agreed between the Eurosystem NCBs, the item banknotes in circulation includes, as of January 2002, the BOG's share of the total euro notes issued corresponding to Greece's paid-up share in the ECB's capital plus the total amount of drachmas notes still in circulation.

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

### *3.1.3 Source data are timely*

The data collection system allows for the timely compilation of monetary statistics to submit to the ECB, to meet the SDDS requirements on timeliness as well as the publication schedule of the *Bulletin of Conjunctural Indicators*.

The accounting records of the BOG are available on a weekly basis and are provided from the Accounting Department to the MFSD. The source central bank balance sheet is available within one week after the end of the reference month. The returns of the OMFIs are submitted to the MFSD on the 12<sup>th</sup> working day following the end of the reference month. The BOG completes the processing of these data and the compiling of aggregates for the balance sheet of the central bank, the Greek contribution to the consolidated balance sheet of the euro area MFIs, and an aggregated monthly balance sheet of MFIs in Greece to submit to the ECB within the time requirement.

## **3.2 Statistical techniques**

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

The MFSD uses an electronic data processing system developed internally to perform consistency checks and consolidation of data. All report forms are automatically cross checked at various stages to ensure correct aggregation. The data are also checked for validity and accuracy by means of plausibility checks using previous months' data. Any errors found are resolved with the reporting agencies immediately, normally prior to dissemination. Once the necessary corrections have been processed, a second round of validation takes place.

In addition to the process within the BOG, the ECB uses an extensive data checking system to minimize reporting errors from member countries. The Guideline ECB/2000/NP12 (Annex 2) requires consistency checks between accounting and statistical balance sheet data of NCBs and relevant explanatory notes on a monthly basis. Any discrepancies or errors are resolved on a timely basis. Furthermore, an annual review of the consistency checks between accounting and statistical data as well as full explanatory notes are reported once a year. The Money and Banking Statistics Division of the ECB is responsible for monitoring of reporting requirements.

The report forms are designed in a way that makes them easy to complete and appropriate for computer processing. Line items in the report form include appropriate codes from the Chart of Accounts for credit institution and general accounting rules for MMF. Report forms have been pilot-tested with a sample of respondents. The new reporting forms introduced for the September 2002 monetary data were piloted in early 2002 with the five largest banks before being sent to all OMFIs.

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

According to the MFSD, all OMFIs report the required data within the specified timeframe that allows the MFSD to disseminate data and report data to the ECB on time. The BOG does not seasonally adjust the data. The ECB calculates seasonally adjusted data on monetary aggregates for the euro area.

**3.3 Assessment and validation of source data**

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

As part of routine operations, the MFSD receives the full cooperation from the BOG Accounting Department on any queries regarding the financial accounts of the BOG or the OMFIs. The BOG maintains a good working relationship with the OMFIs and receives satisfactory cooperation. The MFSD incorporates relevant changes in monetary statistics reflecting financial market developments. The staff of the MFSD are represented at the ECB's Working Group on Money and Banking Statistics to assess, and if necessary enhance, monetary statistics methodology in the context of developments affecting financial markets and financial intermediaries in the euro area.

The source data are analyzed to correct underreporting/misreporting and to check for temporal consistency and consistency with other related data sources. Existing discrepancies of reporting among MFIs necessitate the MFSD to intensify discussion with MFIs to ensure strict compliance with the BOG Guidelines. The MFSD currently is working to resolve discrepancies in deposits reported by credit institution and MMF, discrepancies of deposits among OMFIs' records, and deposits with the BOG. In this context, source data are analyzed for possible revisions.

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

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

If deemed necessary, the accuracy of the balance sheets submitted by the OMFIs is checked against secondary data sources, such as reporting of other financial intermediaries. The MFSD plans to expand the validation of intermediate data to cover cross-checking with data from insurance companies. In general, however, the MFSD resolves most queries concerning monetary statistics with OMFIs directly and immediately.

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

The MFSD investigates statistical discrepancies and determines major factors that might be contributing to them. Reporting institutions are contacted immediately to provide corrected data and explanations, prior to the dissemination of the statistics, for incorrect and/or implausible fluctuations in the data.

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

Discrepancies in monetary or credit aggregates are rare, and likely to occur only after a significant change in statistical methodology. In the case of large and unexplained fluctuations in data series, the MFSD investigates possible classification/sectorization errors by individual respondents. The MFSD also checks on a monthly basis the behavior of monetary data at aggregated level, calculating growth rates, and verifying the overall consistency of monetary statistics.

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

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

Studies and analyses of revisions to investigate the sources of errors and fluctuations are part of operations. Based on the experience of the staff, deviations, omissions, and other potential sources of problems in the data (e.g., erroneous sectorization of institutional units) are identified and investigated (see 3.3). Most data reported in the *Bulletin of Conjunctural Indicators* are final unless otherwise indicated as provisional data. As far as money and banking data are concerned, the size of revisions is very small.

## **4. Serviceability**

### **4.1 Relevance**

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

The ECB undertakes consultations with users to ensure that monetary statistics are relevant and meet users' needs. The MFSD closely follows the report format recommended by the ECB and also, to the extent possible, the format of the *MFSD* in order to have the data serve the analytical needs of users. The MFSD consults with the Economic Research Department on an ad hoc basis. The MFSD, having recently separated from the Economic Research Department, has close contact with that department. Consultation internally or with outside users to ascertain the relevance of monetary statistics is through informal regular contacts. The MFSD staff participate in international statistics meetings and seminars organized by international and regional organizations.

### **4.2 Timeliness and periodicity**

#### *4.2.1 Timeliness follows dissemination standards*

The SDDS prescribed components of the analytical accounts of the BOG are disseminated within two weeks, and those of the MFI sector within one month after the end of the reference month, consistent with the specifications of the SDDS. These components are disseminated on the BOG's website.

In addition, the *Bulletin of Conjunctural Indicators* is normally published one month after the reference period. The *Bulletin* provides more comprehensive data on the central bank survey, the consolidated OMFI survey, and the consolidated MFI survey.

Although there is an embargo on the release of national monetary data before the release of the euro area monetary aggregates by the ECB, the embargo does not delay the release of the national data beyond the timeliness prescribed by the SDDS. In the event of a delay in the release of euro area monetary aggregates that would affect the timeliness of disseminating national data, a notice will be added to the Advance Release Calendar posted on the BOG's website.

#### *4.2.2 Periodicity follows dissemination standards*

The balance sheets of the BOG and the OMFIs are compiled and disseminated on a monthly basis, which is consistent with the SDDS.

### **4.3 Consistency**

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

The MFSD seeks to maintain consistency of the monetary statistics database. Adjustments and explanations are made for change in methodology, recently owing to the participation in the Eurosystem. However, the introduction of the new report form for September 2002 data has caused some inconsistencies among detailed reports from the OMFIs. The MFSD made some adjustments on data for publication while continuing to resolve the inconsistencies, such as large interbank reporting discrepancies of over 15 percent of total MFI deposits.

Currently, there are no flow of funds accounts or system of financial accounts. The BOG and other statistical agencies (such as the National Statistical Service of Greece, GAO of the MEF) have a committee to develop financial system accounts for Greece by 2005 in compliance with the Eurostat requirement.

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

As from March 1998, the monetary statistics are based on reports from all Greek credit institutions on the basis of uniform ECB reporting requirements. As a minimum, the ECB requested the production of harmonized historical data at least as from March 1998 and for monthly data on loans and monetary aggregates from January 1980, on the basis of best estimates. The *Bulletin of Conjunctural Indicators* publishes monetary statistics in the format conforming with the ECB requirement from December 2000.

Main breaks and discontinuities in the time series are explained in the methodological appendix of the *Bulletin of Conjunctural Indicators* and the *BOG Monthly Bulletin*. Unusual changes in economic trends are explained by the Economic Research Department in the *BOG Annual Report*, the *Interim Report on Monetary Policy*, and, occasionally, in the *Economic Bulletin*.

