**Bulgaria: 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 **Bulgaria** 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 **December 12, 2003.** The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of **Bulgaria** or the Executive Board of the IMF.

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

The policy of publication of staff reports and other documents by the IMF allows for the deletion of market-sensitive information.

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INTERNATIONAL MONETARY FUND

BULGARIA

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

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ACRONYMS

ARC	Advance Release Calendar
BNB	Bulgarian National Bank
BOP	Balance of Payments
BPM5	*Balance of Payments Manual*, fifth edition
COICOP	Classification of Individual Consumption by Purpose
CPI	Consumer Price Index
DQAF	Data Quality Assessment Framework
DSBB	Dissemination Standards Bulletin Board
ECB	European Central Bank
ESA 95	*European System of Accounts, 1995*
Eurostat	Statistical Office of the European Communities
EU	European Union
GDDS	General Data Dissemination System
GDP	Gross Domestic Product
GFS	Government Finance Statistics
GFSM 1986	*A Manual on Government Finance Statistics*, 1986
GFSM 2001	*Government Financial Statistics Manual 2001*
IIP	International Investment Position
IMF	International Monetary Fund
ITRS	International Transactions Reporting System
MFSM	*Monetary and Financial Statistics Manual*
MOF	Ministry of Finance
NACE, Rev. 1	Standard Classification of Economic Activities within the European Communities, Revision 1
NAO	National Audit Office
NSI	National Statistical Institute
ODCs	Other Depository Corporations
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

EXECUTIVE SUMMARY

This Report on the Observance of Standards and Codes (ROSC) data module provides a review of Bulgaria's data dissemination practices against the IMF's Special Data Dissemination Standard (SDDS), complemented by an in-depth assessment of the quality of the national accounts, consumer price index (CPI), producer price index (PPI), government finance, monetary, and balance of payments statistics. The agencies that compile the statistics assessed in this report are the Bulgarian National Bank (BNB), the Ministry of Finance (MOF), and the National Statistical Institute (NSI). The assessment was carried out by a mission from the IMF Statistics Department that visited Sofia during January 15–30, 2003.

The mission reached the following main conclusions:

- **SDDS subscription:** Bulgaria participates in the General Data Dissemination System (GDDS), and meets or exceeds SDDS requirements for most of the data sets. However, among other requirements, the Reserve Template data need to be compiled and disseminated, and timeliness needs to be improved for certain real sector data. The authorities indicated their strong commitment to subscribe to the SDDS shortly, and have appointed an SDDS Coordinator.

- **Prerequisites of quality:** Bulgarian statistical agencies have a legal and institutional framework that supports statistical quality. But resources for the balance of payments, national accounts, and price statistics are not sufficient for the requirements of these statistical programs, especially in view of the intention to implement the European Union guidelines in these areas. All agencies demonstrate awareness of quality as a cornerstone of their statistical work.

- **Integrity:** All agencies demonstrate professionalism, and provide guidelines on ethical conduct for staff. Pre-release access to government users is documented, but for the NSI the GDDS metadata are inaccurate.

- **Methodological soundness:** The Bulgarian national accounts, CPI, PPI, government finance statistics (GFS), and monetary statistics generally follow internationally accepted guidelines on definitions, scope, classification, sectorization, and valuation. Certain improvements to scope (national accounts, CPI, and GFS), classification (monetary) and the basis of recording (national accounts, GFS, and monetary) could be made. More substantial improvements should be made to the balance of payments (BOP) statistics.

- **Accuracy and reliability:** Source data and statistical techniques are generally sound for national accounts, and monetary statistics. Improvements could be made to certain aspects of the price indices and GFS. In the case of balance of payments, significant improvements are required. There is also scope for improving the rigor of revisions practices and studies.

- **Serviceability:** Bulgarian statistics are generally relevant, consistent, and available on a timely basis with good frequency. However, there is no formal user group to monitor the relevance of BOP statistics. Timeliness is a concern for the quarterly gross domestic product (GDP) estimates, the PPI, and GFS. The macroeconomic statistics are broadly consistent. Several datasets do not provide the public with proper analyses of revisions and, for the GFS, the revisions policy is not published and preliminary data are not clearly identified.

- **Accessibility:** Most datasets are readily available to the public with the exception of the PPI, while it is being redeveloped. Also, more detailed GFS financing data should be published. Suitable metadata are available to the public except for GFS and the national accounts, for which some available details are not published. All datasets provide adequate assistance to users, except that the PPI is not included in the NSI catalog.

I. INTRODUCTION

1.   The data module of this Report on Observance of Standards and Codes (ROSC) provides a summary of Bulgaria's dissemination practices on the coverage, periodicity, and timeliness of the data categories relative to the Special Data Dissemination Standard (SDDS), even though Bulgaria has worked within the General Data Dissemination System (GDDS) framework for three years, because of the authorities' expressed commitment to subscribe to the SDDS in the near future. It is complemented by a detailed assessment of the quality of national accounts, consumer and producer price indices, and government finance, monetary, and balance of payments statistics using the Data Quality Assessment Framework (DQAF) developed by the IMF's Statistics Department. This report is based on information provided prior to and during a staff mission from January 15–30, 2003,[1] as well as publicly available information.

2.   Section II includes an overview of the SDDS and an assessment of Bulgaria's data dissemination practices against this standard. Section III presents a summary assessment of the quality of the principal macroeconomic datasets, following the dataset-specific assessment frameworks. Finally, Section IV sets out recommendations to achieve further improvements in Bulgaria's statistics.

II. DATA DISSEMINATION PRACTICES AND THE SPECIAL DATA DISSEMINATION STANDARD

3.   Bulgaria's dissemination practices are being assessed in relation to the SDDS in the present report (in terms of the data, access, integrity, and quality dimensions).[2] Bulgaria has

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[1] The mission team was headed by Mr. Rifaat Basanti and included Messrs. Ethan Weisman, Gary Barinshtein, Ms. Michelle Hassine (all STA), Messrs. David Collins and David Hughes (experts), and Ms. Eloise Villanueva (STA—Assistant).

[2] A detailed description of the SDDS can be found on the IMF's Dissemination Standards Bulletin Board on the Internet at http://dsbb.imf.org. For each dimension, the SDDS prescribes

participated in the GDDS since May 2000, so existing dissemination procedures follow those on the GDDS. The following elements are based on the revised GDDS metadata posted in June 2002 on the Data Dissemination Bulletin Board (DSBB) at http://dsbb.imf.org/gddsweb/country/bgrindex.htm and information provided by the Bulgarian authorities during the mission. The Bulgarian authorities have expressed an interest in subscribing to the IMF's SDDS and have appointed a SDDS Coordinator.

4.   Macroeconomic statistics reviewed in this report are compiled and disseminated by three agencies, as follows: (i) the National Statistical Institute (NSI) is responsible for national accounts, price and production statistics; (ii) the Ministry of Finance (MOF) is responsible for government finance statistics (GFS); and (iii) the Bulgarian National Bank (BNB) is responsible for monetary and BOP statistics. Access to macroeconomic statistics is provided through official publications and at the following Internet websites:

- BNB's website http://www.bnb.bg/bnb/home.nsf/fsWebIndex;

- MOF's website http://www.minfin.government.bg/en;

- NSI's website http://www.nsi.bg/Index_e.htm.

Data dimension: coverage, periodicity, and timeliness

5.   Based on the information available to the mission, Table 1 compares Bulgaria's data dissemination practices to the SDDS requirements with respect to coverage, periodicity, timeliness and the advance release calendar (ARC) for 18 SDDS data categories. The review shows that:

- Bulgaria meets the SDDS requirements for the coverage of all SDDS data categories, with the exception of production index data. These are not in a time series format as required by the SDDS, i.e., volume measures are not disseminated in reference to a fixed base.

- All the data categories meet or exceed the SDDS prescribed periodicity.

- Reserves Template data are not yet compiled or disseminated.

- As the transition period for the new external debt category ended on March 31, 2003, data for the quarter ending on June 30, 2003 must be disseminated by end-September 2003.

"good practice" elements that can be monitored by users of statistics (see Annex I of part III). See "Guide to the Data Dissemination Stardards (Module 1: The Special Data Dissemination Standard), IMF, May 1996. Also, the fourth *Review of Fund's Data Standards Initiatives*, page 19, summarizes the transition period in place for the external debt data categories.

- With the use of regular timeliness flexibility for the International Investment Position (IIP), all other data categories, except for the national accounts and the producer price index (PPI), meet or exceed the timeliness requirements of the SDDS (assuming the MOF website is updated monthly). The current timeliness for IIP data is 12 months after the end of the reference year, which is six months more than the SDDS requirements. With respect to PPI, Bulgaria needs to take a regular timeliness flexibility option. Also, pending the fulfillment of SDDS requirements for production index data, Bulgaria could take a special timeliness flexibility option for the national accounts.[3]

Access dimension

6.   The SDDS access requirements provide that ARCs are made available to the public. ARCs are available for monetary statistics and all real sector datasets (with the exception of the PPI). However, for fiscal and external sectors, ARCs need to be developed and disseminated.

Integrity dimension

7.   As a GDDS participating country, the relevant pages for Bulgaria on the DSBB show the terms and conditions under which official statistics are produced, information on internal government access to data, and information on whether there is ministerial commentary accompanying the data releases. Information on revisions and advance notice of major changes in methodology are usually disseminated, except for the GFS data.

Quality dimension

8.   Bulgaria's GDDS metadata provide information that corresponds to the quality dimensions of the SDDS.

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[3] That is, a special timeliness flexibility option for the national accounts could only be taken if the SDDS requirements for the production index (the tracking indicator) were met.

Table 1. Bulgaria: Overview of Current Practices Regarding Coverage, Periodicity, and Timeliness of Data Compared to the Special Data Dissemination Standard (SDDS) as of January 30, 2003

SDDS Data Category	Coverage (meets SDDS requirement)	Periodicity		Timeliness		Comments ARC[4]
		SDDS	Bulgaria	SDDS	Bulgaria	
Real Sector						
National accounts	Yes	Q	Q	Q	80D (115D for 4th quarter)	Yes
Production index/indices	No Data are not in time-series format	M	M	6W	40D	Yes
Employment	Yes	Q	Q (Establishment Survey; Labor Force Survey)	Q	40D (Establishment Survey) 52D (Labor Force Survey)	Yes
Unemployment	Yes	Q	Q (Labour Force Survey) M (Register)	Q	52D (Labor Force Survey) 15D (Register)	Yes
Wages/earnings	Yes	Q	Q	Q	40D	Yes
Consumer price index	Yes	M	M	M	2W	Yes
Producer price index	Yes	M	M	M	40D	No
Fiscal Sector						
General govt. operations	Yes	A	A	2Q	2Q	No Not yet disseminated.
Central govt. operations	Yes	M	M	M	M	No Not yet disseminated.
Central govt. debt	Yes	Q	M	Q	3W	No Not yet disseminated.
Analytical accounts of the banking sector	Yes	M	W	M	W	Yes
Analytical accts. of the central bank	Yes	M	W	2W	W	Yes
Interest rates	Yes	D	D	NA	W	NA
Stock market: share price index	Yes	D	D	NA	D	NA

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[4] ARCs must be published at least a quarter ahead of data release dates

SDDS Data Category	Coverage (meets SDDS requirement)	Periodicity		Timeliness		Comments ARC[4]
		SDDS	Bulgaria	SDDS	Bulgaria	
External Sector						
Balance of payments	Yes	Q	M	Q	8W	No Not yet disseminated.
International reserves and foreign currency liquidity: (a) Official reserves	Yes	M (W recommended)	W	W	1D	No Not yet disseminated.
(b) Reserves template	No Data are not yet compiled.	M	Data are not yet compiled	M	Data are not yet compiled	No Not yet disseminated.
Merchandise trade	Yes	M	M	8W	8W irregular	No Not yet disseminated.
Intn'l investment position	Yes	A (Q recommended)	A	2Q	12M	No Not yet disseminated.
Exchange rates	Yes	D	D	NA	D	NA
External debt	Yes	Q	M	Q	5W	No Not yet disseminated.
Addendum: Population	Yes	A	Q	NA	2M	NA

Note: Periodicity and timeliness: (D) daily; (W) weekly or with a lag of no more than one week from the reference data 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; and (A) annually.

III.   SUMMARY ASSESSMENT OF DATA QUALITY

9.   Interest in assessing the quality of data derives from the objectives of complementing the SDDS with a consideration of the quality of the data being disseminated and of focusing more closely on the quality of the data that underpin surveillance of countries' economic policies. Against this background, the Statistics Department of the IMF has developed a tool to provide a structure and a common language to assess data quality. The DQAF comprises a generic framework[5] and a set of dataset-specific frameworks. The frameworks cover five dimensions of

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[5] Information on data quality can be found at the IMF website on the "Data Quality Reference Site" (http://dsbb.imf.org/dqrsindex.htm).

data quality—integrity, methodological soundness, accuracy and reliability, serviceability, and accessibility—and a set of prerequisites.[6]

10.   An assessment of six macroeconomic datasets (national accounts, consumer price index (CPI), PPI, government finance, monetary, and the balance of payments statistics) was conducted using the frame of reference provided by the dataset-specific DQAF. The information resulting from the application of this framework to the Bulgarian statistics system is presented below, following the structure of the DQAF. Conclusions are also presented in the form of standardized summary tables in which the assessment of data practices is made on a qualitative basis, using a four-part scale (Tables 1–6) in the Detailed Assessment.

11.   Over the last decade, Bulgaria's statistical system changed substantially as major structural changes occurred in the economy:

- Bulgaria's transition to a market economy during the first half of the 1990s was characterized by sporadic and often inconsistent structural reforms and stop-and-go stabilization efforts. The main macroeconomic statistics were evolving but the system was ill-equipped to handle these rapid changes. Bulgaria experienced deep financial crises and economic collapse in 1996–97, which led to the adoption of a currency board arrangement in July 1997, a sweeping restructuring program, and significant improvements in fiscal and monetary statistics.

- Aided by ongoing stabilization programs, Bulgaria's macroeconomic indicators are currently relatively stable. Therefore, the country is poised to move to second generation reforms (deepening structural reforms), in order to enhance its status in international financial markets. In this respect, Bulgaria expressed interest to participate in the SDDS at an early date.

- On current plans, Bulgaria is expected to join the European Union (EU) by 2007. Bulgaria has completed a medium-term plan for improvement of statistics during 2003–2006 with the EU.[7]

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.

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[6] See also the Generic Framework set out in Appendix II of the accompanying detailed assessments volume to this report.

[7] The November 13, 2002 EU Roadmap for Bulgaria *acquis alia*, note key steps under Economic and Monetary Union (chapter 11), Statistics (chapter 12), and Financial and budgetary provisions (chapter 29) that affect the integrity and methodology of statistics.

12.   The **NSI**, which is responsible for the national accounts, the CPI and the PPI, among other statistics, is the main government producer of statistics. This is stipulated in the *Law on Statistics* published in the Official Gazette, No. 57 of June 25, 1999 amended in No. 42 of April 27, 2001. This law provides a legal and institutional environment that clearly sets out responsibility for the relevant statistical work, provides for data sharing and coordination, calls for protection of the confidentiality of individual responses, and makes legal provision for statistical reporting. Resources are a serious problem because of the lack of office space, financial resources, and high turnover of staff. In particular, the NSI does not have sufficient status within the government to offer remuneration packages that enable it to recruit and retain well qualified staff.[8] Moreover, the government is in the process of moving the NSI out of its existing offices without providing alternative suitable accommodation. The NSI maintains a high sense of quality awareness, as evidenced by the creation of a separate division on quality issues. It also has a number of oversight bodies looking at different aspects of quality and actively participates in EU initiatives in this area.

13.   The *Organic Budget Law* (1996) and the *State Debt Law* (2002) provides the **MOF** with the authority and a legal and institutional environment to compile and disseminate fiscal statistics. The MOF has established strong contacts with reporting units and other institutions that compile data relevant for cross-checks. Resources are adequate for current compilation needs; however, more resources would speed the implementation of fiscal statistics developments needed to comply with EU reporting requirements and migration to the *Government Finance Statistics Manual 2001* (*GFSM 2001*). Quality awareness is adequate at all levels.

14.   The **BNB** compiles balance of payments, IIP, external debt, and monetary statistics for Bulgaria. It has a comprehensive legal and institutional mandate (*Law on BNB* and *Law on Statistics*) to collect the required data. It is obligated by legal statutes to maintain the requisite confidentiality of individual reporter's data, and has a legal mandate to disseminate statistics. However, the BNB believes that the current *Foreign Exchange Law* (*2000*) does not allow them to collect all the information needed for BOP compilation; a revision to the law is currently before the National Assembly. While BNB resources for compiling monetary statistics are adequate, they are not sufficient to maintain the programs for compiling BOP statistics. Quality awareness is promoted by BNB management; however, there is scope for further improvement in quality awareness for BOP.

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

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[8] NSI staff are currently classified as category 3 in the Bulgarian civil structure, while line ministry staff are more highly remunerated in category 2.

to the professionalism and ethical standards that should guide policies and practices, which should be reinforced by their transparency.

15.　　The **NSI** maintains a high degree of <u>professionalism</u>, with its independence supported by the *Law on Statistics*. Statistics are compiled on an impartial basis by professional, trained staff, with decisions on data sources and statistical techniques based solely on statistical considerations and guided by international recommendations. The NSI is proactive in communicating with users through monthly press conferences and the agency always reacts to any public misinterpretation of statistics. <u>Transparency</u> of statistical policies and practices is promoted by the widespread availability of the terms and conditions under which the NSI functions, the clear identification of NSI products and the provision of advance notice of significant changes in methodology. However, pre-release access is given to senior government officials, contrary to GDDS metadata. Guidelines on the <u>ethical standards</u> required of staff are clearly documented and well known.

16.　　The **MOF** staff exhibit <u>professionalism</u> in the compilation of fiscal statistics. In addition, the independent National Audit Office (NAO) audits the fiscal statistics quarterly. Fiscal statistics are prepared in a <u>transparent</u> manner and MOF responsibility is clearly identified with the disseminated product. <u>Ethical standards</u> are ensured through sanctions contained in the *Law for the Civil Servant,* the *Law on Access to Public Information* and the *Law on Protection of Classified Information,* which are well known.

17.　　The **BNB** strongly encourages <u>professionalism</u> among its staff. The choice of sources for the compilation of statistics is dictated solely by analytical considerations to meet international standards, and BNB staff comment on the perceived misinterpretation and misuse of statistics. With respect to <u>transparency</u>, the terms and conditions under which statistics are collected, processed and disseminated are available to the public. There is no government access to monetary statistics prior to their general dissemination. BOP statistics are released to the government one day before they are disseminated to the public, but this practice is publicized. Staff are clearly informed about their duties, responsibilities, and <u>ethical standards</u>.

Methodological soundness

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

18.　　The **national accounts** broadly meet the <u>concepts and definitions</u> of the *European System of Accounts, 1995 (ESA 95)*. However, some additional work is required to bring the accounts fully into line with the <u>scope</u> of the *ESA 95*; financial accounts for each sector are still under development. The <u>classifications/sectorization</u> are in accordance with international standards. However, the <u>basis for recording</u> is not fully consistent because government output and final consumption are recorded on a cash, rather than accrual, basis.

19.   The **consumer price index** generally follows the <u>concepts and definitions</u> and the <u>basis for recording</u> of the *ESA 95*. The <u>scope</u> relates to market purchases by resident households; however, housing is not included. The <u>classification</u> of consumption activity follows COICOP.

20.   The **producer price index** conforms to international standards in relation to <u>concepts and definitions</u> for recording of product prices and weights. Its <u>scope</u> relates to domestic sales of the core mining, manufacturing, electricity, gas, and water industries by resident market enterprises. The <u>classification</u> of enterprises and products is based on a combination of NACE Rev. 1, Classification of Products by Activities, and PRODCOM. The <u>basis for recording</u> weights and prices fully reflects basic prices on an accruals basis.

21.   For **government finance statistics**, Bulgaria uses the <u>concepts and definitions</u> of *A Manual on Government Finance Statistics,* 1986 *(GFSM 1986)*, but has initiated steps to implement the EU Deficit and Debt requirements for fiscal statistics, which positions the authorities well for the migration to the *GFSM 2001*. The assessment in this report is based on the data sets compiled using the *GFSM 1986* and the national methodology. Except for debt data, the <u>scope</u> of the fiscal statistics comprises the entire general government, and <u>classification and sectorization</u> generally follow international practices. However, central government debt statistics misclassify IMF purchases as external, rather than domestic debt, and compilation of local government debt statistics only began in 2003 (albeit negligible as a share of total debt). The valuation methods of domestic and external debt are not consistent. Fiscal data are <u>recorded on a cash basis</u> (consistent with the *GFSM 1986*), but no data are available on arrears.

22.   The <u>concepts and definitions</u> used by the BNB for compiling **monetary statistics** conform with the principles presented in the *Monetary and Financial Statistics Manual* (*MFSM*). The BNB is also progressively adopting the European Central Bank (ECB)'s framework for monetary data. The <u>overall structure</u>, <u>scope</u>, <u>classification principles</u>, and <u>the basis for recording</u> are consistent with the *MFSM*, except as follows. With regard to classification, positions on financial derivatives, which at present are reportedly small, are not included in monetary statistics; several "other" items (in particular, in the other depository corporations (ODCs)' foreign liabilities) are not disaggregated by financial instrument; and the treatment within the central bank survey of certain small components of the IMF accounts deviates from the recommended guidelines. As concerns basis for recording, gold and nonfinancial assets are not valued at market prices.

23.   The <u>concepts and definitions</u> used in compiling the **balance of payments statistics** conform to the fifth edition of the *Balance of Payments Manual* (*BPM5*) except that residents' foreign currency accounts with resident banks are incorrectly included in the BOP statistics, and other source data do not uniformly apply the standard criteria for residency. While, in principle, the <u>scope</u> of the data should cover all resident/non-resident transactions, the data insufficiently cover shuttle trade and financial assets. The <u>classification</u> generally follows the requirements of *BPM5*. Regarding the <u>basis for recording</u>, most data are collected on a cash basis rather than accruals, and market prices are not always available.

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.

24.   For the **national accounts**, significant improvements have been made to the source data by producing a more comprehensive and reliable business register. The estimates for informal activities have also been refined to make the best use of all available data. Source data are generally timely. Statistical techniques generally follow best international practice. Assessment and validation, and revision studies are used to guide statistical improvements.

25.   The weights and prices source data for the **consumer price index** are obtained from comprehensive surveys. The Household Budget Survey is a continuous survey based on a random sample, with monthly results. The business register is not considered to be sufficiently up-to-date for the retail industry to support outlet sampling, so judgmental sampling is used. The statistical techniques used are generally sound though quality adjustment techniques need to be applied more widely across products. The approach to the assessment and validation of source and intermediate data and revision studies is sound.

26.   Work is well advanced on a redevelopment program to introduce a new methodology, based on transaction pricing, into the **producer price index,** and rebase the index to the year 2000. The source data for the prices and weights are obtained from comprehensive data collection programs. Pending completion of the program to survey transaction prices during 2003, about 17 percent of industrial sales are still represented through the old approach (unit value measurement). Statistical techniques are generally sound although the weights, which are in the process of being updated, are currently over seven years old. There is scope for improving the application of product quality adjustment techniques. Processes followed for the assessment and validation of source and intermediate data follow international standards. Revision studies are not routinely undertaken because revisions are rare and insignificant.

27.   **Government finance statistics** source data are timely and complete; however, they are reported on a cumulative, rather than discrete (separate), monthly basis. This prevents revisions to any month other than the latest reported month. Statistical techniques, assessment and validation exercises meet international standards. Quarterly data are audited by the NAO. Revision studies are not conducted, and corrections made during the compilation process are not systematic or thoroughly documented.

28.   Detailed balance sheet records constitute the source data for **monetary statistics**. They are timely and provide ample information. The balance sheet records satisfy the internal constraints imposed by the structure of the double-entry system of book-keeping. The source data are not subject to statistical adjustment, and the assessment and validation of source data and intermediate results are robust. Revision studies of methodological changes, when they occur, are carried out for internal discussions.

29.   For **balance of payments**, source data derived from the International Transaction Reporting System (ITRS) and surveys are not comprehensive, timely, or representative of the population of respondents. In addition, merchandise trade source data are prone to errors and are not timely. These deficiencies result in frequent and substantial revisions to the BOP. In the case of statistical techniques, data entry is error-prone and the c.i.f./f.o.b. factor for trade data has not been reviewed since 1994. No satisfactory assessment and validation of source data are applied to inform the compilation process and statistical discrepancies of intermediate data are rarely investigated. Revision studies are made when major methodological changes occur, but do not inform the statistical process.

Serviceability

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

30.   Efforts to ensure the relevance of the **national accounts** involve various meetings with user groups, and surveys specifically addressing their needs. The timeliness and periodicity, with which the national accounts are published, meet SDDS requirements, except for the timeliness of the fourth quarter of each year. Consistent time-series according to the *ESA 95* are available from 1991. The national accounts statistics are fully consistent with the balance of payments and with data for general government. The national accounts publications identify preliminary data, as appropriate, and identify revisions and their causes, but analyses of revisions are not published.

31.   The relevance of the **consumer price index** and the **producer price index** is maintained through meetings with users. The indices are consistent internally and over time. Concerning timeliness and periodicity, both indices meet the SDDS periodicity requirement and the CPI exceeds the timeliness requirement. However, the PPI does not meet the SDDS timeliness standard. The revisions policy and practice of both indices is known to users.

32.   **Government finance statistics** are relevant to users and are disseminated with periodicity that meets the SDDS requirements. The publication of central and general government operations data on the web began in January 2003, so experience is limited with meeting the SDDS timeliness requirements using this medium. Consistency in the time series is hampered by the changes in scope due to structural reforms, especially privatizations. However, institutional tables accompany the data on the web to assist users to compare data over time. Revision policy and practice are not publicly disseminated, preliminary and revised data are not clearly indicated in publications, and there are no formal revision studies.

33.   The relevance of **monetary statistics** in meeting users' needs is monitored based on the feedback sent to the designated BNB e-mail address and during advisory group meetings. Timeliness and periodicity meet and exceed the SDDS guidelines. Monetary statistics show consistency within the dataset, except for an asymmetry in the BNB's claims on banks which

include claims on non-operating banks that are outside the coverage of the ODC sector (the ODC sectoral coverage, however, conforms with the ECB's guidelines). Monetary statistics are largely consistent with the corresponding positions in the fiscal and BOP data. Revisions and preliminary data are clearly identified. Revisions studies, arising from methodological changes when these occur, are not published.

34.   There is no formal user advisory group to monitor the relevance of the existing **balance of payments statistics** in meeting users' needs. The timeliness and periodicity of the data meet the SDDS requirements. Consistent time series are available from 1997 onwards. Revisions are monitored and assessed on an ongoing basis. The national publications describe the revisions policy.

Accessibility

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

35.   The **national accounts** are readily accessible; the publications present the statistics in a clear manner, with charts and tables to facilitate analysis. Many publications contain metadata. However, the comprehensive description of the annual current price GDP figures, produced for the Statistical Office of the European Communities (Eurostat), has not yet been published. Much statistical information, including extensive detail, is published in Bulgarian on the NSI website. The NSI's means of dissemination and assistance to users fully meet requirements.

36.   Metadata are accessible for the **consumer price index** and the **producer price index** in both hard copy and electronic form. Regarding data accessibility, the release of the CPI is simultaneous to all users, and data are announced at a press conference and clearly presented in various formats. However, pending introduction of the new methodology, the PPI publication was discontinued in 2001, although the data are available on request. It was planned to recommence publication in March 2003 as the new methodology has been largely implemented. Assistance to users is available for both indices, although the PPI is not currently listed in the catalog of publications.

37.   **Government finance statistics** data accessibility for users is adequate and on the web, although details on the financing of government operations and expenditures by function are not disseminated. The data format generally follows international standards. Data are disseminated simultaneously to all users. Metadata accessibility is adequate. ARCs and detailed documentation on concepts, sources, and methods have not yet been prepared or disseminated. MOF staff provide ample assistance to users. Contact persons and subscription information for the monthly budget bulletin became available on the web in January 2003.

38.   **Monetary statistics** are readily accessible and are presented in a clear format that facilitates their use and interpretation. They are disseminated in a condensed and a detailed format in the weekly and monthly bulletins published by the BNB, and are also available on the

BNB's web site. Statistics are made available on a pre-announced schedule and simultaneously to all users. With regard to metadata accessibility, BNB's publications, in hard copy and on its web site, include comprehensive general and specific notes concerning sources and methods. Assistance to users is provided through direct contacts with the BNB via e-mail and telephone numbers posted on the web. A catalog of publications, documents, and other services to users is available on the BNB's web site.

39.   Accessibility of **balance of payments** statistics is achieved through dissemination both in hard copy and electronically, through press releases. In January 2003, the BNB decided to start releasing balance of payments statistics simultaneously to all users, subject to a one-day pre-release to government. Description of metadata and methodologies are available via the BNB website and the IMF's DSBB. Sources and additional methodological detail are published in the *BNB Monthly Bulletin.* Assistance to users is provided through the contact person listed on the website. In addition, publications list the BNB Press Office as the contact point for the public, which directs inquiries to the appropriate specialist. A full list of publications is on the BNB website.

IV. STAFF'S RECOMMENDATIONS

40.   Based on the results of the data quality assessment, discussions with the Bulgarian authorities in the statistics compiling agencies, and responses from data users, the following measures are proposed to increase further Bulgaria's adherence to international statistical standards.

Cross-cutting Recommendations[9]

High priority

- Take the remaining steps to support SDDS subscription, including the development and dissemination of a National Summary Data Page for SDDS data categories and posting ARCs on the website of the disseminating agencies. Compile and disseminate the Data Template on International Reserves and Foreign Currency Liquidity when available. Also, disseminate production index data in reference to a fixed base.

- Provide the NSI with appropriate office accommodation; pursue the application to reclassify the NSI to a higher status (to a category 2 institution) to make staff salaries more competitive; allocate additional staff within the headquarters of the NSI for the compilation and development of the national accounts, CPI and PPI; and appropriately increase the staff in the BOP division of the BNB.

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[9] These recommendations apply to two or more sectors or statistical-producing agencies.

Other key recommendations

- Amend the GDDS metadata to accurately reflect the internal government pre-release access arrangements for key data (e.g., national accounts and CPI).

- Clearly indicate preliminary and revised data to all users. Undertake more systematic revision practices and studies, and make the results available to users.

National Accounts

High priority

- Advance the timeliness of the fourth quarter GDP estimates to 90 days.

- Bring the scope of the national accounts fully into line with the recommendations of the *ESA 95* and continue to develop financial accounts

Other key recommendations

- Publish the *ESA 95* metadata produced for Eurostat.

Consumer Price Index

High priority

- Extend the application of quality adjustment techniques to a wider range of product prices.

- Investigate possible ways to maintain more up-to-date retail industry information on the business register to support CPI outlet sampling.

Other key recommendations

- Undertake extensive consultation with major users on including housing in the national CPI.

Producer Price Index

High priority

- Advance the timeliness of the PPI to one month.

- Re-commence publication of the PPI and update the ARC and the catalog of publications.

- Complete the program of implementation of transaction pricing methodology into the PPI as soon as possible.

- Finalize the index rebasing program to convert to a year 2000 weighting and reference base period.

Other key recommendations

- Increase the rigor and the extent to which quality adjustment techniques are applied to product prices.

Government Finance Statistics

High priority

- Improve the fiscal data so they meet fiscal reporting requirements for EU accession. In particular, implement the new chart of accounts (with codes that link the chart to EU and *GFSM 2001* frameworks), the Financial Information Management System, and detailed metadata.

- Disseminate information (stocks and flows) on arrears of central and local governments.

- Collect separate (discrete) monthly data from reporting units (rather than cumulative reports). Compile and disseminate discrete monthly and quarterly data, to create useful time series.

- The MOF website should be updated monthly.

Other key recommendations

- Publish data on local government debt statistics. Reclassify IMF purchases in the government debt statistics. Value domestic and external debt consistently.

- Disseminate more fiscal information on the financing of government operations, specifically aggregates on bank and nonbank domestic financing and breakdowns of external financing into bonds and loans.

Monetary Statistics

High priority

- Disaggregate all foreign liabilities of commercial banks' by financial instrument; for back dates as far as possible, include banks' positions on financial derivatives and classify them by sector of counterparty; and rationalize treatment of certain small components of the IMF accounts in the central bank survey.

- Value gold and nonfinancial assets at market prices.

- Separately identify central bank's claims on nonoperating banks that are excluded from the coverage of ODC survey.

Balance of Payments Statistics

High priority

- Bring reporting instructions into line with the *BPM5* guidelines to comply with critical definitions, such as residency and to allow for proper coverage of data, such as an

adequate reporting of financial assets. Clarify instructions on the accrual principle and prescribe more systematical valuation at market prices, for example in compiling foreign direct investment and reporting financial assets.

- Improve the comprehensiveness and timeliness of all source data; merchandise trade, ITRS and surveys.

Other key recommendations

- Foster interagency cooperation to improve the timeliness of the supply of merchandise trade data.

- Following the outcome on the proposed revision to the *Foreign Exchange Law*, the BNB should draw up statistical reporting procedures to address deficiencies in source data.

Table 2. Bulgaria: 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 = Practice Not Observed

Element	National Accounts Statistics (NAS)	Consumer Price Index (CPI)	Producer Price Index (PPI)	Government Finance Statistics (GFS)	Monetary Statistics (MS)	Balance of Payments Statistics (BOP)	Comments
0. **Prerequisites of quality**							
0.1 Legal and institutional environment	O	O	O	O	O	LO	BOP—See paragraph 14
0.2 Resources	NO	NO	NO	O	O	LNO	NAS—See paragraph 12; CPI/PPI—See paragraph 12; BOP—See paragraph 14
0.3 Quality awareness	O	O	O	O	O	LO	BOP—See paragraph 14
1. **Integrity**							
1.1 Professionalism	O	O	O	O	O	O	
1.2 Transparency	LO	LO	O	O	O	O	NAS—See paragraph 15; CPI—See paragraph 15
1.3 Ethical standards	O	O	O	O	O	O	
2. **Methodological soundness**							
2.1 Concepts and definitions	O	O	O	O	O	LNO	BOP—See paragraph 23
2.2 Scope	LO	LO	O	LO	O	LO	NAS—See paragraph 18; CPI—See paragraph 19 GFS—See paragraph 21; BOP—See paragraph 23
2.3 Classification/sectorization	O	O	O	O	LO	O	MS—See paragraph 22;
2.4 Basis for recording	LO	O	O	LO	LO	LO	NAS—See paragraph 18; GFS—See paragraph 21 MS—See paragraph 22; BOP—See paragraph 23
3. **Accuracy and reliability**							
3.1 Source data	O	LO	LO	LO	O	LNO	CPI—See paragraph 25; PPI—See paragraph 26 GFS—See paragraph 27; BOP—See paragraph 29
3.2 Statistical techniques	O	LO	LO	O	O	LNO	CPI—See paragraph 25; PPI—See paragraph 26; BOP—See paragraph 29.
3.3 Assessment and validation of source data	O	O	O	O	O	LNO	BOP—See paragraph 29
3.4 Assessment and validation of intermediate data and statistical outputs	O	O	O	O	O	LO	BOP—See paragraph 29
3.5 Revision studies	O	O	O	NO	O	LO	GFS—See paragraph 27; BOP—See paragraph 29
4. **Serviceability**							
4.1 Relevance	O	O	O	O	O	LO	BOP—See paragraph 34
4.2 Timeliness and periodicity	LO	O	LO	LO	O	O	NAS—See paragraph 30; PPI—See paragraph 31; GFS—See paragraph 32
4.3 Consistency	O	O	O	O	LO	O	MS—See paragraph 33
4.4 Revision policy and practice	LO	O	O	NO	LO	O	NAS—See paragraph 30; GFS—See paragraph 32; MS—See paragraph 33
5. **Accessibility**							
5.1 Data accessibility	O	O	NO	LNO	O	O	PPI—See paragraph 36; GFS—See paragraph 37
5.2 Metadata accessibility	LO	O	O	LO	O	O	NAS—See paragraph 35; GFS—See paragraph 37
5.3 Assistance to users	O	O	LNO	O	O	O	PPI—See paragraph 36;

INTERNATIONAL MONETARY FUND

BULGARIA

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

Response by the Authorities

December 12, 2003

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REACTION FROM THE BULGARIAN AUTHORITIES ON FUND STAFF RECOMMENDATIONS

The Staff Mission from IMF, which was in Sofia during January 15–30, 2003, has sent a revised version of the draft Report on the Observance of Standards and Codes (ROSC) data module for our comments. Based on the results of the data quality assessment, discussions with the Bulgarian authorities in the statistics compiling agencies, and responses from data users, the mission report proposed recommendations to increase further Bulgaria's adherence to international statistical standards.

The first part deals with comments on Fund Staff's Cross-Cutting Recommendations, received from all the reviewing agencies (except where noted)—the National Statistical Institute (NSI), the Bulgarian National Bank (BNB), and the Ministry of Finance (MoF). The remaining parts deal with comments by NSI on the sections relating to the National Accounts, Consumer Price Index (CPI), and Producer Price Index (PPI), comments by the MoF on the Government Finance Statistics (GFS) section, and comments by the BNB on the Monetary and Balance of Payments (BOP) sections.

A. Cross-Cutting Recommendations[1]

Statements by all Agencies

High priority

- *Take the remaining steps to support SDDS subscription, including the development and dissemination of a National Summary Data Page for SDDS data categories and posting ARCs on the website of the disseminating agencies. Compile and disseminate the Data Template on International Reserves and Foreign Currency Liquidity when available. Also, disseminate production index data in reference to a fixed base.*

The NSI, MoF, and BNB secured the country subscription to SDDS on December 1, 2003. In September a program for the remaining steps to be taken for SDDS subscription was developed by the three institutions and was followed by each of them.

The MoF develops the GFS and government debt national summary data page (NSDP) for SDDS as well as the advance release calendar (ARC). The data are posted on the website of the BNB and are published on the website of the MoF.

NSI finished the work aiming for full compliance with SDDS subscription requirements. Since the beginning of 2003, monthly-disseminated PPI has been included in the advance release calendar, published on the NSI website. Industrial Production Index time series referenced to 2000 are being disseminated by the NSI as of January 2003. Beginning in 2004,

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[1] These recommendations apply to two or more sectors or statistical-producing agencies.

the fourth quarter GDP data will be disseminated within 80 days after the reference period, and the timelines of the external trade data dissemination will be reduced from eight to six weeks. The activities to advance the timeliness of data dissemination on PPI according to SDDS requirements were completed. Metadata for base pages, dissemination formats pages, and summary methodology pages for the IMF's DSBB website were prepared. The Bulgaria's NSDP and ARC (for SDDS data categories) for December 2003 and for the first four months of 2004, in line with the SDDS requirements, were posted on:http://www.bnb.bg/bnb/home.nsf/vWebPagesByADOptionEN/7FB1128193568AF2C2256DC800395580?OpenDocument&count=-1&EN and the national metadata were posted on the IMF's DSBB website http://dsbb.imf.org/Applications/web/sddscountrycategorylist?strcode=BGR.

More detailed information on data categories is available on the NSI website http://www.nsi.bg in Bulgarian and English languages.

BNB was chosen to coordinate the preparatory work for the country subscription to SDDS. In this relation it developed the electronic pages of the NSDP and the Template on International Reserves and Foreign Currency Liquidity on its website. The bank also did all necessary work in the monetary and external sectors for the NSDP as well as the elaboration of the present advance release calendar to make it in full compliance with SDDS requirements. For the needs of the Template on International Reserves and Foreign Currency Liquidity, the BNB compiled the data on foreign reserves at the bank and the necessary data on the government foreign debt service schedule from the MoF. BNB finished the country NSDP and Template on International Reserves and Foreign Currency Liquidity by December 1, 2003. By that time the external debt in SDDS format was also completed.

- *Provide the NSI with appropriate office accommodation; pursue the application to reclassify the NSI to a higher status (to a category 2 institution) to make staff salaries more competitive; allocate additional staff within the headquarters of the NSI for the compilation and development of the national accounts, CPI and PPI; and appropriately increase the staff in the BOP division of the BNB.*

The Decision of the Council of Ministers (CM) No. 450 as of 2002, which obliged the NSI to vacate the building at No. 10 on 6th September Street, could not be fulfilled due to reasons explained in seven reports addressed to the Vice Premier and Minister of Labour and Social Policy and several letters to the Minister of Regional Development and Public Works in his capacity as a Chairman of the Commission for Distribution and Usage of Administrative Buildings—state property. The working group, created by the Minister of the Regional Development and Public Works, held a great number of conversations with the Vice Premier and Minister of Labour and Social Policy, Minister of Regional Development and Public Works, Secretary General of the Ministry of Finance, Secretary General of the Council of Ministers, Chairman of the Parliamentary Commission on Budget and Finances, Regional governors in Sofia-capital district and Sofia district, etc. but did not settle the question completely. As a result, a state building of usable area of 2,100 square meters has been taken away from the NSI, and in return it received premises of 460 square meters for rent in two

different buildings, property of a joint-stock company. The negotiations with the Tax Administration related to the joint usage of the building at No. 10, 6th September Street were finalized. In addition, the possibility of erecting additional stories on the existing NSI building at No. 2, P. Volov Street is under study. There are finances for it, and the problems are purely architectural, technical and engineering in nature.

NSI went on undertaking steps before the Council of Ministers to reclassify the category of administration (from 3 to a category 2 institution), according to IMF and Eurostat recommendations, which might lead to higher salaries of the staff too. The action plan for the strategy of accelerating the EU accession negotiations of Bulgaria has been adopted based on the CM Decision No. 149, as of March 12, 2003, in which under point 71 a change of the NSI status from A3 to A2 is envisaged. A CM Decree № 279/25.11.03 on amendment of the category of NSI administration from A3 to A2 was adopted on November 13, 2003 and will enter into force on January 1, 2004.

Statements by the Bulgarian National Bank

In July, the Foreign Exchange Law was amended providing further liberalization of the foreign exchange regime as well as a stronger legal basis for data collection and compilation of the BOP statistics. From August 1, 2003 the staff in the BOP division was increased from eight to twelve persons. This decision of the management of the BNB is in line with the broadened functions for the BOP compilation, which result from the changes in the Foreign Exchange Law and the ongoing process of harmonization with the requirements of Eurostat and ECB in BOP statistics. The increase in BOP staff is also aimed at providing sufficient resources for the work on the external sector related to the preparation for the country subscription to SDDS (especially to speed the development of the Template on International Reserves and Foreign Liquidity).

Other key recommendations

- *Amend the GDDS metadata to accurately reflect the internal government pre-release access arrangements for key data (e.g., national accounts and CPI).*

In accordance with the newly approved "Rules for Dissemination of Statistical Information Products and Services," the ministers, concerned with the relevant main economic and social indicators, receive data one hour before the press conferences for briefing purposes, but under strict embargo. That change has been reflected in GDDS Table C (Data Integrity and Access by the Public), and the updated table has been included in the IMF's DSBB website. In addition, the message has been published (in Bulgarian and in English) on the NSI website. The aim of this message is to inform all users about the public access to statistical data, produced and disseminated by the NSI.

- *Clearly indicate preliminary and revised data to all users. Undertake more systematic revision practices and studies, and make the results available to users.*

Concerning GFS, following the IMF mission's recommendations in January, the 2002 preliminary data for the consolidated fiscal budget (national methodology) and consolidated central government (*GFSM 1986* concept) have been indicated on the website.

Although the preliminary data and policy on NA revisions have been indicated in general in the main and specialized statistical publications with NA data, NSI undertakes steps to further clarify and acquaint the statistical data users with the adopted policy on revisions, done by means of press releases, announcements on the NSI website, and information in the methodological notes of the statistical publications.

Preliminary CPI data for January each year are clearly indicated in the publications and explained to the users. Regarding the major CPI revision for the period 1995–2000, a detailed analysis has been made and the results have been presented to the Methodological Council and approved by it. Users have been notified about the change made.

B. National Accounts

Statements by the National Statistical Institute

High priority

- *Advance the timeliness of the fourth quarter GDP estimates to 90 days.*

NSI is undertaking measures to reduce the deadline for elaboration of fourth quarter GDP estimates. The fourth quarter of 2003 data in nominal and real terms will be compiled experimentally within 80 days on the basis of available monthly business indicators on industrial production indices, industrial sales indices, receipts from sales indices of domestic trade; CPI. In addition to the volume indices, quantitative information for transport and communication activities and also labor-input data, household budget survey, foreign trade data, etc. will be used. After that, this method of calculation of the fourth quarter GDP will be introduced in the regular statistical practice and will be included in the calendar of statistical surveys.

- *Bring the scope of the national accounts fully into line with the recommendations of the* European System of Accounts, 1995 (ESA 95) *and continue to develop financial accounts.*

NSI participates in all Eurostat activities organized for the candidate countries. The pilot project's work is designed to achieve overall compliance with *ESA 95* requirements and will contribute to the improvement of estimates and exhaustiveness of national accounts.

As a result of the cooperation with the statistical office of Norway in 2003, NSI will implement the software SNA-NT for organization of data flows in the frame of SUT, balancing the tables and valuation of SUT at constant prices of previous year.

The elaboration of financial accounts is a priority field for the development of statistics and its harmonization with the European Legislation. According to the agreement signed with the BNB and the MOF as regards their elaboration, analytical tables and experimental accounts have been prepared up to now. The work will continue within the framework of the National PHARE 2000 program subcomponent "Financial accounts." A special unit for fulfillment of this task is to be established within the National Economic Accounts and Balances Department.

Other key recommendations

- *Publish the ESA 95 metadata produced for Eurostat.*

The first version of GDP and GNI metadata according to *ESA 95* has been prepared for the reporting year 1998. It could not be considered as final because the level of details and coverage is not sufficient. Elaboration of a full inventory on sources and methods for estimating GNI is foreseen under the Phare 2002 Multibeneficiary Program. It will bring our metadata up to the level and size of the inventories produced by the EU member states. The project is expected to start in 2004. NSI intends to publish this new and more comprehensive version in English and Bulgarian on the NSI website. Meanwhile the reports from NSI participation in all NA pilot projects will be available in the NSI library.

C. Consumer Price Index

Statements by the National Statistical Institute

High priority

- *Extend the application of quality adjustment techniques to a wider range of product prices.*

The application of quality adjustment techniques is extending gradually to a wider range of products.

- *Investigate possible ways to maintain more up-to-date retail industry information on the business register to support CPI outlet sampling.*

The recommendation to maintain more up-to-date retail industry information to support CPI outlet sampling cannot be implemented in a short-term period. Since 2003 the register has begun to include information at a local-unit level, which is higher than the outlet level, and thus at present it cannot be used for the needs of CPI.

Other key recommendations

- *Undertake extensive consultation with major users on including housing in the national CPI.*

The concept of Household Final Monetary Consumer Expenditures, according to the Council Regulation (EC) № 1687/98, is used in the definition of CPI weights. Following this concept, both imputed rents and dwelling purchases are not covered in the CPI. Nevertheless, major users of the CPI will be contacted to receive their opinion on whether there is desirability and feasibility to include housing (dwelling purchases) in the national CPI. Our opinion is that at present the market of new dwellings in the country is not yet well developed; the new dwellings are too expensive, and it is difficult for the ordinary consumer to afford such a purchase.

D. Producer Price Index

Statements by the National Statistical Institute

High priority

- *Advance the timeliness of the PPI to one month.*

NSI has launched a program for progressively shortening the delay (from 40 to 30 days after the end of the reference month) in calculation and presentation of the PPIs on the domestic market.

- *Re-commence publication of the PPI and update the ARC and the catalog of publications.*

NSI has started to publish PPIs on the domestic market and the first publication was for January 2003 data. PPIs are presented at the regular monthly press conferences, and they are presented in three modes: indices at 2000 as a base year; indices compared with the previous month with that month as a base; and indices compared with the same month of the previous year with that month as a base. At the first press conference, when January data were announced, the methodology for PPI compilation was presented also, and it was posted on the NSI website. Except for the monthly PPIs for 2003, on the NSI website were posted also the historical data series (by sections and by two-digit NACE code) monthly from January 2000 to December 2002.

NSI has started publishing PPIs in the monthly edition "Statistical Journal" (since volume 3, March 2003).

PPIs are included in the ARC and the NSI catalog of publications.

- *Complete the program of implementation of transaction pricing methodology into the PPI as soon as possible.*

Over the last three years, there has been a program of progressively upgrading the PPIs on the domestic market, applying a methodology that is in accordance with the international standards. Currently, a new survey covers economic activity groups that represent about 90 percent of the sales of industrial enterprises on the domestic market. Implementation of the new methodology for PPI with the introduction of the final panels of enterprises in the new survey with retrospective revisions when necessary is to be finalized by June 2004.

- *Finalize the index rebasing program to convert to a year 2000 weighting and reference base period.*

The program for rebasing PPIs on the domestic market was finalized in March 2003. Since January 2003, PPIs have been calculated using 2000 as a base year, while for rebasing, an internationally accepted technique is applied. All historical data back to 1995 have been recalculated. One month prior to implementation of the new base year (2000), Eurostat, IMF, as well as national users have been informed about the forthcoming change.

Other key recommendations

- *Increase the rigor and the extent to which quality adjustment techniques are applied to product prices.*

During the mission of IMF experts on price statistics in February 2003, great attention was paid to the importance of surveying products with constant quality in the two time periods that are compared. The different techniques for quality correction in the case of quality change have also been discussed in detail. The suggested techniques for quality correction were applied in practice, and the accuracy of the calculated PPIs was approved.

E. Government Finance Statistics

Statements by the Ministry of Finance

High priority

- *Improve the fiscal data so they meet fiscal reporting requirements for EU accession. In particular, implement the new chart of accounts (with codes that link the chart to EU and GFSM 2001 frameworks), the Financial Information Management System, and detailed metadata.*

In recent years, Bulgaria has been interpreting and applying EU requirements to GFS, following Eurostat recommendations. Since 2002 the *ESA 95* and *GFSM 2001* concept of deficit calculation is being interpreted and applied as a national methodology. To ensure consistency of the 2002 fiscal data with the data for the previous years, the Bulgarian

authorities revised the national statistical data and reclassified the financial transactions included in the expenditure side of the national consolidated fiscal budget for the previous years as financial items. This is described in the national methodological notes on the website.

The official fiscal data are compiled on a cash basis in accordance with the Organic Budget Law, but the new chart of accounts for budget enterprises harmonized with the *ESA 95* and *GFSM 2001* requirements has provided information for 2001 and 2002 on an accrual basis. This information for general government (except central budget operations) has been internally consolidated and now is being analyzed.

The MoF considers the possibility to change the budget framework for 2005 and to develop it on the basis of the classification of the Statement on Sources and Uses of Cash for the General Government sector, as indicated in the *GFSM 2001*. Using the above-mentioned breakdown of total assets and liabilities into their constituents and indicating the sources of changes in them from one period to another in terms of cash flows will provide a strong statistical explanation of the factors causing the change in the fiscal deficit of the government. Consumption of fixed assets, imputed transactions, barter and other transactions in kind as well as the transactions to be settled in cash in the future will not be reflected.

The MoF plans to develop the procedure for central budget operations' recording on a modified accrual basis—tax assessments, interest and some assets and liabilities of the central budget (assets and liabilities resulting from privatization). For this reason, the MoF has created working groups that include experts from the Tax Administration and Customs Agency, as well as the Agency for Privatization, the National Social Security Institute and the Ministry of Economy.

- *Disseminate information (stocks and flows) on arrears of central and local governments.*

The local and central government units have been instructed to compile accounting data on arrears. Methodological guidelines for reporting of arrears (defined as receivables and liabilities not settled in the preagreed or legally predetermined term) have been provided. The data have been posted to special post-balance-sheet accounts for statistics of arrears and have been analyzed. MoF is going to disseminate this data on its website in the nearest future. This type of data will be received and processed on a quarterly basis.

The MoF also collects monthly information on arrears made mainly by state hospitals and municipalities and plans to disseminate the arrears of the state hospitals and municipalities under activities determined to be state responsibility on the website in the future.

- *Collect separate (discrete) monthly data from reporting units (rather than cumulative reports). Compile and disseminate discrete monthly and quarterly data, to create useful time series.*

The MoF collection of separate (discrete) monthly data on GFS is envisaged to be introduced after the completion of the Financial Management Information System (FMIS). The system will provide information on a cash and accrual basis for all the central government units and will identify any data revisions. The MoF will be able to extract updated monthly information from the FMIS and to revise monthly (discrete) fiscal data, if necessary.

- *The MoF website should be updated monthly.*

The MoF has published the December 2002 monthly fiscal data at the end of January 2003 and updates the monthly information for general government (national methodology) and central government (*GFSM 1986* concept) within a month after the reference period.

Other key recommendations

- *Publish data on local government debt statistics. Reclassify IMF purchases in the government debt statistics. Value domestic and external debt consistently.*

The Government Debt Directorate (GDD) has started the local government debt data collection procedure since January 2003. The data as of December 31, 2002 have been already compiled. The MoF receives and summarizes this information according to the individual reports from each local government. According to the assumed obligations to the Eurostat, the GDD started to present the local government debt data in the March 2003 "Government Debt Management." Bulletin.

The GDD will consider the possibility of reclassifying IMF purchases in the government debt statistics. This new arrangement will cause considerable changes in the government debt data presentation since 1991, because in the MoF's monthly bulletin "Government Debt Management" and annual reviews, the central government debt is separated into domestic and foreign debt. As a result, the data will be inconsistent with previous publications. However, the GDD will try to meet the IMF recommendations, adding methodological explanations.

Up until December 31, 2002, the domestic debt in the monthly bulletin has been recorded at face value less discounts plus premia, while the foreign debt is valued at full face value, regardless of discounts or premia. In order to bring consistency between these two items, GDD from January 1, 2003 is going to report foreign debt data in the same way as domestic debt—on a cash-received basis.

- *Disseminate more fiscal information on the financing of government operations, specifically aggregates on bank and nonbank domestic financing and breakdowns of external financing into bonds and loans.*

Beginning in 2003 the MoF is disseminating monthly data on bank and nonbank domestic financing and breakdowns of external financing into bonds and loans for consolidated fiscal budget (general government).

F. Monetary Statistics

Statements by the Bulgarian National Bank

- *Disaggregate all foreign liabilities of commercial banks' by financial instrument; for back dates as far as possible, include banks' positions on financial derivatives and classify them by sector of counterparty; and rationalize treatment of certain small components of the IMF accounts in the central bank survey.*

It is not possible to include banks' positions on financial derivatives before January 2003 because these contracts were recorded off-balance sheet according to the existing accounting standards. From January 2003, on they are recorded on-balance, and the BNB started to collect these data but without a breakdown by sector. This breakdown will be implemented from the beginning of 2004 when a new input data system is introduced. After a statistical adjustment, time series starting from January 2003 will be published in July 2004.

As to the disaggregation of all foreign liabilities of commercial banks by financial instrument, a checkup of available data was conducted based on the IMF recommendation. It was found that a bank had recorded incorrectly its relations with its foreign branch. The time series for the appropriate indicators were revised and published in July 2003.

The treatment of IMF accounts was rationalized following the staff recommendation; the time series were revised since 1995 and are published in the new presentation from January 2003 onward.

- *Value gold and nonfinancial assets at market prices.*

From July 1997 onward, following Article 28 of the Law on the BNB, the central bank values conservatively monetary gold at 500 Bulgarian leva per troy ounce or at market price, if lower. This valuation is used in compiling foreign exchange reserves of the central bank in the monetary statistics. Since February 2003, BNB started to calculate monetary gold also at market prices and to show it in the monetary statistics as a memorandum item to the table on foreign assets and liabilities of the BNB. A consistent time series on monetary gold at market prices since December 1995 has been developed and provided for public use.

In respect to the valuation of nonfinancial assets at market prices for all balance sheet dates, both Bulgarian and international accounting standards allow two approaches: at acquisition

costs or at market prices. Taking into account the specific conditions in the country, Bulgarian banks have chosen to value these assets at acquisition costs. That is why it is not possible to fulfill this staff recommendation.

- *Separately identify central bank's claims on nonoperating banks that are excluded from the coverage of ODC survey.*

The positions "credits" and "other" in "claims on commercial banks" in the analytical report of the BNB after December 1997 include only claims on nonoperating banks. That is why there is no need to separate them in a new line. This is explained in a footnote to the tables starting from the publication for April 2003.

G. Balance of Payments Statistics

Statements by the Bulgarian National Bank

High priority

- *Bring reporting instructions into line with the* BPM5 *guidelines to comply with critical definitions, such as residency and to allow for proper coverage of data, such as an adequate reporting of financial assets. Clarify instructions on the accrual principle and prescribe more systematical valuation at market prices, for example in compiling foreign direct investment and reporting financial assets.*

Improved definitions of residency and foreign direct investment were provided by the BNB in the changes to the Foreign Exchange Law made by the National Assembly in July 2003. The changes in the Foreign Exchange Law also provide the necessary legal background for improved reporting (including financial assets) for BOP statistics.

- *Improve the comprehensiveness and timeliness of all source data; merchandise trade, International Transaction Reporting System (ITRS) and surveys.*

In agreement with the Custom Office its merchandise trade data are regularly used in the BOP compilation since March 2003. This data source meets SDDS requirements for timeliness, accuracy, and reliability. Work on the improvement of the ITRS and further use of direct reporting through surveys has started in line with the amendments to the Foreign Exchange Law and the increased staff in the BOP division.

Other key recommendations

- *Foster interagency cooperation to improve the timeliness of the supply of merchandise trade data.*

The timeliness of the supply of merchandise trade data to the BNB has been substantially improved by introducing a direct data flow from the Custom Office based on bilateral

agreement. The BNB also continues its close cooperation on the compilation of merchandise trade data with the NSI.

- *Following the outcome on the proposed revision to the* Foreign Exchange Law*, the BNB should draw up statistical reporting procedures to address deficiencies in source data.*

The BNB has started work to elaborate the BOP reporting procedures in line with the changes made in the Foreign Exchange Law. A new regulation on BOP statistics was approved by the BNB Management Board, which further develops the legal framework to address the deficiencies in source data, especially in recording the foreign assets of the non-banking sector. The use of the new reporting forms will be from the beginning of 2004 and is expected to facilitate substantially the compilation of the BOP and raise its quality.

INTERNATIONAL MONETARY FUND

BULGARIA

Detailed Assessments Using the Data Quality Assessment Framework (DQAF)

Prepared by the Statistics Department

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This document contains a detailed assessment by dataset of the elements and indicators that underlie the data quality dimensions discussed in Bulgaria'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

1993 SNA	*System of National Accounts 1993*
ARC	Advance Release Calendar
BGN	Bulgarian lev (plural-leva)
BOP	Balance of Payments
BNB	Bulgarian National Bank
BPM5	*Balance of Payments Manual,* fifth edition
BULSTAT	Unified Register of Economic Units in Bulgaria
COFOG	Classification of Functions of Government
COICOP	Classification of Individual Consumption by Purpose
CPI	Consumer Price Index
DQAF	Data Quality Assessment Framework
DSBB	Dissemination Standards Bulletin Board
EC	European Commission
ECB	European Central Bank
ESA 95	*European System of Accounts, 1995*
ESS	European Statistical System
Eurostat	Statistical Office of the European Communities
EU	European Union
FDI	Foreign Direct Investment
FMIS	Financial Management Information System
GDDS	General Data Dissemination System
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GFS	Government Finance Statistics
GFSM 1986	*A Manual on Government Finance Statistics*, 1986
GFSM 2001	*Government Finance Statistics Manual 2001*
HBS	Household Budget Survey
IAS	*International Accounting Standards 2002*
ICD	Informatics and Communications Directorate of BNB
IIP	International Investment Position
IMF	International Monetary Fund
ITRS	International Transactions Reporting System
LFS	Labor Force Survey
MBSD	Money and Banking Statistics Division in BNB's Statistics Directorate
MFSM	*Monetary and Financial Statistics Manual*
MOF	Ministry of Finance
NACE, Rev. 1	Standard Classification of Economic Activities within the European Communities, Revision 1
NAD	National Accounts Division
NAO	National Audit Office
NPSS	National Program for Statistical Surveys
NSDP	National Summary Data Page
NSI	National Statistical Institute
ODCs	Other Depository Corporations
PPI	Producer Price Index

PRODCOM	List of Products of the European Communities
ROSC	Report on the Observance of Standards and Codes
RSO	Regional Statistical Office
SDDS	Special Data Dissemination Standard
UVI	Unit Value Index
VAT	Value-Added Tax

DETAILED ASSESSMENT USING THE DATA QUALITY ASSESSMENT FRAMEWORK (DQAF)

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

I. NATIONAL ACCOUNTS

0. Prerequisites of quality

0.1 Legal and institutional environment

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

The *Law on Statistics*, published in the Official Gazette No. 57 of June 25, 1999 and amended in No. 42 of April 27, 2001, governs the activities of the National Statistical Institute (NSI) as well as other government statistical bodies. The NSI disseminates data under Chapter 5 of this *Law,* which requires statistical bodies to inform the public about the results from statistical surveys through mass media, own publications, and other means. Chapter 3 of the *Law on Statistics* establishes the National Statistical Council, a body attached to the NSI president and responsible for the annual National Program for Statistical Surveys (NPSS). This program covers all significant statistical work undertaken by government agencies, including the national accounts, and is approved by the Council of Ministers.

The Bulgarian Annual Statistical Plan incorporates the NPSS of the NSI and other surveys that are of interinstitutional significance. For each specific statistical survey included in the NPSS, the following items must be stated: the purpose, contents, and coverage of the survey; the methods for conducting the survey, information sources, and forms of data collection; the body or bodies conducting the survey, obligations for data provision by the respondents, and the budget for the survey.

The NSI undertakes most of the data collection itself, the main exceptions being that the Bulgarian National Bank (BNB) calculates the balance of payments (BOP) and provides data on banking statistics, and the Ministry of Finance (MOF) compiles the state budget data. The NSI is the only official producer of national accounts data, and this position has never been challenged. The national accounts are prepared in the National Accounts Division (NAD) of the NSI's National Economic Accounts and Balances Directorate, in cooperation with other divisions. Also, within the NSI, the Basic Statistics Directorate organizes the surveys and

aggregates the submitted data. The same directorate produces the final results of the surveys (by activities), after grossing up the results and making adjustments for nonresponse.

The main responsibility of the NAD is to apply the national accounts system, based on the *European System of Accounts, 1995 (ESA 95)*, to the current statistictical practice of NSI. To that end, the NAD staff support other divisions within the NSI and the National Statistical System as a whole.

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

In pursuance of the *Law on Statistics* the NSI is responsible for coordinating all national statistical activity. The main incentives to encourage coordination among agencies include the sharing of information, participation in joint statistical activities, access to statistical expertise, and influence on the setting of priorities. The tools to achieve coordination are as follows:
- the NPSS statistical infrastructure—classifications, registers, definitions, indicators;
- councils, which improve relations with users, data suppliers, and other bodies of statistics, that is, the National Statistical Council, High Statistical Council, Methodological Council, Editing Council, Methodology and Training Council, IT Council; and
- agreements with bodies of statistics and other institutions, protocols, rules, methods, and ordinance.

The *Law on Statistics* specifies the obligations of legal entities to submit information in response to surveys, covered in the NPSS and conducted on an obligatory basis.

The NPSS covers statistical information required for the observation and compilation of the Bulgarian economic, demographic, social, and environmental activities and other activities, taking into account the availability of sources, respondents' burden, and cost-effectiveness. The NPSS includes a plan for the NSI statistical surveys and surveys with interinstitutional significance. The NPSS covers regularly conducted statistical surveys of established public significance, other statistical surveys for the relevant year, and particular surveys related to the international obligations undertaken by the Republic of Bulgaria. Exhaustive censuses are conducted according to the specific laws enacted for that purpose. The NPSS contains detailed characteristics of the surveys in terms of:
- theme of the survey;
- contents and object of the survey;
- method of conducting the survey;
- sources and form of data collection;
- body/ bodies conducting the survey;
- obligation for data provision; and
- budget for the survey.

The actual funds needed for implementing the NPSS are provided from the State Budget. These funds are allocated to the bodies undertaking the surveys. There is no information available for the coordination of these funds, or the efficiency of their use, for monitoring. The NPSS is published in the Official Gazette.

Annual operating plans for statistical activity have been developed in conformity with the NPSS. These plans contain detailed information about the allocation of tasks between different departments and divisions, including aspects of data exchange.

In accordance with the *Law on Statistics* there are two principal councils, i.e., the High Statistical Council and the National Statistical Council. The High Statistical Council, a consultative body to the NSI president, provides opinions and recommendation on the NSI plan for statistical surveys, drafts of legislative instruments in the field of statistics, national statistical standards, national classifications, nomenclatures, and methods. This council, consisting of 35 members, held two meetings in 2002, when the following issues were discussed: the NPSS for 2003, the medium-term program, and the updating of the statistical classifications.

The National Statistical Council is the body responsible for drafting and implementing the NPSS; it is attached to the NSI president and consists of 18 members. The roles of the National Statistical Council are to adopt a long-term strategy for the development of statistical activity, draft the NPSS, and approve a list of the structural units in the government administration that are bodies of statistics, as well as rules on their activity.

A third council—the Methodological Council—is responsible for implementing the principles of statistical activities incorporated in the *Law on Statistics*—impartiality, reliability, effectiveness, adequacy, publicity, and confidentiality. It is also involved in the development of methodologies, the planning of statistical surveys, and the dissemination of statistical information. The council consists of 15 members—of which five are from the NSI and the rest are from scientific, research institutions, nongovernment organizations, and other government agencies. In general, the councils are a useful mechanism for controlling statistical activities and they meet regularly.

Also, to improve coordination and information between state bodies, agreements have been made for data exchange between the NSI and the main ministries and other state institutions. These agreements specify the obligations of the NSI and another institution in providing statistical information, as well as other forms of cooperation in the field of statistics. The terms of data provision are consistent with the requirements of the advance release calendar (ARC) for dissemination of the results of the statistical surveys.

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

Confidentiality of reporting is guaranteed under Article 25 of the *Law on Statistics*, which states that individual and personal data received may be used only for statistical purposes.

Article 22 requires that all respondents to statistical surveys are informed of their rights and obligations, including the guarantee of data confidentiality. Data on individual reporters can only be provided to third parties if written permission has been received. In addition, Article 26 of the *Law on Statistics* states that statistical bodies and their employees cannot make public or provide (1) individual statistical data; (2) statistical data that may be combined in a way that leads to the identification of an individual person; and (3) statistical data that summarize information for less than three units or in which the relative part of one unit is more than 85 percent of the total volume. Article 55 states that any person not complying with these provisions will be liable to a fine of up to 6,000 Bulgarian leva or BGN (about US$2,000). One accidental breach of the confidentiality rules is known to have taken place, and appropriate disciplinary action was taken. All computers and databases are password controlled to restrict access to authorized staff. Destruction of unwanted survey forms is tightly controlled. Formal procedures are in place to authorize such destruction, and this is undertaken by specially licensed contractors.

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

Article 20 of the *Law on Statistics* requires all organizations and individuals to submit data covered by the NPSS. Article 52 establishes a penalty of up to 6,000 leva (about US$2,000) for noncompliance with reporting requirements (including misreporting). If someone refuses to supply data, attempts are made to encourage participation. However, continuing refusal can result in prosecution, and such cases are publicized.

0.2   Resources

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

At the end of 2002 the NSI had 1,689 staff. Of this total, 1,609 had permanent contracts and 89 had temporary contracts. In comparison with 2001 the number of permanent staff had decreased by 190 employees.

Twenty-one people work in the NAD, which is made up of three sectors, but the structure is quite flexible to make the best use of the experience of the staff. The national accounts division consists of the following units: (1) gross domestic product (GDP) calculations from the production and expenditure approaches—both quarterly and annually; (2) institutional sector accounts, GDP from the income approach, and the production accounts for general government; and (3) supply and use tables, and regional GDP estimates.

The workload of the NAD is increasing because of Bulgaria's application to join the European Union (EU). The NAD is obliged to implement all of the recommendations flowing from the participation of the NSI in the Eurostat pilot projects. It is also required to shorten the deadlines for the quarterly and annual accounts in accordance with the Eurostat data transmission program. The problems of this extra work are compounded by the high

turnover of staff. Since 1997 two-thirds of the experienced staff have left, and have had to be replaced by new entrants.

Low pay is a significant problem for recruiting and retaining well-qualified staff. The NSI is classified as a category 3 institution rather than category 2, such as the MOF. Category 2 would allow the NSI to improve staff pay. So, following a Eurostat recommendation, a proposal to change its status was made at the end of 2001. Most agencies supported this application, except for the MOF and the Council of Ministers. Both of these bodies said there were insufficient funds available at the time. The NSI issued another proposal at the end of 2002 but has not yet received a response.

In 2002, the Council of Ministers decided that the NSI would have to vacate its current office building in Sofia because the office space was required for other purposes. Surprisingly, and disturbingly, suitable alternative accommodation for all of the NSI's staff was not supplied. So, as of January 2003, some of the NSI staff are still in the old office, while attempts are made to find alternative accommodation. This situation has a serious impact on staff morale. It also demonstrates a serious lack of interest in statistics throughout the higher reaches of government. Computing for the national accounts is currently adequate and has been supported under the PHARE program.

0.2.2   Measures to ensure efficient use of resources are implemented

Funds from the central budget are assigned to the NSI each year on the basis of the State Budget of the Republic of Bulgaria. The main financial problem facing the NSI relates to limited funds for its operations. It is extremely difficult to cover the most pressing expenditures, related to conducting statistical surveys and studies, as well as overheads such as electricity, telecommunications, postal, and other external services. This calls for tight controls on expenditure, so that the NSI can run all of the surveys and studies included in the NPSS and disseminate the necessary statistical information.

A first set of performance indicators was developed in 2000, according to the specific objectives of *Statistics about Statistics*. The new performance indicators system follows the philosophy of the Statistical Capacity Building Indicators (PARIS 21 Task Team).[1] The indicators cover seven dimensions:

- effectiveness and usefulness;
- resources—staff, budget, infrastructure;
- transparency;
- timeliness;
- accuracy and relevance;

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[1] Details can be found for the Partnership in Statistics for Development in the 21st Century at: http://www.paris21.org/htm/TT_Indicators.htm.

- respondent burden; and
- international cooperation.

For each of these indicators the approach is to review the data available (including identification of data gaps) and their usefulness as indicators of quality. This information is then expressed as time series in order to be able to see trends over time. This process is still ongoing.

0.3   Quality awareness

0.3.1   Processes are in place to focus on quality

The NSI, under Article 7(1) of the *Law on Statistics*, coordinates the state statistical activity by means of collaboration with the other bodies of statistics in drafting and implementing the NPSS. It is also responsible for ensuring methodological uniformity in the surveys.

The NSI recognizes the importance of the quality of statistical data. It has adopted the quality dimensions of statistical information in accordance with the definition of quality accepted by Eurostat. The topic of quality of statistical information is contained in the Strategy for Development of Statistics and in the Priority Tasks for the period 2001–2005.

Using the General Data Dissemination System (GDDS) as a framework for the development of statistics contributes to the improvement of the production and dissemination of the statistical information in accordance with the basic parameters of the system: that is, coverage, periodicity, and timeliness of data, quality of data, integrity of data, and public access. Regular revisions are made to the national metadata for the GDDS, which are included in the Dissemination Standards Bulletin Board (DSBB) of the IMF. Work towards adoption of the Special Data Dissemination Standard (SDDS) of the IMF is continuing.

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

The statistical divisions of the NSI continuously address the issue of the quality of the data received from statistical surveys. Since 2000 the Statistical Methods and Standards Division has been engaged in studying and elaborating issues of statistical data quality. For instance:
- the theme of quality has been given priority in the NPSS since 2000;
- quality assessment is addressed within the development of national statistical practice in line with the requirements of the European Statistical System; and
- focusing on quality is involved in all stages of the production and dissemination of statistical data. The main publication of NSI—the "2001 Bulgarian Statistical Yearbook"—can be presented as an example of this approach. The dissemination of the methodologies of the statistical surveys (in every chapter of the "Yearbook") is one of the requirements of data quality. Also covered is the increasing use of administrative sources of data to reduce respondents' burden.

User satisfaction with data quality has been researched. This has involved periodic marketing research on user satisfaction, surveys on respondent burden, and the attitude of businesses towards statistical confidentiality.

The NSI has adopted the principles of the Quality Declaration of the European Statistical System and the relevant Eurostat Leadership Group. Recommendations on quality, which will be gradually applied to different surveys, will be considered in line with the accepted criteria established by the European Statistical System. These quality reports are in compliance with the European Commission (EC) and Council Regulations for the respective surveys.

Because of the importance of national accounts statistics within the macroeconomic statistics, Bulgaria puts particular importance on their quality. While Eurostat plays a key role in improving the quality of statistics in candidate countries by providing methodological and technical assistance, the countries themselves retain the ultimate responsibility for upgrading the statistical system to the European standards. Steps have been taken by the NAD to meet the quality requirements of national accounts data in terms of reliability, exhaustiveness, and correspondence with *ESA 95* and related EU regulations. This involved the identification of shortcomings in statistical techniques, methods, sources of information, and accounts. This was achieved through a number of Eurostat pilot projects, e.g., on exhaustiveness of GDP estimates and the assessment of sources and methods for GDP compilation. The assessment is strictly orientated towards the *ESA 95* rules and requirements of member states in the framework of the GNP Committee. Eurostat will carry out the second phase of the pilot project on exhaustiveness in 2003, under PHARE 2000.

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 NSI holds regular meetings with users that consider the trade-offs between timeliness and quality of the national accounts. There are also surveys designed to get a wider perspective of user needs. The NPSS process considers the balance between supplying statistics as early as possible and ensuring that the disseminated data are of good quality. There is continuing pressure from Eurostat to improve on the timeliness of data. However, moves in this direction are made only if they can be achieved by more efficient procedures rather than by reduced quality of the statistics.

1.   Integrity

1.1   Professionalism

1.1.1   Statistics are compiled on an impartial basis

There is no external interference in the compilation and dissemination of NSI statistics. The 1999 *Law on Statistics* establishes the autonomy of the NSI. It requires that "statistical activity shall be carried out in compliance with the principles of the rule of law, impartiality,

reliability, efficiency, adequacy, publicity, and confidentiality." It also established the role of the National Statistical Council in drafting the NPSS, which, along with the rules for dissemination of statistical information products and services, ensures that objective principles are applied in the collection, processing, and dissemination of official statistics. The NSI strives to adhere to objective international methodological recommendations in the preparation of its economic statistics.

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

The NSI makes choices about sources of data and statistical techniques solely on the basis of professional statistical considerations and in the light of international standards. Data sources are soundly based on household and business surveys. There is no evidence of outside interference.

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

Key data are presented and explained at regular monthly press conferences. One of the objectives is to prevent any misunderstandings or misinterpretations by users. In all cases of incorrect interpretation of data, the NSI responds publicly to provide the correct interpretation.