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

The MFSD focuses mainly on data consistency within monetary statistics and cross checks with other sectoral data are not done.

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

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

The latest data on the BOG and OMFIs are considered final, except for a few tables of more detailed breakdowns of credit by economic sector. In accordance with the principles and guidelines on revision policy set out by the ECB, revisions are carried out at the time of the next release; once the revisions are incorporated, the data are considered final. Footnotes to

the data and a general note in the introduction section of the BOG publications notify users of important revisions.

According to the Eurosystem revision policy, national central banks in the euro area should not need to systematically revise data outside the ordinary date range (so called exceptional revisions). Significant data revisions applied to values related to a period prior to the month preceding the current reference month—not due to grossing-up or to minor revisions—and any exceptional revisions are to be explained to the ECB by means of explanatory notes. According to the BOG, the only significant revisions made to date refer to reconstructions of time series for monetary and credit aggregates—several of which occur from March 1998—to be in compliance with the ECB’s requirements. The 1998 Annual Report provides limited explanation of changes in statistics. The MFSD plans to incorporate detailed explanations and clear break signs in the data series in the BOG Monthly Bulletin, currently being reformatted.

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

Users are alerted that the initially published data are provisional (data are marked with “\*”) and subject to revision. However, most data are final when they are first published, except a few detailed series. The revised data are disseminated in the same format as the provisional data. In practice, revisions are normally small; significant revisions are explained in the methodological notes or footnotes.

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

The BOG does not do separate revision studies, but revision studies and analysis are part of normal data compilation operations. According to the MFSD, revisions in monetary data are normally very small. No analysis of the preliminary versus revised data is being published for major aggregates to allow an assessment of the reliability of the preliminary data.

## **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 BOG disseminates the central bank and the OMFI accounts in a balance sheet format, including a central bank survey, consolidated OMFI survey, and consolidated MFI survey. The BOG also disseminates the Greek component of the aggregated balance sheet of the Eurosystem and the Greek contribution to the euro area monetary aggregates. Such an analytical framework constitutes a core set of data for macroeconomic analysis; it links the consolidated deposit liabilities of the BOG and the OMFIs to their claims on the resident sectors of the economy and nonresidents.

The presentation format of monetary statistics in the *Bulletin of Conjunctural Indicator* is very similar to that in the ECB *Monthly Bulletin*, so that it is easy for users to make a comparison. In addition, the *Bulletin of Conjunctural Indicators* also publishes the central bank survey; OMFI survey, and the consolidated MFI survey following the *MFSD* format. The *Bulletin of Conjunctural Indicators* includes tables and charts that facilitate the analysis. Comments on current trends are provided in the BOG's *Annual Report*, the *Interim Report on Monetary Policy*, and, occasionally, in the *Economic Bulletin*. The MFSD meets all the SDDS requirements and provides independently metadata and summary methodology statements on the BOG's website. Systems are in place to permit cross-checking to ensure accuracy of statistics.

However, use of terminology is not consistent across statistical tables in *the Bulletin of Conjunctural Indicator*. For example, the term "resident" means Euro area residents in some tables but Greek residents in others. Also, there is inadequate explanation regarding comparability of data before and after joining the Euro area and the concept of consolidation in the context of Euro area with the extended residency term, i.e., Greek resident plus other euro residents.

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

Data are first released in a more aggregate format, i.e., the SDDS prescribed component on the BOG's website. Afterward, more comprehensive data are released in the *Bulletin of Conjunctural Indicators* and on the BOG's website. Longer time series can be accessed free of charge and downloaded from the BOG website.

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

Meeting the SDDS requirements, monetary statistics are released according to a quarter ahead Advance Release Calendar giving precise release dates for the next three months. The press release containing the calendar is disseminated on the BOG's Internet website.

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

Data are released simultaneously to all interested users.

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

Unpublished and nonconfidential data are made available upon request free of charge.

## **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 BOG in general follows the money and banking statistics methodology as prescribed by the ECB. The BOG disseminates metadata for the analytical accounts of the central bank and analytical accounts of the banking sector on its website including information on the concepts, classifications, data sources, characteristics, and definitions. Summary methodology statements are also disseminated on the BOG's website.

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

The *Bulletin of Conjunctural Indicators* and the *Annual Report* provide information regarding methodology in a summary format, with further reference to more details from ECB references. As a member of Euro system, the BOG follows strictly the methodology prescribed by the ECB. Users have access to comprehensive sources and method documents from the ECB website.

## **5.3 Assistance to users**

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

All publications of the BOG provide general contact information for the department responsible for the publications and queries are forwarded to subject experts by BOG's internal procedure. In addition, a contact person for each subject field for monetary statistics has been recently provided in the metadata on the BOG's website. Information regarding the organization structure is also available from the BOG's website. The *Bulletin of Conjunctural Indicators* refers only the Economic Research Department and not the Statistics Department that is responsible for the monetary statistics. The BOG is considering including contact information by subject field in its publications. There is no official survey of users to help gauge the effectiveness of assistance, although the BOG has contacts with major users of monetary statistics..

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

A catalogue of publications is available from the BOG website with contact information. Most publications are available by downloading from the website. Most hard copy publications are available for free from the BOG.

Table 5. Data Quality Assessment Framework—Summary of Results for Monetary Statistics  
(Compiling Agency: Bank of Greece)

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						
Elements	NA	Assessments				Comments
		O	LO	LNO	NO	
<b>Prerequisites of quality</b>						
0.1 Legal and institutional environment		X				0.2. Insufficient staff resource to allow longer-term statistical development.
0.2 Resources			X			
0.3 Quality awareness		X				
<b>1. Integrity</b>						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
<b>2. Methodological soundness</b>						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
<b>3. Accuracy and reliability</b>						
3.1 Source data			X			3.1 Inaccurate reporting among MFIs gives rise to large interbank discrepancies and relatively large other assets and other liabilities. There are large discrepancies of deposits of MMFs with credit institutions and deposits of OMFIs with the BOG.
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
<b>4. Serviceability</b>						
4.1 Relevance		X				4.3 Need a regular procedure for crosschecks of consistency with other sectoral statistics. 4.4 No explicit and well-established schedule for revision. Revision policy is not published.
4.2 Timeliness and periodicity		X				
4.3 Consistency			X			
4.4 Revision policy and practice			X			
<b>5. Accessibility</b>						
5.1 Data accessibility			X			5.1 Terminology used should be more consistent across tables, such as resident and domestic concepts. More explanations are needed regarding comparability of data across periods, such as prior to and after joining the euro area.
5.2 Metadata accessibility		X				
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 statistics is clearly specified*

Since the commencement of operations as a central bank in 1929, the BOG has been responsible for the compilation of Greek balance of payments statistics, under the original *Statute of the Bank of Greece*. Under Article 55C of the new *Statute of the Bank of Greece (2000)*, the BOG is accorded the right to collect the necessary data and information in order to perform its tasks and fulfill its duties in accordance with the Maastricht Treaty. This has been ratified by Laws 2609/1998 and 2832/2000, and requires all residents to report transactions with nonresidents to the BOG for the compilation of the balance of payments, thereby strengthening the legal basis for the collection of statistical information from both the banking system, and other resident legal entities and private individuals.

Since the start of Stage Three of European Economic and Monetary Union (EMU) in January 1999, Greece (along with the members of the euro area) provides statistical data for the euro area balance of payments and international investment position (IIP). The legal authority for collecting balance of payments and international investment statistics is provided for by (i) Article 5 of the Protocol on the Statute of the ESCB and the ECB (as provided for under the Maastricht Treaty); (ii) the Council Regulation (European Commission) 2533/1998 of November 23, 1998 that governs the collection of statistical information for the fulfillment of tasks of the ESCB; and (iii) the ECB Guidelines 2000/4 (May 2000) addressing the detailed requirements for balance of payments and international investment position statistics. Such information, aggregated as required, is used to compile statistics relating to the single currency area, which are then disseminated by the ECB.