1.2 Transparency

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

Users have full access to information about the conditions under which statistical data are collected, processed, and disseminated, as well as about release timetables, confidentiality of individual data, and other specific points. This information is contained in basic documents such as the Law on Statistics, the rules for dissemination of statistical information, ARCs, and the catalog of NSI statistical publications. All of these products are reproduced both on the NSI website and in its printed and electronic publications.

The fundamental principles of official statistics, methodologies, classifications, nomenclatures, mission statements, etc. are regularly released in the NSI publication *Statistics Magazine*, in both printed and electronic form, as well as on the website.

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

Under new dissemination rules, national accounts data are provided to relevant government ministers (under embargo conditions) for briefing purposes up to one hour prior to the embargo time. This new rule is contained only on the NSI website, in Bulgarian. It is not yet

reflected on the IMF GDDS metadata. The NSI is taking immediate action to present the new rule in English on the website and to update the GDDS metadata.

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

The NSI is clearly identified on all its printed and electronic products through the standard inclusion of the NSI logo together with a box containing publishing information and other insignia. In the case of joint publications with another institution, inclusion of the organization's name and logo is obligatory, and the source of the information is stated in the methodological notes and tables. A basic requirement when giving permission for NSI statistics to be reproduced is that the NSI must be acknowledged as the source of the information.

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

The NSI informs users about the current status, and all significant changes, in relation to methodology, sources, and data collection techniques for all the surveys in the NPSS. In-depth information is provided to the academic community and practicing statisticians through the institute's *Statistics Magazine*. Similar information is also presented on the NSI website.

1.3   Ethical standards

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

In addition to itemizing specific responsibilities, the job descriptions for each NSI staff member contain a list of the laws with which he/she needs to be familiar, i.e., *the Law on Statistics*, the *Law for the Civil Servant*, the *Law for the Administration*, and the *Code of Behavior of the Civil Servant*. While no special training course is provided to new staff on these laws, before they sign their employment contracts they are required to sign a declaration not to release individual data that they access during the course of their everyday work.

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

From 1991 onwards, the national accounts for Bulgaria are broadly compiled according to the recommendations of the *ESA 95*, which is consistent with the *System of National Accounts 1993 (1993 SNA)*. The data for the years 1980–90 were calculated using the conversion tables, known as a document F-20 developed by UNSO, for adjusting the main

macroeconomic aggregates of the Material Product System to those of the *System of National Accounts 1968.*

2.2 *Scope*

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

Most of the *1993 SNA (ESA 95)* tables and accounts that the ISWGNA[2] determined as the *minimum requirement* for implementation are compiled on a regular basis. The only exception is sectoral financial accounts, which are under development. The tables and accounts that are currently produced are:
- annual value added and GDP at current and constant prices by activity;
- annual expenditures of GDP at current and constant prices;
- annual value added components at current prices by activity;
- sequence of accounts for the total economy, and for each sector (up to the capital account) with an annual frequency; and
- annual rest of world accounts (up to net lending).

All of the *1993 SNA (ESA 95)* tables and accounts that the ISWGNA determined as *recommended* for its implementation are compiled on a regular basis. These are:
- quarterly value added and GDP at current and constant prices by activity;
- quarterly expenditures of GDP at current and constant prices; and
- annual supply and use tables.

On a regular basis, Bulgaria also elaborates regional GDP conforming to the NUTS2[3] and NUTS3 levels.

The national accounts in principle cover the economic activity of all Bulgarian resident units, in conformity with the *ESA 95*. However, residency is established after six months, rather than the one year specified in the *ESA 95*. Nonetheless, this variance is not considered to have a significant impact on the figures. The accounts cover the whole territory of Bulgaria, including embassies in other countries and free-trade zones.

The production boundary covers most economic activities of resident units that produce goods and services in line with the *ESA 95*. So, in particular own-account, research and development, plus fixed capital formation on own-account, are included. Also covered are the own-account production of goods and housing services by household producers.

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[2] Intersecretariat Working Group on National Accounts.

[3] EU Nomenclature of Territorial Units.

However, estimates for illegal activities are not currently included, although a special study to derive figures for the narcotics trade was undertaken for 1997.

Tangible assets include productive agricultural goods, buildings, machinery and equipment, transport vehicles, and other instruments and equipment. However, all defense-related assets are currently treated as assets, even those of a military nature that should be classified as current expenditure. Fortunately, this does not affect the size of total GDP since the correct treatment would result only in a reduction to gross fixed capital formation (GFCF) and a counterbalancing increase in general government final consumption. Valuables are not currently treated as assets, though the amounts involved are likely to be small. However, within the framework of the Eurostat pilot project on GFCF some investigative work on valuables will be undertaken. This will involve (1) the examination of existing practices, including trying to ascertain the kind of information currently being collected, or (2) development of new estimates. A key issue, which remains to be resolved, is how, in practice, valuables can be distinguished from nonvaluables, for example using some threshold. It should be noted that this issue is also unlikely to affect total GDP, because valuables purchased by households will be included in household final consumption.

Intangible assets cover owners' rights (patents, licenses; know-how, trademarks); research and development; concessions; mineral exploration; computer software; and other intangible assets. The films, sound recordings, manuscripts and tapes containing drama and musical performances, radio and TV programs, literary and artistic output, etc. are regarded as entertainment, literary, or artistic originals. Where originals are produced and sold, the price paid is correctly scored as GFCF. If the original is retained by the producer, the valuation, which strictly depends on the expected benefits to the producer, is usually based on the costs of production. The quarterly figures for work-in-progress do not cover agriculture even though this is recommended in the *ESA 95*. However, this is consistent with the recommendations of many national accounts experts because of the difficulty of deriving these figures, particularly prior to the harvest in the current year. Even so, this issue will be addressed by a Eurostat pilot project.

2.3   *Classification/sectorization*

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

The classification and sectorization used in the compilation of the Bulgarian national accounts are in broad conformity with internationally recommended systems. The *ESA 95* is followed in classifying institutional units and transactions.

Since 1996 the production and generation of income accounts by activities are compiled according to the National Classification of Economic Activities, which is consistent with the Standard Classification of Economic Activities within the European Communities, Revision 1 (NACE, Rev. 1). Beginning in 2001, NACE, Rev. 1, Classification of Products by Activity and the List of Products of the European Communities (PRODCOM) are applied

directly as national classifications. The Classification of Individual Consumption by Purpose (COICOP) is used for household expenditures, the consumer price index (CPI), and the retail trade survey. The Classification of Functions of Government (COFOG) has not yet been implemented but is planned for the medium term. However, the existing classification of the functions of general government, used by the MOF, is not significantly different from the COFOG. In particular, the existing general government data provide the information necessary for the individual/collective split of consumption expenditures. Foreign trade data are classified according to the 9-digit level of the National Custom Tariff based on the Combined Nomenclature. Capital formation is broken down into six categories according to the Pi6 level defined in the *ESA 95*.

2.4   Basis for recording

2.4.1   Market prices are used to value flows and stocks

The valuation rules used for recording flows and stocks are in accordance with the *ESA 95*. Market output is valued at basic prices before any taxes on products (import duties, excises, VAT, and the tax on insurance premiums) are added and before any subsidies on products are deducted. Changes in inventories of finished goods and changes in inventories of work-in-progress should, in principle, be valued at the prices prevailing at the time they were produced. In practice, they are valued at the prices of the reporting time, i.e. the beginning and the end of the period in question. This is why additional adjustments for holding gains are undertaken. Intermediate consumption is valued at purchaser's prices and is also adjusted for holding gains. Gross output for nonmarket producers is derived from the production costs incurred in providing the services, by summing up the components of intermediate consumption, compensation of employees, and consumption of fixed capital.

Final consumption of households, general government and nonprofit institutions serving households (NPISHs) is valued at purchaser prices. GFCF is also valued at purchaser prices (including all costs associated with ownership transfer), if they are bought. However, and if they are produced for own consumption, the figures are recorded at basic prices, although in this case there is no difference from purchaser prices. Owner-occupied housing is valued at comparable rental values, and imports and exports are valued free on board.

Household production for own final consumption covers agricultural goods produced and consumed by those households and is valued at the relevant selling prices. Nonagricultural and nonfood industrial products produced by households for own use such as clothing, furniture, etc. are not included in gross output, in line with the recommendations of the *ESA 95*.

2.4.2   Recording is done on an accrual basis

In principle, accrual accounting is followed for all accounts. According to the accounting law and standards, all units are obliged to record their transactions on an accrual basis. However, figures for general government are still recorded on a cash basis. The NAD adjusts the

figures for taxes on production onto an accruals basis using data from the tax authorities. Similar adjustments are made to the figures for subsidies on production using data from the financial reports of the receiving enterprises. The MOF is planning to produce budget data on an accruals basis by the year 2005.

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

The production figures are based on reported data from establishments, and their transactions with other 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

Registers

The Unified Register of Economic Units in Bulgaria (BULSTAT) is used as a common sample frame for all enterprise surveys. This register is organized in a decentralized way in the 28 Regional Statistical Offices. It covers all legal entities including foreign-owned ones, natural persons registered as sole proprietors, partnerships, budgetary units, and NPISHs. The Register Department of the NSI is responsible for maintaining the BULSTAT. According to the *Statistics Law*, all units have to register with the BULSTAT. As identification characteristics, the register contains information about the main activity according to the 4-digit level of NACE, Rev. 1, name, address, and legal status. The BULSTAT contains three levels of units—the enterprise, any establishments with complete bookkeeping, and any local units (but only wages and salaries are observed for local units). It does not cover professionals such as lawyers (who are exempted by a special law), street and market traders, and temporary and occasional workers.

A Statistical Register is derived from the BULSTAT, to keep track of the currently registered units for statistical purposes. This is so that dead units can be removed from the register. In addition to the identification characteristics, the Statistical Register contains information about the main activity of the unit, the number of employees, turnover, and long-term tangible assets.

All units are included in the register when they are newly created and removed when they report their closure. New units have to register because no legal economic activity is possible without a registration number. There is no formal mechanism for reporting dead units. However, larger businesses that have double-entry bookkeeping are required to provide quarterly statistical reports to the NSI. So, if a particular unit fails to supply such a report, the appropriate Regional Statistical Office checks to see if it is still in existence. Small units

(unincorporated enterprises with single entry bookkeeping) are checked by the tax authorities, not by the Regional Statistical Offices.

Special procedures exist for registering legal entities controlled by the Ministry of Defense, the Ministry of the Interior and other similar institutions. Professionals (advocates, doctors, dentists, teachers, and artists) have to apply for a tax number and are registered in a special tax register. For all agricultural producers, including private households, a special register is built-up from the Ministry of Agriculture and Forestry Register, the Social Insurance Register, and the last census on population, housing funds, and agricultural farms.

Monthly checks are made with other registers, such as the Social Insurance Register and the VAT Register. The resulting register is considered to be very sound. This was confirmed by a one-off street by street census of all businesses, however small, undertaken by the regional offices in the year 2000.

Statistical surveys

Statistical units (enterprises and establishments) are classified to the appropriate industry according to their principal activity, even if they have any secondary activity. The statistical surveys are conducted using the Statistical Register. Statistical reports are collected from the whole enterprise as well as from any establishments. Specific questionnaires are designed for different activities and also for units having double or single entry bookkeeping.

All units (enterprises and establishments) are obliged to respond to the surveys under the Law on Statistics. Public enterprises generally have a 100 percent response rate, but it is less for private firms and varies by type of activity. The Basic Statistics Divisions make estimates for the nonresponse based on other statistical surveys.

The main statistical surveys conducted by the NSI and used for national accounts purposes are as follows:
- annual bookkeeping statements, provided by all public and private enterprises with double-entry bookkeeping, with special annexes for revenues and expenditures; acquisition of tangible fixed assets; revenues from sales of construction activity; reports on retail and wholesale trade outlets; etc.;
- less detailed annual statistical reports on revenues and expenditures provided by private firms with single-entry bookkeeping;
- annual reports of insurance enterprises, collected by the NSI and based on the specific accounting standard of insurance undertakings; additional information is provided by the yearbook on insurance businesses compiled by the Insurance Supervision Directorate in MOF;
- annual reports of nonprofit institutions based on their specific accounting standard, which allows output to be split between market and nonmarket activities;
- annual reports of investment and pension funds, which are separate institutional units;

- the PRODCOM survey that is exhaustive annually, conducted for 10,000 enterprises engaged in mining, manufacturing, electricity, gas, and water supply activities. Information is collected for about 3,000 different industrial products. Monthly, a sample survey is carried out covering a quarter of the universe and observing 950 products. According to the requirement of the PRODCOM Regulation, the deadline for publication of the data is six months, but at present they are available 10 months after the end of the reference year. Monthly data are published within 40 days;
- agricultural balances, containing very detailed information about the supply of goods and their use in both quantity and value terms—compiled by kind of production unit for state and co-operative agricultural farms, private farms, and households;
- annual reports on labor statistics, providing information about the average annual number of employees, wages and salaries, and working hours—split by economic activity and type of ownership for double-entry bookkeeping units;
- the Labor Force Survey (LFS), used to estimate hidden and self-employed activities. The methodology of the survey has been developed according to the International Labor Organization recommendations and usual international practice. The survey covers a sample of 24,000 noninstitutional households in the whole territory of the country. The reference period is one calendar week (the week before the survey). The data are collected from a two-stage cluster sample of the population aged 15 years and over;
- material balances in quantity and value terms for about 200 commodities groups, constituting intermediate consumption of enterprises and establishments; and
- the Household Budget Survey (HBS), which is a continuous survey covering all households in the country. The survey uses a two-stage scientific random sampling technique: first, selection of population census areas, and second, selection of households. Institutional households are not included in the sample. All households participate in the survey for one year. At present the sample covers 3,000 households. All households are included in the survey on a voluntary basis. The HBS sample is self-weighting, i.e. all households have an identical probability of selection. Households that refuse to participate are substituted by households with similar characteristics. A special investigation was undertaken to confirm that this procedure did not introduce any bias into the sample. The HBS collects information on monetary expenditure on food products, nonfoods, services, income from wages and salaries, social security benefits, households own production, etc. Since 1999, households' expenditures are classified according to COICOP.

NSI also carries out sample statistical surveys. A very important use of these surveys is to control and correct the data from the exhaustive statistical surveys and to cross-check the information from the statistical reports. Furthermore, they allow additional verification of the estimates for the private sector.

The following table summarizes for each NACE, Rev. 1 section the main basic sources for the annual accounts estimates and an assessment of their coverage. Taken over the total of all activities, the coverage of the main sources should be considered to be good.

MAIN SOURCES FOR THE ANNUAL ACCOUNTS

Production Approach		
NACE Rev. 1 Section	**Main source**	**Assessment of coverage**
Agriculture, hunting and forestry	Agricultural balances—with detailed information about the supply and use of goods in both quantity and value terms Annual bookkeeping statement of enterprises with double entry bookkeeping; Report on revenues and expenditure of enterprises with single entry bookkeeping; Unincorporated households activities—agricultural balances, HBS	Satisfactory
Fishing	Annual bookkeeping statement of enterprises with double entry bookkeeping; Report on revenues and expenditure of enterprises with single entry bookkeeping;	Good
Mining and quarrying	Annual bookkeeping statement of enterprises with double entry bookkeeping; Report on revenues and expenditure of enterprises with single entry bookkeeping;	Good
Manufacturing	Annual bookkeeping statement of enterprises with double entry bookkeeping; Report on revenues and expenditure of enterprises with single entry bookkeeping;	Good
Electricity, gas, and water supply	Annual bookkeeping statement of enterprises with double entry bookkeeping; Report on revenues and expenditure of enterprises with single entry bookkeeping;	Good
Construction	Annual bookkeeping statement of enterprises with double entry bookkeeping; Report on revenues and expenditure of enterprises with single entry bookkeeping;	Satisfactory
Wholesale and retail trade, repair of motor vehicles, and personal and household goods	Annual bookkeeping statement of enterprises with double entry bookkeeping—specialized annex for the enterprises performing trade activities; Report on revenues and expenditure of enterprises with single entry bookkeeping;	Good/Satisfactory
Hotels and restaurants	Annual bookkeeping statement of enterprises with double entry bookkeeping; Report on revenues and expenditure of enterprises with single entry bookkeeping;	Satisfactory/Poor
Transport, storage, and communications	Annual bookkeeping statement of enterprises with double entry bookkeeping; Report on revenues and expenditure of enterprises with single entry bookkeeping;	Satisfactory
Financial intermediation	BNB balance sheet and income statement; the annual report of the banking system (containing balance sheets and profit and loss account and specific annexes with more detailed breakdown	Good

	of indicators); Annual report of insurance undertakings; Yearbook on insurance businesses compiled by the Insurance Supervision Directorate in MOF; Annual report of investment funds; Annual report of pension funds; Annual bookkeeping statement of enterprises with double entry bookkeeping; Report on revenues and expenditure of enterprises with single entry bookkeeping;	
Real estate, renting, and business	Annual bookkeeping statement of enterprises with double entry bookkeeping; Report on revenues and expenditure of enterprises with single entry bookkeeping;	Good
Public administration and defense; compulsory social security	Consolidated state budget—the report on the revenues and expenditures of the state budget for central and local government activities and social security funds	Good
Education/ Health and social work	Consolidated state budget—the report on the revenues and expenditures of the state budget for central and local government activities and social security funds Annual bookkeeping statement of enterprises with double entry bookkeeping; Report on revenues and expenditure of enterprises with single entry bookkeeping;	Good
Other community, social and personal service activities	Consolidated state budget—the report on the revenues and expenditures of the state budget for central and local government activities and social security funds Annual bookkeeping statement of enterprises with double entry bookkeeping; Report on revenues and expenditure of enterprises with single entry bookkeeping; Annual report of nonprofit institutions allowing output to be split between market and non-market	Good/Satisfactory
Net taxes less subsidies on products	Consolidated state budget—revenues and expenditures; Tax authorities information about accrual taxes on products	Good

Expenditure Approach		
NACE Rev. 1 Section	**Main source**	**Assessment of coverage**
Household final consumption expenditure	HBS Retail trade Branch statistics Agricultural balances Balance of payments	Satisfactory
Final consumption expenditure of NPISHs	Annual report of nonprofit institutions allowing output to be split between market and non-market	Satisfactory
Government final consumption expenditure	Consolidated state budget—the report on the revenues and expenditures of the state budget for central and local government activities and social security funds	Good
Acquisitions less disposals of tangible fixed assets	Annual bookkeeping statement of enterprises with double entry bookkeeping—balance sheet and special annexes for fixed assets; Report on revenues and expenditure of enterprises with single entry bookkeeping—special reference table 'Report on	Good

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	dwellings construction'; Commodity flow; Custom statistics	
Acquisitions less disposals of intangible fixed assets	Annual bookkeeping statement of enterprises with double entry bookkeeping—balance sheet; Report on revenues and expenditure of enterprises with single entry bookkeeping—special reference table	Satisfactory
Additions to the value of non-produced non-financial assets	n.a.	
Changes in inventories	Annual bookkeeping statement of enterprises with double entry bookkeeping—balance sheet; Report on revenues and expenditure of enterprises with single entry bookkeeping—special reference table Agricultural balances	Satisfactory
Acquisitions less disposals of valuables	Not available at the moment—it is planned to be estimated	
Exports and imports of goods	Custom statistics	Good
Exports and imports of services	Balance of payments	Good

Other sources of information used for quarterly national accounts are a:
- special statistical survey, "Financial Results," which is exhaustive for all enterprises in the public sector with representative samples for private units in all industries other than agriculture;
- statistical survey of insurance undertakings;
- labor statistics report;
- retail trade survey; and
- report on investment of enterprises.

The available price information—producer price index (PPI), CPI, unit value indices (UVIs) etc.—is adequate for compiling the quarterly and annual accounts.

MAIN SOURCES FOR THE QUARTERLY ACCOUNTS

Production Approach		
NACE Rev. 1 Section	Main source	Assessment of coverage
Agriculture, hunting, and forestry	Quarterly economic accounts of agriculture since the beginning of 2002	Reasonable
Fishing	Quarterly enterprises survey "Financial results"	Adequate
Mining and quarrying	Quarterly enterprises survey "Financial results"	Adequate
Manufacturing	Quarterly enterprises survey "Financial results"	Adequate
Electricity, gas, and water supply	Quarterly enterprises survey "Financial results"	Adequate
Construction	Quarterly enterprises survey "Financial results"	Adequate
Wholesale and retail trade, repair of motor vehicles, and personal	Quarterly enterprises survey "Financial results"	Adequate/ Reasonable

and household goods		
Hotels and restaurants	Quarterly enterprises survey "Financial results"	Reasonable
Transport, storage, and communications	Quarterly enterprises survey "Financial results"	Adequate
Financial intermediation	BNB quarterly information Quarterly report of insurance undertakings	Adequate
Real estate, renting, and business	Quarterly enterprises survey "Financial results"	Adequate
Public administration and defense; compulsory social security	Quarterly execution of the state budget	Adequate
Education/Health and social work	Quarterly execution of the state budget Quarterly enterprises survey "Financial results"	Adequate
Other community, social and personal service activities	Quarterly execution of the state budget Quarterly enterprises survey "Financial results" Labor statistics data for NPIs	Adequate/ Reasonable
Net taxes less subsidies on products	Quarterly execution of the state budget Tax authorities information about accrual taxes on products	Adequate
Expenditure Approach		
NACE Rev 1. Section	**Main source**	**Assessment of coverage**
Household final consumption expenditure	HBS, Retail trade, Branch statistics Agricultural balances, Balance of payments	Adequate but at a more aggregated level
Final consumption expenditure of government and NPISHs	Quarterly execution of the state budget	Adequate/ Reasonable
Gross fixed capital formation	Quarterly report on investment of enterprises Custom statistics	Adequate
Changes in inventories	Quarterly enterprises survey "Financial results"	Reasonable
Exports and imports of goods and services	Custom statistics Balance of payments	Adequate

Administrative data

Monetary and banking statistics are provided by the BNB. This covers annual and quarterly balance sheets and income statements of the BNB and the commercial banks. Additionally, annual annexes are supplied containing more detailed breakdowns of some indicators.

BOP data are produced by the BNB in accordance with the fifth edition of the *Balance of Payments Manual (BPM5)*.

The consolidated budget is supplied quarterly and annually by the MOF, broken down by function and for each subsector of general government. Annually, the execution of the state budget is very detailed—by separate units, activities and revenues, and expenditure items.

Quarterly customs statistics on imports and exports of goods are used for checking the direct exports of enterprises and the external turnover of trade firms.

Income declarations collected by MOF are the main source for output produced by households not recorded in the business register, lawyers and other professionals, street traders, etc.

Tax authorities' information is used to convert VAT and excises data onto an accruals basis using information on the delay between when the taxes fall due and when they are paid to the government.

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

Source data closely conform to the definitions, scope, classifications, valuation, and time of recording required for the national accounts. The NSI is consulted on any changes to the accounting standards, which means that financial reports meet the needs of the national accounts.

3.1.3 *Source data are timely*

The data collection system within the NSI is strongly controlled and provides timely data for the elaboration of the national accounts. The Basic Statistics Divisions deliver their quarterly information between 45–55 days after the end of the reference quarter. This is with the exception of the fourth quarter of every year, when the data become available within 80 days because of the extra processing required. Administrative information from the MOF, BNB, etc. is delivered about 60 days after the end of each quarter. The elaboration of the quarterly GDP figures also benefits from the fully computerized system created by the NAD. This meant that in 2001 the deadlines for the national accounts for the first three quarters of the year were reduced to 80 days after the end of the relevant quarter. This is closer to the Eurostat requirement of 70 days. The estimates for the fourth quarter, and hence the first annual totals, only become available 115 days after the end of the year.

More comprehensive annual figures become available 18 months after the accounting period, based on annual information from statistical surveys, bookkeeping records, and administrative data sources. The final estimates based on balanced supply and use tables are produced 36 months after the year in question.

3.2 **Statistical techniques**

3.2.1 *Data compilation employs sound statistical techniques*

Production approach procedures

The industrial breakdown of the annual GDP estimates is based on the 3-digit level of NACE, Rev. 1. Intermediate consumption for each 3-digit industry is further broken down into 3-digit products using data from the latest supply and use tables. This is the only use of historical ratios, and these are only three years old.

The calculation of agricultural gross output is supplemented by figures for household primary and secondary production and consumption. These are based on estimates of areas under cultivation and livestock estimates produced by region. Intermediate consumption includes estimates of the value of seeds, fertilizer, livestock feed, power, and repairs. Output used for own intermediate consumption is excluded from both output and intermediate consumption.

For other economic activities, various methods are used to supplement the standard reports and surveys to arrive at estimates for total output and intermediate consumption. Estimates are prepared at the 3-digit level of the NACE, Rev. 1 for nonresponse; in most cases, average values for similar enterprises are calculated and used for the estimation for nonresponding enterprises. Government budget data cover all activities that should be classified as government services. Estimates for holding gains are made by activity branches and for raw materials, work-in-progress, finished goods, and goods for resale.

Own-account construction and production of major equipment are not recorded as work-in-progress, but only when completed.

The imputed rent of owners' occupied dwellings is evaluated on the basis of number of dwellings and market rent. A lot of improvements in the data collected for actual rents have been implemented regarding the stratification and details of rented dwelling stock. However, there are still concerns about the quality of the estimates, because the rental market of dwellings is less than 10 percent of the total dwelling stock. So, the NSI is in process of implementing an alternative method—the user cost approach recommended by Eurostat.

Consumption of fixed capital is not estimated by the recommended perpetual inventory method, due to the lack of long time series on asset data. So, the estimates are derived from depreciation figures reported in the financial reports.

Volume measures

For constant price estimates, the recommendations of the *ESA 95* are followed. For measuring gross value added of most market producers, the double deflation method is used, that is, output and intermediate consumption are deflated separately. However, some use is made of volume projection, when appropriate. In general, Paasche type deflators are used to estimate the production account components. The constant price figures are expressed as annual chained indices.

The output of the industrial branches is deflated at the 2-digit level of NACE, Rev. 1. The deflator presents a combination of domestic PPIs and export UVIs. The Business Statistics Directorate provides information on domestic market PPIs at the 3-digit level. They are Laspeyres type with fixed 1995 base year. NAD recalculates them to derive price changes over the average of the previous year. From the monthly surveys, information on the domestic sales and direct exports is available. They are used to weight the PPIs and the export UVIs provided by the external trade statistics division and to obtain implicit deflators of gross output at the 3-digit level. These indices are weighted to the 2-digit level by

applying current period sales as weights in order to approximate a Paasche deflator. So, in effect the volume estimates are being derived at the 3-digit level of NACE, Rev. 1.

The latest supply and use tables are used to derive a structure of all intermediate inputs (domestically produced and imported) by branch. The resulting structure is used to weigh the corresponding PPIs and import UVIs to obtain an aggregate index for each industry. Agricultural output at constant prices is estimated using direct valuation of quantities in the previous year prices; intermediate consumption is derived by deflation.

The relevant business statistics divisions supply the deflators for trade, transport, and communications. The market output of the other services is calculated at constant prices using the corresponding CPIs.

The trade margin (output) at present is calculated at constant prices using double deflation. Combined CPI, PPI, and UVI indices are used as deflators for purchases by the wholesale and retail trade, adjusted for change in inventories. In the framework of the Eurostat pilot project on constant prices, growth in output derived from a detailed deflation of sales will be applied.

The output of nonmarket services and construction at constant prices is the sum of the deflated value added and intermediate consumption. The wages and salaries index for each industry is used for value added. In the case of intermediate consumption, a suitable price index is applied to each of its components.

The implicit deflator for domestic demand is used to deflate financial intermediation services indirectly measured (FISIM). Additional work will be undertaken in cooperation with the PHARE FISIM project to derive estimates based on the projection of the deflated values of the relevant loans and deposits.

The volume measures of net taxes on products are estimated by applying the base year tax rates to the volume of the transactions that are subject to each tax or subsidy.

Expenditure approach procedures

The estimate of GDP by final expenditure is compiled independently from the production data. The estimates are in accordance with the domestic concept and in compliance with the *ESA 95*, and these principals have been applied to the time series back to 1991. However, the national accounts follow the more conceptually correct national concept from 1996. This introduces a break in the figures, which is necessary to maintain full consistency with the BOP figures.

In some cases the estimated values of some specific transactions from the production side are applied directly to the related categories of final demand—imputed rent of owner occupied dwellings, production of households for own final use, and own account construction of residential buildings. Some of the data from the demand side are equally important in

determining the adjustments for exhaustiveness applied to the production figures—for example the HBS information about expenditure on food is the basis for adjustments to the data for the relevant manufacturing industries and retailers. In some cases the custom statistics for imports and exports of goods are used to adjust the production figures obtained from business statistics.

Household final consumption expenditure

Since 1997, household final consumption expenditure is based on the 4-digit level of the COICOP. The NAD uses various sources to build up the estimates of household final consumption expenditure. Balance of payments data are used to make adjustments for expenditure by tourists as required by the national concept, which has been followed since 1996. The HBS is used for food products and retail trade statistics for nonfood products. This guarantees an independent estimate of consumption. Branch statistics data are used for other items such as services, including consumption of water, electricity, and heat energy. Retail trade data have also been presented in accordance with COICOP since the year 2000. It is important to mention that different sources can be chosen for different COICOP items. The NAD has more than one estimate for most items, which are used for comparison purposes. COICOP classes are also adjusted for the purchases of businesses, income in kind, and household production for own final consumption.

NPISH final consumption expenditure

The final consumption expenditure of NPISHs is derived from the corresponding gross output figures, adjusted for incidental sales.

Government final consumption expenditure

The government final consumption expenditure is calculated by subtracting the value of sales, which are included in the intermediate consumption or in household final expenditure, from the gross output of general government. The distinction between final and intermediate consumption is based on detailed information from the budget. COFOG has not yet been introduced. However, the activity detail of the National Classification of the Functions of the State Budget provides the information necessary for the individual/collective split of consumption expenditure.

Gross fixed capital formation

GFCF is measured as expenditure on the acquisition of fixed assets (the actual expenditure on construction activity, improvements of existing assets, cost of delivery and installation of fixed assets, and progress payments by customers), less the disposal of existing fixed assets.

For tangible fixed assets, data are obtained through the annual report on investments and cover all units outside the household sector. Until 1998, the data included expenditure on the acquisition of secondhand assets, so adjustments had to be made to exclude them. The

commodity flow approach is used for cross-checking the consistency of the GFCF data for construction, machinery, and equipment. Data on sales to the domestic market of those branches producing investment goods and information from customs statistics on imports of investment goods are also used.

Changes in livestock used for production are derived from the agricultural balances. Expenditure on acquisition of assets by households is estimated on the basis of information on the number of permissions for individual construction of dwellings.

Estimates for intangible fixed assets are based on the specific annex to the annual balance sheet.

Changes in inventories

Measurement of change in inventories is in line with the *ESA 95* recommendations. It is based mainly on quarterly information.

The estimate for the enterprises sector is based on the quarterly survey "Financial Results" and the annual balance sheets. Data are available in value terms for the stocks at the beginning and at the end of the period. Changes in inventories for enterprises are derived as the difference between the inventory levels at the beginning and end of each quarter. They are separately estimated by stage of processing for all industries and adjusted for holding gains. Current and constant price data are derived simultaneously.

HBS data and agricultural balances are used to estimate the change in inventories for unincorporated activities of households and agricultural producers. As the data for agriculture are available in volume terms, it is not necessary to make adjustments for holding gains.

Imports and exports of goods and services

The exports and imports of goods are valued *free on board* and are calculated on the basis of customs declarations. Those data are provided by the External Trade Statistics Division of the NSI at the 8-digit level of the Combined Nomenclature, which has a transition key to the national classification of products and NACE, Rev. 1. The same figures are included in the BOP.

The data on exports and imports of services cover construction, transport, communication, financial and insurance services, operating leasing, culture, science, sports, maintenance of embassies, etc. This breakdown is provided by the BOP. Until 2000 it was only prepared in U.S. dollars and was converted into Bulgarian leva by the NAD. Since 2001, the BOP also provides the figures in leva, based on actual transaction exchange rates.

Volume measures

The household final consumption expenditure estimates at constant prices are derived by applying the relevant CPIs for the corresponding COICOP items at the 3-digit level. The CPIs used are chain-linked, Paasche type indices covering the whole territory of the country.

The final consumption expenditures of general government and NPISHs are deflated with the implicit output indices of the corresponding branches.

GFCF is obtained at constant prices by applying appropriate Paasche price indices—the implicit construction output deflator, domestic PPIs, and import UVIs for investment goods; and the implicit deflator of the output of agricultural productive goods.

Depending on the average stock-holding period the value of inventories by type and by branch is estimated at average previous year prices using specific monthly or quarterly price indices. Raw materials are deflated with a combination of PPIs and import UVIs. The latest supply and use tables are used to derive a structure of all materials that can be held in stock (including imports) by industry. Work-in-progress and finished goods are deflated with indices derived from the relevant PPIs, weighted from the 3-digit to 2-digit level with corresponding current period weights. For the electricity and service branches, the overall price index for manufacturing industry is used, because their stocks will be the result of secondary activities. Goods for resale are deflated with monthly and quarterly PPIs for manufactures.

The exports and imports of goods are deflated with the corresponding Paasche type UVIs. Since 2001, the Foreign Trade Statistics Division has improved the quality of these indices. The price index is calculated from the average prices of selected commodities for each 3-digit NACE, Rev. 1 class. The import of services is deflated with the harmonized CPI of EU-15. Exports of services are derived at constant prices by applying the corresponding national CPI.

Specific quarterly compilation techniques

Quarterly accounts for Bulgaria have been prepared since 1994. GDP is calculated from the production and expenditure approaches, and at current and constant prices. The constant price figures are expressed as time-series of chain-linked indices. The estimates are based largely on direct surveys and apply the same methodology as the annual national accounts.

The quarterly estimates of the production account follow the structure of the annual versions. However, as is common in other countries, the level of detail is less than for the annual accounts. Also, work-in-progress is not estimated quarterly for agriculture, because no usable data are available. Adjustments are made for holding gains; exhaustiveness—people working without labor contract, based on the LFS; income in kind; and underreporting.

Seasonally adjusted GDP is calculated on an experimental basis and is published, but only as a graph. The model used is Tramo/Seats (Demetra interface proposed by Eurostat). The data are available from 1995, but only for total GDP. The calculation of seasonally adjusted output and expenditure components is planned.

Three sets of national accounts are compiled for each quarter:
1.   First quarterly accounts estimates published 80 days after the corresponding period are compiled on the basis of the quarterly basic statistical information available. The GDP estimates from the production and expenditure side are balanced on the basis of the use matrix framework. However, the statistical discrepancies between the two methods are not entirely removed.
2.   The preliminary annual estimates can involve revisions to the estimates for the first three quarters.
3.   Finalized quarterly estimates can be reconciled with the final annual accounts. Reconciliation with the annual figures makes use of the recommended Denton technique.

In practice, there are two series of finalized estimates for each year—the first set is reconciled with the final annual figures, but before finalizing the supply and use tables. The second set is achieved when the last revision of the annual accounts has taken place, after constructing the supply and use tables for the corresponding year. Unlike the preliminary data, with final revised estimates, reconciliation is done in line with the balancing procedure of quarterly aggregates, and all statistical discrepancies are removed.

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

A large number of procedures are applied in national statistical practice to adjust the source data and to improve the coverage, definitions, and valuation in conformity to international guidelines. The estimates from the production and the expenditure approaches are balanced through a supply and use framework.

The NAD has participated in the Eurostat pilot project on exhaustiveness, which aims to ensure the exhaustive coverage of the production system as defined in the *ESA 95*. Specific adjustments are made for informal and underground activities. Some investigation of illegal activities has also been undertaken, such as the transactions involved in drug production, distribution, and consumption. However, these estimates have not yet been incorporated into the accounts, owing to concerns about their quality.

According to the definitions of the European Commission Decision on exhaustiveness, concerning the estimation of the legal activities that are not directly observed in statistical surveys, the NSI effort has, until now, been mainly focused on the following areas:
*   survey nonresponse;
*   evasion of the payment of taxes and/or social security; and

- exemption from the obligation to submit information to the tax and social security authorities.

For nonresponse, adjustments are prepared at the 3-digit level of NACE, Rev. 1. The number of nonresponded units, their activities, and number of employees are determined. Then the average revenue from sales per employee is calculated from the data of responded units in the same activities with similar number of employees. The derived ratio is used to estimate the activity of nonresponded units.

The adjustments for underreporting to avoid tax and social payments are made using indirect methods, which can be summarized as follows:

- The ratio between intermediate consumption by types of expenditures and gross output for different groups of units engaged in the same activity is calculated. The groups are defined according to the type of activity, ownership, and number of employees at the 3-digit level of NACE, Rev. 1. The investigation of the deviation in input-output ratios among the units within the chosen homogeneous group shows the degree of overreporting in intermediate consumption and underreporting in the value of gross output.
- Additional adjustment is made on the basis of comparison of structural indicators in the public and private sectors, and between small and large enterprises. Typically for all small units the ratio between intermediate consumption and gross output is extremely distorted. It can be twice or three times larger than for public sector units or larger private enterprises in the same branch. For many small units, both outputs and inputs are unreliable. Also, for some businesses the share of externally supplied services can be several times higher than for other units belonging to the same activity group. This is because they are recording the expenses of their own staff as external services to avoid social security payments.
- The evaluation of the retail trade sales in some specific economic activities—using the demand side data (HBS)—identifies some underestimation of sales. For example, the HBS shows higher expenditures on food than is recorded in retail sales.

The main exhaustiveness correction made with regard to missing income is based on LFS data. In order to avoid tax and social contribution payments, employers generally tend to employ some workers without any labor contract. According to the result of LFS, their number is about 100,000, with an increase in numbers in June and September, owing to the seasonal character of some activities.