Until 1995, balance of payments compilation and analysis were undertaken by a section in the BOG's Economic Research Department. In that year, the Balance of Payments Statistics Division was created as a distinct unit within the Economic Research Department, to compile balance of payments statistics. By a decision of the General Council of the BOG in October 2000, the Department of Statistics was established to undertake responsibility for statistical systems; and the Balance of Payments Statistics Division was brought within its fold. However, the Economic Research Department has retained responsibility for balance of payments forecasting and analysis.

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

The BOG relies primarily on its closed international transactions reporting system (ITRS) as the basis for data collection. Banks' settlements reporting are complemented by direct reporting by resident transactors including oil refineries, investment companies, mutual

funds, brokerage firms and entities not using resident banks for intermediation (e.g., multinational corporations); and data sharing is deemed adequate by the authorities. Additionally, various departments of the BOG provide source data, including general government external debt and reserves assets, for the compilation of the balance of payments and the IIP. Following the 1997 findings of a BOG interdepartmental committee tasked with determining how balance of payments transactions undertaken in various BOG departments were reported, a unit was created to improve statistical coordination among balance of payments data providers within the BOG. It provides a harmonized balance of payments accounting framework for the BOG as a distinct reporting entity. Related government agencies also provide data on transactions with EU institutions, and on external debt. Data sharing and coordination with these external agencies are deemed adequate, and regular bilateral meetings are held to ensure proper understanding of existing and emerging data requirements.

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

Balance of payments statistics are collected, compiled and published in compliance with Article 55C of the Statute of the BOG. This Article safeguards the confidentiality of individual data, and requires that data be disseminated in a manner that prevents identification of individual persons' or entities' (public or private) responses. Also, the employees of the BOG are bound by professional secrecy for all their actions and are forbidden to disclose data reported for statistical purposes; persons acting or having previously acted on behalf of the BOG are also bound by these prohibitions. Article 371 of the Penal Code provides penalties for secrecy violations. Council Regulation (EC) 2533/1998 governing the collection of statistical information for the fulfillment of ESCB tasks also includes a requirement for confidentiality (Article 8). These confidential guarantees are identified on all surveys undertaken by the BOG, and in cases where data collection activities are outsourced to private firms ( for e.g., the “frontiers” travel survey), confidentiality clauses are included in the service contracts.

Procedures developed by the Information Technology Department ensure the security and authenticity of individual respondents' data by a password-protection system and secured access and editing rights. Data transmission will shortly move from magnetic media to electronic exchange, and secure transmission and storage will be effected by the use of file encryption and digital certification technologies.

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

Statistical reporting is mandatory under Article 55C of the *Statute of the Bank of Greece (2000)*. Under Article 55D of the *Statute*, the BOG has the right to verify reported information, and sanctions exist for misreporting or for noncompliance with the reporting requirements. However, such sanctions have never been invoked, as the Bank has relied traditionally on moral suasion.

Within recent years, proactive approaches for encouraging statistical reporting have also been developed. These include the distribution of a *Balance of Payments Compilation Manual* and an accompanying *Technical Specifications for the new Balance of Payments Methodology* to credit institutions; the development and distribution of software tools that assist data small banks and resident brokerage firms in compiling, checking and archiving their data submissions to the BOG; and the availability, upon request, of more disaggregated—but nonconfidential—information to enterprises, and industry groups such as shipping associations and tourism organizations. In discussions with data providers in the private sector, BOG officials have also emphasized the potential impact of quality macroeconomic data on Greece's credit ratings in global financial markets.

## **0.2 Resources**

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

The balance of payments statistical program is driven primarily by ECB requirements, and has focused largely on development initiatives within the last five years. The termination of exchange controls in Greece during the mid-1990s resulted in a redeployment of BOG staff, with the Statistics Department being among the beneficiaries, thereby enabling an increase in the size of the Balance of Payments Division. Presently, this division comprises 25 permanent staff, of which five have been in the division for over 15 years, representing the core of experienced balance of payments compilers. An additional four economists/statisticians are expected to join the division. There are also three university interns. At the time of staff redeployment in 1995, potential recruits participated in an extensive seminar on balance of payments methodology and were required to pass a balance of payments examination. However, wider exposure to external training by a greater number of staff in the Balance of Payments Division appears limited; senior staff indicate that language capabilities limit staff access to external training.

Six specialists in the Information Technology Department are assigned to the Balance of Payments Division, and five economists are assigned to balance of payments analysis in the Economic Research Department.

Computer resources are also considered adequate, and computerized systems for source data collation and validation, and balance of payments data generation are in place. The financial resources are allocated as part of the annual BOG budget review process and are considered adequate.

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

The Statistics Department prepares detailed project plans that are sent to the General Council of the BOG for approval. The BOG's Departmental Directors and Division Chiefs are expected to ensure the efficient use of resources under their supervision, and to verify the degree to which operational plans have been effected, exercising decisional powers as necessary.

The BOG's Information Technology Department is proactive in the application of state of the art technologies for enhancing resource efficiency in the balance of payments statistical system, and staff exposure to information technology (IT) solutions used in other Member States is facilitated by participation in ECB/Eurostat committees on statistical information systems.

### **0.3 *Quality awareness***

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

Issues affecting the quality of euro area and national balance of payments statistics are discussed at the level of the ECB and the Eurostat, and recommendations regarding data accuracy and relevance guide the work of the national statisticians. Particular foci of the assessments of national data has been on the adequacy of ITRS systems to handle the increased volume and complexity of transactions, problems in distinguishing between resident and nonresident transactions, integration of national financial markets and the disappearance of domestic and foreign concepts previously applied to certain financial instruments, changes in corporate cash management, and changes in payments systems. The quality focus within the BOG's Statistics Department is, therefore, largely influenced by work on data quality undertaken by the ECB and Eurostat. However, statistical initiatives such as the development of new data sources for recording travel—an important item in Greece's balance of payments—indicate a high level of data quality awareness at the national level.

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

Within the context of the transition to settlements-based bank reporting, and to ensure compliance with the ECB requirements defined in ESCB committees, processes to monitor the quality of the balance of payments statistical system have focused largely at the collection stage in order to guarantee the accuracy of source data. Validation checks on respondents' data—submitted on diskette or CD-Rom—are performed in the Information Technology Department (the technical control stage) prior to transmission to the Statistics Department's Balance of Payments Division, which performs quality control checks that include examination of an individual respondent's time series data; comparison of transaction trends of respondents of similar size; comparison between different sources of data and between stocks and flows; and confirmation of high-value transactions (see 3.2.1). At the statistical output level, plausibility checks are conducted against related data series prior to dissemination. Formal processes to monitor the quality of disseminated statistics do not exist in the form of periodic users' surveys. However, to the extent that the SDDS embodies statistical best practices for data dissemination, the BOG's Statistics Department view their work that facilitated Greece's SDDS subscription as indicative of evolving processes that support monitoring of the quality of disseminated statistics. Further, the ECB and Eurostat

monitor the quality of Greece's balance of payments statistics (national presentation and contribution to euro aggregates) through periodic field visits.

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

Trade-offs are discussed in the context of the work of the relevant ECB committees on which the BOG is represented. While departmental strategic plans are not formalized within the BOG's operations, the Statistics Department identifies national priorities primarily as part of its reporting to the ECB and Eurostat. The Balance of Payments Division is sensitive to the trade-offs within quality, and has, for example, decided to delay the inclusion of reinvested earnings until the next round of major revisions—scheduled for 2003 when the travel credits and debits will be revised on the basis of the new travel survey—in order to provide stability to the balance of payments time series.

**1. Integrity**

**1.1 Professionalism**

*1.1.1 Statistics are compiled on an impartial basis*

Professional independence is guaranteed under Article 5A of the *Statute of the Bank of Greece*, which states that: “When carrying out the tasks conferred upon them, neither the BOG nor any member of its decision-making bodies shall seek to take instructions from the government or any organization. Neither the government nor any other political authority shall seek to influence the decision making organs of the Bank in the performance of their duties.”