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 sampling errors is available. The NAD routinely reviews the nonresponse adjustments made by Basic Statistics Divisions. Information is available about imputation methods for nonresponse in the surveys. High-value transactions are confirmed with respondents.

The accuracy of budgetary data, international trade, price statistics, and other secondary sources used to compile national accounts is routinely assessed by national accounts experts.

Appropriate measures are taken to validate the source data and to make them consistent with the national accounts. The source data are analyzed to correct for underreporting/misreporting, in particular to check for temporal consistency and consistency with other related data sources. The consistency of the source data with the national accounts is checked, in particular concerning the definitions, valuation, reference periods, and classifications. Source data are analyzed to ensure that any revisions are reasonable.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Main intermediate data are validated against other information where applicable

The data compiled from the main sources used in the national accounts statistics are checked with other primary/secondary sources whenever possible.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

A systematic procedure exists to routinely assess the potential discrepancies in intermediate data. Appropriate adjustments are made to remove any discrepancies.

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

Supply and use tables are used to investigate discrepancies and make the statistical outputs consistent. Data are validated against other estimates whenever possible. In particular, the figures for informal activity are checked against those produced by other organizations. In fact, some of the methods used by these organizations are taken up by the NAD.

3.5 Revision studies

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

The national accounts data are subject to routine revisions before being considered as final. The process of revisions results in the elaboration of different quantitative evaluations of one and the same variable. The direction and magnitude of revisions between preliminary and final data are investigated. Short explanations about the reasons and type of revisions accompany the release of national accounts.

The results of investigations and adjustments made in the statistical processes are taken into account in compiling the data for the subsequent periods.

4. Serviceability

4.1 Relevance

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

Users are represented on a number of groups responsible for establishing and maintaining the statistical program, e.g., the High Statistical Council. The NAD also arranges periodic meetings with groups of users to monitor their needs. Marketing surveys to identify user needs are also undertaken on a regular basis.

National accounts experts participate in international statistical meetings organized by Eurostat, OECD, UNECE, IMF, and other international institutions. Representatives of the NSI take part in the interinstitutional working groups established for ad hoc and accession related purposes.

4.2 Timeliness and periodicity

4.2.1 Timeliness follows dissemination standards

The GDP estimates for the first three quarters of the year are disseminated within 80 days after the end of the relevant quarter, exceeding the SDDS requirement of 90 days. However, the figures for the fourth quarter do not become available until 115 days after the end of the quarter, which does not meet either GDDS or SDDS requirements.

The first annual estimates of GDP and its subcategories become available 115 days after the end of the year, calculated as a sum of the preliminary quarterly accounts for the year. Revised estimates are published 18 months after the accounting period, based on annual information from statistical surveys, bookkeeping records, and administrative data sources.

The final estimates become available, after compilation of supply and use tables, 36 months after the end of the year in question.

4.2.2   Periodicity follows dissemination standards

The Bulgarian 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 annual national accounts are internally consistent. The GDP estimates by activity and expenditure components are made consistent in a detailed balancing process on the basis of the supply and use framework. 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. Concepts, definition, and classification for compiling quarterly GDP estimates are the same as those used to compile annual estimates.

The only exception to the above is the quarterly GDP by the output and expenditure approaches and, consequently, the preliminary annual data based on them. These data are not completely balanced, and the officially published GDP estimates for these periods are based on the production approach. Then an additional residual item is included within the table for expenditure figures. This statistical discrepancy between the estimates is not large and is stable over time—less than 1 percent.

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

Consistent national accounts time series according to the *ESA 95* are available from 1991 onward. Detailed methodological notes identifying and explaining the introduction of the *ESA* 95 were published in the NSI/OECD joint publication "National Accounts for Bulgaria – Sources and Methods." Any breaks in the series are explained to the users—for example, changes in the classification of economic activities in 1996.

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

The national accounts statistics are in general consistent with balance of payments and government finance statistics. Currently, the BOP is the main source of statistical data for the transactions with the rest of the world, and its current account is used as a "mirror" account in the Bulgarian national accounts. Also, the net lending/borrowing of the country is reconciled with the BOP current external balance. Regarding the quarterly BOP data, the consistency between the two sets of macroeconomic statistics only exists for a short time as the BNB makes monthly revisions to its data. The net lending/net borrowing of the general government subsectors recorded in the nonfinancial national accounts is identical to the

government debt and deficit, as presented by the MOF since 1998 (according to *ESA 95* and Council Regulation 3605/93 of EC). However, the other transactions for general government have to be adjusted to conform to the requirements of the *ESA 95*.

4.4 Revision policy and practice

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

The first annual estimate of GDP and its subcategories is derived from preliminary quarterly accounts for the current year and become available 115 days after the end of the year. Then, independent annual national accounts estimates are prepared on the basis of more exhaustive annual information derived from statistical surveys, bookkeeping records, and administrative data sources. These new annual figures involve the first revision of the preliminary national accounts data and become available 18 months after the end of the year. The second revision of national accounts data is based on the compiled and balanced supply and use tables, regularly prepared three years after the period in question.

The first release of quarterly national accounts is within 80 days of the end of the reference quarter. The quarterly data are fully reconciled with each annual revision. In the process of elaboration of the accounts for the current quarter, some quantitative changes could result in revisions to the previous quarters of the current year. The purpose of these within-year revisions is to improve the consistency and comparability of the quarterly data. Such revisions also maintain consistency between the quarterly and annual accounts.

As well as these regular revisions, there are occasional one-off changes to the data. These occur as a result of changes in surveys, changes of estimation procedures, incorporation of information from nonannual statistics such as censuses, etc., or as result of changes in concepts, definitions, or classifications. One major cause of such revisions is continuing work on harmonization of the Bulgarian national accounts practice with the *ESA 95*. Users of national accounts data are given a clear view of these revisions through the press conferences and in the publications.

4.4.2 Preliminary data are clearly identified

Preliminary annual estimates are identified in statistical releases. As the quarterly data are subject to continuous revision, it would be redundant to identify preliminary data. However, the data published on the website have a clear indication of the exact date of their compilation.

4.4.3 Studies and analyses of revisions are made public

Users are informed of the causes of revisions to the statistical series. Revisions are explained in the publication of the statistical series.

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)

National accounts data are published clearly—charts and tables are disseminated with the figures to facilitate their analysis. Depending on the type of publication—yearbook or specialized national accounts publication—datasets are published with various levels of detail. Estimates are disseminated at a detailed level and as time series. An annual analysis of current-period developments is included in the NSI publication "Socioeconomic Development of Bulgaria." The release of quarterly GDP estimates is supplemented with short comments and methodological notes.

5.1.2   Dissemination media and formats are adequate

GDP data are first published via a press release, which is then followed by the release of a more comprehensive publication. Recently released data and longer time series can be accessed through the NSI Internet site.

The national accounts data are available in the following hard copies:

1.   "Statistical Journal" (monthly edition), NSI (Bulgarian/English)—Quarterly GDP;
2.   "Main Macroeconomic Indicators," NSI (Bulgarian/English);
3.   "Statistical Yearbook of the Republic of Bulgaria," NSI (Bulgarian/English);
4.   "Statistical Reference Book," NSI (Bulgarian); and
5.   "Statistical Reference Book of the Republic of Bulgaria," NSI (English).

5.1.3   Statistics are released on a preannounced schedule

The statistical series, including the national accounts, are released according to a preannounced schedule. In 2001 a general assessment of the national statistical system took place in the NSI. In terms of the dissemination of statistical information, it was recommended to include in the calendar for presenting the results from the statistical surveys, conducted by the NSI, not only the week, but also the date for presenting the results. The calendar for 2002 was revised accordingly.

The calendar for presenting the results from the statistical surveys is announced after the adoption of the NPSS by the Council of Ministers (at the beginning of the current year). Therefore, the calendar for 2003 is not ready yet, which means that there is nothing on the website. In the interim period, the NSI supplies details of forthcoming events by fax to those users who have registered for such information.

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

The NSI provides data on an embargo basis to the media at a press conference. One hour after the beginning of the press conference, the data are available on the Internet.

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

The NSI, upon the request and under signed bilateral contracts with some government agencies, provides more detailed data than is published. Such data can also be supplied to other users on request and, possibly, on payment of a fee. However, this facility is not publicized.

5.2 *Metadata accessibility*

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

Metadata—including information on concepts, definitions, classifications, data sources, and statistical techniques—are published on the Internet, but only for quarterly GDP and in Bulgarian. The national accounts chapters in the "Statistical Yearbook" and the "Statistical Reference Book" also contain metadata. The specialized national account publication "Main Macroeconomic Indicators" contains more detailed methodological notes in Bulgarian and English.

The GDDS summary methodology is regularly reviewed and updated.

NAD has been involved in a Eurostat activity to produce a detailed description of the sources and methods for the annual GDP estimates (similar to the work undertaken with the EU member states within the GNP committee), but this description is only used internally.

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

The description of the methodology included in each publication is designed to meet the needs of the users of that publication.

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 statistics. National accounts experts provide assistance and answer inquires of national and international users depending on their level of responsibility and competence. In line with NSI policy, publications provide a standard contact in the Information Division of the NSI, and only in Bulgarian.

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

A catalog of publications, documents, and other services to users is available and is updated each year. It is published in hardcopy and on the NSI website. The prices of the statistical products and services are clearly disclosed, and assistance is provided for placing orders.

Table 1. Bulgaria: Data Quality Assessment Framework—Summary Presentation of National Accounts
(Compiling Agency: National Statistical Institute)

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

Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources					X	Lack of accommodation, financial resources, and high turnover of staff.
0.3 Quality awareness		X				
1. Integrity						
1.1 Professionalism		X				
1.2 Transparency			X			Prerelease access is given to government users contrary to the statement in GDDS metadata.
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				
2.2 Scope			X			Additional work required to bring the accounts fully in line with *ESA 95*; and financial accounts for each sector are still under development.
2.3 Classification/sectorization		X				
2.4 Basis for recording			X			Government output and final consumption are recorded on a cash basis.
3. Accuracy and reliability						
3.1 Source data		X				
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
4. Serviceability						
4.1 Relevance		X				
4.2 Timeliness and periodicity			X			Fourth quarter GDP figures are released 115 days after the end of the period.
4.3 Consistency		X				
4.4 Revision policy and practice			X			Reasons for revisions are given, but analyses are not published.
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility			X			GDDS metadata are published, but the comprehensive *ESA 95* inventory of GDP at current prices is not currenly disseminated.
5.3 Assistance to users		X				

II. PRICE STATISTICS (CONSUMER PRICE INDEX)

0.   Prerequisites of quality

0.1   Legal and institutional environment

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

The *Law on Statistics* published in the Official Gazette No. 57 of June 25, 1999, amended in No. 42 of April 27, 2001, governs the activities of the National Statistical Institute (NSI) as well as other government statistical bodies. Chapter 3 of the *Law on Statistics* establishes the National Statistical Council (NSC), a body attached to the NSI president and responsible for the annual National Program for Statistical Surveys (NPSS). This program covers all significant statistical work undertaken by government agencies, including the consumer price index (CPI), and is approved by the Council of Ministers. The NSI disseminates data under Chapter 5 of this *Law,* which requires statistical bodies to inform the public about the results from statistical surveys through mass media, own publications, and other means.

The Bulgarian Annual Statistical Plan incorporates the NPSS of the NSI and other surveys that are of interinstitutional significance. For each specific statistical survey included in the NPSS, the following items must be stated: the purpose, contents, and coverage of the survey; the methods for conducting the survey, information sources, and forms of data collection; the body or bodies conducting the survey, obligations for data provision by the respondents, and the budget for the survey.

0.1.2   Data sharing and coordination among data producing agencies are adequate

In pursuance of the *Law on Statistics* the NSI is responsible for coordinating all national statistical activity. The main incentives to encourage coordination among agencies include the sharing of information, participation in joint statistical activities, access to statistical expertise, and influence on the setting of priorities. The tools to achieve coordination are as follows:
* the NPSS statistical infrastructure—classifications, registers, definitions, indicators;
* councils, which improve relations with users, data suppliers, and other bodies of statistics, that is the National Statistical Council, High Statistical Council, Methodological Council, Editing Council, Methodology and Training Council, and IT Council; and
* agreements with bodies of statistics and other institutions, protocols, rules, methods, and ordinance.

The *Law on Statistics* specifies the obligations of legal entities to submit information in response to surveys, covered in the NPSS and conducted on an obligatory basis.

The NPSS covers statistical information required for observation and compilation of the Bulgarian economic, demographic, social, environmental, and other activities, taking into account the availability of sources, respondents burden, and cost-effectiveness principles. The NPSS includes a plan for the NSI statistical surveys and surveys with interinstitutional significance. The NPSS covers permanently conducted statistical surveys of established public significance, other statistical surveys for the particular year, and particular surveys and surveys related to the international obligations undertaken by the Republic of Bulgaria. Exhaustive censuses are conducted according to the specific laws enacted for that purpose. The NPSS contains detailed characteristics of the surveys in terms of:

- theme of the survey;
- contents and object of the survey;
- method of conducting the survey;
- sources and form of data collection;
- body/bodies conducting the survey;
- obligation for data provision; and
- budget of the survey.

The funds needed for implementing the NPSS are provided from the State Budget. These funds are allocated to the bodies undertaking the surveys. There is no information available about the coordination of these funds, and the efficiency of their use, for monitoring. The NPSS is published in the Official Gazette.

Annual operating plans for statistical activity have been developed in conformity with NPSS. These plans contain detailed information about the allocation of tasks between different departments and divisions, including aspects of data exchange.

In accordance with the *Law on Statistics* there are two principal councils, i.e., the High Statistical Council and the National Statistical Council. The High Statistical Council, a consultative body to the NSI president, provides opinions and recommendation on the NSI plan for statistical surveys, drafts of legislative instruments in the field of statistics, national statistical standards, national classifications, nomenclatures, and methods. This council, consisting of 35 members, held two meetings in 2002, at which the following issues were discussed: the NPSS for 2003, the medium-term program, and updating of the statistical classifications.

The National Statistical Council is the body responsible for drafting and implementing the NPSS; it is attached to the NSI president and consists of 18 members. The roles of the National Statistical Council are to adopt a long-term strategy for the development of statistical activity, draft the NPSS, and approve a list of the structural units in the government administration, which are bodies of statistics, as well as rules on their activity.

In addition, the Methodological Council is a body responsible for implementing the principles of statistical activities incorporated in the *Law on Statistics*—impartiality, reliability, effectiveness, adequacy, publicity, confidentiality, and concrete issues of

statistical activities such as development of methodology and planning of statistical surveys, statistical data collection, processing, analysis and storage, as well as dissemination of statistical information. This Council consists of 15 members—of which five are from the NSI and the rest from scientific, research institutions, NGOs, and other government agencies.

In general, the councils are useful and manageable mechanisms that meet regularly and reach decisions that the statistical bodies and represented parties can put into practice. To improve coordination and information between state bodies, agreements have been reached on data exchange between NSI and the main ministries and other state institutions beginning in 2000. The agreements specify the obligations of the NSI and the other institutions in providing statistical information, as well as other forms of cooperation in the field of statistics. Two annexes are included in the agreements in which statistical surveys, indicators, periodicity, terms, and information carriers are described. Annex 1 specifies NSI's responsibilities, and Annex 2 indicates those of the other institutions. Terms of data provision are consistent with the requirements of the ARC for dissemination of the results of the statistical surveys.

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

Confidentiality of reporting is guaranteed under Article 25 of the *Law*, which states that individual and personal data received may be used only for statistical purposes. Article 22 requires that all respondents to statistical surveys are informed of their rights and obligations, including the guarantee of data confidentiality. Data on individual reporters can only be provided to third parties if written permission has been received. In addition, Article 26 of the *Law* states that statistical bodies and their employees cannot make public or provide (1) individual statistical data; (2) statistical data that may be combined in a way that leads to the identification of an individual person; and (3) statistical data that summarize information for less than three units or in which the relative part of one unit is more than 85 percent of the total volume. Article 55 states that any person not complying with these provisions will be liable to a fine of up to 6,000 leva. One accidental breach of the confidentiality rules is known to have taken place, and appropriate disciplinary action was taken. All computers and databases are password controlled to restrict access to authorized staff. Destruction of unwanted survey forms is tightly controlled. Formal procedures are in place to authorize such destruction, and this is undertaken by specially licensed contractors.

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

Article 20 of the *Law* requires all organizations and individuals to submit data covered by the NPSS. Article 52 establishes a penalty of up to 6,000 leva for noncompliance with reporting requirements (including misreporting). If someone refuses to supply data, attempts are made to encourage participation. However, continuing refusal can result in prosecution, and such cases are publicized.

0.2 Resources

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

At the end of 2002 the NSI had 1,689 staff. Of this total, 1,609 had permanent contracts and 89 had temporary contracts. In comparison with 2001, the permanent staff had decreased by 190 employees.

Six staff work on the CPI in the head office. These resources are considered to be inadequate given their responsibility for such a wide range of methodological, processing, compilation and dissemination functions. In the regional offices, price collectors also have responsibility for other collections and spend only part of their time on CPI work. These staff resources are also inadequate. A lack of financial resources has meant that there has not been any face-to-face training of price collectors over the last four years.

Low pay is a significant problem for recruiting and retaining well-qualified staff. The NSI is classified as a category 3 institution rather than category 2, such as the MOF. Category 2 would allow the NSI to improve staff pay. Following a Eurostat recommendation, a proposal to change its status was made at the end of 2001. Most agencies supported this application, except for the MOF and the Council of Ministers. Both of these bodies said there were insufficient funds available at the time. The NSI issued another proposal at the end of 2002 but has not yet received a response.

In 2002, the Council of Ministers decided that the NSI would have to vacate its current office building in Sofia because the office space was required for other purposes. Surprisingly, and disturbingly, suitable alternative accommodation for all of the NSI's staff was not supplied. As of January 2003, some of the NSI staff are still in the old office, while attempts are made to find alternative accommodation. This situation has a serious impact on staff morale. It also demonstrates a serious lack of interest in statistics throughout the higher reaches of government.

0.2.2 Measures to ensure efficient use of resources are implemented

Funds from the central budget are assigned to the NSI each year on the basis of the State Budget of the Republic of Bulgaria. Wages and salaries and social security contributions for the personnel, together with current and capital costs, are covered in the expenditure part of the budget. The main financial problem facing the NSI relates to its operating costs. It is extremely difficult to cover the most pressing expenditures, related to conducting statistical surveys and studies, as well as overheads such as electricity, telecommunications, postal, and other external services. This calls for tight controls on expenditure, so that the NSI can run all of the surveys and studies included in the NPSS and disseminate the necessary statistical information.

The first set of main performance indicators was developed in 2000, according to the specific objectives *Statistics about Statistics*. The new performance indicators system, following the

philosophy of the Statistical Capacity Building Indicators (PARIS 21 Task Team), covers seven dimensions:
- effectiveness and usefulness;
- resources—staff, budget, infrastructure;
- transparency;
- timeliness;
- accuracy and relevance;
- respondent burden; and
- international cooperation.

For each of these indicators the approach is to review the data available (including identification of data gaps) and its usefulness as indicators of quality. This information is then used to produce time series in order to be able to see trends over time. This process is still ongoing.

0.3 Quality awareness

0.3.1 Processes are in place to focus on quality

The NSI, under Article 7(1) of the *Law on Statistics*, coordinates the state statistical activity by means of collaboration with the other bodies of statistics in drafting and implementing the NPSS and ensures methodological uniformity in the surveys.

The NSI, as the central body processing and disseminating statistical information, recognizes the importance of the quality of statistical data. It adopts the quality dimensions of the statistical information in accordance with the definition of quality accepted by Eurostat. The topic of quality of statistical information is contained in the Strategy for Development of Statistics and in the Priority Tasks for the period 2001–2005.

Using the General Data Dissemination System (GDDS) as a frame for development of statistics contributes to the improvement of the production and dissemination of the statistical information in accordance with the basic parameters of the system: that is, coverage, periodicity and timeliness of data, quality of data, integrity of data, and public access. Regular revisions are made to the national metadata for the GDDS, which are included in the Dissemination Standards Bulletin Board (DSBB) of the IMF. Work towards adoption of the Special Data Dissemination Standard (SDDS) of the IMF is continuing.

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

The statistical divisions of the NSI continually address the issue of the quality of statistical data received from statistical surveys. Since 2000, the Statistical Methods and Standards Division has been engaged in studying and elaborating issues of statistical data quality. For instance:

Price Statistics (Consumer Price Index)

- the theme of quality has been included and given priority in the NPSS since 2000;

- quality assessment is connected with the development of national statistical practice on control of the quality of data and its harmonization according to the European Statistical System (ESS) requirements; and

- focusing on quality is directed at all stages of the production and dissemination of statistical data. The main publication of NSI—the 2001 Bulgarian Statistical Yearbook—is an example of this approach. The dissemination of the methodologies of the statistical surveys (in every chapter of the yearbook) is one of the requirements on data quality. Also covered is the increasing use of administrative sources of statistical data to reduce respondent's burden. It is also pointed out which categories of data are covered in the metadata in the DSBB.

User satisfaction on data quality has been researched. This has involved periodic marketing research on user satisfaction, surveys on respondent burden, and the attitude of businesses towards statistical confidentiality.

The NSI has adopted the principles of the Quality Declaration of the ESS and developed by the relevant Eurostat Leadership of Group on Quality. Recommendations on quality, which will be gradually applied in statistical practice for different surveys, will be considered in line with the accepted criteria established by the ESS. The reports prepared are in compliance with the European Commission and Council Regulations for the respective surveys.

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 NSI holds regular meetings with users that consider the trade-offs between timeliness and quality. There are also surveys designed to get a wider perspective of user needs. The NPSS process considers the balance between supplying statistics as early as possible and ensuring that the disseminated data are of good quality. There is continuing pressure from Eurostat to improve the timeliness of data. However, moves in this direction are made only if they can be achieved by more efficient procedures rather than by reduced quality of the statistics.

1.   Integrity

1.1   *Professionalism*

1.1.1   *Statistics are compiled on an impartial basis*

There is no external interference in the compilation and dissemination of NSI statistics. The 1999 *Law on Statistics* establishes the autonomy of the NSI. The *Law* requires that "statistical activity shall be carried out in compliance with the principles of the rule of law,

impartiality, reliability, efficiency, adequacy, publicity, and confidentiality." The *Law* also establishes a National Statistical Council to draft the NPSS, which, along with the rules for dissemination of statistical information products and services, ensure that objective principles are applied in the collection, processing, and dissemination of official statistics.

The NSI strives to adhere to objective international methodological recommendations in the preparation of its economic statistics.

Professionalism is actively encouraged. There are strong links between the NSI and the universities and research institutes in Bulgaria, which are mutually beneficial. Opportunities are taken for NSI staff to participate in international statistical training programs (e.g., IMF training courses), and this practice should be extended (e.g., in the fields of prices and national accounts). Between the beginning of 1999 and the end of 2002, experts have participated in two seminars held by the Joint Vienna Institute (two persons for 14 days each).

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

The NSI makes choices about sources of data and statistical techniques based solely on professional statistical considerations and in the light of international standards. Data sources are soundly based on household and business surveys. There is no evidence of outside interference.

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

Key data are presented and explained at regular monthly press conferences. One of the objectives is to prevent any misunderstandings or misinterpretations by users. In all cases of incorrect interpretation of data, the NSI responds publicly to provide the correct interpretation.

1.2   **Transparency**

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

Users have full access to information about the conditions under which statistical data are collected, processed, and disseminated as well as about release timetables, confidentiality of individual data, and other specific points. This information is contained in basic documents such as the *Law on Statistics*, rules for dissemination of statistical information products and services, calendar for presentation of the results from statistical surveys, and the catalog of NSI statistical publications, which are reproduced both on the NSI website and in its printed and electronic publications.

The fundamental principles of official statistics, methodologies, classifications, nomenclatures, mission statements, etc., are regularly released in the NSI *Statistics Magazine* in both printed and electronic form, and on the website.

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

Under new dissemination rules, CPI data are provided to relevant government ministers (under embargo conditions) for briefing purposes up to one hour prior to the embargo time. This new rule is only contained on the NSI website, in Bulgarian. It is not yet reflected in the IMF GDDS NSI metadata. The NSI plans to take immediate action to present the new rule in English on the website and to update the GDDS metadata.

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

The NSI is clearly identified on all its printed and electronic products through the standard inclusion of the NSI logo and a box containing publishing information and other insignia. In the case of joint publications with another institution, inclusion of the organization's name and logo is obligatory, and the source of the information is stated in the methodological notes and tables. A basic requirement when giving permission for NSI statistics to be reproduced is that the NSI must be acknowledged as the source of the information.

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

The NSI informs users about the current status, and all significant changes, in relation to methodology, sources and data collection techniques for all the surveys in the NPSS. In-depth information is provided to the academic community and practicing statisticians through the institute's *Statistics Magazine*. Similar information is also presented on the NSI website.

1.3 Ethical standards

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

In addition to itemizing specific responsibilities, the job descriptions for each NSI staff member contain a list of the laws which he/she needs to be familiar with and apply on the job i.e., the *Law on Statistics*, the *Law for the Civil Servant*, the *Law for the Administration*, and the *Code of Behavior of the Civil Servant*. While no special training course is provided to new staff on these laws, before they sign their employment contracts, they are required to sign a declaration not to release individual data which they access during the course of their everyday work.

2. Methodological Soundness

From the beginning of 1999, the National CPI has been a chained Laspeyres index with the weights changed annually. At the same time, the international classification "Classification of Individual Consumption by Purpose" (COICOP) was introduced for the CPI calculation. Since 2000, the geometric mean formula has been applied at the elementary aggregate level.

2.1 Concepts and definitions

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

The concepts and definitions of the National CPI generally follow the recommendations of the *European System of Accounts, 1995 (ESA 95)* and EU regulations. As a measure of inflation, the CPI relates to household final monetary consumption expenditure (HFMCE) and excludes imputed expenditures, especially imputed rentals of owner-occupied dwellings and own-account production of market goods for own final consumption. While these exclusions depart from *ESA 95*, they are in agreement with the specific EU regulations for price statistics.

2.2 Scope

The NSI compiles the National CPI that is regarded as the official measure of inflation in Bulgaria. Since 1997 a preliminary Harmonized Index of Consumer Prices (HICP) has been produced for Eurostat. The National CPI and the preliminary HICP are derived from the same database and at present are identical. No regional indices are produced. The NSI produces another index that relates to a small basket consisting of 100 goods and services that have particular social importance for low-income households in the country (the bottom 20 percent) and aims to support socioeconomic analysis. The CPI described below is the National CPI of Bulgaria.

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

The CPI covers the expenditures of all resident, noninstitutional households within the country. The weights are derived from the monthly results of a continuous Household Budget Survey (HBS). The CPI refers to market purchases of consumer goods and services made by resident households. However, the following expenditures are excluded from the index: imputed rents for owner occupied housing, dwelling purchases, major maintenance and repair of dwellings, life insurance services, pension and obligatory health insurance, gambling, self-production of goods and services, and illegally sold goods and services. Financial services are not yet covered, owing to their insignificant relative share (less than 0.1 percent of total expenditure). Note that the exclusion of both imputed dwelling rents and dwelling purchases means that housing is not covered in the CPI.

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 is followed in the aggregation of household expenditures on individual goods and services.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

Consumer goods and services included in the basket are valued at market prices, including VAT. That is, the valuation basis is purchasers' prices, inclusive of trade and transport margins. Sales, or discounted, prices are included in the index consistent with the EU Regulation regarding the treatment of price reductions in the HICP. As far as practicable, detailed product specifications are defined including all price determining characteristics, for transactions at market prices.

2.4.2 Recording is done on an accrual basis

Prices of goods and services are recorded at price collectors' visits to the selected outlets (stores, shops, restaurants, cafes, etc.). The price collection period is from the 5th to the 25th of the reference month. Prices of goods are recorded in the period in which they are purchased, and prices of services are recorded in the period in which their consumption commences (e.g., for education and package holidays). This treatment is in accordance with EC Regulation № 2601/2000 regarding the timing of entering purchaser prices into the HICP.

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

Used cars and other secondhand durables are not included in the CPI, so this is not applicable.

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

Comprehensive population and business registers maintained by the NSI are available for sampling frames. Each year the population register is updated with the annual demographic administrative data, and every ten years it is revised on the basis of the results from the

population census. The HBS uses the population census data and the population register to prepare its sampling frame. However, the NSI business register cannot be used to select outlet samples for the CPI price collection because it is not sufficiently up-to-date for the volatile retail industry. Therefore, the approach to the sampling of outlets is judgmental and relies on the selection of outlets to be made by price collectors, and confirmed by the director of the relevant Regional Statistical Office (RSO). Price collectors are given instructions on how to select the outlets, i.e., they must have a large volume of retail sales and supply a variety of goods.

The main source of information for constructing CPI weights is the HBS. The HBS is continuous, with monthly and annual results regularly produced. The selected households are observed for a period of one year. The survey is based on 2-stage probability sample, which at the first stage covers enumeration districts according to their size and at the second stage, six households per enumeration district. The stratification of the sampling units is done firstly by region (28) and type of region (regional center, urban or rural), and secondly by the size of the household. The sample size for 2002 is 3,000 households (6,000 households were sampled in 2000 and 2001). The sampling frame refers to all private households and excludes people living in institutions such as nursing homes for the elderly or ill, prisons, military institutions, etc. The survey covers the whole country.

Participation in the survey is voluntary. The initial response rate of households, when first sampled, was 60.1 percent for 2001. However, all nonrespondent households are replaced with other households from the same strata. Standard errors are calculated for various survey variables. Data collection is done through an open diary and questionnaires. The recording period for the items in each diary is 15 days (i.e., within each month two diaries are completed by each household). For each 15-day period the responding households record in the diary (on a daily basis) all household expenditure, income and receipts, products produced by the household, as well as the products and services supplied from other sources in kind. The questionnaires provide data about socioeconomic and demographic variables relating to household members, foodstuffs available in households on the last day of each month, farm animals, etc. There are also questions that refer to the previous month.

The consumer basket consists of 512 goods and services. Each month, price collectors register the prices of 482 goods and services by personal visits to the outlets or service providers. The prices of the remaining 30 goods and services are centrally collected. The weight of the locally collected prices is 84.9 percent of the total CPI weight, and the weight of the centrally collected prices is 15.1 percent. In compliance with EU regulations, goods and services are included in the index if their weight accounts for more than 0.1 percent of total household expenditure. The number and types of outlets are selected in a way that assures the optimum number of collected prices, sufficient to represent national prices for any group of goods and services in the consumer basket. The main types of retail trade are covered, including the largest outlets such as supermarkets, general and specialized stores, cooperative markets, etc.

The price collection period is from the 5th to the 25th of the reference month. Judgmental sampling techniques are used for the selection of outlets, which must have a large volume of retail sales and supply a variety of goods, representative of the relevant elementary aggregates in the consumer basket. The principle of proportionality is followed. Judgmental sampling techniques are also applied to items and product varieties. Prices are collected each month from 4,589 outlets located in all 27 district centers (including the capital city); as a result, 31,151 price quotations are obtained each month. These 27 centers account for over 65 percent of national retail sales. The NSI has developed special software for data processing at both regional and national level. The collected price data are sent from the regional offices to the national office via an internal data exchange system (based on the Internet) by the end of the reference month.

Additional research and regular consultations with price collectors are undertaken in order to provide information about the weights and prices of new products that are to be included in the CPI. The press, research papers and Internet websites are also monitored for information on price developments.

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

The HBS, national accounts, and CPI data are closely coordinated, and there is broad consistency of definitions, scope, and classifications. This applies also to the time of recording, reference periods, and valuation of CPI estimates. For a few expenditure items (e.g., energy and telecommunications) details are obtained centrally from the respective providers.

3.1.3 *Source data are timely*

The expenditure data provided by the HBS are available at the end of the previous year and are used in CPI calculation for the current year. The collection of expenditure on a monthly basis enables the construction of annual weights for the CPI covering all household expenditure for a full calendar year, including seasonal expenditure recorded in only a few months of the year. It also facilitates an annual change of CPI weights that reflect the most recent pattern of consumption. Consumer price data are available on a timely basis.

3.2 Statistical techniques

3.2.1 *Data compilation employs sound statistical techniques*

The HBS provides detailed expenditure data for CPI weighting according to COICOP at the 2, 3, and 4-digit levels. In addition, HBS data are available for a national extension of COICOP to a 5th and a 6th digit which supports weighting down to the elementary aggregate level.

The goods and services purchased are valued at actual prices paid by the households regardless of the method of payment.

Since 2000, the geometric mean formula has been used to calculate the elementary aggregate indices. Higher level indices are then calculated by applying the Laspeyres chain formula, with annual links.

From 2000, prices for temporarily missing products (up to two months) are imputed at the outlet level on the basis of a matched sample of average prices (i.e., the short-term approach). If a product continues to be missing, a similar substitute is introduced.

Quality adjustment procedures are applied at the national level in a small number of selected cases only. The main approach is the overlap method in which the price difference between the old and new products in the overlap period is used as a proxy for the quality difference.

Until 2000, the long-term relative approach for imputing missing prices of fresh products was used. Commencing in 2001, the methodology has been improved through the introduction of the short-term relative approach.

Products that become permanently unavailable are replaced. New products are introduced into the sample at the time of the annual sample update when they gain market share, i.e., more than 0.1 percent of total expenditure.

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

The scope of the CPI relates to household final monetary consumption expenditure, and it is used in disaggregated form to deflate the corresponding component of the national accounts without data adjustments and transformations.

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*

HBS sampling errors are acceptable and are made available. Nonresponse is not an issue as replacement households are introduced into the survey on a scientific basis.

Sampling errors are not available for the price survey because scientific sampling methods are not used for outlet and product selection. Nonresponse is not a problem as personal price collection is used.

Administrative prices and tariffs are crosschecked in the market. Other price data are checked and edited by special software and manual procedures at both regional and national office levels with rejected prices treated as missing observations. Price collectors are instructed to report if there are significant or unusual price changes and to provide relevant explanations. As the Bulgarian CPI is a chained Laspeyres index, the weighting source data are analyzed and validated each year.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Main intermediate data are validated against other information where applicable

CPI experts selectively make comparisons with relevant components or aggregates from other statistical surveys such as the PPI, export, and import price indices (for example petrol, pharmaceutical products, etc.).

During 2002, CPI price data for water supply were compared and checked with the corresponding price data from the annual survey of water supply and sewerage collection conducted by the NSI.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

Each unusual (i.e., large or inconsistent) movement in components of the index is carefully investigated with the assistance of the price collectors and the suppliers of centrally collected prices.

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

The overall CPI is calculated as the weighted arithmetic mean of the group indices derived from the elementary aggregates weighted with the corresponding statistical weights, and therefore there is no internal inconsistency in the aggregation procedure. It is compiled only on a national basis.

3.5 Revision studies

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

As explained in 4.4.1 and 4.4.2 below, in line with most countries' practices, the introduction of new weights and samples into the CPI each year does not result in revisions to the index numbers because they are not recompiled retrospectively on the basis of the new weights and samples. However, the initially released index numbers for January of each year are preliminary because they are based on incomplete HBS data (i.e., for January to November of the previous calendar year) and are revised at the time of the release of the February indices after the full year's HBS data are available. Index numbers for all other months of the

year are final when first released. Although the January revisions are minor, the differences are analyzed and explained in the publication.

4. Serviceability

4.1 Relevance

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

The survey of consumer prices is part of the NPSS, which is adopted by the Council of Ministries. The most important issues related to the CPI methodology are presented and discussed at the NSI Methodological Council which consists of users in Ministries, the National Bank and the Academy of Science. For example, the new revised CPI series for the period 1995–2000 were presented to the Methodological Council and it was agreed that the new series should be published with an explanation of the methodology. Also, as necessary, working groups are established in order to discuss and receive opinions presented by users (representatives of the Syndicates in Bulgaria, Ministries, etc.) about particular issues. Very good relations have been established with CPI users: the media, Ministries, the National Bank, the Agency for Economic Analysis and Forecasting, etc. NSI price statistics staff regularly participate in meetings and seminars organized by Eurostat, the UN, and the ILO.

4.2 Timeliness and periodicity

4.2.1 Timeliness follows dissemination standards

The CPI is normally released in the week containing the 10th of the month following the reference month and therefore exceeds SDDS requirements.

4.2.2 Periodicity follows dissemination standards

The periodicity of the CPI is monthly and complies with the SDDS.

4.3 Consistency

4.3.1 Statistics are consistent within the dataset

The NSI does not produce regional CPIs. The item/expenditure classification is used in the calculation of the National CPI. The overall CPI is invariant to the hierarchical level used to calculate the overall index.

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

The CPI is an annual chained Laspeyres index. The monthly indices for each calendar year are chained to those of the previous year in order to maintain index series for longer time periods.

The CPI Division revised the index series for the period 1995–2000 to apply the COICOP classification and introduce new methodology incorporating IMF and Eurostat recommendations. The new series have consistent coverage and methodology that meet the standards of the HICP. The revised series have been provided to Eurostat, the OECD, the IMF, and the ILO and have been published to replace the old series for this period.

The old CPI series for the period 1990–94 (May 1990=100) have been re-referenced to 1995 in order to provide historical time series. Users were advised that there is a break in the series between December 1994 and January 1995, informed of the reasons for the changes, and provided with methodological notes.

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

Following *ESA 95*, CPI data are broadly consistent with national accounts deflators for household consumption subject to the exclusions of imputed expenditures from the index as its scope relates to monetary expenditure.

4.4   Revision policy and practice

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

The NSI's annual calendar for data releases is published on its Internet site and is available to all users. It provides information about the release dates for both the preliminary and final CPI (for January of each year). Users are also well informed, mainly through regular press conferences and NSI website postings, about the regular updates to the samples of outlets and basket of goods and services and the annual weight updates. Note that the index series are not routinely recompiled retrospectively, and revised, to reflect these new samples and weights; rather the new series are linked onto the old series each year to form a continuous time series.

Index numbers for the months of February to December of each year are final when first released and are not revised.

4.4.2   Preliminary data are clearly identified

Each year the January index is first released as a preliminary index (calculated with weights from January–November of the previous year). The final January index is released together with the February index and replaces the preliminary one. Users are informed that the initially published data for January are preliminary and subject to revision; this is clearly

identified in the publications. Both preliminary and final January CPIs are disseminated with the same level of detail.

4.4.3 Studies and analyses of revisions are made public

Regarding the preliminary and final January CPIs, although the difference between them is minor, they are analyzed and explained in the publication.

In relation to the major revision for the period 1995–2000, a detailed analysis was undertaken and the results were presented to the Methodological Council. Users were notified what changes had been made, that it represented a marked improvement over the old series, and that it now complied with Eurostat requirements.

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)

At regular monthly press conferences, national CPI data are presented for the overall CPI, the 12 major COICOP headings, and the four main groups (food, nonfood, services, and catering) and along with analyses of the recent price developments. The same data are also posted on the NSI website and are sent to the Regional Statistical Offices for dissemination.

CPI back-data for the overall index and recent data at various levels of disaggregation are presented in tables and charts in the NSI's monthly and annual publications. In addition, the NSI provides printed and electronic publication catalogs.

5.1.2 Dissemination media and formats are adequate

The CPI data are first released at the regular press conferences and via the Bulgarian Information Agency. An hour later, the information is posted on the NSI website. Subsequently, the data are published in the Statistical Journal and annually in the "Statistical Yearbook" and the "Statistical Reference Book". The NSI Statistical Services division provides a wide range of services based on ad-hoc requests, for a fee.

5.1.3 Statistics are released on a preannounced schedule

The CPI data are released according to a preannounced schedule presented in the NSI's annual calendar of data releases. The calendar contains the release dates and the embargo time. The calendar is available in hard copy as well as on the website.

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

The release of the CPI is tightly controlled. It is embargoed until 11.30 a.m. on the preannounced day of release. The data are provided under embargo conditions for briefing purposes to:

(i) media representatives at a press conference commencing at 11.00 a.m., and
(ii) government ministers up to one hour prior to the embargo time.

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

The NSI Information Services Division can provide unpublished specialized tabulations for a fee. There are specific terms and conditions for dissemination of statistical products and services, including a price list, that are contained on the NSI 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

The publication "Methodology for Statistical Observation of the Consumer Prices" is available to users on request. Annually updated CPI methodology is presented on the NSI website and in the NSI Statistical Journal. The GDDS summary methodologies are annually reviewed and updated. The last update was in July 2002.

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

The NSI publishes documentation at various levels of detail according to users' needs. Methodological notes are published in the "Statistical Yearbook" and also the "Statistical Reference Book".

5.3   Assistance to users

5.3.1   Contact person for each subject field is publicized

Contact persons are published in the Statistical Journal. The CPI press releases list the name of the contact person, including the telephone number and email address of the NSI press center.

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

A catalog of publications is published and updated each year. The prices of the statistical products and services are clearly disclosed and assistance is provided in placing orders.

Table 2. Bulgaria: Data Quality Assessment Framework—Summary Presentation of Statistics (Consumer Price Index)
(Compiling Agency: National Statistical Institute)

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

Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources					X	Office accommodation, staff resources, and financial resources in Sofia are inadequate.
0.3 Quality awareness		X				
1. Integrity						
1.1 Professionalism		X				
1.2 Transparency			X			Prerelease access is given to government contrary to the statement in the GDDS metadata, and it is not described in English on the NSI website.
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				
2.2 Scope			X			Housing is excluded.
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data			X			The business register is not sufficiently up-to-date for the retail industry to support outlet sampling.
3.2 Statistical techniques			X			Quality adjustment techniques need to be applied more widely across products.
3.3 Assessment and validation of source data		X				

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
4. Serviceability						
4.1 Relevance		X				
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice		X				
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

III. PRICE STATISTICS (PRODUCER PRICE INDEX)

0. Prerequisites of quality

0.1 Legal and institutional environment

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

The *Law on Statistics* published in the Official Gazette, No. 57 of June 25, 1999, amended in No. 42 of April 27, 2001, governs the activities of the National Statistical Institute (NSI) as well as other government statistical bodies. Chapter 3 of the *Law on Statistics* establishes the National Statistical Council (NSC), a body attached to the NSI president and responsible for the annual National Programme for Statistical Surveys (NPSS). This program covers all significant statistical work undertaken by government agencies, including the producer price index (PPI), and is approved by the Council of Ministers. The NSI disseminates data under Chapter 5 of the *Law,* which requires statistical bodies to inform the public about the results from statistical surveys through mass media, own publications, and other means.

The Bulgarian Annual Statistical Plan incorporates the NPSS of the NSI and other surveys that are of interinstitutional significance. For each specific statistical survey included in the NPSS, the following items must be stated: the purpose, contents, and coverage of the survey; the methods for conducting the survey, information sources, and forms of data collection; the body or bodies conducting the survey, obligations for data provision by the respondents, and the budget for the survey.

0.1.2 Data sharing and coordination among data producing agencies are adequate

In pursuance of the *Law on Statistics* the NSI is responsible for coordinating all national statistical activity. The main incentives to encourage coordination among agencies include the sharing of information, participation in joint statistical activities, access to statistical expertise, and influence on the setting of priorities. The tools to achieve coordination are as follows:
- the NPSS statistical infrastructure—classifications, registers, definitions, indicators;
- councils, which improve relations with users, data suppliers, and other bodies of statistics, that is the National Statistical Council, High Statistical Council, Methodological Council, Editing Council, Methodology and Training Council, and IT Council; and
- agreements with bodies of statistics and other institutions, protocols, rules, methods, and ordinance.

The *Law on Statistics* specifies the obligations of legal entities to submit information in response to surveys, covered in the NPSS and conducted on an obligatory basis.

The NPSS covers statistical information required for observation and compilation of the Bulgarian economic, demographic, social, and environmental activities and other activities, taking into account the availability of sources, respondents burden, and cost-effectiveness principles. The NPSS includes a plan for the NSI statistical surveys and surveys with interinstitutional significance. The NPSS covers permanently conducted statistical surveys of established public significance, other statistical surveys for the particular year, and particular surveys and surveys related to the international obligations undertaken by the Republic of Bulgaria. Exhaustive censuses are conducted according to the specific laws enacted for that purpose. The NPSS contains detailed characteristics of the surveys in terms of:

- theme of the survey;
- contents and object of the survey;
- method of conducting the survey;
- sources and form of data collection;
- body/ bodies conducting the survey;
- obligation for data provision; and
- budget of the survey.

The funds needed for implementing of the NPSS are provided from the State Budget. These funds are allocated to the bodies undertaking the surveys. There is no information available about the coordination of these funds, and the efficiency of their use, for monitoring. The NPSS is published in the Official Gazette.

Annual operating plans for statistical activity have been developed in conformity with NPSS. These plans contain detailed information about the allocation of tasks between different departments and divisions, including aspects of data exchange.

In accordance with the *Law on Statistics* there are two principal councils, i.e., the High Statistical Council and the National Statistical Council. The High Statistical Council, a consultative body to the NSI president, provides opinions and recommendation on the NSI plan for statistical surveys, drafts of legislative instruments in the field of statistics, national statistical standards, national classifications, nomenclatures and methods. This council, consisting of 35 members, held two meetings in 2002, at which the following issues were discussed: the NPSS for 2003, the medium-term program, and updating of the statistical classifications.

The National Statistical Council is the body responsible for drafting and implementing the NPSS; it is attached to the NSI president and consists of 18 members. The roles of the National Statistical Council are to adopt a long-term strategy for the development of statistical activity, draft the NPSS, and approve a list of the structural units in the government administration, which are bodies of statistics, as well as rules on their activity.

The Methodological Council is a body responsible for implementing the principles of statistical activities incorporated in the *Law on Statistics*—impartiality, reliability, effectiveness, adequacy, publicity, confidentiality, and concrete issues of statistical activities

such as development of methodology and planning of statistical surveys, statistical data collection, processing, analysis and storage, as well as dissemination of statistical information. The Council consists of 15 members—of which five are from the NSI and the rest from scientific, research institutions, NGOs, and other government agencies.

In general, the councils are useful and manageable mechanisms that meet regularly and reach decisions that the statistical bodies and represented parties can put into practice. To improve coordination and information between state bodies, agreements have been reached on data exchange between NSI and the main ministries and other state institutions beginning in 2000. The agreements specify the obligations of NSI and the other institutions in providing statistical information, as well as other forms of cooperation in the field of statistics. Two annexes are included in the agreements in which statistical surveys, indicators, periodicity, terms, and information carriers are described. Annex 1 specifies NSI's responsibilities, and Annex 2 indicates those of the other institutions. Terms of data provision are consistent with the requirements of the ARC for dissemination of the results of the statistical surveys.

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

Confidentiality of reporting is guaranteed under Article 25 of the *Law*, which states that individual and personal data received may be used only for statistical purposes. Article 22 requires that all respondents to statistical surveys are informed of their rights and obligations, including the guarantee of data confidentiality. Data on individual reporters can only be provided to third parties if written permission has been received. In addition, Article 26 of the *Law* states that statistical bodies and their employees cannot make public or provide (1) individual statistical data; (2) statistical data that may be combined in a way that leads to the identification of an individual person; and (3) statistical data that summarize information for less than three units or in which the relative part of one unit is more than 85 percent of the total volume. Article 55 states that any person not complying with these provisions will be liable to a fine of up to 6,000 leva. One accidental breach of the confidentiality rules is known to have taken place, and appropriate disciplinary action was taken. All computers and databases are password controlled to restrict access to authorized staff. Destruction of unwanted survey forms is tightly controlled. Formal procedures are in place to authorize such destruction, and this is undertaken by specially licensed contractors.

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

Article 20 of the Law requires all organizations and individuals to submit data covered by the NPSS. Article 52 establishes a penalty of up to 6,000 leva for noncompliance with reporting requirements (including misreporting). If someone refuses to supply data, attempts are made to encourage participation. However, continuing refusal can result in prosecution, and such cases are publicized.

0.2   Resources

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

At the end of 2002 the NSI had 1,689 staff. Of this total, 1,609 had permanent contracts and 89 had temporary contracts. In comparison with 2001, the permanent staff had decreased by 190 employees.

Two to three staff work on the PPI in the head office. These resources are considered to be inadequate given their responsibility for such a wide range of methodological, processing, compilation and dissemination functions. In the regional offices, PPI staff also have responsibility for other collections and only spend part of their time on prices work. These staff resources are generally reasonable, though workloads are cyclical and there can be delays in the implementation of new panels of samples during peak periods. A lack of financial resources has meant that there has not been any face-to-face training of price collectors over the last four years.

Low pay is a significant problem for recruiting and retaining well-qualified staff. The NSI is classified as a category 3 institution rather than category 2, such as the MOF. Category 2 would allow the NSI to improve staff pay. So, following a Eurostat recommendation, a proposal to change its status was made at the end of 2001. Most agencies supported this application, except for the MOF and the Council of Ministers. Both of these bodies said there were insufficient funds available at the time. The NSI issued another proposal at the end of 2002 but has not yet received a response.

In 2002, the Council of Ministers decided that the NSI would have to vacate its current office building in Sofia because the office space was required for other purposes. Surprisingly, and disturbingly, suitable alternative accommodation for all of the NSI's staff was not supplied. So, as of January 2003, some of the NSI staff are still in the old office, while attempts are made to find alternative accommodation. This situation has a serious impact on staff morale. It also demonstrates a serious lack of interest in statistics throughout the higher reaches of government.

0.2.2   Measures to ensure efficient use of resources are implemented

Funds from the central budget are assigned to the NSI each year on the basis of the State Budget of the Republic of Bulgaria. Wages and salaries and social security contributions for the personnel, together with current and capital costs, are covered in the expenditure part of the budget. The main financial problem facing the NSI relates to its operating costs. It is extremely difficult to cover the most pressing expenditures, related to conducting statistical surveys and studies, as well as overheads such as electricity, telecommunications, postal, and other external services. This calls for tight controls on expenditure, so that the NSI can run all of the surveys and studies included in the NPSS and disseminate the necessary statistical information.

The first set of main performance indicators was developed in 2000, according to the specific objectives *Statistics about Statistics*. The new performance indicators system, following the philosophy of the Statistical Capacity Building Indicators (PARIS 21 Task Team), covers seven dimensions:

- effectiveness and usefulness;
- resources—staff, budget, infrastructure;
- transparency;
- timeliness;
- accuracy and relevance;
- respondent burden; and
- international cooperation.

For each of these indicators the approach is to review the data available (including identification of data gaps) and its usefulness as indicators of quality. This information is then used to produce time series in order to see trends over time. This process is still ongoing.

0.3 Quality awareness

0.3.1 Processes are in place to focus on quality

The NSI, under Article 7(1) of the *Law on Statistics*, coordinates the state statistical activity by means of collaboration with the other bodies of statistics in drafting and implementing the NPSS and ensures methodological uniformity in the surveys.

The NSI, as the central body processing and disseminating statistical information, recognizes the importance of the quality of statistical data. It adopts the quality dimensions of the statistical information in accordance with the definition of quality accepted by Eurostat. The topic of quality of statistical information is contained in the Strategy for Development of Statistics and in the Priority Tasks for the period 2001–2005.

Using the General Data Dissemination System (GDDS) as a frame for development of statistics contributes to the improvement of the production and dissemination of the statistical information in accordance with the basic parameters of the system: that is, coverage, periodicity, and timeliness of data, quality of data, integrity of data and public access. Regular revisions are made to the national metadata for the GDDS, which are included in the Dissemination Standards Bulletin Board (DSBB) of the IMF. Work towards adoption of the Special Data Dissemination Standard (SDDS) of the IMF is continuing.

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

The statistical divisions of the NSI continually address the issue of the quality of statistical data received from statistical surveys. Since 2000, the Statistical Methods and Standards

Division has been engaged in studying and elaborating issues of statistical data quality. For instance:

- the theme of quality has been included and given priority in the NPSS since 2000;

- quality assessment is connected with the development of national statistical practice on control of the quality of data and its harmonization according to the European Statistical System (ESS) requirements; and

- focusing on quality is directed at all stages of the production and dissemination of statistical data. The main publication of NSI—the 2001 Bulgarian Statistical Yearbook—is an example of this approach. The dissemination of the methodologies of the statistical surveys (in every chapter of the yearbook) is one of the requirements on data quality. Also covered is the increasing use of administrative sources of statistical data to reduce respondent burden. It is also pointed out which categories of data are covered in the metadata in the DSBB.

User satisfaction on data quality has been researched. This has involved periodic market research on user satisfaction, surveys on respondent burden, and the attitude of businesses towards statistical confidentiality.

The NSI has adopted the principles of the Quality Declaration of the ESS and the relevant Eurostat Leadership Group. Recommendations on quality, which will be gradually applied in statistical practice for different surveys, will be considered in line with the accepted criteria established by the ESS. The reports prepared are in compliance with the European Commission and Council Regulations for the respective surveys.

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 NSI holds regular meetings with users that consider the trade-offs between timeliness and quality. There are also surveys designed to get a wider perspective of user needs. The NPSS process considers the balance between supplying statistics as early as possible and ensuring that the disseminated data are of good quality. There is continuing pressure from Eurostat to improve the timeliness of data. However, moves in this direction are made only if they can be achieved by more efficient procedures rather than by reduced quality of the statistics.

1.   Integrity

1.1   Professionalism

1.1.1   Statistics are compiled on an impartial basis

There is no external interference in the compilation and dissemination of NSI statistics. The 1999 *Law on Statistics* establishes the autonomy of the NSI. The *Law* requires that "statistical activity shall be carried out in compliance with the principles of the rule of law, impartiality, reliability, efficiency, adequacy, publicity and confidentiality." The *Law* also establishes a National Statistical Council to draft the NPSS, which, along with the Rules for dissemination of statistical information products and services, ensure that objective principles are applied in the collection, processing, and dissemination of official statistics.

The NSI strives to adhere to objective international methodological recommendations in the preparation of its economic statistics.

Professionalism is actively encouraged. There are strong links between the NSI and the universities and research institutes in Bulgaria, which are mutually beneficial. Opportunities are taken for NSI staff to participate in international statistical training programs (e.g., IMF training courses), and this practice should be extended (e.g., in the fields of prices and national accounts). Between the beginning of 1999 and the end of 2002, experts have participated in two seminars held by the Joint Vienna Institute (two persons for 14 days each).

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

The NSI makes choices about sources of data and statistical techniques based solely on professional statistical considerations and in the light of international standards. Data sources are soundly based on household and business surveys. There is no evidence of outside interference.

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

Key data are presented and explained at regular monthly press conferences. One of the objectives is to prevent any misunderstandings or misinterpretations by users. In all cases of incorrect interpretation of data, the NSI responds publicly to provide the correct interpretation.

1.2 Transparency

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

Users have full access to information about the conditions under which statistical data are collected, processed, and disseminated as well as about release timetables, confidentiality of individual data, and other specific points. This information is contained in basic documents such as the *Law on Statistics*, rules for dissemination of statistical information products and services, calendar for presentation of the results from statistical surveys, and the catalog of NSI statistical publications, which are reproduced both on the NSI website and in its printed and electronic publications.

The fundamental principles of official statistics, methodologies, classifications, nomenclatures, mission statements, etc., are regularly released in the NSI *Statistics Magazine* in both printed and electronic form, and on the website.

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

There is no internal government access to the PPI prior to its release embargo time.

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

The NSI is clearly identified on all its printed and electronic products through the standard inclusion of the NSI logo and a box containing publishing information and other insignia. In the case of joint publications with another institution, inclusion of the organization's name and logo is obligatory, and the source of the information is stated in the methodological notes and tables. A basic requirement when giving permission for NSI statistics to be reproduced is that the NSI must be acknowledged as the source of the information.

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

The NSI informs users about the current status, and all significant changes, in relation to methodology, sources and data collection techniques for all the surveys in the NPSS. In-depth information is provided to the academic community and practicing statisticians through the institute's *Statistics Magazine*. Similar information is also presented on the NSI website.

1.3 Ethical standards

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

In addition to itemizing specific responsibilities, the job descriptions for each NSI staff member contain a list of the laws which he/she need to be familiar with and apply on the job i.e., the *Law on Statistics*, the *Law for the Civil Servant*, the *Law for the Administration*, and

the *Code of Behavior of the Civil Servant*. While no special training course is provided to new staff on these laws, before they sign their employment contracts, they are required to sign a declaration not to release individual data which they access during the course of their everyday work.

2.   Methodological Soundness

At the beginning of 1999 the National Statistical Institute (NSI) commenced the introduction of a new producer price index (PPI) methodology to accord with Eurostat requirements. A work program was adopted for the progressive implementation of transaction pricing to replace the use of unit values. Currently 75 groups (3rd digit level) of NACE Rev. 1 are included in the new price survey with these groups representing about 83 percent of the sales of industrial enterprises. The current base year for the PPI is 1995, but the NSI is in the process of updating the PPI to a 2000 base year.

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

PPIs for the domestic market are calculated following EU Regulation 1165/98, which established data requirements in relation to coverage, periodicity, and timeliness. NSI also uses the *1998 PPI Eurostat Manual on Business Statistics* and, more recently, the new Eurostat manual *Methodology of Short-term Business Statistics (interpretations and guidelines)*.

PRODCOM concepts and definitions are used in the selection of the individual products for monthly pricing. The PPI relates to output prices, with separate indices of final use also calculated. Input price indices and stage of processing indices are not yet produced.

The PPI Manual is followed in relation to the definition of individual product specifications, that is:

(i) the prices quoted represent prices achieved for a significant proportion of sales of industrial enterprises;

(ii) the products are quoted on the same basis each month, (i.e., the same product and terms of sale);

(iii) the product and the terms of sale are described in sufficient detail to ensure consistency each month; and

(iv) prices are ex-factory (ex-mine, etc.), selling prices (i.e., basic prices which exclude trade and transport margins and taxes on products).

2.2   Scope

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

The PPI covers the mining and manufacturing industries, the production and distribution of electricity and steam, and natural gas and water supply. Following EU recommendations, uranium mining, nuclear fuels, weapons and ammunitions, and shipbuilding are excluded because of difficulties in obtaining reliable data for these activities. Price indices for agricultural products are produced and released separately but are not incorporated in the PPI. Some transport prices indices are also calculated but they are based on unit values.

All resident market enterprises are in scope for the PPI. The index relates to sales on the domestic market, and exports are not included.

The coverage of the PPI differs from the *1993 SNA* ideal in that it excludes changes in stocks of finished products, own-account production of market goods for own final consumption, output of market goods for own-account fixed capital formation, illegal market goods or services sold to willing buyers, production of selected services for own final consumption, and production of services for own account fixed capital formation. These exclusions are common for national PPIs and are accepted under EU regulations.

2.3   Classification/sectorization

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

The *1993 SNA* is followed in the classification of institutional units and transactions. The National Classification of Economic Activities (NCEA), which complies with NACE Rev. 1, is used for the classification of statistical units to the 4-digit level. The classification of products is based on a combination of NACE, the Classification of Products by Activity (CPA) and PRODCOM down to the 10-digit level (the last two digits have been added for national purposes). A further three digits have been added (making a total of 13 digits) to provide for the unique classification of detailed product specifications for pricing.

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, ex-mine, etc., selling prices), excluding VAT and other taxes. That is, the valuation basis is basic prices. Price data are collected for products produced and sold on the domestic market. The prices are actual transaction prices and include discounts, rebates, and other reductions. Excise duties and VAT are excluded.

Each specific product is precisely described when first selected and is carefully identified each month when its price is reported.

2.4.2 Recording is done on an accrual basis

Sales data used for weighting are recorded at the time the products are sold. Price data for the specific products surveyed relate to the time of the sales contract. Transaction prices are recorded as at the 15th day of each month, where possible. If no price information is available for that particular day, the reported price refers to the day when the contract or sale is concluded. PPI data are recorded when products are sold, not when they are produced.

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

As the PPI is a gross sector index, and there is no Stage of Production index, transactions between enterprises are recorded on a gross basis and no netting procedures are required.

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 annual PRODCOM industry census is used for the selection of PRODCOM groups, and the NSI Register of statistical units, EKPOU 96, is used for the selection of enterprises. The main purpose of the Bulgarian business register (EKPOU 96) is to serve as a sampling frame for statistical surveys and for the extrapolation of their results. The *Law of Statistics* (article 30) provides the legal basis for establishing and maintaining the register. The main source of information for updating the register for births and deaths of legal units is the administrative register, BULSTAT, that is also maintained by the NSI. By law, all economic subjects are obliged to register in BULSTAT in order to legitimately conduct economic activity. The business register (EKPOU 96) relates to all economic activities covered by NACE, Rev. 1.

All units, irrespective of their size in terms of number of employees or turnover, are included on the business register. Units are classified according to their principal activity at the class level (4-digit) in accordance to the National Classification of Economic Activities (NCEA), which complies with NACE, Rev. 1. The business register is updated on the basis of two sources: BULSTAT and the Structural Business Statistics (SBS) survey. Updates from BULSTAT are received monthly, and annually from the SBS survey.

The value of sales in the PPI base year is extracted from the annual PRODCOM survey for index product weighting purposes. PRODCOM covers all industrial enterprises, as well as

nonindustrial enterprises (with an annual turnover of more than 75,000 leva), which have significant industrial activity.

The source for activity weights is the mandatory Annual Structural Business Statistics (SBS) survey which is conducted in accordance with the requirements of EU Regulation 58/97. The SBS survey is a census of all economic activities with the exception of NACE classes 65.11, 65.21, 65.22, 65.23, and 66.02.

The SBS survey, as well as the PRODCOM survey, are included in the NPSS and, according to article 20 of the *Law on Statistics*, all units (legal persons and natural persons) carrying out economic activity are obliged to participate and to provide the Bodies of Statistics with the data required. The *Law of Statistics* includes provisions relating to fines, which can be imposed for refusals, nonresponses, and delays.

The response rate varies significantly depending upon the size of the enterprise and its activity. The final overall average response rate in terms of turnover is about 95 percent. For the industrial sector, the response rate is close to 100 percent. Efforts are made to maximize response rates. First, a reminder letter is sent stating that the *Law on Statistics* requires that those that do not respond are required to pay a fine. Depending upon the relative importance of a nonrespondent in terms of their size or representativeness of their industry, the mail survey may be supplemented by a telephone interview and/or visit to collect the data. Data for nonrespondents may be estimated by a variety of methods including secondary sources. Estimates for some nonrespondents are based on relationships from the corresponding NACE activity and size category. Missing data items are estimated by using the values from similar units.

To improve quality, the results are carefully analyzed, first at the enterprise level. Internal consistency of the indicators within the questionnaire is checked by reference to ratios between variables. The consistency of results relative to previous years' results is also checked. Second, the results are checked with data from other surveys conducted by the NSI (PRODCOM Survey, SBS survey, short-term surveys, and International Trade).

The PPI survey, based on the new transaction pricing methodology, covers 83 percent of industrial sales; the remaining 17 percent is still represented by the old unit value methodology, but it is planned to be converted to the new methodology during 2003. For the new survey, a three-stage sampling process is used based on PRODCOM groups, then reporting units and finally specific products, or transactions. Probability proportional to size techniques are used for selection to ensure sufficient coverage is obtained. These techniques involve identifying strata that will be selected with certainty (i.e., probability=1) with the remaining strata selected with probabilities based on their relative contribution to sales.

Questionnaires are sent to about 2,000 enterprises. Approximately 7,800 specification prices are collected for about 850 product groups.

After an enterprise is selected, a qualified employee from a Regional Statistical Office (RSO) visits the enterprise to select a sample of products (transactions) that are most representative of changes in the prices of the PRODCOM group(s) selected for disaggregation. Every product selected for monthly pricing is specified in detail including characteristics of the transaction. Purposive sampling techniques are used to select products that have high sales volumes and that have been produced for a reasonable period of time.

The producer price index aims to take account of changes in quality that can be caused by a change in either the physical characteristics of a product or a change in the transaction characteristics.

A monthly mail questionnaire is used for the price collection. A new computer program for data entry and collection control was recently introduced.

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

The source data used for weights and prices under the new methodology reasonably approximate the definition, scope, classification, and valuation and timing requirements of the PPI. The NSI plans to commence compiling an export price index. Field investigations have revealed that the 50 largest exporting enterprises account for 65 percent of the total value of industrial exports.

3.1.3 Source data are timely

The price collection is completed in a timely manner to conform to the release schedule. The mail questionnaires are sent out before the end of the reference month by the RSOs. The deadline for response is the 20th of the reporting month. RSOs check the data, and on the 25th of the reporting month data files are sent to Central Statistical Office. Data collection is normally closed two days before publication.

The weighting and sampling source data are also available on a timely basis, which support a five-year index reweighting program and the maintenance of samples.

3.2 Statistical techniques

3.2.1 Data compilation employs sound statistical techniques

The Industrial Producer Price Index measures the monthly change in prices of industrial products produced by Bulgarian enterprises and sold on the domestic market.
Indices are calculated at the 10-digit PRODCOM level. Also, aggregated indices are produced at the group level (third digit), division level (second digit), and at section and subsection levels of NACE Rev. 1. Indices are calculated for Main Industrial Groupings (MIGS), following EU Regulation 586/2001 concerning short-term statistics.

The PPIs are base-weighted (Laspeyres) indices. That is, they are weighted according to sales in the base year, which is currently 1995. PPIs are calculated at successive levels of aggregation with indices for each level of aggregation based on the weighted arithmetic mean of indices from the level below. The weights of the lower level indices are sourced from the PRODCOM survey, and weights for PPIs at higher levels of aggregation are based on the value of sales on the domestic market in the base period drawn from SBS survey results.

The weight reference period will be updated every five years according to the EU Regulation 1165/98. The weights are currently over seven years old (based on 1995 data), and the NSI is in the process of changing the base year to year 2000 = 100. When new weights are introduced, the new index will be linked to the old index using internationally accepted techniques.

In relation to quality changes of the surveyed products, efforts are made to ensure that only 'pure' price changes are recorded in the PPI. Quality changes can be caused by a change in either the physical characteristics of a product or a change in the characteristics of the transaction. Currently, four different methods are used for quality corrections in the new PPI system, depending upon the particular circumstances. This is an area where more training and resources would improve results.

Prices for temporarily missing products are handled by one of three methods: (1) asking the enterprise to estimate the missing price, (2) imputing the price based on the change in price of similar products, or (3) repeating the last reported price.

In the case of seasonal products, when selecting the product samples, it is ensured that there are some price data available for each month of the year. This is achieved through working closely with respondents. When the price for a particular seasonal specification is not available, an imputation is made using the short-term price change from a matched sample of specifications from the same product group or enterprise.

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

The PPI covers mining, manufacturing, electricity, water, and gas and has very high coverage of the traditional industrial goods producing industries. Transaction pricing techniques are employed for the majority of the industry output (some 83 percent of the sales of the industrial enterprises) with the remainder measured by the old methodology using unit value indices, pending conversion to the new methodology over the next year.

The other price indices compiled by the NSI relating to agricultural products (using transaction pricing methodology) and the transport sector (based on unit values) provide a significant increase in economic coverage.

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

In relation to the weighting data sources, the Structural Business Statistics (SBS) and PRODCOM surveys have no sampling error impact because they are censuses. The principal activity of the enterprises is observed and updated in the SBS survey so there is no significant misclassification impact. There are small nonresponse rate errors, which vary depending on the size of the enterprise and its economic activity. Rigorous data editing concentrates on the largest enterprises, though effort is put into checking the internal consistency of data for all enterprises by analyzing ratios between variables. The coherence of results with previous years' results is also checked.

Sampling and nonsampling errors are not available for the producer price survey because scientific sampling is not used. The response rate is nearly 100 percent. Missing prices are imputed using the techniques described in 3.2.1 above. Unusual movements in the PPI are investigated. Large price changes (more than +/- 15 percent) are detected by computer editing and then queried with respondents and amended if necessary. RSO staff responsible for price collection contact the enterprises by phone to check the ongoing representativeness of the product specifications and to obtain replacement specifications if necessary.

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 NSI experts responsible for the compilation of the index regularly compare component PPI data by product, or by different levels of aggregation, with relevant components or aggregates from other surveys such as the CPI, export and import price indices.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

Unusual movements in the index arising from large movements in particular sectors or from particular respondents are investigated during the process of compiling the PPI. Unusual movements are not normally explained in descriptive documentation; however, they are explained to users as necessary.

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

PPI indices at higher levels of aggregation are calculated directly as aggregations of product indices so there are no discrepancies in aggregates.

3.5   Revision studies

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

The PPI data are normally final when first released, and revisions are rare and insignificant. As such, there are no routine analyses of revisions. The revisions may be caused by reporting or other errors discovered for previous months. Revision studies are completed following the 5-yearly PPI revision, when new weights, industries, and products are introduced.

4.   Serviceability

4.1   Relevance

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

Meetings are periodically convened with policymakers and other statistical users to review existing statistical surveys and the resultant data and to identify unmet demand. The PPI survey is included in the NPSS. NPSS is discussed by the High Statistical Council, which includes the main data users and aims to improve information provision. The Methodological Council, which includes representatives of the other statistical bodies, academic circles, and other statistical data users, discusses the methodologies of new or changed statistical surveys. Professional committees of experts from other statistical bodies, institutions, etc., including trade unions, have been established with the aim of improving coordination and cooperation between institutions in relation to statistical data exchange.

The new methodology for PPI calculation is published in the NSI's *Statistics* magazine. Producer price statistics experts regularly participate in meetings and seminars organized by Eurostat.

4.2   Timeliness and periodicity

4.2.1   Timeliness follows dissemination standards

Monthly producer price indices are available 40 days after the end of the reference month, which does not meet the SDDS standard of one month. Publication of the monthly indices was discontinued in 2001 pending the implementation of the new methodology. Users may obtain the PPI data and special tables from the Information Services Division of the NSI, upon request. As the new methodology has been largely implemented, the NSI proposes to shortly recommence publishing the PPI each month and release it on the NSI website.

4.2.2   Periodicity follows dissemination standards

Producer price indices are calculated monthly and conform to the SDDS.

4.3   Consistency

4.3.1   Statistics are consistent within the dataset

PPI by product and activity, and at different levels of aggregation, are consistent.

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

In 1998, a new system was introduced for the calculation of the producer price index using the Laspeyres formula, to replace the Paasche formula, and with 1995 as the base year. Indices have been recalculated back to January 1995 on a consistent basis. Users were informed of the new methodology.

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

The PPI conforms with EU requirements and is broadly in line with deflators of industrial production and comparable components of the CPI.

4.4   Revision policy and practice

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

The PPI data are normally final when first released, and routine revisions owing to misreporting, etc. are rare and very minor. Any changes to methodology, etc. resulting in retrospective recompilation of the series, as happened in 1998, are announced to users in advance, and documentation of the changes is provided with the revised data series.

4.4.2   Preliminary data are clearly identified

Users are informed that data may be revised. Revised data are disseminated with the same level of detail as the previously published data.

4.4.3   Studies and analyses of revisions are made public

All differences between original and revised PPI data are analyzed. Revised PPI data are presented in the same aggregates as the preliminary data. Users are informed of causes of revisions to the price series.

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)

Publication of the monthly indices was discontinued in 2001 pending the implementation of new methodology. The data are not currently presented at the regular press conference nor released on the website. Users may obtain the PPI data and special tables from the Information Services Division of the NSI, upon request. As the new methodology has been largely implemented, the NSI proposes to recommence publishing the PPI each month, commencing in March 2003, and release it on the website.

5.1.2   Dissemination media and formats are adequate

See 5.1.1 above.

5.1.3   Statistics are released on a preannounced schedule

The producer price indices are available for users under a regular timetable. However, because they are not currently published, they are not listed in the annual calendar of data releases at present.

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

The PPI is available, upon request. As it is not published or announced in the calendar of data releases, in practice access to all users is not simultaneous.

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

With the permission of the President of the NSI, special tables and more detailed data can be obtained by users from the Information Services Division (subject to confidentiality rules). There are specific terms and conditions for the dissemination of statistical products and services, including a price list, that are contained on the NSI 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

The new "Methodology of the Producer Price Index on the Domestic Market" was published in the NSI *Statistics Magazine* in 2000. The GDDS summary methodologies are regularly reviewed and updated—the last update was in July 2002.

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

The new "Methodology of the Producer Price Index on the Domestic Market" was published in the NSI's *Statistics* magazine. After publication of the PPI recommences, the methodology will be also published. The methodology describes the different levels of detail at which the PPIs are calculated and are available. Methodological notes are published in the "Statistical Yearbook" and in the "Statistical Reference Book."

5.3   Assistance to users

5.3.1   Contact person for each subject field is publicized

The PPI is currently not published, but the NSI Information Services Division provides users with contact details where expert advice can be obtained.

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

The catalog for NSI publications is available and updated every year. However, the PPI is not listed because it is not currently published.

Table 3. Bulgaria: Data Quality Assessment Framework—Summary Presentation of Statistics (Producer Price Index)
(Compiling Agency: National Statistical Institute)

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

Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources					X	Office accommodation, staff resources, and financial resources in Sofia are inadequate.
0.3 Quality awareness		X				
1. Integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data			X			The progressive introduction of transaction pricing needs to be completed.
3.2 Statistical techniques			X			Work to introduce weights from the 2000 PRODCOM and Structural Business Statistics surveys, to replace the 1995 weights, needs to be completed.
3.3 Assessment and validation of source data		X				

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
4. Serviceability						
4.1 Relevance		X				
4.2 Timeliness and periodicity			X			The timeliness of release (40 days after the end of the reference period) does not meet SDDS standards (i.e., one month).
4.3 Consistency		X				
4.4 Revision policy and practice		X				
5. Accessibility						
5.1 Data accessibility					X	Publication of the PPI was discontinued in 2001 pending introduction of new methodology.
5.2 Metadata accessibility		X				
5.3 Assistance to users				X		The PPI is not listed in the catalog of publications.

IV. GOVERNMENT FINANCE STATISTICS

0. Prerequisites of quality

0.1 Legal and institutional environment

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

Under the *Organic Budget Law* (July 25, 1996) the Ministry of Finance (MOF) has the responsibility to collect, process and disseminate fiscal statistics on the budgetary and extra-budgetary central government and local governments. The *Law on the Preparation and Implementation of the State Budget* (published in the State Gazette, additional issue No. 91, 1960; amendments and additions, No. 99, 1963, No. 36, 1979, No. 27, 1992 and No. 104, 1995) was repealed with the 1996 *Organic Budget Law*. The Fiscal Statistics and Accounting Division, Budget and Treasury Directorate in the MOF is dedicated to the compilation of fiscal statistics. Compilation of statistics on government debt is governed by the *State Debt Law* (October 1, 2002), which notes (Article 34) that the Bulgarian National Bank (BNB) shall register government and government guaranteed debt, but (Article 38) that the MOF maintains the official register of State Debt and State Guarantees and that it shall publish information on the Consolidated State and State Guaranteed Debt monthly in an official bulletin and on the Internet.