The IMF's ROSC for Monetary and Financial Policy Transparency (2001) indicates that the Eurosystem (i.e., the ECB and National Central Banks, including the BOG) is afforded a high degree of legal and operational independence.

Professional competency plays a key role in the BOG's recruitment policies, and there is a formal system of annual performance review. Staff in the Balance of Payments Division participate in a number of external committees, working groups and task forces, as follows:

- ECB Statistics Committee,
- Eurostat's Committee on Monetary, Financial and Balance of Payments Statistics (CMFB),
- ECB Working Group on Balance of Payments and External Reserves Statistics,
- Eurostat Balance of Payments Working Party,
- ECB Business Coordination Group on the Centralized Securities Database,
- ECB Task Force on Foreign Direct Investment,
- ECB Task Force on Portfolio Investment Income,

- ECB/Eurostat Technical Group on Asymmetries, Common Codification and Thresholds,
- Joint Eurostat-OECD Committee on Trade in Services,
- Joint ECB/Eurostat Task Force on Quality, and
- OECD Working Party on Financial Statistics.

Staff report that these fora provide wider exposure to statistical best practices, and access to a regional pool of expertise on which they can draw to address any data issues. Staff also participate in other international statistical meetings and conferences, including those conducted by the IMF.

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

Decisions about the choice of data sources and statistical techniques are made solely on the basis of statistical considerations. The BOG has recently shifted to a survey-based method for compiling travel transactions, in response to recognition that the ITRS provided incomplete coverage following the introduction of the euro. In deciding on the closed ITRS system as the primary source of data collection, BOG staff in 1995 had visited a number of EU countries to assess the suitability of different data collection systems. Wide consultations were also held with representatives of respondent banks, explaining the rationale for choosing the ITRS. At that time, emphasis on explaining statistical considerations was viewed as critical because as exchange controls were terminated, new reporting requirements by the BOG were likely to harbor perceptions of continued control by the central bank.

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

The BOG is entitled to comment on instances of erroneous interpretation and misuse of balance of payments statistics. Such comments are usually made through the Office of the Governor, or of the Deputy Governors. The Statistics Department is alert to the financial press and other media, and the BOG's Secretariat maintains a clipping service, and actively scouts major Greek, English, German and French language-based editions. The Secretariat also provides explanatory material sought by data users, and directs enquiries to the subject Department/Division when required.

### **1.2 Transparency**

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

*The Statute of the Bank of Greece (2000)* is available to the public, free of charge, in hard copy format (in Greek and English). Electronic copies of the *Statute* are also posted on the BOG's internet website. The Protocol on the Statute of the ESCB and of the ECB, along with

the text of all other regulations, are available on the ECB Internet website. Detailed references to the legal terms and conditions of data collection and dissemination are included in the package kit sent to reporting agents.

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

No government officials have prior access to the monthly balance of payments data, and this is stated on Greece's SDDS country page on the IMF's Dissemination Standards Bulletin Board (DSBB). National balance of payments and the extra euro area contributions (using the format of the data exchange for the aggregation of the euro area balance of payments statistics) are sent to the ECB prior to the public release by the BOG. These arrangements for data transmission to the ECB are explained in the relevant protocols disseminated on the ECB's Internet website.

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

In the BOG's press releases, hard copy publications and electronic modes of dissemination, the BOG is identified as the producer of balance of payments data. However there is no reference to the BOG's Statistics Department in hard copy publications, and the monthly *Bulletin of Conjunctural Indicators* (a statistical publication) is identified as a product of the BOG's Economic Research Department. Publications contain no request for attribution when their data are used or reproduced in other formats.

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

The BOG's *Annual Report* has within recent years included a chapter titled "Preparation by the BOG for the changeover to the single currency", which reports on major year-ahead plans in the area of statistical data and standards.

Greece's shift to *BPM5* and to a settlements-based system of reporting in 1997 were preceded by widespread consultations with potential source-data providers and data users, explaining the rationale for the changes, and the impact on the data. A press release was issued by the Governor, ahead of the changeover, to sensitize the public on these changes.

With the introduction of a survey-based method for compiling travel items, the change in source data was announced in the balance of payments press release of May 2002, at the time the revised data were introduced in the series.<sup>64</sup>

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<sup>64</sup> The change was also noted in the July-August 2002 edition of the *Bulletin of Conjunctural Indicators*.

### **1.3 Ethical standards**

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

Staff are required to take an oath to be bound by the *Statute of the Bank of Greece*, and are provided with copies of the *Statute* and the *General Conditions of Employment*, which was last revised in 2001. Under the oath, staff pledge not to disclose confidential information, even after they leave the BOG. Ethical standards are also discussed in orientation seminars held for new recruits and promoted staff.

## **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*

Balance of payments statistics are compiled in line with the concepts and definitions set out in the fifth edition of the *BPM5*. Departures from guidelines are relatively minor and reflect constraints on the collection system.

### **2.2 Scope**

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

In principle, Greece's national balance of payments cover all transactions of residents vis-à-vis the rest of the world. However, national data presentations do not report reinvested earnings and undistributed branch profits;<sup>65</sup> this deviation from international standards is identified in the *ECB's European Union Balance of Payments/International Investment Position Statistical Methods (2001)*. Resident institutional units are defined in conformity with *BPM5*'s concepts of economic territory and center of economic interest. Although the activities of offshore enterprises established in Greece by nonresidents are not generally covered, these are deemed insignificant by the Balance of Payments Division. To the extent that source data permits, the activities of Special Purposes Enterprises (SPE's) are included in the direct investment data.

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<sup>65</sup> Data on reinvested earnings and undistributed branch profits are currently compiled on the basis of the annual survey on foreign direct investment, and the classification is expected to be introduced in the monthly data series in 2003.

In accordance with ECB guidelines, data submitted for inclusion in the euro balance of payments presentation exclude cross border transactions of the euro area, which is viewed as one economic territory.<sup>66</sup>

### 2.3 *Classification/sectorization*

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

With a few exceptions, the classification system used in Greece's monthly data is broadly consistent with the structure of *BPM5*, and modifications to international guidelines regarding the creation of the new functional category, financial derivatives, in the financial accounts have been adopted in Greek balance of payments statistics. The exceptions are as follows:

- Published **goods** data do not distinguish between (i) general merchandise; (ii) goods for processing; (iii) repairs on goods; (iv) goods procured in ports by carriers; and (v) nonmonetary gold, but instead present all these items as merchandise goods. (The annual data reported to the IMF's Statistics Department for publication in the *Balance of Payments Yearbook* do, however, classify these items correctly. Quarterly data reported to Eurostat also include these classifications.)
- **Capital transfers** are classified as part of the Balance of Payments Current Account,<sup>67</sup> and data on the **acquisition/disposal of nonproduced, nonfinancial assets**—although reported to the IMF's Statistics Department on an annual basis—are not identified in any national publications.
- For **investment income**, the distinction between direct investment and portfolio investment is not evident as the classifications used in disseminated data are (i) interest; and (ii) dividends, profits and other income. *BPM5* recommends classifications of investment income into direct investment, portfolio investment and other investment. However these classifications are compiled, as indicated in the *ECB's European Union Balance of Payments/International Investment Position Statistical Methods (2001)*, but with the following gaps:

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<sup>66</sup> Except portfolio investment assets and portfolio investment income for which the ECB requires data on cross-border transactions within the euro area.

<sup>67</sup> During the mission, the authorities disseminated on the Bank of Greece's website, a new balance of payments format that correctly classifies capital transfers as part of the Capital and Financial Account ([www.bankofgreece.gr/en/sdds/SDDS-EXTERNAL.htm](http://www.bankofgreece.gr/en/sdds/SDDS-EXTERNAL.htm)).

- direct investment income excludes income on trade credits between affiliated enterprises, and income from intercompany loans; and
- other investment income excludes income on trade credits and the interest share on financial leasing payments.

Institutional units are classified according to *BPM5*.