0.1.2 Data sharing and coordination among data producing agencies are adequate

There is no standing statistical committee to share information across data producing agencies; data sharing arrangements are informal and seem to resolve all data issues satisfactorily. The NSI has prepared and maintains a complete list of public units that comprise the different subsectors of the general government. This list is routinely updated and shared with the MOF and BNB for use in classifying their data consistently with the national accounts definition of general government. The government finance statistics (GFS) derivation links are built into the so-called "budget classification" system (classification codes that serve as a chart of accounts for cash data collection), used for budgeting and accounting purposes. These data are used, in turn, as direct inputs into the national accounts. Weekly data from the BNB are compared with MOF sources, and detailed quarterly banking data for government agencies are confirmed by the BNB and audited by the National Audit Office (NAO). Debt data are taken directly from the BNB database. Budgetary central government, extra-budgetary agencies, and local governments are required to report fiscal data to the MOF.

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. Fiscal data are not confidential, but must be officially approved to be disseminated to the public.

Tax authorities have the obligation to keep confidential any circumstances that have become known to them in the discharge of their duties (Art. 60, *Taxation of the Income of Natural Persons* 1999 as amended). Violators will be fined 500–1,500 Bulgarian leva (US$250–$750), if not subject to heavier punishment, including penal decrees by the Chief Tax Director applying the *Code of Tax Procedure* (Articles 64-65). Specifically the *Code of Tax Procedure* states in Article 12 on confidentiality: "Article 12. (1) The tax administration officials and the recruited contractual experts, as well as public enforcement authorities and experts, shall have the obligation to keep confidential and not to use for other purposes but discharge of their official duties, all circumstances or facts, which have become known to them and have been determined as confidential under this Code, including for a five year period of limitation following the termination of their employment/temporary assignment contracts. (2) The confidential information may be disclosed on the basis of a court ruling, as well as at the written request of another tax authority following the procedure, determined by the General Tax Administration Directorate in connection with executing his/her powers under this Code."

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

Under the *Organic Budget Law* (July 25, 1996) the MOF has the authority to require all units that comprise the budgetary and extra-budgetary central government and local governments to report fiscal data according to a format (template) determined by the MOF. Reporting instructions issued by the MOF are designed to feed into budget execution monitoring and are coordinated with the NAO. Relevant paragraphs of the *Organic Budget Law* are quoted below:

Organic Budget Law (1996)

Section 5

Article 37.
(1) The Accounting Chamber shall monitor state budget implementation in accordance with the Law on the Accounting Chamber.
(2) The National Assembly, the Council of Ministers, the Minister of Finance, the leaders of the ministries and other departments, and agencies of the tax and customs administrations shall monitor state budget implementation within their jurisdictions.

Article 40.
(1) Primary budget credit managers shall compile periodic and annual reports on the cash implementation of their budgets using the complete budget classification, incorporating the reports of secondary budget credit managers.
(2) The Ministry of Finance shall compile a report on state budget implementation using the complete budget classification on the basis of reports on the central budget, the judicial authorities, and primary budget credit managers certified by the Accounting Chamber.
(3) The Ministry of Finance, in coordination with the Accounting Chamber, shall set forth

procedures and deadlines for compiling and submitting the reports referred to in Paragraphs 1 and 2.

Article 41.
(1) The annual report on state budget implementation on indicators approved for the year in question shall be reviewed by the Council of Ministers and submitted to the National Assembly.
(2) The commission responsible for the budget shall in coordination with other standing commissions of the National Assembly, review the report on state budget implementation and make findings concerning it.
(3) The Accounting Chamber shall submit to the National Assembly a paper on the state budget implementation report.
(4) The National Assembly shall resolve to approve the state budget implementation report no later than the end of the next fiscal year.

Section 7

Article 49.
(1) Reports on extrabudgetary accounts and funds shall be prepared and submitted together with those on the implementation of corresponding budgets and budgetary accounts.
(2) Reports on extrabudgetary accounts and funds shall be certified by the Accounting Chamber using certification procedures for reports on the implementation of state authority budgets.
(3) Reports referred to in Paragraph 1 shall be submitted by the Minister of Finance to the Council of Ministers, which shall review and submit them to the National Assembly together with the state budget report.

Article 50.
Funds of others shall be collected, used and reported by state authorities and budget organizations using procedures set forth by the Minister of Finance and the Governor of the Bulgarian National Bank.

Article 51.
Extrabudgetary funds shall be monitored by the authorities, and using the procedures, established for the state budget.

0.2   Resources

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

Resources appear adequate for current GFS compilation demands. The Fiscal Statistics and Accounting Division in the MOF Budget and Treasury Directorate comprises eight professional staff to develop Bulgaria's GFS methodology and compile the general government statistics (including the development of underlying MOF accounting and reporting rules for source data units). Retention of staff has remained stable in recent years.

The Budget and Treasury Directorate overall contains approximately 40 staff to support these statistical efforts and to use the data for fiscal policy purposes. In addition, the Government Debt Directorate comprises 20 staff to compile domestic and foreign debt statistics for the central government. Computer resources are adequate for data manipulation and storage; computer center services are outsourced. Building facilities are adequate and are being refurbished. Two staff in the Fiscal Statistics and Accounting Division have been trained in the *Government Finance Statistics Manual 2001* (*GFSM 2001*) or European Debt and Deficit methodologies. However, despite these adequate facilities for current fiscal statistics, more resources would speed the implementation and development of the *GFSM 2001* and EU fiscal data reporting requirements. Thus far none of the Debt Directorate staff have been nominated to training courses on the new methodology.

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

While the costs associated with compiling fiscal statistics are not measured, the authorities claim that greater efficiency in the use of available resources has been demonstrated in recent years. In addition to continuing to produce currently available fiscal statistics, the staff are simultaneously preparing for the implementation of a new set of fiscal data as part of the EU accession arrangements. In particular, the staff have developed a new chart of accounts, begun to develop a new Financial Information Management System (FIMS), and are preparing changes in instructions for reporting agencies, methodological notes, and new accounting guidelines. All of these developments would support future efforts to implement the *GFSM 2001*.

0.3 **Quality awareness**

0.3.1 *Processes are in place to focus on quality*

There is a recognition throughout the MOF that quality builds trust and is the cornerstone of statistical work. Data quality processes are official, developed by MOF staff, and instructions are signed by the Minister of Finance.

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

Instructions to reporting agencies, actions to deal with missing reports, verifications, cross-checks, and audits are among the processes to monitor the quality of fiscal data collection, processing, and dissemination. For example, the "budget classification" chart of accounts is imposed by the MOF on reporting agencies. The *Organic Budget Law* requires data to be reported and audited by the NAO. International statistical and accounting standards are taken into account in monitoring, and planning improvements to statistical quality. The new *Accountancy Law* (2001) requires the MOF to develop requirements and guidelines for public sector units that are consistent with international accounting standards by the beginning of 2005. Arrangements have been put in place on the Web in January 2003 to obtain feedback from users of fiscal data. On the MOF website, users' feedback is solicited

through feedback@minfin.government.bg, as well as through an innovative online chat room advertising open communication with the Minister of Finance.

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

Monthly data collected from reporting units is less detailed than quarterly reports, reflecting the recognition of the trade-off between timeliness and the quality of detail. The more detailed quarterly reports are scrutinized more carefully against other sources of data (especially banking data) and are audited by the NAO within 60 days. Quality is taken into account in statistical planning, especially as part of the plans to develop fiscal statistics that will meet the requirements for notification to the EU and the migration to the *GFSM 2001*.

1.   Integrity

1.1   Professionalism

1.1.1   Statistics are compiled on an impartial basis

The Fiscal Statistics and Accounting Division of the MOF operates professionally. Part of the efforts to promote professionalism have included publication of articles on fiscal statistics methods (and the development of balance sheets), participation in seminars and training, as well as the provision of training to Bulgarian reporting units on the implementation of the new chart of accounts. Moreover, the quarterly data are audited by the NAO, which is independent from the executive branch of government. The National Assembly elects the NAO's chairman and members.

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

Consistent with the provisions in the *Organic Budget Law*, fiscal statisticians choose the most appropriate sources and methods for compiling data without pressure. Consistent with the *GFSM 2001* and *ESA 95*, the fiscal compilers have classified privatization proceeds and the net acquisition of financial assets with public corporations ("net lending minus repayments" in the *GFSM 1986* system) below-the-line.

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

The Fiscal Statistics and Accounting Division provides expert advice on technical (not policy) aspects of the fiscal data. They occasionally clarify any misinterpretation of the data; for example, explanatory material has been provided to users (such as rating agencies).

1.2   Transparency

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

The *Organic Budget Law* notes the terms and conditions under which fiscal statistics are collected, processed, and disseminated, as well as the requirements for audits, and Council of Ministers and National Assembly approval. It is available to the public and appears on the MOF website.

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

There is no internal government access to the fiscal statistics prior to their release, except as part of the publication process.

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

All MOF statistical publications and data disseminated on the Web clearly indicate that the data are compiled by the MOF.

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

Notes on changes to methodology accompany the data on the MOF website to inform users of changes in methodology, source data, and statistical techniques. Institutional tables appear on the website to highlight for users structural changes in the economy that affect the coverage of the government data.

1.3   Ethical standards

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

As noted in the *Law for the Civil Servant* (as amended SG 45/02), Article 25(1) "The civil servant shall be obliged to protect the classified information representing state or official secret that have become known to him at or on the occasion of fulfillment of his official duties." The compilation and dissemination of fiscal statistics also are governed by the *Law on Access to Public Information* (July 7, 2000) and the *Law on Protection of Classified Information* (April 30, 2002). MOF staff are well aware of the rules concerning classified information.

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 (GFSM 1986 guidelines)

The Bulgarian GFS concepts and definitions are based on the recommendations of the IMF's *A Manual on Government Finance Statistics,* 1986 (*GFSM 1986*). The Bulgarian authorities have not fully developed an explicit action plan to migrate to the *GFSM 2001.* However, they have taken steps to implement the statistical methods for the general government statistics, based on the *European System of Accounts, 1995,* consistent with the requirements of EU accession, and in preparation for reporting according to the EU Excessive Deficit Procedure under the Stability and Growth Pact (Eurostat notification). In particular, two key steps have been the development and planned implementation of a new unified chart of accounts and preliminary actions to develop a new Financial Management Information System (FMIS) for cash and accrual recording. The new harmonized chart of accounts has not yet been linked to the EU notification table or *GFSM 2001* codes; however, it has taken into account the main recommendations of the 1999 technical assistance from the IMF and has been supported by other international organizations. These developments, particularly those taken to prepare for EU accession, have positioned Bulgaria well for future migration to the *GFSM 2001.*

2.2   Scope

2.2.1   The scope is broadly consistent with internationally accepted standards, guidelines, or good practices (GFSM 1986 guidelines)

Data are available on all cash transactions within the scope of GFS following the *GFSM 1986.* There are two distinct presentations of the fiscal statistics for the entire general government prepared by the Fiscal Statistics and Accounting Division in the MOF Directorate of Budget and Treasury: a national presentation, and an international presentation (labelled, "GFS 1986 presentation"). While both use the *GFSM 1986* guidelines and practices, the national presentation of general government data uses a framework that more closely follows the structure of the Bulgarian budget. Thus the Bulgarian fiscal data on the basis of the "national budget classification" really refers to general government data. The international "GFS 1986 presentation" uses the standard international framework and includes a presentation of expenditure by function. The national presentation does not show expenditure by function, even though such quarterly data are compiled for internal purposes.

The national presentation explicitly shows the coverage of the general government data and shows the transactions among the units eliminated in consolidation. The national presentation is organized as follows, beginning with the units of central government (and using the Bulgarian terminology as translated into English). The "Republican Budget" includes 1) the "Central Budget," which mainly includes interest payments and transfers to other parts of the general government; 2) line ministries (33, also called first-line spending units) and agencies

(second-line or sub-ministerial units); 3) and the NAO. The "State Budget" adds to the "Republican Budget" budgets of the judiciary authorities. The rest of central government includes, in addition to the "State Budget," 1) the budgets of social insurance schemes (the Pension Fund, the Industrial Injuries and Professional Illness Fund, the Common Illness and Maternity Fund, the Health Insurance Fund, and the Fund for Professional Qualification and Unemployment (FPQU)[4]); 2) universities, the Bulgarian Academy of Science, Bulgarian National TV, and Bulgarian National Radio (all aggregated together); and 3) extra-budgetary funds and accounts. In the annual data extra-budgetary units of social security schemes and local governments are included with the subsector to which they correspond; however, in the monthly data all extra-budgetary activity is reported as a separate subsector of the general government. To complete the general government, local governments are added (263 municipalities and 5,078 communes); the municipalities report on the activities of the communes. Coverage is identical for the international "GFS 1986 presentation" of Bulgarian fiscal data.

Data are presented in both the national presentation and the international "GFS 1986 presentation" for central government, local governments, and for the consolidated general government. There are no state, regional, or provincial governments. No data are collected on the rest of the public sector for publication, in particular nonfinancial public corporations. Thus, data are not compiled for the consolidated nonfinancial public sector.

Depending on the year under consideration, certain funds may be included as extra-budgetary or as social security funds.[5] In addition, rapid structural changes to this transition economy have resulted from privatizations (for example, hospitals and medical clinics were transformed from budget units to non-financial corporations by the end of 2000) or the absorption of public corporations into the general government. As a result, significant changes in coverage for the general government data have occurred over time. These structural changes are reflected correctly in the data and institutional tables for each year of data list the changes in coverage.

The MOF Government Debt Directorate compiles and disseminates monthly consolidated central government gross debt (domestic and foreign by instrument), including the debt of social insurance schemes, in its *Government Debt Management* bulletin. At the same time, it provides data on central government debt guarantees. The sources of the central government deficit (presently constituting only domestic securities and foreign loans) are shown

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[4] The FPQU was recently split into an Unemployment Fund (remaining part of social security) and the professional qualification activities were absorbed into the parent Ministry of Social Policy and Labor.

[5] Specifically, in the national consolidated fiscal budget the FPQU was recorded as extra-budgetary in 1998 and as social security since 1999; the Teachers' Pension Fund was recorded as an extra-budgetary fund in 1998–1999 and as social security in 2000.

explicitly in the annual MOF publication *Annual Review of the Government Debt*. The MOF has strengthened the methodology used to record debt data through the "Computerized Information System for Analyses, Forecast and Management of the Government and Government Guaranteed Debt" program that began in 1999. The Fiscal Services Department in the BNB compiles and disseminates central government domestic debt by holder in its *Government Securities Market* monthly bulletin (also available on the BNB website). A major difference in coverage between the two data sets concerns transactions with the IMF. The BNB considers purchases from the IMF as a liability of the BNB, which is on-lent to the Government through domestic financing. This is domestic financing in the fiscal data. In contrast, the MOF Debt Directorate reports these transactions with the IMF as external debt. Data on the stock of gross debt for local governments are not available; data collection began in 2003. However, the national presentation of annual fiscal data shows separately local governments' domestic and external financing. As of the end of 2002, preliminary data has shown that local government debt was negligible, representing less than 0.2 percent of total central government debt.

Preliminary data submitted to the MOF and the NAO are replaced with the audited data. However, in general all data are submitted on a timely basis; therefore there are no partial data that would need to be replaced with data based on full coverage.

2.3   Classification/sectorization

2.3.1   Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices (GFSM 1986 guidelines)

In general, revenue, expenditure, and financing transactions are classified using the methodology set out in the *GFSM 1986*. However, according to Section 1 Article 2(7) of the *Organic Budget Law* (1996): "Revenues and expenditures shall be classified according to the uniform budget classification, which shall be approved by the Minister of Finance." Thus, this budget classification serves as the framework for the national presentation of fiscal data. In contrast, the international "GFS 1986 presentation" follows the *GFSM 1986* structure more closely (see 3.1.2).

There are some exceptions to the *GFSM 1986* classifications in the national presentation. Privatization receipts are included under financing rather than under net lending minus repayments. Beginning in 2002, general government acquisition of financial assets and lending to nonfinancial corporations also are classified as financing instead of net lending minus repayments. These departures from the *GFSM 1986* are in line with the *GFSM 2001*.

The international "GFS 1986 presentation" data include a summary table, revenue and grants, expenditure by economic classifications and by functions, and financing (domestic and foreign). Further details on domestic and external financing flows are not disseminated.

There are specialized publications on central government debt stocks (see 2.2.1). Data are provided on the central government gross debt, classified by residency (foreign and domestic) of the counterparty to the liabilities, as well as by instrument.

2.4 *Basis for recording*

2.4.1 *Prices are used to value flows and stocks reflect actual cash payments (GFSM 1986 guidelines)*

Flows are valued on the basis of the amount of cash received (cash deposits) and cash payments made (cash withdrawals). However, the debt data are not valued consistently. Domestic debt is valued on an issue price (cash received) basis, that is at face value less discounts plus premia, which is not consistent with the *GFSM 1986* recommendation to value debt at par (full redemption) value. Foreign debt is valued at full face value, regardless of discounts or premia, that is on the basis of cash due at maturity, consistent with the *GFSM 1986*.

Amounts denominated in foreign currency are converted to national currency using the mid-point exchange rate between the buying and selling market rates on the date of the transaction. The exchange rates are provided by the BNB.

2.4.2 *Recording is done on a cash basis (*GFSM 1986 *guidelines)*

Flows are valued on the basis of the amount of cash received (cash deposits) and cash payments made (cash withdrawals), consistent with the *GFSM 1986* guidelines. Foreign and domestic central government debt stocks are recorded at issue price (face value less discounts or plus premiums), that is based on cash received. Currently, little information is collected on noncash supplementary data, especially on arrears and nothing on arrears is disseminated. Noncash domestic debt is included (associated with the *Law on Settlement of Nonperforming Credits* negotiated prior to end-1990, so called ZUNK bonds).

The planned new FMIS will allow complete recording of budgetary transactions on an accrual as well as a cash basis. The new FMIS, using SAP R3 software, has been successfully piloted in two MOF units. It contains three modules: budget, accounting, and financial reporting. The FMIS is targeted to apply initially to 39 budgetary units (all 33 front line ministries and six MOF second line directorates) and automatically collect monthly, quarterly, and annual budget and accounting data. On current plans, full implementation of the new FMIS will take several years, but it will support implementation of the *GFSM 2001* and the data requirements for accession to the EU.

In parallel with the FMIS, new national accounting standards are to be developed to fulfill the requirements of the *Accountancy Law* (Nov. 16, 2001). This requires the MOF to develop accounting standards and documentation rules for all general government units by January 1, 2005, consistent with international accounting standards (the International Public Sector Accounting Standards approved by the International Federation of Accountants).

2.4.3   Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices (GFSM 1986 guidelines)

All transactions are shown on a gross basis, except for tax refunds and financing transactions, which are shown net. This is consistent with the *GFSM 1986*. Fiscal data on the subsectors of the general government are recorded on a gross basis and intersectoral flows are eliminated in consolidation.

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

Current administrative systems provide data covering the full range of economic stocks and flows for central and local government units. All units are required to report as specified in the *Organic Budget Law*, the *Social Security Code*, and the *Law on Health Insurance*. Reporting units develop their own internal systems based on 10 different kinds of software packages in use in the Bulgarian government sector. Data are available to allow consolidation for both levels of government, as well as subsectors within the central government (social security and extra-budgetary units) and general government. Surveys are not needed because all information is provided through administrative sources.

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

All general government units report according to the national "budget classification," which serves as a harmonizing chart of account to collect and compile fiscal data. A bridge table has been created from the "budget classification" to the "national presentation" of fiscal data, and from those data to the international "GFS 1986 presentation." This provides automatic derivation of GFS items from budget items. Accounting standards are delineated in the *Accounting Act* (2001), the *Excise Tax Act* and *Value-Added Tax Act*. Currently data are reported on a cash basis. Data are reported by all government units each month; however, the data are reported on a cumulative, rather than a discrete, basis. Monthly data are derived as a residual, preventing distinction between revisions to previous months' data and flows that occurred during the latest month.

3.1.3   Source data are timely

Most central government units report their data 12 days after the end of the reference month, but local governments and some second-line central government units report data within 15–20 days. This allows monthly budget execution reports on the operations and financing of general government (and both levels of government) to be prepared approximately 20–25 days after the reference month. The MOF also receives more detailed data quarterly

from reporting units within one month of the end of the reference quarter. The BNB collects information on the cash balances of all general government units and provides this information to the MOF twice per month. Flash reports on cash execution for the general government are compiled two times per month (on the 17th and at the end of the month following the reference month). The BNB also provides cash balance data to the MOF quarterly. Central government debt data are submitted by the 5th of the month after the reference month, and the data are finalized by the 10th of the month.

3.2 Statistical techniques

3.2.1 Data compilation employs sound statistical techniques

All data come from administrative and accounting sources that are required under the *Organic Budget Law* to report on a timely basis; therefore, there is no need to estimate missing data and no surveys are employed. The MOF contacts late reporters by phone to obtain those submissions.

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

Suspect submissions or discrepancies concerning data to be eliminated in consolidation are investigated and resolved, frequently through telephone contacts.

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

All data are provided through administrative records and are complete (see 3.2). Systematized assessments of late reporting, suspect submissions, and discrepancies are assessed periodically. Nevertheless, persistent difficulties may be addressed through regular follow-up with the reporting unit, or on-the-job training.

There is an appropriate balance between accuracy and timeliness because unaudited monthly data are reported within one month of the reference month but, in contrast, quarterly data are audited by the NAO (see 3.4.3) and inaccuracies are addressed within 2½ months of the reference quarter. The data are reported on a cumulative, rather than a discrete basis (see 3.1.2). Monthly data are derived as a residual, preventing distinction between revisions to previous months' data and flows that occurred during the latest month. Therefore, it is difficult to discover and correct material differences in data except for the latest month. These quarterly corrections typically are small and are not disseminated to the public.

3.4   Assessment and validation of intermediate data and statistical outputs

3.4.1   Main intermediate data are validated against other information where applicable

Fiscal data reported by the BNB, NSI, and the Agency for Economic Analysis and Forecasting are fully consistent with the MOF data. In particular, financing data are checked and validated with BNB data on government deposits, the issue of domestic securities, and sources of external financing (bonds and loans).

3.4.2   Statistical discrepancies in intermediate data are assessed and investigated

The MOF fiscal data are cross-checked against all other intermediate data, such as information from tax and customs administrations (see also 3.4.1 and 3.4.3).

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

Any cross-checks with intermediate data that give rise to discrepancies are resolved by the Fiscal Statistics and Accounting Division of the MOF with the providing agency, usually via phone or email, but occasionally through formal letters. The BNB submits data on government accounts at commercial banks and at the BNB to the MOF twice a month and quarterly. Significant discrepancies are identified. The quarterly data are reviewed and validated by the NAO. The MOF and the NAO investigate any discrepancies on a quarterly basis.

3.5   Revision studies

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

Data are reported cumulatively, so that typically errors and omissions are captured in the latest month's data. There are no revisions to the published data. Revision studies are not conducted, and corrections made during the compilation process are not systematic or thoroughly documented.

As part of the compilation process, quarterly data are audited by the NAO, but this does not lead to systematic revisions of the cumulative data for the quarter. Except for the audit report, material corrections are not fully documented (that is the main aspects of the source data leading to the corrections, the reasons for the corrections, and the direction and magnitude of the corrections are not always recorded).

The process to review and assess corrections is not formal, documented, or systematic to determine the reliability of data. However, audits and periodic feedback with source data compilers lead to improvements in the compilation process through on-the-job training and contacts with MOF fiscal data compilers.

4.   Serviceability

4.1   Relevance

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

The international "GFS 1986 presentation" of Bulgarian fiscal data are derived from the national presentation, and both are used in the process of determining and evaluating fiscal policy. The GFS data are used primarily by the international community, including international financial institutions (such as the IMF and World Bank) and international rating agencies. The national presentation of the fiscal data is used primarily in Bulgaria. Monthly fiscal data are available in sufficient detail to allow users to assess the degree to which government is achieving its stated social and fiscal policies. However, greater detail could be provided to the public on the financing of government and on the types of expenditure by function (currently only aggregates are available for the latter in the international "GFS 1986 presentation"). While the methodological basis and classification structure of the fiscal data are adequate for users' analytical needs, migration to the methods and classifications in the *GFSM 2001* and the EU *Deficit and Debt Guide* would enhance the policy relevance and the analytical information for users. Feedback from users and potential users on the relevance of existing statistics is not sought on a regular basis; however, the recently renewed website http://www.minfin.government.bg/en/ contains email addresses and phone contacts for such feedback.

4.2   Timeliness and periodicity

4.2.1   Timeliness follows dissemination standards

In principle, central government operations data are published approximately within one month after the reference period (reference month). The publication of these data on the Web began in January 2003, so experience is limited with meeting the SDDS timeliness requirements on the MOF website. Prior to January 2003, no monthly data were available. The monthly MOF budget bulletin is disseminated about one month after the reference month, but the level of detail and analytical usefulness of the tables are limited, especially for the consolidated central government operations and financing.

Monthly central government debt stocks are available three weeks after the reference month. This exceeds the SDDS requirement that quarterly central government debt data be disseminated within one quarter after the reference period.

Annual general government operations data are normally presented to the NAO on the 24th of January, and the NAO issues its report in mid-February. Preliminary annual data normally would be published in March following the reference year. Again, the publication of these data on the Web began in January 2003, so experience is limited with meeting the SDDS

timeliness requirements using this medium. Prior to January 2003, the MOF website only contained annual data (as of December 2002 the latest data were for 2000).

4.2.2   *Periodicity follows dissemination standards*

Monthly central and general government operations data (the national presentation) are published monthly in the MOF budget bulletin. Beginning in January 2003, the MOF website has monthly and annual central and general government data following the national presentation, and monthly, quarterly, and annual data following the international "GFS 1986 presentation."

Monthly central government debt stock data are disseminated monthly, and annual data are disseminated annually. Monthly debt stocks simultaneously provide the information to create a quarterly series. This exceeds the SDDS requirements.

4.3   *Consistency*

4.3.1   *Statistics are consistent within the dataset*

Fiscal statistics are fully internally consistent within the database: deficits/surpluses equal financing (except the subsector of general government in the "GFS 1986 presentation" which is reported on a consolidated basis); major aggregates equal the sum of their components; expenditure by function equals expenditure by economic classification (and interest expenditure is identical in both sets of tables); transfers paid equal transfers received (and are checked carefully between levels of government and between subsectors of central government); domestic financing is reconcilable with changes in domestic debt (differences are mainly due to zero coupon bonds measured at the issue price (cash received), revaluations, and noncash "ZUNK" bonds); and foreign financing is reconcilable with foreign debt. Financing differs from the debt statistics, due to the misclassification of IMF purchases in the debt statistics (as foreign rather than domestic lending from the BNB, see 4.3.3).

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

Monthly data are fully consistent with quarterly and annual data. Monthly data are reported on a cumulative basis. Therefore, subannual data do not represent activity that took place during the month (or quarter) because errors and revisions are captured in the latest month's (quarter's) data reported.

As a transition economy, Bulgaria has experienced significant structural changes. Therefore, the coverage of the data over time has been affected. Units that were part of the government may have shifted to the public or private corporations sectors. Significant privatizations have affected the government's accounts and, therefore, made it more difficult for users to compare fiscal data over time. The authorities note that it would be impractical to make

adjustments to the statistics; however, institutional tables for 1992–2001 and other metadata on the website signal these changes in coverage across time to users.

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

In general the fiscal data are not formally reconciled with the national accounts, monetary, or balance of payments statistics. However, in principle, it should be possible to produce such reconciliations, and the data validation and cross-checks support the notion that the data are fully consistent. General government sector data in the national accounts are based on the data reported by the MOF and are internally consistent. The BNB provides information twice a month and quarterly on all general government units' deposits in the BNB and the commercial banks, and it also supplies information on its activities as an agent of the government to issue domestic securities (Treasury bills and bonds). This information is used to compare the domestic financing reported by individual reporting units. External financing is extracted from the BNB database using Reuters software. Differences across data sets frequently result from structural changes in the economy that have not been made fully consistent, but cross-checks resolve these differences.

A major difference in coverage between the fiscal and monetary data sets concerns transactions with the IMF. The BNB considers purchases from the IMF as a liability of the BNB, which is on-lent to the government through domestic financing. In contrast, the MOF erroneously records these transactions with the IMF as external debts. However, an adjustment is made so that external financing excludes these transactions and domestic financing reflects the on-lending from the BNB. Another difference stems from valuation of government debt, reflected at market prices by the BNB and at cash value (issue price for domestic debt and maturity value for external debt) by the MOF.

4.4 Revision policy and practice

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

Revision policy and practice are not publicly disseminated. Quarterly data are submitted by reporting units in more detail than monthly reports. These quarterly data are vetted thoroughly using cross-checks with BNB data and audit procedures. Thus data for the last month of the quarter are preliminary when reported and disseminated within roughly one month; however this is not done. There are no revisions made on a regular, well-established, and transparent schedule concerning government domestic debt statistics. Foreign debt statistics are revised to take late submissions into account. None of these practices are made known to the public.

4.4.2 Preliminary data are clearly identified

Preliminary data are not separately distinguished. Foreign debt revisions are not clearly labeled in the publications. In general, preliminary data are sufficiently close to final data in most cases so that they can be used with confidence for policy determination and analysis.

4.4.3 Studies and analyses of revisions are made public

There are no revision studies or analyses to be 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 refreshed website (as of January 2003) contains the international "GFS 1986 presentation" as well as the national presentation of fiscal data and recent time series; it also contains a hyper-link to older data (http://www2.minfin.government.bg). Most of the fiscal data are presented in a way that allows major aggregates and balancing items to be identified and related to detailed underlying data. The two major exceptions concern details on financing and on expenditure by function. The national presentation is used mainly to monitor budget implementation and to formulate future fiscal policy.

5.1.2 Dissemination media and formats are adequate

The MOF disseminates two monthly publications (the monthly budget bulletin in hardcopy only and *Government Debt Management* in hardcopy and on the MOF website) and an annual publication in hardcopy and on the MOF website (*Annual Review of the Government Debt*). The BNB (*Monthly Bulletin*) and the Agency for Economic Analysis and Forecasting (monthly bulleting and semi-annual survey) reproduce some of these data. The BNB also disseminates hardcopies of the monthly *Government Securities Market*, which contains domestic debt stock information. As of January 2003, the MOF website contains more timely fiscal data, in both the national presentation and the international "GFS 1986 presentation." Maintenance of this website with current data remains to be tested. The BNB website contains the fiscal data disseminated in its hardcopy publications.

5.1.3 Statistics are released on a preannounced schedule

There are no advanced release calendars for fiscal data. The annual data using the national presentation are prepared in March and are typically approved by the Council of Ministers for submission to the National Assembly by end-June. *Organic Budget Law* Article 41(4) states "The National Assembly shall resolve to approve the state budget implementation report no later than the end of the next fiscal year." However, this was not done for the data

concerning 2001. Therefore, to meet SDDS requirements the authorities would need to disseminate the annual data approved by the Council of Ministers. The data could be revised following National Assembly approval, if needed. The monthly bulletins are usually released about one month after the reference period. There is no explicit calendar of release dates for fiscal data.

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 through hardcopy and web dissemination formats. No prior release or preferential access to the data occurs.

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

Nonpublished, but nonconfidential, information is provided via email or hardcopy without charge. The availability of nonpublished but nonconfidential data and the terms and conditions under which they are made available has not been publicized in the GFS publications. However, the contact section of the MOF website notes that users can obtain additional information about the budget (including historical fiscal data) through this contact via email or by phone.

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

Broad statements on concepts, scope, classifications, basis of recording, and differences from international standards are annotated (on the website and GDDS only). An elaborate document on concepts, sources, and methods has not been compiled. Bridge tables showing the links between "budget classification" (chart of accounts) and the fiscal presentations are made available on request. Although rare, universities and international organizations have requested and received this information.

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

Only broad statements on concepts, sources, and methods are available. More detailed metadata have not been requested by users and have not been developed. The less detailed metadata accompany the data (on the Web) to orient users concerning the basic framework under which the fiscal statistics have been produced.

5.3   *Assistance to users*

5.3.1   *Contact person for each subject field is publicized*

The GDDS and MOF websites list contact persons for fiscal data (and other budget questions). Users can write to a designated MOF official or directly to budget@minfin.government.bg. Although not widely announced, prompt and knowledgeable service and support is available from the Fiscal Statistics and Accounting Division, Budget and Treasury Directorate, and the Government Debt Directorate. However, in most instances, users would be directed to contact the MOF Information and Public Relations Directorate to coordinate queries (at feedback@minfin.government.bg or by phone in Sofia, Bulgaria on (02) 98.59.20.24). No officer in the MOF has been designated to provide a rapid response to the misuse of fiscal data. However, the senior staff in the units listed above would attempt to correct errors by users, when noticed.

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

The MOF does not have a separate catalog of publications. However, the monthly budget bulletin can be obtained via subscription and the relevant information is available on the MOF website, including the subscription price and contact address (http://www.minfin.government.bg/en/act/index.php?lang=2&catid=426&depth=1). In addition, MOF website browsers can subscribe to the MOF news items online.

Table 4. Bulgaria: Data Quality Assessment Framework—Summary Presentation of Government Finance Statistics
(*Compiling Agency: Ministry of Finance*)

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

Element	NA	O	LO	LNO	NO	Comments
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Quality awareness		X				
1. Integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				
2.2 Scope			X			No local government debt stock data (collection began in 2003). IMF purchases shown as external debt (but are included in domestic financing).
2.3 Classification/sectorization		X				
2.4 Basis for recording			X			No arrears data. External and domestic debt data not valued consistently.
3. Accuracy and reliability						
3.1 Source data			X			Subannual source data are reported cumulatively.
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies					X	No revision studies, and corrections are not systematic or documented.

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
4. Serviceability						
4.1 Relevance		X				
4.2 Timeliness and periodicity			X			The publication of this data on the web began in January 2003, so experience is limited with meeting the SDDS timeliness requirements using this medium.
4.3 Consistency		X				
4.4 Revision policy and practice					X	Preliminary data are not identified. No revisions. Revision policy not disseminated.
5. Accessibility						
5.1 Data accessibility				X		More data should be disseminated than currently appear on the web. ARCs not disseminated.
5.2 Metadata accessibility			X			Detailed concepts, sources, and methods documentation has not been prepared.
5.3 Assistance to users		X				

V. MONETARY STATISTICS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

Monetary statistics are collected, compiled, and disseminated by the Bulgarian National Bank (BNB), the central bank of the Republic of Bulgaria. The BNB collects data from all operating commercial banks and also from banks in liquidation. The legal basis for data collection is given in Article 4(1) of the Law on the Bulgarian National Bank (1997) and Article 55 of the Law on Banks (1997). The Law on BNB states that the BNB can demand that the banks submit any documentation and information it needs in connection with the performance of its functions.

The Rules of Procedure on the Functions and Responsibilities of the Structural Units and the Powers of Senior Executives of the Bulgarian National Bank state that the Monetary and Banking Statistics Division (MBSD), which is a unit of the BNB's Statistics Directorate, is responsible for compiling monetary statistics. The MBSD is also responsible for the development of methodology conforming with the international standards provided by the IMF and the European Central Bank (ECB).

The Statistics Directorate is identified in the list of structural units of the Bulgarian administrative institutions that are designated as statistical bodies and that constitute the national statistical compilation system (Articles 3(2), 14(4) of the *Law on Statistics* (1999)). This list is defined by the National Statistical Council (NSC), in which the director of the Statistics Directorate represents the BNB (Article 14(2)(4) of the *Law on Statistics*). The MBSD's mandate to compile and disseminate monetary statistics for Bulgaria is also specified in the *Rules for the Activity of the Statistics Directorate* approved by the NSC (Article 14(4) of the *Law on Statistics*).

0.1.2 Data sharing and coordination among data producing agencies are adequate

The BNB is the sole institution involved in compiling monetary statistics. It collects all requisite source data needed for this purpose. The MBSD disseminates monetary statistics to domestic and foreign users. Under current practice, the Statistics Directorate regularly provides to the MOF, the NSI, and other government institutions specific nonconfidential data collected by the BNB that those institutions need for their own statistical compilation and verification programs. In particular, detailed records on positions of government spending units with the banks are routinely transmitted to the MOF.

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

The *Law on Statistics* (Chapter 6 on the BNB's Statistics Directorate) and the Law on BNB (Articles 4(2) and 23(1)(2)) ensure the confidentiality of individual data and require that data be disseminated in a manner that prevents identification of data on individual transactions and reporting institutions. The BNB staff's access to data is only for work-related needs. Maintaining confidentiality is an obligation of all BNB employees, and in this respect MBSD staff follow these rules. BNB data and data collected from the commercial banks are used by MBSD staff only for statistical purposes.

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

Article 4(1) of the Law on BNB (see section 0.1.1) and Article 55 of the Law on Banks provide the legal basis for statistical reporting and data collection. Article 55 of the Law on Banks specifies that banks shall submit to the central bank reports in a format, content, periodicity, and timeliness established by the central bank. Further, Articles 61 and 62 of the Law on BNB specify significant penalties imposed for its breach, including for failure to report to the BNB documents and information it may demand from the banks under Article 4(1) of the Law on BNB.[6] These legal instruments form a part of the general legal framework for data collection and reporting obligations.

Commercial banks are also encouraged to report to the central bank since they benefit from the availability of comprehensive monetary statistics needed for analytical and other purposes. Comprehensive and detailed instructions are provided to the banks to facilitate their data compilation and reporting. Additional support, as needed, is available at the BNB through the designated contacts at the MBSD and the Banking Supervision Department.

At present, the list of financial institutions required to report for the monetary statistics compilation program includes only the banks. This current legal mandate for statistical reporting is adequate. When other (nonbank) financial institutions qualify for inclusion in the coverage of the broad money survey, the reporting mandate will need to be extended so as to include them in the reporting population.

0.2   Resources

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

At the beginning of 2003, the number of MBSD staff was increased from 15 to 17, and a new three-section structure replaced the previous two-section one. The three sections within MBSD cover methodology, monetary statistics, and interest rate statistics.