## **2.4 Basis for recording**

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

As of January 2002, transactions recorded in the balance of payments statistics are expressed solely in euro. Transactions in currencies other than the euro are converted into euro at the exchange rate prevailing on the day of transaction or, where appropriate, at the corresponding weighted average exchange rate for the reference period. Stocks denominated in other currencies are converted to the euro, using the end-month corresponding exchange rate.

Market prices are used to value flows and stocks. Owing to the lack of market value for unlisted equity securities, data providers report book values notwithstanding instructions in the reporting forms to the contrary.<sup>68</sup>

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

In principle, the Greek balance of payments statistics are compiled with the full recognition of the change in ownership criteria as the basis for determining balance of payments transactions and their time of recording. However, the use of settlements-based reporting means that transactions are recorded at the time of banking intermediation; income on debt for both direct and portfolio investment is therefore reported when paid<sup>69</sup>. The data on interest payments for government debt are also reported on a cash basis. However, ECB guidelines on the reporting of monthly data permit cash-based reporting.

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<sup>68</sup> Revaluations are not done by the balance of payments compilers. However, in the BOG's annual survey on inward foreign direct investment for 2000, unlisted companies accounted for about 7–10 percent of the respondents, and for about 30 percent of the total value of investments.

<sup>69</sup> As indicated in the *ECB's European Union Balance of Payments/International Investment Position Statistical Methods (2001)*, security-by-security data collection is conducted for quarterly stock data. Transactions are reported with the International Securities Identification Number (ISIN), and these are identified against a comprehensive ISIN securities database, that would allow income accruing from tradable securities to be compiled on an accrual basis.

*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*. Current and capital account transactions are reported on a gross basis. Financial account transactions are reported on a gross basis, but are recorded on a net basis—separately for the individual asset and liability components.

**3. Accuracy and Reliability**

**3.1 Source data**

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

Greece's balance of payments statistical system relies on a comprehensive framework of data collection that includes the closed ITRS, direct reporting, surveys, and the use of secondary data sources within and outside of the BOG.

The closed ITRS is the primary data collection system used for balance of payments compilation, and is based on transaction-by-transaction reporting. This settlements-based monthly reporting, covering all resident banks (36), is viewed by the authorities as adequate, and is kept under continuous review to determine the level of coverage<sup>70</sup>. In this regard, the BOG recognizes that with the introduction of the euro, the ITRS has become increasingly insufficient for recording transactions, and needs to be complemented—in the short term—by direct (full or partial) reporting and/ or sample surveys, particularly for transactions in the goods and services sector. Accordingly, a pilot survey for the collection of travel transactions has been underway since May 2002, and preliminary survey-based estimates for travel have already been introduced in the monthly balance of payments series. Direct reporting by shipping firms engaged in the Greece-Italy route, airline and telecommunications companies are scheduled to be implemented in 2003/04, with the aim of enhancing coverage of services. For other services, the BOG is examining the structure and evolution of the respective markets to determine the feasibility of introducing full or partial direct reporting. Presently, a number of these markets appear fragmented, and are therefore not amenable to direct

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<sup>70</sup> Banks (commercial banks and other special credit institutions) are required to report external transactions on behalf of residents and nonresidents and on their own account, irrespective of whether they are acting as an intermediary between a nonresident bank or nonbank and another resident bank, or undertaking interbank operations affecting their external position. Resident banks must also report the opening and closing balances of their external position, according to currency breakdowns. Changes between the opening and closing positions should be equal to the net external transactions in the respective currencies.

declarant reporting. The BOG estimates that its data collection system is capturing over 85 percent of potential goods transactions Existing data sources understate shuttle trade.

For balance of payments transactions without the intermediation of a resident bank, monthly **direct reporting** is used. Respondents currently include companies in the oil sector, and multinational corporations operating in Greece. Apart from the ITRS and the monthly financial accounts reported by companies, data on investment securities are also collected from agencies, as identified in Table C below.

Table C. Source of Balance of Payments Data Collection for Portfolio Investment Assets and Liabilities

	Assets	Liabilities
Flows (monthly)	Mutual funds Investment companies	Brokerage firms BOG's electronic secondary securities market (for government debt and equity)
	Brokerage firms	
Stocks (quarterly)	Mutual funds	Custodians
	Investment companies	
	Brokerage firms	
	Private banking departments	

With the aim of enhancing the accuracy of monthly data on portfolio investment liabilities, the Balance of Payments Division is exploring the possibility of collecting monthly custodians' stock data, subject to the resources currently available. Full coverage of residents' investments in securities issued by nonresidents remains a challenge for the balance of payments data collection system; domestic data sources do not exist, and balance of payments compilers indicate they would require access to bilateral data to address this problem.

To facilitate more comprehensive coverage and classification, particularly in the financial account, a number of annual **surveys** are conducted. These include:

- a survey of resident nonfinancial companies to collect assets/liabilities vis-à-vis nonresidents (sample size: 1,250 companies);
- a survey of foreign direct investment in Greece (sample size: 700 companies);
- a survey of foreign direct investment abroad (sample size: 700 companies; and
- a survey of public corporations' external borrowing (full enumeration: 20 respondents).

The conduct of annual surveys of foreign direct investment enterprises in Greece is facilitated by a business register of enterprises involved in direct investment. This register is maintained and updated on an ongoing basis by the BOG, using information from (i) ITRS's

list of transactors; (ii) other statistical collection forms; (iii) regional branches of the BOG; (iv) registers maintained by the Athens Stock Exchange, industry associations, and other departments within the BOG; and (v) the financial press.

The Balance of Payments Division also access a number of secondary data sources, including data on government debt obtained from the BOG's Electronic Secondary Securities Market; MFI's balance sheet (for compiling part of the other investment account); official reserve assets from the BOG's Foreign Exchange Department; and data on EU capital and current transfers, which are reported by Eurostat. The Bank of International Settlements (BIS) database is also used for compiling data on other investment external assets.

Greece has not been using any exemption thresholds. However, as of July 1, 2002, all Member States were required to implement an exemption threshold of euro 12,500. The implementation stages are varied across respondent banks in Greece, and full compliance is not likely to occur until the beginning of 2003. Thus the loss of information arising from thresholds is not an immediate issue in Greek balance of payments compilation, but it is already estimated to be around 7–8 percent of the value of merchandise trade.

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

Definitions, scope and classifications used in source data are broadly in line with *BPM5*, and adjustment procedures, including the use of supplementary information, exist to ensure that source data conform to the coverage, classification, valuation, and timing conventions of *BPM5*. For example, for source data on foreign direct investment, the BOG conducts an annual FDI survey, and the data are supplemented by various sources, including flow statistics, press reports, and monthly information from the Athens Stock Exchange. Information available from the latter addresses the difficulties in delimiting direct investment and portfolio investment, and facilitates classification adjustments for listed enterprises.

Deviations from *BPM5*'s guidelines for time of recording are noted in 2.4.2.

### *3.1.3 Source data are timely*

Respondent banks are aware of the requirement to report monthly data to the BOG with a lag not exceeding 15 days after the end of the reference month, and are contacted by BOG staff if the deadline is missed. However, codification is undertaken by the respondents and not by the BOG. Errors in source data often require further communication with respondents and actual transactors, and this tends to create a tight time frame in which compilation takes place.

## 3.2 *Statistical techniques*

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

Data compilation procedures are generally sound, and the BOG has invested heavily in user-friendly software applications that facilitate the transmission of accurate data. These applications contain custom-built consistency checks that seek to eliminate micro reporting errors prior to data transmission by reporting banks. Following transmission by magnetic media, the data undergo systematic validation checks in the BOG's Information Technology Department for three categories of errors as follows:

- ***fatal*** errors (file rejected by computer program and bank required to resubmit corrected file) include missing reference numbers for records, invalid or missing transmission dates;
- ***serious*** errors (a threshold of acceptable errors determines whether data are corrected internally or are resent to the bank) include invalid currency codes, incorrect credited/debited accounts, invalid balance of payments transaction code; and
- ***warning*** errors (corrected manually or by standard predefined protocols) are typically those relating to incorrect codes for country, economic sector, and economic activity.