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[6] The penalties amount to 6 to 35 times of the minimum monthly salary.

The current MBSD resources are sufficient for the division's statistical program. Nonetheless, the staff resources are overburdened by the growing needs to harmonize compilation of monetary statistics in line with the ECB requirements. The number of MBSD staff cannot grow at the expense of other divisions within the Statistics Directorate because their staff needs are also increasing, owing to work on harmonization with the ECB's and EUROSTAT's data requirements.

Raising qualifications of the MBSD staff is part of the BNB's general human resource management policy. Division staff attend specialized courses offered by other central banks and international institutions. Internal competition for attendance is coordinated by the BNB's Human Resources Directorate. The EU PHARE-financed project between the BNB and Banque de France includes technical assistance in compiling money and banking statistics.

Computing resources at present cover the needs but will have to grow in line with the growth in the MBSD activities. Computing resources are provided by the BNB's Informatics and Communications Directorate (ICD) according to an annual allocation plan as part of the BNB's annual budget.

Financial resources for MBSD are allocated from the Statistics Directorate's financial resources, which are a component of the BNB's annual budget approved by the Parliament.

0.2.2   Measures to ensure efficient use of resources are implemented

The plan for the use of staff, financial, and computing resources is drafted by the director of the Statistics Directorate with the input from the head of MBSD (and other divisions within Statistics Directorate). The annual plan, with a quarterly breakdown, is approved by the Deputy Governor responsible for the Banking Department (the Statistics Directorate is a unit of that department).

The BNB Budget Committee, which is a standing executive management body established by a decision of the BNB Managing Board, is responsible for the preparation, monitoring, and reporting on the execution of the BNB's budget. The use of resources by the MBSD is monitored and reported by the director of the Statistics Directorate following the rules set up by the Budget Committee.

The efficient use of computing resources is monitored by the Automation Executive Committee, an auxiliary body under the BNB Managing Board (among this committee's tasks are the development of strategy for automating banks' main operations).

0.3   *Quality awareness*

0.3.1   *Processes are in place to focus on quality*

Raising quality of statistics as a public good is of primary importance for the Statistics Directorate. The quality of monetary statistics is monitored by the MBSD head in discussions with the staff in the methodological section of the division. MBSD's aims at present are to ensure conformity with the international standards such as *ESA 95*, the ECB's framework for monetary data, and also compatibility with the IMF's *Monetary and Financial Statistics Manual* (*MFSM)*.

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

The quality of data, which are received electronically from the commercial banks, is checked by the ICD using automated procedures. The quality checks performed by the MBSD staff include checks of individual and aggregated data series focusing on their intertemporal behavior and logical coherence. Monetary statistics for dissemination are checked by the MBSD head and the director of the Statistics Directorate.

A regular contact with users is maintained. An email address of the MBSD is provided to users to ask questions, express opinions, and give recommendations. Users' questions are answered within three working days. Informal surveys of users are also carried out.

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

The focus at present is on quality data collection and compilation. A special inter-organizational group of experts from the MBSD and commercial banks has been set up to discuss methodological issues related to data quality. Documents related to the project are posted on the BNB website, and an email address mbstatistics@bnb.bg is provided for user comments.

1.   **Integrity**

1.1   *Professionalism*

1.1.1   *Statistics are compiled on an impartial basis*

The statutory provisions under which monetary statistic are compiled by the BNB are adequate to ensure its independence in performing these functions. Statutory provisions in the Law on BNB and *Law on Statistics* provide the legal basis for institutional independence and professionalism. Professionalism of MBSD staff is underpinned by the BNB recruitment procedures. The selection and promotion process evaluates exclusively the merit and the

potential of all candidates and current employees. An informal mentoring program for new staff is in place.

MBSD staff attend meetings organized by international statistical agencies, including the IMF and the ECB, for consultations and to foster the development of national statistical practices. MBSD staff participate in the coordinating meetings in the area of monetary statistics held by the ECB with the central banks of the accession countries. Additional training is offered in Sofia at the International Banking Institute, which is operated by the BNB and the commercial banks.

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

The choices of source data and statistical techniques for monetary statistics are determined solely by statistical considerations conforming with the principles in *ESA 95*, ECB's framework for monetary data, and *MFSM*.

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

Supported by its institutional independence, the BNB seeks to build trust in its statistical activity by commenting publicly, in mass media or in any other fora, on the perceived misinterpretations or misuse of monetary statistics. To facilitate the use and interpretation of the disseminated statistics, detailed methodological notes have been provided to all users of monetary statistics on the BNB's website, as well as in its publications.

1.2   Transparency

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

Documents detailing the methodology for collecting, processing, and disseminating monetary statistics are posted on the BNB website and are included in its publications. The various legal instruments underpinning BNB's statistical activity are also posted on its website.

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

There is no internal government access to BNB's monetary statistics prior to their release.

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

All BNB publications, as well as its website, clearly identify the BNB as the data-producing agency for its outputs. Data obtained from other agencies (e.g., MOF, NSI) are clearly identified. After dissemination through the website or its publications, the BNB-produced

statistics can be quoted or reproduced without further permission; however, due acknowledgement is requested.

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

The BNB's policy in statistical dissemination is that major methodological changes are announced in advance. New data first appear in the weekly publication and then in the monthly bulletins. Dissemination of data and announcements of methodological changes are first made through the BNB's website and later in the hard-copy monthly publications. Following a major revision in early 2002, monetary statistics were disseminated in two formats—the old and the new—for a period of three months.

1.3 *Ethical standards*

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

Guidelines for the BNB staff behavior are specified in the BNB's *Rules of Procedures*. BNB staff have access to this document on an internal BNB website. New employees are briefed on these rules and responsibilities by the Human Resources Directorate. Further, in accordance with the Law on BNB (Article 23(1)), when taking office, the BNB employees sign a declaration of oath to observe this law, maintain data confidentiality, and dutifully perform the functions entrusted in connection with the BNB's activities.

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 BNB for compiling monetary statistics conform with the principles presented in the IMF's *Monetary and Financial Statistics Manual* (*MFSM*).[7] The monthly monetary survey compiled by the BNB (the Monetary Survey table)[8]

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[7] In addition to *MFSM*, the most important other international statistical standards that guide compilation of monetary statistics in Bulgaria are the *European System of Account*s, *1995* (*ESA 95*) and *1993 SNA*; ECB's Regulation ECB/2001/13 (2002 update) and *Money and Banking Statistics Compilation Guide* and *Money and Banking Statistics Sector Manual*, ECB, 1999. Therefore, since the BNB is progressively adopting the ECB's framework for monetary data, a number of aspects of the current compilation system reflect the terminology and the principles of that framework along with the *MFSM* principles.

[8] Parenthetical references are to the tables in the BNB bulletins.

is equivalent to the *MFSM*'s depository corporations/broad money survey. It presents measures of liquidity and its counterparts, with comprehensive detail on depository corporations' positions by economic sector and financial instrument. As a general principle, banks' positions in leva and foreign currency on all financial instruments are always shown.

The measures of liquidity are broad money and its components, progressing from narrow money (M1), to narrow money plus quasi-money (M2), and finally to broad money (M3), each disaggregated by the constituent financial instruments.[9] Narrow money M1 is composed of currency outside banks and demand (transferable) deposits in leva; quasi-money comprises time, savings, and all foreign currency deposits of the nonbank, noncentral government sectors.[10] The M2 aggregate comprises M1 and quasi-money. By its national definition, the broad money aggregate M3, in addition to narrow money and quasi-money, includes restricted deposits[11] and other funds mobilized by banks from the resident nonbank, nongovernment sectors, namely debt securities issued and loans ("deposits").[12]

The counterparts to measures of liquidity are net claims on nonresidents (foreign assets (net)) and domestic assets net of central government deposits. Foreign assets (net) are disaggregated by financial instrument. Domestic assets have three major components: domestic claims net of central government deposits, capital and reserves shown as a negative claim, and other items (net). Domestic claims net of central government deposits are first disaggregated by sector of debtor and then by financial instrument. Capital and reserves consist of funds contributed by owners, reserves, and the financial result account. Other items net comprises net interbank balances, fixed assets, and unclassified assets minus unclassified liabilities.

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[9] Local governments and social security funds are treated as money holding sectors.

[10] Based on their transferability properties, the BNB staff are currently reviewing the reclassification of the demand deposits in foreign currency from quasi-money to narrow money.

[11] These restricted deposits include the government's suspense accounts, which are a type of the government's restricted deposits, that cover funds received by the government under particular commercial and legal conditions such as tender participations, auctions, customs administration guarantees, etc.

[12] The ECB/2001/13 regulation and ECB *Guidance Notes* recommend that only instruments with maturity up to two years be included in broad money. The Bulgarian definition of broad money currently includes debt securities and loans/deposits regardless of maturity, but starting in January 2004, those with maturity over two years will be excluded and classified in long-term financial liabilities. Moreover, restricted deposits that are blocked for more than two years shall also be reclassified in long-term financial liabilities.

The monetary survey is derived by consolidating accounts of the central bank and other depository corporations (ODCs). The monthly BNB survey (the BNB Analytical Reporting table) and the ODC survey (the Commercial Banks' Analytical Reporting table) contain a comprehensive level of sectoral and instrument detail at least as extensive as in the broad money survey. In addition to the sectoral surveys (in the *MFSM*-sense), the BNB compiles the monthly sectoral balance sheets (the Monthly Sectoral Survey tables) for the BNB and the ODCs. The sectoral balance sheets are in a matrix format that displays positions with the various resident and nonresident economic sectors by the underlying financial instrument.

To provide a fuller view of banking developments, the BNB also prepares and publishes a monthly analytical survey for the nonoperating banks (banks in liquidation) and their sectoral balance sheet. The survey and the sectoral balance sheet are in the same detailed format as used for the operating commercial banks.

2.2 *Scope*

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

The scope of the depository corporations/broad money survey (the Monetary Survey table) is consistent with the *MFSM* principles. The survey presents positions of all resident depository corporations vis-à-vis other sectors of the economy and with nonresidents. The depository corporations sector covers the BNB and all resident ODCs, which in Bulgaria consist of all commercial banks licensed by the BNB. Licensed commercial banks comprise banks with domestic headquarters and branches of foreign banks.

As of end-December 2002, there were four banks in liquidation (which are referred to as the nonoperating banks) whose total assets were approximately 0.2 percent of the commercial banks' total assets. These four banks, whose banking licenses have been revoked, are excluded from the coverage of the broad money survey (this practice accords with the ECB's framework for monetary data under which they are not considered monetary financial institutions, and would be excluded from the coverage of the money creating sector).[13] However, to provide a fuller picture of banking developments, a separate survey of nonoperating banks (the Analytical Reporting of Nonoperating Banks table) with a comprehensive sectoral and instrument detail is compiled and published in the BNB's monthly *Monetary Statistics Bulletin* and the general *BNB Monthly Bulletin.*

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[13] Although the nonoperating banks are excluded from the coverage of ODC survey (the Commercial Banks' Analytical Reporting table), the central bank—by decision of its Board—includes the claims it still has on these banks in its *Claims on Commercial Banks* credit aggregate. This appears as a difference in the data on the BNB-commercial banks' positions presented in their respective surveys. (Also see section 4.3.1.)

There are at present no other (nonbank) financial institutions (viz., money market funds) that would meet the criteria for ODCs in terms of issuing liabilities that are a close substitute for deposits (and that would also meet the ECB's criteria for other monetary financial institutions).

2.3 *Classification/sectorization*

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

The sectoral and instrument classification is broadly consistent with the *MFSM* principles. The distinction between domestic and external transactors is based on the definition of residents in the *Foreign Exchange Law* (1999). This law specifies that residents are (a) physical persons permanently residing in Bulgaria or having a permit to stay in the country for more than six months; (b) legal persons registered in Bulgaria; and (c) physical persons (and their families) staying abroad on a mission of the Bulgarian state or Bulgarian enterprises. All others are considered nonresidents. This definition broadly conforms with the residency principle based on center of economic interest discussed in the *Balance of Payments Manual,* fifth edition *(BPM5)*.[14]

It should be noted that legal persons are considered residents upon their registration. The NSI maintains a register of legal persons (the BULSTAT) and is responsible for their sectoral classification in conformity with the *ESA 95* standards, which are generally consistent with the *MFSM* principles. The physical persons' dwelling address, the BULSTAT, and the legal registry documents of legal persons are the basis for sectoral classification of clients by the banks. When a client opens a bank account (either as a debtor or a creditor), the account number includes codes identifying his economic sector, as well as the financial instrument underlying the account.

The following resident sectors and subsectors are separately identified[15] (with two exceptions mentioned in the footnotes): the financial sector S.12 (composed of the central bank (BNB) S.121, other depository corporations S.122 (the licensed commercial banks), and nonbank financial institutions/other financial corporations (comprising other financial intermediaries S.123, financial auxiliaries S.124, and insurance corporations and pension funds S.125);[16] general government S.13 (composed of budgetary and extrabudgetary central government S.1311, budgetary and extrabudgetary local governments S.1313, and the social security

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[14] With respect to item (a), the *suggested guideline* in *BPM5* is for a period of one year.

[15] The codes refer to the *1993 SNA/ESA 95* economic sector codes.

[16] The subsectors S.123, S.124, and S.125 will be separately identified starting in 2004.

funds[17] S.1314); nonfinancial corporations S.11 (composed of public (S.11001) and private (S.11002 and S.11003) nonfinancial corporations); and households S.14.[18]

The following financial instruments are recognized: monetary gold, SDRs, currency, deposits (comprising demand, time, savings, and restricted deposits), credits ("loans"), securities other than shares, shares and other equity, and debt securities issued (as defined by ECB regulations). Accounts payable/receivable are not separately identified and, as per ECB regulations, are included in other assets/liabilities. As a general principle, positions on each financial instrument are always disaggregated by national/foreign currency position.

In addition to the aforementioned financial instruments, credit aggregates present data on "other" position, which, with one exception, are mostly relatively small.[19] Much of these data capture certain historical positions prior to the accounting reform in June 1995 that are not easily amenable to classification by financial instrument. The data also include accrued interest on these positions.

A supplementary table[20] on the BNB's foreign assets and liabilities contain data on Bulgaria's financial relationship with the IMF, including Reserve Position in the Fund and the Use of Fund Credit (*Liabilities to the IMF, Credits*). However, shares and other equity component of *Other Foreign Assets* aggregate[21] also includes data on the quota paid in leva. Further, *Liabilities to the IMF, Other* aggregate includes positions on the IMF No.1 account. Inclusion of these positions may be redundant, and on the gross level would amount to

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[17] The social security funds are administered by two institutions: the National Social Security Institute and the National Health Insurance Fund. The coverage includes budgetary and extrabudgetary operations of these two institutions.

[18] Nonprofit institutions are presently considered part of the sector that they serve. Starting in 2004, nonprofit institutions serving households (NPISH) will be separately identified as sector S.15.

[19] There are relatively small "other" positions in the BNB's and the commercial banks' liabilities to the central government. The "other" position in the BNB's foreign liabilities is relatively small, but commercial banks' "other" position in foreign liabilities at end-November 2002 stood at 40 percent of their total foreign liabilities—by far the largest "other" position in monetary data—that also marked an increase from 28 percent since November 2001. This "other" position covers transactions between resident banks and their branches/headquarters abroad.

[20] Table 5a in the BNB's monthly *Monetary Statistics Bulletin*.

[21] In its analytical survey, the BNB's foreign assets have two components: international reserves and other foreign assets.

double-counting. Therefore, their compilation deviates from the recommended practice. (The BNB will implement the requisite revisions for the December 2002 issue of the *Monetary Statistics Bulletin*, which will be published at the end of January 2003.)

The repurchase agreements are treated as collateralized loans rather than as outright sales of securities. Starting in January 2003, liability positions arising from repurchase agreement operations are being separately identified. There are no gold swaps, but in that event, they too would be treated as collateralized loans. Nonnegotiable instruments that possess all other properties of securities other than shares are classified as credits (loans), as recommended in *MFSM*.

Prior to January 2003, banks' positions on financial derivatives were maintained offbalance sheets (these positions are reportedly relatively small). Starting in January 2003, in line with the *International Accounting Standards* (*IAS*), positions on financial derivatives are being included in the balance sheets. In monetary statistics, in line with the ECB regulations, financial derivatives are being classified in other assets/liabilities. Additionally, starting in January 2004, these data will be disaggregated by currency and sector of the counterparty as recommended in *MFSM*.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

The Bulgarian Accountancy Law[22] (November 2001) prescribes that all financial assets and liabilities be reported at market price. Whenever market price is unavailable, a measure of a fair value has to be calculated and used in the valuation. Valuation at market price or a fair value is applied to all financial instruments except currency and coins, deposits, loans, and capital and reserves, which are maintained at book value. These valuation practices conform with the *MFSM* recommendations.

The book value of loans and deposits denominated in foreign currency, is converted into leva using the official exchange rate[23] (along with the relevant daily cross rates) prevailing on the

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[22] Effective January 1, 2003 the use of *IAS* became mandatory for the Bulgarian banks (as well as for insurance companies, social security institutions, and public companies). The first annual reports conforming with the *IAS* must be published by March 1, 2004 and would cover the accounting year ending December 31, 2003.

[23] Under the currency board arrangement (in effect since July 1, 1997), the BNB maintains a fixed exchange rate against the euro, and stands ready to buy and sell euros at this rate. At the time of this report, the official rate is BGN 1.95583 per euro. This rate is published in the *State Gazette* and on the BNB's website. The BNB also announces daily the ECB's rates for the euro against other foreign currencies that are in effect for currency conversions during that day.

balance sheet date. The official exchange rate is also used (along with the relevant daily cross rates) for the conversion of all other foreign-currency-denominated positions into BGN for the end-period balance sheet. The valuation adjustment is included in the *Financial Result* account, which is part of the *Capital and Reserves* aggregate (the valuation adjustment is not separately identified). The nonfinancial assets are carried in the balance sheets at their acquisition cost rather than at market value.

Monetary gold is not necessarily valued at market prices. Article 28(6) of the Law on BNB prescribes that monetary gold be valued at DM 500 per troy ounce and, since January 2002, at BGN 500 per troy ounce or the market price whichever is lower. Commodity gold is valued at market prices.

2.4.2   Recording is done on an accrual basis

Article 4(1) of the Bulgarian Accountancy Law prescribes recognition of the accruing interest. In monetary statistics, accruing interest is incorporated in the outstanding position on the underlying instrument, as recommended by *MFSM*. Accrual of interest in the balance sheets stops on instruments that are 90 days past due in service. The detailed data, by instrument and sector, on accrued interest and interest arrears are also presented in the memorandum items tables in the BNB bulletins.

Financial transactions are recorded on the settlement date (in line with the ECB's guidelines), which may marginally differ from the change of ownership date, as recommended in *MFSM*.

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

As recommended in *MFSM*, source data are collected on a gross basis. In particular, claims on a client or a group of clients are not netted against the liabilities to that client or a group of clients. Gross data on assets are collected, and the various provisions (including the loan loss provisions) are classified in the *Other liabilities* aggregate.

Within the central bank, the ODC, and the broad money surveys, the stock data on financial assets and liabilities are aggregated into major analytic categories: on the asset side, by claims on the debtor sectors, and by the various measures of liquidity on the liability side. The underlying component data, by economic sector and financial instrument, are also shown.

The ODC survey (the Commercial Banks' Analytical Reporting table) includes in other assets and in other liabilities, respectively, the gross claims on and gross liabilities to banks. These interbank positions can easily be netted in order to conform with the *MFSM* recommendation that, within a sectoral survey, such positions be consolidated. (This operation is straightforward because in the above-mentioned table the interbank positions, by financial instrument, are clearly and separately identified.)

Within the broad money survey, data on the financial relationship between the BNB and the commercial banks are consolidated, and the net amount is separately identified in other items net. Whenever net monetary aggregates are shown in the broad money survey (viz., net foreign assets or claims on general government net of central government deposits), the underlying gross data are also presented.

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 central bank and the commercial banks produce a complete set of balance sheets that are reported to the BNB for the statistical compilation program. At present, data on the detailed, 4-digit balance sheet accounts for the BNB and the commercial banks constitute the source data for compiling monetary statistics. The balance sheet data are comprehensive and contain sufficient information for classification by financial instrument, economic sector of counterparty, currency of denomination, and maturity. Information available at the BNB's Banking Supervision Department and in other sources is used only for validation and cross-checking.

Currently the BNB is developing a new reporting system for the commercial banks which will be implemented in 2004. This reporting system will comprise the report forms and the methodological instructions for compiling data needed to fully implement the ECB's framework for monetary data as well as for meeting the *MFSM* requirements.

Developments in the financial sector are closely monitored to assure that the data collection system remains comprehensive. Key available sources, including those in the Banking Supervision Department and the financial press, are monitored for relevant information. In particular, the evolution of the money market funds, which at present are relatively small, is followed so as to capture them in the coverage of monetary statistics, in due course.

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

Monetary statistics are derived from the BNB's balance sheets and the balance sheets reported by the commercial banks. As noted in section 3.1.1, the currently available source data provide sufficient information for classification of the balance sheet accounts by financial instrument, economic sector of the counterparty, currency of denomination, and maturity. Therefore, there is no need for auxiliary data, approximations, or other adjustments.

3.1.3   Source data are timely

The accounting records of the central bank and the commercial banks are timely. The BNB's end-week balance sheet is available on a Monday following the week's end. The weekly commercial banks' aggregated balance sheet is available on the second business day following the week's end. The BNB's and the aggregated commercial banks' monthly balance sheets are available, respectively, on the first business day and the 15th calendar day following the month's end. Should a delay in reporting occur, the BNB would immediately follow up by contacting the nonreporting bank. All data reporting is by electronic means, via a secure network.

3.2   *Statistical techniques*

3.2.1   Data compilation employs sound statistical techniques

The BNB receives data from the commercial banks via a VPN (Virtual Private Network) interbank electronic system. Each bank reports data on the same set of 4-digit balance sheet accounts. Therefore, the structure of reported data is uniform across all reporters. Aggregation of the reported balance sheet data is performed electronically and is robust.

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

The balance sheet data are not subject to statistical adjustments. Seasonal adjustment on certain monetary aggregates is performed for internal analytical purposes only, and these seasonally-adjusted monetary aggregates are not part of the officially published monetary statistics. (Following the current internal development stage, and if proved to be of analytical value, the seasonally-adjusted monetary aggregates may become part of the officially published statistics.)

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

No census or sample survey or secondary sources data are used for compiling monetary statistics. Balance sheet records (at the 4-digit level of accounts) constitute the source data for compiling monetary statistics. Procedures are in place for source data validation. These procedures are performed when the balance sheet data are first reported to the BNB. The data are subject to preliminary checks and an error-check log is automatically generated. Follow-up queries to resolve outstanding issues are undertaken by MBSD and the Banking Supervision Department. As part of the validation procedures, growth rates for all positions are calculated, including the interbank positions for each commercial bank. The interbank

positions are also subject to verification across the banks. Once the reported source data have passed the validation procedures, they are made available for statistical compilation.

A new information technology system, ISMS (Information System for Monetary Statistics), is under development. It will provide the means to conduct additional verification checks. This system will also enable implementation of a coding system similar to GESMES and thus will facilitate data reporting in the GESMES format.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Main intermediate data are validated against other information where applicable

Monetary statistics are derived from the balance sheet records and satisfy internal constraints imposed by the structure of the double-entry system of bookkeeping. Cross-checks are carried out against data reported to the Banking Supervision Department and on the interbank positions. Data on banks' positions with nonresidents are regularly provided to the Statistics Directorate's Balance of Payments and External Debt Division for use in compiling the balance of payments statistics (BOP). This practice engenders a consistency between monetary and BOP statistics as concerns source bank data. The detailed weekly balance sheet data on positions of the various general government units with the BNB are regularly provided to MOF for verification with the data provided to MOF by these units. Further, the detailed monthly data on positions of the various general government units with the banking system are also provided to MOF for verification. Consultations take place to discuss and resolve discrepancies, if they arise.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

After balance sheet records have been validated they are ready for use as the basis for compiling monetary statistics (also see section 3.3.1). The MBSD identifies anomalous data behavior in the detailed monetary accounts (e.g., unusual growth patterns) and contacts the banks to investigate its sources.

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

Procedures are in place for consultations with the MOF to address data issues (as noted in section 3.4.1) that may arise between monetary statistics and certain fiscal data. In general, banks' balance sheet records reported to the BNB are considered the authoritative source for use in the relevant BOP accounts and for validating the MOF's fiscal data compiled on the basis of reporting to MOF by the various central government spending units.

3.5   Revision studies

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

Monthly monetary statistics are based on the final balance sheet data of the BNB and the commercial banks. The revision studies are undertaken in the event of methodological changes that affect the compilation system. One such revision was implemented in March 2002 and involved excluding positions of nonoperating banks from the data starting in December 1997. An internal analysis of this change in the coverage of the ODC sector was carried out. Further, revisions to correct erroneous data if they occur tend to be of small magnitude and rarely affect major statistical aggregates. In light of this, no other revision studies are undertaken.

4.   Serviceability

4.1   Relevance

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

Established procedures are in place for periodic consultations with the BNB's Research and Treasury Directorates, MOF, NSI, and advisory groups that include representatives from the commercial banks. The MBSD staff regularly participate in the meetings and seminars for international and regional statistical community organized by, among others, the ECB and IMF. These meetings afford an opportunity to observe developments in the statistical methodologies, share national experiences, and discuss issues particular to the national statistical compilation environment and practices.

4.2   Timeliness and periodicity

4.2.1   Timeliness follows dissemination standards

The detailed monthly central bank survey and the broad money/depository corporations' survey are disseminated within one month following the end of the reference month. In addition to the detailed monthly surveys, the BNB compiles weekly monetary statistics. The weekly main aggregates of the central bank and the broad money survey are disseminated within five days following the end of the reference week. The dissemination of the main aggregates for the central bank and the broad money survey within five days following the end of the reference week meets and exceeds the SDDS timeliness guideline for the analytical accounts of the central bank and the banking sector, respectively.

4.2.2   Periodicity follows dissemination standards

The SDDS monthly periodicity guideline for the analytical accounts of the central bank and the banking sector (the depository corporations sector) is observed. Additionally, the central bank's and the broad money weekly main aggregates are also disseminated, which exceeds the SDDS periodicity guideline for these statistics (the weekly statistics are more aggregated relative to the monthly accounts).

4.3   Consistency

4.3.1   Statistics are consistent within the dataset

The BNB strives to ensure accuracy of information used in compiling monetary statistics through internal consistency checks, which include steps to reconcile the available stock data.

Although there are deviations, data on the BNB's depository liabilities to commercial banks, as shown in the central bank survey, are broadly consistent with the data on the commercial banks' depository claims on the BNB, as shown in the ODC survey. During the twelve months to November 2002, the deviations of the commercial banks' positions are between 10–15 percent of the corresponding positions shown in the central bank survey (and are approximately 2 percent of reserve money).

As noted in section 2.2.1, the BNB's claim on banks include claims it still has on nonoperating banks which are excluded from the coverage of the ODC survey. Accordingly, data on the BNB's claims on banks shown in its survey are significantly larger than the data on the commercial banks' liabilities to the BNB shown in the ODC survey. For data since March 2002, the difference in these positions can be explained with reference to the data in the nonoperating banks' survey (the Analytical Reporting of Nonoperating Banks table), specifically the records of their liabilities to the BNB. Prior to March 2002, the deviation between the BNB's positions, on the one hand, and the commercial banks' and the nonoperating banks' positions, on the other, remains large. These deviations are attributed to the lack of data reporting by banks that had already been liquidated through court proceedings. The BNB has, however, retained claims on the banks in liquidation (the so-called non-operating banks) as well as on the liquidated banks. All these claims are fully provisioned and, effective January 2003, the majority of these claims have been written off. Consequently, starting in January 2003, a close symmetry in these BNB-commercial banks' cross-positions is expected.

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

When methodological changes are implemented, data are revised as far back as the available detailed information permits. A revision noted in 3.5.1, which was implemented in March 2002, was carried through back to 1997.

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

The BNB's monetary statistics are broadly consistent with other statistical systems, such as balance of payments and government finance statistics. Changes in positions on net foreign assets in monetary statistics are broadly consistent with the corresponding measures shown in the BOP. Differences exist between the two sets of statistics, but they are attributable to differences in valuation (e.g., end-period prices and exchange rates in monetary statistics compared to transactions date prices and exchange rates in the balance of payments statistics). Differences between corresponding measures in monetary statistics and fiscal accounts are attributed to the differences in the valuation of securities (e.g., market prices plus the accrued interest in monetary statistics compared to the "cash" value used in the government finance data).

4.4   Revision policy and practice

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

Only final data are used for compiling monthly monetary statistics. Preliminary data are only used for compiling the weekly monetary statistics for the last week of the year. Revisions are made to correct erroneous data or upon implementation of changes in the accounting standards or the statistical compilation methodology. Except for revisions in the preliminary data covering the last week of the year, the other aforementioned events do not occur on a regular, well-established schedule, and hence they do not engender a regular revisions schedule.

4.4.2   Preliminary data are clearly identified

Historical data are revised to reflect any changes in the compilation methodology whenever historical data would be affected by the change (revisions are clearly marked by symbol **R**). Since weekly publication precedes the monthly publication, revisions are announced for the first time in the weekly publication. Preliminary data are clearly identified by symbol **P**.

4.4.3   Studies and analyses of revisions are made public

An internal analysis of the revision noted in section 3.5.1 was carried out. Revisions to correct erroneous data tend to be of small magnitude and rarely affect major statistical aggregates. In light of this, no other revision studies are undertaken 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)

Monetary statistics in the general *BNB Monthly Bulletin* and in the BNB's monthly *Monetary Statistics Bulletin* are published in a clear manner. In the general *BNB Monthly Bulletin*, charts accompany data tables to facilitate the analysis. Monthly monetary statistics are presented in the time series format for the past 13 months, except for the sectoral balance sheets in a matrix format, which are presented for a specific month. Extensive supplementary tables focusing on particular aggregates accompany the surveys and present more detailed information (for example, a breakdown by instrument maturity or more detailed positions with a particular sector). Comprehensive tables of memorandum items are also included in the monthly publications. Development of seasonally adjusted monetary aggregates is underway. Analysis of macroeconomic developments is included in the BNB's semiannual and annual reports. In the near future, an analysis of monetary developments will also be included on the BNB's website, in the monthly *Monetary Statistics Bulletin*, and in the weekly publication (*Weekly Statistical Data on Selected Balance Sheet Indicators*).

The BNB's *Weekly Statistical Data on Selected Balance Sheet Indicators* provides, in a clear format, the condensed data on the main credit and monetary aggregates and the interest rates, along with the abbreviated methodological notes.

5.1.2 Dissemination media and formats are adequate

The BNB's *Weekly Statistical Data on Selected Balance Sheet Indicators* is published five business days after the end of the reporting period. The BNB's monthly *Monetary Statistics Bulletin* is published not later than 30 days after the end of the reporting period. The general *BNB Monthly Bulletin*, which includes monetary, external, fiscal, and real sector data, is issued 45 days after the end of the reporting period. All these publications are released simultaneously to all subscribers. Further, these publications are posted and are accessible through the clearly organized BNB's website at http://www.bnb.bg.

Monetary statistics are also included in the BNB's annual and semiannual reports. The annual report for the reporting year is usually published at the beginning of May of the following year, and the semiannual report is published in November of the current year. These publications are available in hard copy and on the BNB's website at http://www.bnb.bg.

Since June 1999, the BNB's website at http://www.bnb.bg has become a key source of information. The weekly and monthly data, from 1995 and onward, are available for downloading free of charge at this site. The users can retrieve data by user-specified time period, data series, and periodicity.

5.1.3 Statistics are released on a preannounced schedule

Monetary statistics are released according to a preannounced schedule. The *Publications* section of the *General Methodological Notes* in the BNB's monthly *Monetary Statistics Bulletin* contains a schedule for the release of weekly and monthly monetary statistics. Further, the *Press Office* page on the BNB's website provides a schedule for the release of daily, weekly, biweekly, monthly, quarterly, semiannual, and annual data.

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

The data are released simultaneously to all interested users. Government authorities and agencies (viz., ministries, departments) are not given privileged or insider access (however, inherent to the data validation process, as noted in section 3.4, some agency-specific data are exchanged between the BNB and the specific agency).

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

All nonconfidential monetary data are published; therefore, no additional data are provided.

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

Monetary statistics metadata pages, including concepts, scope, classifications, data sources and definitions, are available within the GDDS information pages on Bulgaria posted on the IMF's electronic DSBB/GDDS bulletin board. These metadata are regularly reviewed and updated. Users have easy access to these metadata via a hyperlink from the BNB's website.

Detailed methodological notes concerning general compilation methodology for monetary statistics (namely, coverage, sectoral and instrument classification, valuation, grossing and netting procedures) and specific methodological notes, table-by-table, are included in the general *BNB Monthly Bulletin*, the monthly *Monetary Statistics Bulletin*, in hard copy and on the BNB's website (the weekly publication contains abbreviated notes). A comprehensive methodological document providing a detailed discussion of the BNB's compilation system for monetary statistics is prepared for inclusion in the ECB's *Methodological Manual for the Accession Countries* (the last update was provided for the December 2002 issue). The BNB's website has a hyperlink to this document posted on the ECB's website.[24]

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[24] This document includes a discussion of coverage, sectoral and instrument classification, valuation, and the derivation procedures. Where applicable, it also identifies deviations from the ECB's framework for monetary data.

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

In addition to the detailed surveys and subsidiary tables, the BNB's monthly *Monetary Statistics Bulletin* contains, at the beginning, a one-page-condensed broad money survey (the Short Monetary Survey table). It also includes informative tabular summary presentations on the monetary base and its counterpart sources, money multipliers, and measurers of money supply.

5.3   Assistance to users

5.3.1   Contact person for each subject field is publicized

Prompt and knowledgeable support is available to users of monetary statistics. The email address (mbstatistics@bnbank.org) to reach MBSD contact persons with questions and provide comments, as well as the contacts' telephone numbers, are posted on the BNB's website. In 2003, a FAQ (frequently asked questions) document concerning monetary statistics will be published on the BNB's website.

A dedicated interorganizational group of experts from MBSD and the commercial banks has been set up to discuss methodological issues related to data quality. Documents explaining the project to improve quality of monetary statistics and the implementation of major requirements set by the ECB from January 2004 onward are posted on the BNB's website, and an e-mail address (mbstatistics@bnbank.org) is provided for users' comments.

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

A catalog of publications, documents, and other services to users is available on the BNB's website. The prices of the statistical products and services are clearly disclosed, and assistance is provided in placing the orders.

Table 5. Bulgaria: Data Quality Assessment Framework—Summary Presentation of Monetary Statistics
(Compiling Agency: Bulgarian National Bank)

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

Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Quality awareness		X				
1. Integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization			X			Positions on financial derivatives will be included only starting in January 2003. Classification of certain small components of the IMF accounts deviates from the recommended practice. Several "other" positions are not disaggregated by financial instrument.
2.4 Basis for recording			X			Gold is not consistently valued at market prices; nonfinancial assets are at acquisition cost.
3. Accuracy and reliability						
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				

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
3.5 Revision studies		X				
4. Serviceability						
4.1 Relevance		X				
4.2 Timeliness and periodicity		X				
4.3 Consistency			X			BNB's claims on banks include claims on nonoperating banks which are excluded from the coverage of ODC survey.
4.4 Revision policy and practice			X			Revision studies of methodological changes (when they arise) are not published.
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

VI. BALANCE OF PAYMENTS STATISTICS

0. Prerequisites of quality

0.1 Legal and institutional environment

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

Since 1991, the Bulgaria National Bank (BNB) has had responsibility for collecting, compiling, and disseminating balance of payments, international investment position (IIP), and external debt statistics.

The legal authority for collecting balance of payments and international investment position data is provided by 1) the *Foreign Exchange Law*, an instrumental regulation for the collection of statistics, adopted in December 1999 and in force since January 1, 2000, 2) Article 42 of the *Law on the Bulgarian National Bank*, 3) three BNB regulations,[25] adopted to implement the *Foreign Exchange Law* and govern the detailed requirements of statistical information, and 4) the *Law on Statistics* of June 25, 1999, which addresses the general rules applicable to confidentiality and disclosure of individual information.

However, the *Foreign Exchange Law* contains many important gaps, which imply weak coverage of critical information. In particular, it does not mandate reporting transactions on accounts opened with nonresident banks before it entered into force, and does not mandate the reporting of outstanding assets with nonresidents.

The BNB staff believe that the law does not provide an adequate framework to collect all necessary balance of payments statistics. They noted that within the limitations of the existing legal framework, supplementary BNB regulations were adopted to cover some of the coverage gaps of the law.[26] However, those provisions are not sufficient to redress the coverage gaps in the law. The BNB staff have advocated amendments to the law that would close these information gaps. As at end-January 2003, the proposed revision was under consideration by the National Assembly.

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[25] The three regulations are Regulation No. 27 on the Registration by the Bulgarian National Bank of Transactions between Residents and Nonresidents; Regulation No. 28 on the Collection of Information on BOP Statistics; and Regulation No. 29 on the Terms and Procedures for the Submission of Reports and Declarations on the Liabilities of Residents vis-à-vis Nonresidents.

[26] For instance, the *Foreign Exchange Law* defines foreign direct investment (FDI) as at least 20 percent of the equity capital. In contrast, the *BPM5* recommends a 10 percent threshold; therefore the BNB maintains a 10 percent threshold for collecting FDI data under its January 2000 regulation.