Files not rejected by the computer program enter the "technical control stage", and are loaded into a temporary ORACLE database; serious errors that cleared the first round validation are addressed and the files are then loaded into a permanent ORACLE database, and are ready for the "quality control stage". During the transfer some warning errors are corrected by standard predefined protocols. At this stage, authorized users (Balance of Payments Division staff) begin to apply plausibility checks by generating a number of reports that enable them to:

- compare transactions against historical series and bank size;
- check for transactor-transaction consistency;
- determine the accuracy of transaction classifications and type of account used;
- flag high value transactions; and
- investigate "lumpy" transactions.

The Balance of Payments Division follows up with banks on any issues that arise from the plausibility checks, and a summary of balance of payments transactions is then created for each respondent bank. Aggregation procedures are then activated to produce an ITRS-based balance of payments statement.

Statistical techniques used in the monthly travel survey and in the annual surveys on direct investment assets and liabilities are based on sound methodologies. Sampling approaches take into account the country-specific consideration, and both sampling techniques and surveys' results are reassessed after each exercise.

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

For monthly data, no adjustments are made for coverage and classification, and no studies have been undertaken to establish the possible need for such adjustments. The underreporting of Greece's merchandise exports by the ITRS, and deviations from NSSG-based merchandise trade data are acknowledged by balance of payments compilers who indicate that there are no benchmarks against which grossing up procedures can be effected.

**3.3 Assessment and validation of source data**

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

Preliminary results from the new travel survey have been analyzed against existing data sources for coverage. Travel credits (nonresidents' travel in Greece) based on the survey are higher than previous estimates, supporting the view of some industry analysts that the estimates were traditionally understated. On the debit side, the survey-based estimates for residents' travel expenditure abroad are lower than previous estimates. Since the latter deviation appears not to be supported by any changes in economic trends such as a decline in resident travel abroad, such analysis may prompt a reexamination of the survey operations with a view to determining—and addressing if necessary—any downward biases in reporting by residents returning from abroad. However, the possibility that previous debit estimates may have been overestimated is not discounted.

As explained in 3.2.1, banks' reports undergo systematic validation checks that include confirmation of high value transactions and significant changes in the individual data with respondents.

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

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

ITRS/survey data are validated against a range of data sources, as follows:

- balance sheet data submitted by resident banks to the Monetary and Financial Statistics Division are used to reconcile portfolio and other investment flows;

- information reported in the financial press is used to verify high-value direct investment and other transactions; and
- portfolio investment assets and liabilities reported by mutual funds and custodians are validated against information disseminated on the Bloomberg's network.

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

Comprehensive validation and plausibility checks at the level of the source data are designed to minimize statistical discrepancies that are likely to be transmitted to the level of intermediate data. The tight balance of payments compilation schedule, and the timeliness of related series (such as merchandise trade statistics), do not facilitate a comprehensive assessment of intermediate outputs, but the following are usually done on a regular basis.

- Reported data on investment income payments and receipts are regularly assessed in relation to the corresponding stock data in the international investment position statistics.
- The reported financial flow data are reconciled with changes in the corresponding stock data collected for external debt and for other elements of the international investment position.

Assessing data on freight earnings in relation to the value/volume of the trade flows is not relevant in Greece because the operations of Greek shipping companies are largely directed in cross-trading. General trends in the freight market are monitored as the basis for assessment.

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

The sign and direction of errors and omissions as an indicator of problems of coverage at the intermediate level is assessed on an ongoing basis. Bilateral data reconciliations are in an infancy stage in Greece, and are conducted for only a few current, and financial account items (travel and FDI) with principal partners. However, a number of task forces, set up under the aegis of Eurostat for current account items, are involved in discussions on the use of "mirror" statistics, and Greece is expected to benefit from any emerging processes for data exchange and sharing.

### **3.5 Revision studies**

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

Revisions studies are not undertaken because data revisions are viewed by the authorities as minor—relating primarily to reclassifications that do not affect overall aggregates. However,

major revisions arising from changes in methodology and data sources are analyzed before their introduction in the balance of payments series.

#### **4. Serviceability**

##### **4.1 Relevance**

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

There is no formal user advisory group, and no established process of consultation with policy departments or ministries. However, the ECB and Eurostat conduct periodic visits to monitor Greece's progress in meeting their needs. Staff in the Balance of Payments Division regularly attend international statistical meetings and seminars, and participate in a number of working groups at the regional level (see 1.1.1), where methodological and other issues affecting the relevance and practical utility of national balance of payments statistics are discussed.

##### **4.2 Timeliness and periodicity**

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

Monthly balance of payments statistics are disseminated six weeks after the end of the reference month, thereby exceeding the prescribed SDDS timeliness, which is one quarter for quarterly data.

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

Greece compiles and disseminates monthly balance of payments statistics, which exceed the quarterly periodicity requirements of the SDDS.

##### **4.3 Consistency**

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

In principle, annual and quarterly data are compiled from monthly data, ensuring consistency is achieved within datasets of different periodicity. The concepts, definitions, and classifications for derived quarterly and annual statistics are therefore identical with those of monthly statistics (see also 5.1.1). Volatility in the magnitude and direction of the net errors and omissions characterizes the monthly balance of payments statistics.

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

Beginning with data for 1998, Greek balance of payments shifted to *BPM5*, and the fundamental changes in source data (administrative data, a by-product from the exchange

control regime, were previously used to construct foreign currency-based balance of payments statistics) precluded any reconstruction of historical time series. Detailed methodological notes that identify and explain the main breaks and discontinuities in the balance of payments component time series were published at the time of the transition to *BPM5* (and more recently for the travel survey), but these practices have largely not been sustained in successive revisions to address reclassifications and other quality improvements. Unusual changes in economic trends are explained in the analytical text included in the monthly balance of payments press release, and significant transactions in the financial account are also drawn to the users' attention.

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

The balance of payments data on trade in goods are not consistent with the national accounts data due to differences in source data. Between 1995 and 2002, annual changes in the current account balance (as a share of GDP) generated between the two statistical systems—BOG's settlements-based current account and the NSSG's external accounts—were of the same sign in only two of seven years, and absolute differences in the annual changes were in excess of one percentage point of GDP in four of the seven years. Differences in periodicity and timeliness of the BOG's data on goods and the NSSG's merchandise trade statistics also affect data reconciliation, but the BOG estimates that its data collection system is capturing over 85 percent of merchandise trade transactions.

The banking sector transactions in the balance of payments statistics are broadly consistent with the monetary and financial statistics as balance of payments information is sourced from the MFI balance sheets. Financial flow data are reconciled with changes in the international investment position, but a table explaining the differences (e.g., transactions, exchange rates, prices, and other changes) is not disseminated.

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

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

Revisions to national balance of payments data do not follow a regular, well-established and transparent schedule. National publications do not disseminate the revision policy, which the national authorities indicate is one of no revisions, except for instances of changes in source data, reclassifications, or to effect closer harmonization with international standards. However, the SDDS metadata disseminated on the DSBB states that “monthly data are provisional when first released and are indicated as such. The quarterly and annual data undergo revision each time a new quarter is published. The final revision for the quarterly data takes place four months after the end of the reference quarter, while for the annual data takes place 10 months after the end of the reference year”. This description appears applicable only to Greece's contribution to the euro area balance of payments statistics, as in practice, monthly national balance of payments data are final, unless a cause for revision arises. The Balance of Payments Division indicated to the IMF mission that quarterly balance

of payments data represent the sum of monthly data, and annual data – the sum of the four quarters, as evidenced in the tabular presentations in the monthly *Bulletin of Conjunctural Indicators*. This suggests that no systematic revisions of the quarterly and annual data occur, and any revisions to the quarterly and annual series would result only from changes in the monthly data. However, available metadata identify a number of adjustments that may undermine temporal consistency, given the absence of a transparent revisions policy and schedule.

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

Identification of the status of the data (preliminary, revised, final) varies across modes of dissemination, reflecting the lack of clarity in revision practices. The BOG's monthly *Bulletin of Conjunctural Indicators* does not identify the status of the balance of payments data. However, the data now disseminated on the BOG's Internet website, as part of the improvements effected for SDDS subscription, are labeled as preliminary. The biannual *Economic Bulletin* labels current year (latest month in both individual and year-to-date format) balance of payments data as preliminary.

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

No systematic revision studies are conducted, but revisions arising only from major changes in data sources are documented and made public.

## **5. Accessibility**

### **5.1 Data accessibility**

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

The monthly *Bulletin of Conjunctural Indicators* is the primary dissemination media for Greece's monthly balance of payments statistics, providing summarized tables and charts. The monthly data are disseminated in a largely aggregative format and deviate from the structure and classifications of *BPM5* in a few instances, as identified in 2.3.1. Additionally, there are several aspects that hinder the interpretation and meaningful comparison of the data by users.

- The *Bulletin of Conjunctural Indicators* has limited time series data. Annual data are presented for the last three years; quarterly data for the most recent eight quarters, and monthly data for the latest 15 months. With the latter presentation, there is a lack of comparability of the data in the present period against the corresponding period of the previous year: for the monthly data (as reported in the *Bulletin of Conjunctural Indicators*, No. 60/2002) covering the period January–July 2002, there are no corresponding data for the first four months of 2001.

- As indicated in 4.4.2 above, identification of the status of the data is not uniform across dissemination formats.
- In table VI.9 of the *Bulletin of Conjunctural Indicators*, “general government transfers” is presented as a category distinct from current and capital transfers, with a footnote indicating that the receipts include current and capital transfers from the EU budget. While this appears to be a memorandum item, it is not annotated accordingly, and can be misconstrued as a separate classification.

The latest *Monthly Statistical Bulletin* (which appears to be published on an irregular basis, the latest covering July–December 2001) presents a historical balance of payments series for the period 1992–1997, but does not include the *BPM5*-based series, which start from 1998.

Presently, balance of payments data series are not seasonally adjusted. The BOG recognizes that seasonal adjustments of components such as travel would be useful, and plans to use the TRAMO SEATS software program acquired from the Bank of Spain.

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

Greece’s balance of payments data are first released on the BOG’s Internet website, and are followed by a press release that includes a brief analysis of balance of payments developments. The monthly *Bulletin of Conjunctural Indicators* is published approximately two months later, and is posted on the BOG’s Internet website. However the use of the Internet as a medium for disseminating detailed balance of payments data (current and historical series) is not fully exploited. For the historical data series, dissemination formats are limited largely to hard copy statistical publications, as there is no electronic data retrieval system. While monthly data for 1970–2000 are available in magnetic formats, this is not communicated to the public.

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

An advance release calendar that gives a year-ahead schedule of precise release dates is posted on the BOG’s Internet website. An advance release calendar that meets the requirements of the SDDS is also posted on Greece’s country page on the IMF’s DSBB.

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

The data are released simultaneously to all interested parties through the posting of the data and the press release on the BOG’s Internet website. Balance of payments data (national and contributions to euro area aggregates) are provided to the ECB prior to public release according to a fixed schedule, and the BOG usually disseminates national data two days after release to the ECB.

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

Further disaggregations are available on request, but this is not formally indicated to users. Specialized tabulations are also available on request, free of charge.

## **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*

Concepts, scope, classifications, basis of recording, data sources, and statistical techniques employed in Greece's balance of payments compilation are documented in the ECB's annual publication *European Union Balance of Payments/International Position Statistical Methods*, which is available on the ECB's Internet website <[www.ecb.int](http://www.ecb.int)>. This publication also identifies deviations from agreed definitions. However, the BOG has no comprehensive and up to date published metadata, and the posting of Greece's balance of payments summary methodology on the DSBB represents an initial step. Apart from the use of footnotes in balance of payments tables, the *Bulletin of Conjunctural Indicators* does not include a section on methodological notes, in contrast to statistical publications produced by other National Central Banks, and by regional/international organizations such as the ECB and the IMF. Methodological notes for Greece's balance of payments are not published in the IMF's *Balance of Payments Statistics Yearbook*.

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

The ECB's *European Union Balance of Payments/International Position Statistical Methods* provides the most detailed and up to date documentation on Greek balance of payments statistical practices. In the changeover to *BPM5* and to settlement based reporting, the BOG's Statistics Department published a *Balance of Payments Compilation Manual* in 1997 (in Greek), which contains key balance of payments concepts and definitions to guide credit institutions' reporting. Brief methodological notes, aimed at a general audience, were last published in the *Economic Bulletin* of March 1997.

## **5.3 Assistance to users**

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

The BOG's hard copy publications do not identify a contact person for each subject field, but the monthly *Bulletin of Conjunctural Indicators* lists the street address, and telephone and fax numbers for the Economic Research Department-Secretariat. The BOG's Internet website <[www.bankofgreece.gr](http://www.bankofgreece.gr)> provides a contact person for the balance of payments. A contact person is also identified in Greece's metadata posted on the DSBB.

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

Statistical publications are reproduced on the BOG's Internet website, and the data are accessible free of charge. Hard copy publications are also available free of charge at the BOG's headquarters in Athens, but this information is not well disclosed. Subscription information is available on the BOG's Internet website. Dissemination formats are publicized on Greece's metadata posted on the DSBB.

Table 6. Data Quality Assessment Framework—Summary of Results for Balance of Payments Statistics  
(Compiling Agency: Bank of Greece)

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	
<b>0. Pre-requisites of quality</b>						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Quality awareness		X				
<b>1. Integrity</b>						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
<b>2. Methodological soundness</b>						
2.1 Concepts and definitions		X				Reinvested earnings and undistributed branch profits not included in published balance of payments series. Published data use classifications for components of goods, investment income and capital transfers that are not consistent with <i>BPM5</i> .
2.2 Scope			X			
2.3 Classification/sectorization			X			
2.4 Basis for recording		X				
<b>3. Accuracy and reliability</b>						
3.1 Source data		X				
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
<b>4. Serviceability</b>						
4.1 Relevance			X			No regular feedback is sought from users.
4.2 Timeliness and periodicity		X				Not reconcilable with the national accounts. Revision policy and practices not well-established, and lack transparency; identification of status of data not uniform across dissemination formats.
4.3 Consistency			X			
4.4 Revision policy and practice			X			

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
<b>5. Accessibility</b>						
5.1 Data accessibility			X			Limited published time series and aggregative presentations hinder accessibility; limited access modes for historical data Updated and comprehensive (BOG-produced) metadata unavailable; statistical publications are devoid of methodological notes.
5.2 Metadata accessibility			X			
5.3 Assistance to users		X				

### **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 of the economy, with prescribed periodicity and timeliness.

#### **Access dimension**

- the dissemination of advance release calendars providing at least 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
- 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 DSBB. Summary methodologies, which describe data compilation practices in some detail, are also disseminated on the DSBB;
- 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.

At the March 29, 2000 meeting of the IMF's Executive Board, Directors approved the incorporation of a new SDDS data category on external debt. The transition period for implementing this data category expires in March 2003.

As a result of the IMF Executive Board's Third Review of the SDDS in March 2000, the IMF staff began monitoring observance of the Standard through NSDPs maintained on the Internet. Monitoring commenced at the beginning of July 2000 and is limited to the coverage, periodicity, and timeliness of the data and to the dissemination of advance release calendars.

*Source: Guide to the SDDS, February 2002: <http://dsbb.imf.org>*

**Data Quality Assessment Framework—Generic Framework**  
(July 2001 Vintage)

Quality Dimensions	Elements	Indicators
<p><b>Prerequisites of quality<sup>1</sup></b></p>	<p><b>0.1 Legal and institutional environment</b>—<i>The environment is supportive of statistics.</i></p> <p><b>0.2 Resources</b>—<i>Resources are commensurate with needs of statistical programs.</i></p> <p><b>0.3 Quality awareness</b>—<i>Quality is a cornerstone of statistical work.</i></p>	<p>0.1.1 The responsibility for collecting, processing, and disseminating statistics is clearly specified.</p> <p>0.1.2 Data sharing and coordination among data producing agencies are adequate.</p> <p>0.1.3 Respondents' 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, financial, and computing resources are commensurate with statistical programs.</p> <p>0.2.2 Measures to ensure efficient use of resources are implemented.</p> <p>0.3.1 Processes are in place to focus on quality.</p> <p>0.3.2 Processes are in place to monitor the quality of the collection, processing, and dissemination of statistics.</p> <p>0.3.3 Processes are in place to deal with quality considerations, including trade-offs within quality, and to guide planning for existing and emerging needs.</p>
<p><b>1. Integrity</b></p> <p><i>The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.</i></p>	<p><b>1.1 Professionalism</b>—<i>Statistical policies and practices are guided by professional principles.</i></p> <p><b>1.2 Transparency</b>—<i>Statistical policies and practices are transparent.</i></p> <p><b>1.3 Ethical standards</b>—<i>Policies and practices are guided by ethical standards.</i></p>	<p>1.1.1 Statistics are compiled on an impartial basis.</p> <p>1.1.2 Choices of sources and statistical techniques 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>

**Data Quality Assessment Framework—Generic Framework  
(July 2001 Vintage)**

Quality Dimensions	Elements	Indicators
<p><b>2. Methodological soundness</b></p> <p><i>The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.</i></p>	<p><b>2.1 Concepts and definitions—</b> <i>Concepts and definitions used are in accord with internationally accepted statistical frameworks.</i></p> <p><b>2.2 Scope—</b><i>The scope is in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p><b>2.3 Classification/sectorization—</b> <i>Classification and sectorization systems are in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p><b>2.4 Basis for recording—</b><i>Flows and stocks are valued and recorded according to internationally accepted standards, guidelines, or good practices.</i></p>	<p>2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices: see dataset-specific framework</p> <p>2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices: see dataset-specific framework.</p> <p>2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices: see dataset-specific framework.</p> <p>2.4.1 Market prices are used to value flows and stocks. 2.4.2. Recording is done on an accrual basis. 2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.</p>

**Data Quality Assessment Framework—Generic Framework  
(July 2001 Vintage)**

Quality Dimensions	Elements	Indicators
<p><b>3. Accuracy and reliability</b></p> <p><i>Source data and statistical techniques are sound and statistical outputs sufficiently portray reality.</i></p>	<p><b>3.1 Source data</b>—<i>Source data available provide an adequate basis to compile statistics.</i></p> <p><b>3.2 Statistical techniques</b>—<i>Statistical techniques employed conform to sound statistical procedures.</i></p> <p><b>3.3 Assessment and validation of source data</b>—<i>Source data are regularly assessed and validated.</i></p> <p><b>3.4 Assessment and validation of intermediate data and statistical outputs</b>—<i>Intermediate results and statistical outputs are regularly assessed and validated.</i></p> <p><b>3.5 Revision studies</b>—<i>Revisions, as a gauge of reliability, are tracked and mined for the information they may provide.</i></p>	<p>3.1.1 Source data are collected from comprehensive data collection programs that take into account country-specific conditions.</p> <p>3.1.2 Source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required.</p> <p>3.1.3 Source data are timely.</p> <p>3.2.1 Data compilation employs sound statistical techniques.</p> <p>3.2.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.</p> <p>3.3.1 Source data—including censuses, sample surveys and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide planning.</p> <p>3.4.1 Main intermediate data are validated against other information where applicable.</p> <p>3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.</p> <p>3.4.3 Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated.</p> <p>3.5.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes.</p>

**Data Quality Assessment Framework—Generic Framework  
(July 2001 Vintage)**

Quality Dimensions	Elements	Indicators
<p><b>4. Serviceability</b></p> <p><i>Statistics are relevant, timely, consistent, and follow a predictable revisions policy.</i></p>	<p><b>4.1 Relevance</b>—<i>Statistics cover relevant information on the subject field.</i></p> <p><b>4.2 Timeliness and periodicity</b> – <i>Timeliness and periodicity follow internationally accepted dissemination standards.</i></p> <p><b>4.3 Consistency</b>—<i>Statistics are consistent within the dataset, over time, and with major datasets.</i></p> <p><b>4.4 Revision policy and practice</b>—<i>Data revisions follow a regular and publicized procedure.</i></p>	<p>4.1.1 The relevance and practical utility of existing statistics in meeting users’ needs are monitored.</p> <p>4.2.1 Timeliness follows dissemination standards. 4.2.2 Periodicity follows dissemination standards.</p> <p>4.3.1 Statistics are consistent within the dataset (e.g., accounting identities observed). 4.3.2 Statistics are consistent or reconcilable over a reasonable period of time. 4.3.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.</p> <p>4.4.1 Revisions follow a regular, well-established and transparent schedule. 4.4.2 Preliminary data are clearly identified. 4.4.3 Studies and analyses of revisions are made public.</p>

**Data Quality Assessment Framework—Generic Framework  
(July 2001 Vintage)**

Quality Dimensions	Elements	Indicators
<p><b>5. Accessibility</b></p> <p><i>Data and metadata are easily available and assistance to users is adequate.</i></p>	<p><b>5.1 Data accessibility</b>—<i>Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.</i></p> <p><b>5.2 Metadata accessibility</b>—<i>Up-to-date and pertinent metadata are made available.</i></p> <p><b>5.3 Assistance to users</b>—<i>Prompt and knowledgeable support service is available.</i></p>	<p>5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts).</p> <p>5.1.2 Dissemination media and formats are adequate.</p> <p>5.1.3 Statistics are released on the preannounced schedule.</p> <p>5.1.4 Statistics are made available to all users at the same time.</p> <p>5.1.5 Nonpublished (nonconfidential) subaggregates are made available upon request.</p> <p>5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines or good practices are annotated.</p> <p>5.2.2 Levels of detail are adapted to the needs of the intended audience.</p> <p>5.3.1 Contact person for each subject field is publicized.</p> <p>5.3.2 Catalogs of publications, documents, and other services, including information on any charges, are widely available.</p>

Note: The elements and indicators included here bring together the “pointers to quality” that are applicable across the five identified dimensions of data quality.

### Users' Survey

With assistance of the Greek authorities, survey of the usability of the statistical data produced by the Greek authorities was conducted by IMF staff among key users of economic statistics. The survey was conducted by personal interview and mail sample survey. In general, users were satisfied with the quality and the availability of a range of statistics. Respondents indicated satisfaction with accessibility to official data, mostly through official press releases, publications, and official policy papers. Information on data sources and methodology generally met users' needs. However, information on revision policy and practices could be more widely disseminated. Users viewed the coverage, periodicity and timeliness of statistics to be appropriate for economic analysis. Users also indicated that significant improvements had been made in terms of the availability of statistics during the past few years. Overall, users' views were consistent with the findings of the mission, and the main areas for improvement were broadly in line with the proposals suggested by the IMF staff.

The survey asked questions regarding the quality of balance of payments, monetary, fiscal, national accounts, and price statistics. In this connection, respondents mentioned data on the fiscal sector and national accounts as areas that could be improved. Users indicated satisfaction with the quality of price and monetary statistics in terms of coverage, periodicity, and timeliness of dissemination.

On national accounts, respondents wanted more detailed data with improved timeliness. As compared with other data, respondents had some reservations on the accuracy of the national accounts data.

On fiscal data, users questioned the underlying methodology used to compile the data. They also wanted an expanded with more detailed data, as well as improved timeliness. There were more questions on the accuracy of the data.

**Table 7. Greece—Results of the Users' Survey**

Type of Correspondent	Received
Government	2
State owned agencies (enterprises) Bank of Greece	1
Banks	6
Other enterprises	2
Embassies	0
Universities (researcher)	1
Media	1
Supervisory, Regulatory Institutions (stock exchange)	4
Total	17

Source: Department of Statistics, Greece.