Within the Banking Department of the BNB, the Balance of Payments and External Debt Division (BOPED) is responsible for compiling balance of payments, international investment position, and external debt statistics. At present, the BOPED is made up of the following three sections: Methodology and Compilation, Analyses and Forecasting of Foreign Trade and the Balance of Payments, and International Investment Position sections. The BOPED is also responsible for developing methodology in relation to the relevant international standards and guidelines produced by the IMF, Eurostat, and the ECB for balance of payments, IIP, and external debt statistics. The BOPED belongs to the Statistics Directorate, together with two other BNB divisions (the Monetary and Banking Statistics Division—MBSD, and the General Economic Statistics and Publications Division).

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

Data sharing and coordination are covered by formal or working arrangements; however, commitments of each agency need some further strengthening to eliminate delays in data provision by the producing agencies.

In June 2000, the BNB and the National Statistical Institute (NSI) implemented a formal agreement for exchanging data. The agreement includes regular cooperation on techniques for data compilation and scheduling of data provision for the external sector data (e.g., monthly merchandise trade data from the NSI, results of quarterly and annual FDI, and surveys of nonfinancial companies). Since mid-2002, the BNB and NSI have felt the timeliness of trade data, as disseminated by customs, to be a source of concern because trade data were transmitted by the customs with substantial delays and were undergoing revisions growing in magnitude.

In addition to this formal arrangement, data sharing includes transmission of data from different agencies, such as: 1) the Ministry of Finance for government current and capital operations with nonresidents and debt-related transactions; 2) the central depository agency for portfolio transactions of listed companies traded on the Bulgarian stock exchange; 3) the Notary office for transactions in real estate; and 4) the Ministry of the Interior for the number of travelers to and from Bulgaria.

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

The BNB is mandated to maintain the confidentiality of individual institutions or transactions. The *Foreign Exchange Law* includes a requirement for confidentiality: Article 8.3 provides that individual data received from respondents shall not be communicated to third parties; Article 8.4 provides that external communication must bear only on aggregated data, which prevents the identification of individual persons or entities. For its part, the *Law on the BNB* specifies in its articles 3.2 and 23.1 that individual data shall not be disclosed. In

addition, the Article 4(2) provides that certain types of information shall not be released to third parties.[27]

The *Law on Statistics* also makes the case for protection of individual data. Chapter 6 provides that statistical information is provided exclusively for the purpose of statistical compilation (Article 25), and it provides the rule for dissemination of aggregate data (Article 26). Confidentiality provisions are enforced by different ranges of fines, disciplinary sanctions applicable to staff (Article 53 and 55), and physical protection of data records (Article 27).

The BOPED follows these rules and disseminates only aggregate information for balance of payments purposes, as evidenced by the dissemination of data on combined transactions for gas and oil sectors. In addition, allocation of tasks within the division makes it difficult for a given staff member to access information not explicitly assigned.

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

Statistical reporting is mandatory under the *Foreign Exchange Law* (Article 7) and the *Law on the BNB* (Article 42). Of the two, only the *Foreign Exchange Law* defines the penalties for noncompliance with the reporting requirements or misreporting and provides that no secrecy provision can be raised by any bank or nonfinancial entity to oppose requested information (Article 19).

However, since BNB's Legal Department deems these provisions impractical to enforce, the penalties for noncompliance with the mandatory reporting are not implemented. In addition, interpretation of *Foreign Exchange Law* is hampered by an ambiguous definition of its mandate; Article 8 provides that "the BNB and the Ministry of Finance may request from every person information which is significant for the balance of payments." This wording may prove misleading since it refers to information presented by name, which implies that the identity of the respondent should be shown, whereas the requirement was only meant as a general provision to access detailed data for the purpose of compiling statistics.

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[27] **Article 4.** (2) (amended; *State Gazette*, issue 45 of 2002) The Bulgarian National Bank shall not disclose or pass to third parties any financial or commercial information it obtained that is of confidential nature for the banks and the other participants in monetary and credit transactions, except under the provision of *Law on Protection of Classified Information.*

0.2   Resources

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

Established by the BNB Management Board, the BNB Budget Committee is a standing executive body in charge of managing financing aspects, including preparation, monitoring, and reporting of the BNB budget and annual allocation to the different departments. It allocates the financial resources directorate-by-directorate, while making no specific allocation by BNB activity, task, or product. For instance, in the case of the Statistics Directorate, common budgetary resources serve both BOPED and MBSD.

At present, BOPED suffers severe understaffing in the context of BNB's growing awareness of data quality and the pressing requirements to comply with ECB and European Union guidelines. The BOPED is composed of eight staff (including a division chief), who compile balance of payments, international investment position, and external debt statistics. In addition to these functions, the BOPED is actively involved in a number of activities relating to comparison and harmonization with European Union entities and other initiatives (e.g., the Coordinated Portfolio Investment Survey (CPIS)).

The relative shortage of staff was addressed by the Fund's 2000 Statistics Department technical assistance mission on balance of payments statistics, which recommended that additional economists be recruited to face the BOPED mounting workload. For its part, the EC noted in its 2001 "Regular Report on Bulgaria's Progress Towards Accession" that "the BNB balance of payments department, however, needs substantial capacity building in order to ensure permanent and detailed monitoring of the capital inflow and outflow."[28] Nonetheless, training of BOPED staff is satisfactory, since half the staff received formal training, and all received on-the-job training upon joining the division. The BOPED's staff have a high work ethic in the face of a heavy workload.

0.2.2   Measures to ensure efficient use of resources are implemented

The limited staff resources are efficiently used. The Director of the BNB's Statistics Department, using the proposals of the heads of the BOPED and MSBD, drafts an annual plan with a quarterly breakdown for the use of staff, financial, and computing resources. It is approved by the Deputy Governor responsible for the Banking Department and then approved by the BNB Budget Committee. The annual budget is not revised during the fiscal year; thus, it does not allow for the inclusion of new priorities or emerging issues.

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[28] Page 44 of the report, November 13, 2001, Secretariat of the European Commission (2001), #1744.

0.3   Quality awareness

0.3.1   Processes are in place to focus on quality

The BNB views its role of providing balance of payments statistics as primarily to satisfy the requirements of policymakers. While BNB managers acknowledge their emphasis on quality issues, as evidenced by the implementation of the *BPM5* and relevant international guidelines, they also recognize that the qualitative comparison with agencies producing statistics in countries of the European Union points to the need for further strengthening of the BOPED procedures. In particular, the authorities indicated that the quality monitoring of balance of payments statistics as a public good is primarily assigned to the balance of payments division chief, while no other internal processes emulate specific assessment and monitoring of quality within the BNB. The authorities deem the current internal processes adequate to the present situation.

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

The focus of internal processes is mostly limited to ensuring only the consistency of data prior to their dissemination. It excludes other processes that may have a significant impact on the quality of the sequence for data compilation and processing, e.g., source data checks, internal monitoring of intermediate results, and comparability between sources. Regarding checks on individual data, while BNB management accepts and encourages the principle of contacting respondents for verification of their data, the BOPED workload allows little interaction with respondents. Regarding checks of aggregate results, the formal and analytical checks routinely run by BOPED staff include formal correctness, logical coherence between main items and their subcomponents for aggregate results, and comparison between the behavior of different time series. Final results are ultimately validated by the division chief and by the director of the Statistics Directorate.

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 BNB-management level, a project for substantial improvement of the quality of balance of payments statistics is expected to start after more human and other resources are allocated to BOPED. As yet, a precise assessment is to be made of the trade-offs involved in the transition to detailed reporting and the more intensive use of direct reporting.

## 1.	Integrity

### 1.1	Professionalism

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

Chapter 6 of the *Law on Statistics* stipulates that the collection of individual data is reserved only for statistical purposes unless the concerned party explicitly approves public dissemination of its data (Article 25).

Regarding the implementation of other internal measures, the BOPED work is guided solely by professional considerations, as indicated in the internal rules of procedures for staff. For instance, the methodological decisions on sources and methods, statistical adjustments, and dissemination are taken in line with the commitment of the BNB to issue statistics in accordance with the *Law on the BNB*.

The professionalism of the BOPED staff is supported by the recruitment procedures of the BNB. The BNB evaluates the merit and the potential of all candidates and current employees solely on professional criteria measured with objectivity.

BOPED staff indicated that comments in the press on the balance of payments statistics are closely monitored, and that the feedback received from users in the media provides evidence that balance of payments statistics are credited with high professionalism.

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

The choice of methods and statistical techniques is informed by the implementation of *BPM5* and other relevant guidelines issued by the European institutions (Eurostat and the European Central Bank—ECB). Different types of sources are assessed against statistical needs when alternative sources are available, as evidenced when a recent survey on FDI was designed.

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

The BNB is entitled to react when commentators or media erroneously interpret the statistics. The BOPED is keen to maintain a good reputation through building up trust with the respondents and the users.

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 collected, processed, and disseminated are adequately made available to the public on the BNB Internet site.

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

Reference to prerelease access by the MOF and other government agencies is made only on the Dissemination Standards Bulletin Board (DSBB) Internet pages for Bulgaria; no other reference is made in BNB hard copy or electronic dissemination. Government agencies, primarily the MOF, receive balance of payments statistics 24 hours before the public dissemination of the information.

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

The identification of the statistical products is made clear in the press releases and in all subsequent documents that disseminate the data. As mentioned on page 2 of the *BNB Monthly Bulletin*, the BNB press office requests attribution when data are used or reproduced.

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

The BNB provides advance notice in the *BNB Monthly Bulletin* two months before it introduces changes in methodology. The main reasons for statistical changes are made clear to users.

1.3 Ethical standards

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

Guidelines for BNB staff behavior are specified in the BNB Rules of Procedures and are well known. BNB staff are provided access to this document through the BNB Intranet. These rules are also used for the orientation of new employees by the BNB's Human Resources Directorate.

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 *Balance of Payments Manual, fifth edition (BPM5)*. Regarding definitions, the critical departure from *BPM5* concerns the simultaneous use of two distinct residency criteria in the collection of balance of payments source data.[29] In addition, foreign exchange deposits of resident households with resident commercial banks are erroneously included in balance of payments statistics.[30]

2.2   Scope

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

In principle, Bulgaria's balance of payments cover all transactions of residents vis-à-vis the rest of the world. However, a large number of items are seriously undercovered, chiefly shuttle trade and travel services. It was noted by the IMF's balance of payments technical assistance report in 2000 that, while the magnitude of shuttle trade is deemed to require serious assessment, no resources have been allocated to this area and no subsequent adjustment has been made to trade data. In 2000 the BNB envisaged establishing a working group with NSI and other interested parties to assess shuttle trade and adjust trade records; however, so far no progress has been made. The authorities have acknowledged that deficiencies in trade data were critically impeding further harmonization work as requested for accession to the EU.

Regarding travel services, source data are mostly based on surveys conducted among travel agencies. In principle, the surveys are annual; however, there were such surveys only in 1999

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[29] As required by the *Foreign Exchange Law*, reports from enterprises are based the location of the establishment (for individuals, a residency criterion of six months is applied), while commercial bank reports are based on a residency period of at least 12 months, in accordance with a BNB regulation.

[30] They are classified under other investments, assets, other foreign exchange deposits. The authorities indicated to the ROSC mission that this departure is being corrected as of January 2003.

and 2001. Data were collected from about 100 travel agencies, for a total coverage of an estimated 75 percent of the sector, for the 2001 survey. In addition, other sources provide qualitative information that is used for the purpose of travel. As yet, no supplementary information is collected from foreign currency bureaus on foreign exchange to estimate cash transactions by tourists; absent that information, the compilation techniques currently used suggest that the travel receipts are probably underestimated.

2.3   *Classification/sectorization*

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

The classification system used in Bulgaria's monthly transactions data for institutional units and transactions is broadly consistent with the structure of *BPM5,* with the following important exceptions:

- In the analytic presentation used for dissemination of balance of payments data, goods data do not distinguish between (1) general merchandise; (2) goods for processing; (3) repairs on goods; (4) goods procured in ports by carriers; and (5) nonmonetary gold. Instead, all these items are presented as credits or debits of goods. They should be disseminated using the standard components rather than the analytical presentation;

- When a central depository agency reports financial flows, the ITRS does not separately identify financial commissions;

- When the f.o.b. value is calculated on imports, insurance services on merchandise trade are not separated from merchandise value;

- Financial derivatives, reported separately, are still included in portfolio investment. There are no plans to disseminate them separately;

- Trade credits between affiliates are reported under trade credits in other investment and not under foreign direct investment (FDI) flows and stocks in the IIP because detailed information is missing. Consequently, income on trade credit is not separated from other investment income;

- Other investment income excludes the interest share on financial leasing payments; and

- Loans between affiliates are recorded under other investment–loans and not under direct investment–other capital.

2.4   Basis for recording

2.4.1   Market prices are used to value flows and stocks

Transactions are recorded in broad consistency with the *BPM5* methodology. Balance of payments statistics are expressed in euro, leva, and U.S. dollars and are valued at market prices where they are available. Outstanding amounts in debt instruments are valued at nominal value while flows are valued at market prices. Exports and imports of goods are valued on an f.o.b. basis (imports are adjusted to exclude transport, but not insurance, however). Where transactions are derived from outstanding stocks of financial claims and liabilities at the beginning and the end of the recording period, adjustments are made to isolate actual transactions from valuation and other changes affecting the stock data.

Consistent with the *BPM5* methodology, the BNB has begun adjusting changes in holdings of international reserves for valuation changes, owing to exchange rate changes (backward revision of data was made to 1998). The main exception to the market valuation principle is the recording of foreign direct investment stocks, using book value as reported by banks and other reporters. However, the quarterly FDI survey conducted by the NSI, and data reported by the privatization agency and by the Notary office, are valued either at market prices or at a proxy for market prices.[31]

For their part, currency conversion practices are broadly consistent with the *BPM5* methodology. Transactions taken from the international transactions reporting system (ITRS)—mainly services, compensation of employees, and some private transfers—are recorded at the time of payment. Imports and exports from customs records are converted by the reporting banks from the transaction currency into the unit of account at the relevant average market exchange rate, unless the actual exchange rate of the transaction is reported.

Reporting instructions to banks prescribe the use of the average market rates in leva and in U.S. dollars to report monthly aggregated transactions in the presentation of the standard component. As financial flows are derived from changes in stocks for portfolio and other investment, data reported in foreign currencies are converted using the monthly average exchange rate, in conformity with *BPM5* prescribed guidelines.

Also in conformity with *BPM5* methodology, data obtained from external debt records—all of which report data in the original transaction currencies—are also converted using the average monthly exchange rates for the reporting period. The recording of arrears is valued at book prices and adjusted to take into account accumulated interest.

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[31] Data from the Central Depository Agency are in fact proxy market prices, since the Sofia Exchange Market (SEM) provides volumes of transactions, while for their part, average prices are used by BNB staff.

2.4.2   Recording is done on an accrual basis

Recording is mostly done on a cash basis, and no subsequent adjustment is made to achieve accrual recording.

In case of the ITRS, two reasons explain the large use of cash basis data: (1) the use of settlements-based reporting means that transactions are recorded at the time of banking intermediation. Most data are therefore on a cash basis, for example, income on debt for both direct and portfolio investment is reported when paid;[32] and (2) given the legal arrangements for reporting introduced by the *Foreign Exchange Law*, the accrual principle is not mandated, although it is deemed by BOPED to be more frequent on liabilities than on assets. Assessing the respective parts of reports, using either the cash or the accrual basis in the ITRS, proves difficult to BOPED.

Regarding survey sources, data are mostly communicated in stocks (from which flows are derived) and are therefore mostly based on accrual.

Regarding other sources, customs data are based on the Special System of Trade. Effective January 1, 1999 the time of recording for customs data reflects the date on the Single Administrative Document. For administrative sources, there is no correction to adjust data to an accrual basis; for example, data on interest payments on government debt reported by the MOF are also reported on a cash basis. Private debt is to be reported in accrual; however, it is believed that the respondents do not carry it out appropriately.

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

Credits and debits are mandated from respondents in the reporting regulations in gross figures, for both the credits and the debits in the current account. Financial account statistics are reported net to the BNB for each category (e.g., credits and debits are not reported separately), except for the FDI where both credits and debits are reported. The international reserves are collected for assets only.

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[32] It is worth noting that for the accession of Bulgaria to the European Union, ECB guidelines on the reporting of monthly data permit cash-based reporting.

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

Bulgaria's balance of payments statistical system relies on a comprehensive framework of data collection that includes the international transaction reporting system (ITRS), direct reporting, surveys, and the use of administrative data sources within and outside the BNB.

The **ITRS** is the primary data collection system used for compiling balance of payments statistics. It is based on aggregate monthly transactions reported following the standard component of the *BPM5* both in euros and U.S. dollars. The ITRS was introduced in 1996 and covers reporting from 1) 35 commercial banks[33] and, in application of the *Foreign Exchange Law*, 2) 21 enterprises that hold bank accounts with nonresident financial entities and report directly to the BOPED. ITRS data are mostly used to record data in the categories of services and nongovernment transfers. In the financial account, ITRS data are used for Bulgarian FDI abroad, portfolio investment assets and other investment assets, and liabilities for the commercial banks.

However, because the ITRS is viewed by the authorities as insufficient, they plan to migrate to transaction-by-transaction reporting before the accession to the EU in 2007. In addition, the authorities recognize that the present reporting by enterprises could be further improved by requesting more detailed information from reporting enterprises.

The ITRS information is automated through banks (electronic forms submitted by email) and largely based on manual recording for enterprise reports (hard-copy questionnaires). Both groups of reporters use *BPM5* economic codes to classify transactions.

For the reporting format of the banks, the classification established in 1996 was reviewed in 2000. It mandates the reporting of all transactions above the 5000 leva threshold, both in U.S. dollars and leva, including reporting of financial derivatives. Nonfinancial companies report on less detailed forms, whose classification follows the main items of the standard components. In this latter case, nonfinancial companies report initial and end positions and flows quarterly and annually.

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[33] Banks are required to report external transactions on behalf of residents and nonresidents and on their own account. Resident banks must report the opening and closing balances of their external position by currency breakdowns. Changes between the opening and closing positions should be equal to the net external transactions in the respective currencies.

ITRS data, however, are not used for the compilation of the following items: (1) exports and imports data based on customs declarations, (2) the result of the annual tourism survey, used for estimating travel services, (3) transport services, which result from calculations based primarily on trade data, (4) the foreign direct investment surveys, managed by the NSI and the BNB, and (5) the result of the quarterly data from the register on the private debt, which provides information on specific items in the financial account.

Furthermore, the ITRS sources are hampered by several deficiencies, such as:

- It is based on the *Foreign Exchange Law,* which is limited in scope to banks and to enterprises that opened accounts with nonresident financial institutions after January 2000; those accounts that were opened before that date are not covered;

- When banks submit reporting forms, the central bank considers that the proportion of forms missing the economic code to be about 1 percent of the total current account.[34] If the transaction is below the reporting threshold of 5,000 leva (approximately US$2,500), then the economic code is not required for individual operations. If it is above that amount, then the code is required, but the information may be missing. The BOPED classifies unallocated data in their totality under other investment, other liabilities. Consequently, the magnitude of data not classified and reported under other investment is significant for that item (50.6 percent of the total for other investment–other liabilities during the 11 cumulated months January through November 2002); and

- Electronic submission of data is mostly limited to banks; hence, the amount of information that requires manual recording, from companies and most of the administrative data, is significant.

To facilitate more comprehensive coverage and classification, particularly in the financial accounts, two annual **surveys** are conducted.

The survey on *foreign direct investment abroad* is based on reports from 80 nonfinancial enterprises. The initial listing of target companies was provided in 1999 by the Ministry of Economy and covers companies that held FDI abroad before 1990. For *foreign direct investment in Bulgaria*, the NSI runs a survey whose results are communicated to the BNB; BOPED supplements this information with seven other sources.[35]

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[34] One percent out of US$400–500 million recorded monthly in the current account transactions.

[35] The seven complementary sources are the transactions in real estate reported by the Notary Office, the transactions mediated by the Privatization Agency, both MOF Directorates for insurance and pension companies, the register of private debt maintained by the BNB, and the monthly reports of enterprises and ITRS reports of banks for their transactions and those on behalf of their clients. The complementary sources have a substantive impact on the

(continued)

However, given these institutional arrangements, no FDI register is maintained and no sampling techniques are used by BOPED. Thus the authorities are aware that the present coverage of the FDI survey is incomplete. The revision of the *Foreign Exchange Law* is deemed a prerequisite to improve the coverage of the current FDI survey. Regarding the periodicity of the FDI survey, although initially designed as an annual survey, it was run only twice in 1999 and 2000 on the outstanding FDI stock for 1998 and 1999 and flows for 1999 and 2000. For 2003, there are plans to collect stock and flow data for 2001 and 2002 and to follow up on FDI operations announced in the press.

Regarding the *travel survey*, as indicated above (see indicator 2.2.1), the approach adopted is not systematic and allows for large undercoverage. The survey administration does not comprise any benchmarking or register follow-up. Other qualitative information is used to identify the purpose of the travel: the Border police provide monthly information on the number of travelers to and from Bulgaria (used to derive the number and the purpose of travel along six main categories), and the ITRS provides information from banks on travel motivated by education and health purposes.

For both surveys, no registers and no benchmarks are employed.

In addition to the ITRS and to surveys, BOPED uses *other sources*, including administrative data sent on hard-copy forms, which all require manual recording by BOPED. These sources include:

- customs data for transaction in goods, which replace the ITRS data;
- transfers by the EU of funds communicated by the MOF;
- external debt-related data reported by the Ministry of Finance;
- for the compilation of current transfers, data communicated by the Bulgarian Red Cross—the agency for foreign aid (received aid);
- the Monetary Banking Statistics Unit in BNB, which reports data for other investment–other foreign exchange deposits–other sectors (household deposits with domestic banks) and BNB accounts abroad with other central banks;
- the BNB Fiscal Services Department, which transmits data on nonresident holdings of government, securities issued under Regulation 5, and the ZUNKs;[36]
- the BNB Information Technology Directorate, which reports foreign assets and assets and liabilities of the BNB and commercial banks;

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whole FDI; for the first three quarters of 2002, the NSI data contributed only to respectively one-sixth, one-third, and one-twelfth of the total FDI calculated by the BNB.

[36] The ZUNK is the law on management of credits and arrears covering nonperforming loans created by the State Bank.

- for the purpose of completing the FDI transactions, the Notary office, which communicates data on the purchase of real estate property in Bulgaria by nonresidents, and the privatization agency, which provides information on the successful nonresident bidders of privatized enterprises;
- the register on financial loans maintained by the BNB on private sector debt, which provides quarterly data, recorded under relevant items in the financial accounts;
- portfolio investment transactions, reported by the Central Depository Agency when ` transactions are recorded between residents and nonresidents; and
- the Insurance Supervision and Pension Insurance Directorates of the Ministry of Finance, which report respectively data on nonresident holdings in equity capital.

Developments in the external sector are monitored through the follow-up of the financial press information on major transactions, especially for the follow-up of foreign direct investment operations. The monitoring and drafting of research papers is severely constrained by the limited number of staff. Discussions are informally held with market participants.

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*. In particular:

- *Foreign direct investment*: The BNB supplements the data received from the NSI with other sources for flows (see 3.1.1).

- *Trade statistics:* Data received by the BNB comprise transactions in natural gas, electricity, military equipment, gold as commodity, barter trade, financial leases, direct investment in kind, fuel and food sold to foreign carriers, and foreign aid in kind (official and private). No other sources are used.

- *C.i.f. /f.o.b. correction:* The correction is made using a coefficient of 8 percent on imports, while no correction is made on exports, provided f.o.b. by the NSI. The adjusted amounts are subsequently recorded under transportation (5 percent as expenses, and 3 percent as receipts).

- *Services data:* The information for specific services, reported by transactors through the ITRS (e.g., communication, construction, information), are not adjusted in the balance of payments statistics.

- *Portfolio investment:* The data are provided by the Central Depository Agency on securities transactions, in nominal value and average price. The data are not corrected

to take into account fees or intermediary commissions. Portfolio investment stocks are recorded as reported by banks and by the BNB.[37]

Deviations from *BPM5's* guidelines for time of recording are noted in 2.4.2.

3.1.3   Source data are timely

The communication schedule is made clear to the respondents in the reporting regulation issued and maintained by the BNB. Reporting periods are months, quarters, and years, using the fiscal year starting on January 1. Banks have 17 days after the end of the reference period (reports are monthly and quarterly) to communicate data. Quarterly data from companies are expected within 15 days for the first three quarters. The last quarter data are communicated within 25 days after the end of the year.

Delays in submissions are followed up through phone calls and letters. Although the BNB can in theory impose penalties for delays or nonreporting, penalties are usually not implemented. Delays are encountered in the case of surveys, for example in obtaining the responses for the travel survey. There is usually no significant delay for administrative data. Delays of source data from customs, however, are a serious impediment affecting the timeliness and quality of the production schedule of the balance of payments statistics.

3.2   Statistical techniques

3.2.1   Data compilation employs sound statistical techniques

At present, there are no built-in computerized controls of data, mainly because of the software used for processing the incoming information from commercial banks and reporting enterprises (Microsoft Excel and partially Access). However, the BNB runs some simple consistency checks by comparing previous periods with current reports, comparing both reported columns (in leva and dollars), checking consistency between flows and stocks, and making some reasonable checks of the magnitude for debit and credit.

The thoroughness of data checks is however limited by the fact that ITRS respondents provide monthly aggregated data. In the case of settlement data provided by banks, the BOPED compares the opening and end positions with flows, and it may contact respondents when supplementary information is deemed necessary. Data controls are oriented by staff knowledge and expertise. For a number of items, to ensure consistency checks and avoid double counting (for example in the case of FDI), the BNB cross-checks sources between bank and company reports. There is, however, no cross-checking with national accounts.

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[37] The BNB collects information on Brady bond-related operations that are used by the government in the framework of debt reorganization.

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

The authorities acknowledge that the other statistical procedures need to be critically updated or revised. Regarding particularly trade data, the c.i.f./f.o.b. correction established in 1994 has not been revised ever since. Trade data are reported by the customs administration and supplemented by the NSI to take into account other merchandise trade (e.g., natural gas). As yet, there is no estimation of shuttle trade by either the NSI or the BNB.

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 non-sampling error; the results of the assessments are monitored and made available to guide planning

Source data are assessed and merged in the BOPED database as they are sent by respondents. However, the population of banks, which provide an essential part of the reports used to compile balance of payments statistics, is not systematically monitored. As BOPED staff rarely interact with reporting banks, they do not gain adequate knowledge of banks' routine operations. While instructions to banks are deemed by BOPED staff to be tightly implemented, BOPED has had little chance to install formal or informal consultation groups or even engage in training of commercial bank staff assigned to balance of payments compilation.

For enterprises, contacts are limited to the companies that report using accounts with nonresident banks. BOPED interactions are quite formal; they rarely lead to providing advice on specific types of transactions and mostly focus on confirming high-value transactions with operators.

Where applicable, data sources are checked against other available sources:

- In the case of foreign direct investment (FDI), temporal consistency is sought by checking reports by respondents over corresponding periods of time for transactions done via domestic banks. However, the scope of consistency checks for sources is limited when transactions involve accounts held abroad. For transactions in FDI flows, different data sources are confronted, such as the privatization agency, the FDI quarterly survey of NSI (on nonbank FDI flows), and the register of debt (loans between affiliated enterprises) reported by the nonbank enterprises. Similar checks are not run for the travel survey, owing to paucity of alternative data sources.

- Regarding portfolio investment, monthly data provided by the MOF for external public debt and publicly guaranteed debt are compared with holdings of securities as reported by banks for their own assets and for those held on behalf of their clients.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Main intermediate data are validated against other information where applicable

Main intermediate data are validated using other sources. For instance, data obtained from the ITRS and surveys are checked against information received from administrative sources. For example, the register on foreign loans obtained by companies is checked against the data reported by banks.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

Resource constraints limit the range of possible checks. Most of the checks are run on the same reported source data. For instance, flows and stocks from data reported by commercial banks on the same form are routinely compared, bank by bank. For enterprise reports, BOPED compares the changes in stocks with the reported transactions on the same form. In addition, the compilation process may be a source of uninvestigated discrepancies, such as in the case of unallocated transactions (the reports missing an economic code). BOPED classifies the unallocated transactions under other investment, other liabilities. About half of the line originates from unallocated transactions (50.6 percent of the total line for other investment–other liabilities during the 11 cumulated months January through November 2002).

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

Errors and omissions are attributed to two main sources: (1) the undercoverage of assets compared to the coverage of liabilities and (2) recording of households' deposits with the resident banks in foreign exchange. Comments about errors and omissions are provided in the main publication on balance of payments statistics, posted on the BNB website.

Regarding comparisons with data of other countries, the NSI has so far conducted limited bilateral comparisons with the corresponding German and Ukrainian trade statistics. A similar exercise on travel series is currently being conducted with Germany.

3.5 Revision studies

3.5.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes (see also 4.4.3)

BOPED routinely carries out three main types of revisions studies:

- Analysis of preliminary versus revised data is conducted for major aggregates. Revisions related to corrections of source data are systematically examined to assess the expected impact of corrections brought to trade that the computing center of the customs administration brings to data between provisional and final estimates. On an

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ad hoc basis, comparisons between preliminary estimates and final results are run for foreign direct investment compiled by the NSI on real sector operators.

- Revisions of source data may originate in the comparison of alternative source data, such as in the assessment of private sector liabilities compared against the register of financial loans maintained by the BNB.

- Revisions linked to methodology are introduced when complete series have to be reviewed against a European regulation or best practice, as evidenced by the revision to trade credit series.

However, although conducted periodically, revisions studies are not used to inform the statistical process.

4. Serviceability

4.1 Relevance

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

Two groups of users are identified: institutional users (e.g., IMF, MOF) and the wider public. Although there is no formally established official consultation process, there are informal discussions on a bilateral basis with the other institutions on certain topics such as the FDI.

Communication with the wider public is conducted through the Publication Office, which is in general assigned to interact with the public. The Publication Office is responsible for disseminating the *BNB Monthly Bulletin* both in hard copy and on the Internet. However, BOPED receives queries and responds via email or via the Press Office of the BNB.

BOPED participates regularly in international meetings, especially with the view to preparing the entry of Bulgaria into the EU (Eurostat meetings), but also in methodological consultations with the staff of the IMF and OECD.

4.2 Timeliness and periodicity

4.2.1 Timeliness follows dissemination standards

Quarterly balance of payments statistics are disseminated within eight weeks after the end of the reference period, which exceeds the recommendation of the GDDS and the requirements of the SDDS.

4.2.2   Periodicity follows dissemination standards

The BNB disseminates monthly balance of payments data, which exceeds the GDDS and SDDS requirements.

4.3   Consistency

4.3.1   Statistics are consistent within the dataset

Internal consistency is assured through checks that sub-items are consistent with the aggregate data; quarterly data are totals of monthly data. Quarterly data are adjusted to monthly data to support total consistency. Errors and omissions are monitored (see 3.4.3).

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

Monthly data are available since 1997, and quarterly data since 1995, without a break in the series. Revisions are corrected back to the period when the information was available (e.g., revisions of travel data were corrected back to establish a consistent time series since 1995; revisions of the series on trade credit back to 1997).

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

Balance of payments are consistent with the other macroeconomic data: balance of payments are the source data used for the rest of the world account in *national accounts* by the NSI. Consistency with *government finance statistics* is complete, since the data from the MOF on public and publicly guaranteed debt, as well as payments of interest on the external debt, are incorporated in the balance of payments.

Consistency with monetary statistics is satisfactory, since the balance of payments source data for bank transactions with nonresidents are derived from the same sources as the monetary statistics, i.e., central bank and commercial banks' balance sheet records.

4.4   Revision policy and practice

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

Monthly publication includes revisions of the data for the previous three months, and each quarterly publication includes revisions of the monthly data for the entire current year. No systematic methodological document is released when routine data corrections are made. However, whenever data revisions bear on changes in methodology or when significant additional information is introduced, these are documented, and the BNB releases advance notice of such revisions in the monthly press release and in the endnotes of the balance of payments table in the BNB statistical publications.

4.4.2   Preliminary data are clearly identified

Users are alerted that the initially published data are preliminary and subject to revision, and the revised data are disseminated with the same level of detail as previously published for the data being revised. End notes in the *BNB Monthly Bulletin* accompanying the data make clear which sets of data are revised quarterly, and the same level of detail is provided for revised data.

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

Most studies and analysis of revisions are not made public, but are used only for internal quality control. With the publication of the annual results, BOPED assesses retrospectively over a given exercise the improvements in methodology-related revisions.

5.   Accessibility

5.1   Data accessibility

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

The monthly booklet presenting the results of balance of payments data is accompanied by tables, charts, and additional breakdowns, providing results in detail greater than the standard component of the balance of payments and for trade data. When BOP statistics are released to the public, this booklet is posted on the website of the BNB in a summary form, with a summary in English. In addition, the main results are elaborated in a press release in Bulgarian and in English for distribution to the wider public.

5.1.2   Dissemination media and formats are adequate

For the dissemination media and format, a wide variety of formats is used: electronic—information posted on the Internet; and hard-copy—*BNB Monthly Bulletin*, press release, and ad hoc handouts prepared by the Press Office.

5.1.3   Statistics are released on the pre-announced schedule

The BNB Press Office maintains a schedule of all statistics released by the BNB classified by periodicity. It includes the balance of payments, together with separate series for foreign direct investment, foreign trade, and external debt, and is available on www.bnb.bg/press_office. The balance of payments statistics release date and time are announced a week in advance on this Internet page. However, these procedures fall short of the SDDS requirements for a quarter-ahead ARC.

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

Up until January 2003, the BNB Press Office gave priority to paying subscribing users, who received data 90 minutes before their public release. Most press agencies and a large number of investment banks subscribed. However, the mission was informed that the BNB authorities decided that, effective January 27, 2003 balance of payments data would be released to all users simultaneously.

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

Nonpublished but nonconfidential data are available to users upon request. However, given the limited number of staff, it is planned that some fees may be introduced for this service. This arrangement covers specific details on the balance of payments and the external debt statistics. When frequent queries for these data are made, the information is posted on the BNB's Internet site.

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 balance of payments GDDS metadata provide users with adequate information on the sources and methods and methodological guidelines. An information notice is posted on the BNB Internet site and on the DSBB following the framework of the GDDS. In addition, detailed methodological notes are posted in the *BNB Monthly Bulletin* for balance of payments and external trade; however, external debt metadata are not disseminated. Methodology deviations are described in the tables and in the different methodological notes.

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

The methodological information is made available to all users. An additional breakdown for quarterly data is communicated to the Agency for Economic Analysis and Forecasting at the Ministry of Finance. For specific topics, for example the FDI methodology, notes are prepared and posted on the BNB website.

5.3   Assistance to users

5.3.1   Contact person for each subject field is publicized

For most of the queries of the users, the BNB Press Office service is the point of enquiry. Users may also contact directly the phone number and the email address mentioned on the Internet site, to which a BOPED economist attends.

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

The BNB provides a catalog of publications to the users, which includes the *BNB Monthly Bulletin*, its *Mid-Year Annual Reports,* and the *BNB Research Papers*. In addition, the Internet site offers these reports in downloadable format free of charge. Hard-copy reports are sent to subscribers only.

Table 6. Bulgaria: Data Quality Assessment Framework—Summary Presentation of Balance of Payment Statistics
(Compiling Agency: Bulgarian National Bank)

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

Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment			X			The *Foreign Exchange Law* is not considered adequate for BOP collection. Also, delays in data supplied by customs.
0.2 Resources				X		Staff is insufficient to maintain the programs for compiling BOP statistics.
0.3 Quality awareness			X			Most of the internal checks are not used to monitor quality.
1. Integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions				X		Mostly in conformity with *BPM5*, but with important exceptions related to the residency of banking transactions and other source data.
2.2 Scope			X			Undercoverage of trade data (particularly shuttle trade) and financial assets.
2.3 Classification/sectorization		X				
2.4 Basis for recording			X			Most data are collected on cash basis rather than accruals, and market prices are not always available.

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
3. Accuracy and reliability						
3.1 Source data				X		Sources data need further strengthening through the transition to the reporting on a transaction by transaction basis for banks in the International Transaction Reporting System (ITRS) and through more comprehensive and timely surveys. In addition, merchandise trade source data need to be more timely.
3.2 Statistical techniques				X		No built-in computerized controls and c.i.f./f.o.b. factor for trade data has not been reviewed since 1994.
3.3 Assessment and validation of source data				X		Source data are not routinely assessed.
3.4 Assessment and validation of intermediate data and statistical outputs			X			Statistical discrepancies are noted; however, they rarely undergo thorough investigation.
3.5 Revision studies			X			Most revision studies are disconnected from statistical processes.
4. Serviceability						
4.1 Relevance			X			There is no formal user advisory group to monitor relevance.
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice		X				
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

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 ARCs 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 Dissemination Standards Bulletin Board (DSBB). Summary methodologies, which describe data compilation practices in some detail, are also disseminated on the DSBB; and

- maintain an Internet website, referred to as the National Summary Data Page (NSDP), which contains the actual data described in the metadata and to which the DSBB is electronically linked.

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 ARCs.

Source: Guide to the SDDS, February 2002: http://dsbb.imf.org.

Data Quality Assessment Framework
(DQAF)—Generic Framework
(July 2001 Vintage)

Quality Dimensions	Elements	Indicators
Prerequisites of quality[1]	**0.1 Legal and institutional environment**—*The environment is supportive of statistics.*	0.1.1 The responsibility for collecting, processing, and disseminating statistics is clearly specified. 0.1.2 Data sharing and coordination among data producing agencies are adequate. 0.1.3 Respondents' data are to be kept confidential and used for statistical purposes only. 0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.
	0.2 Resources—*Resources are commensurate with needs of statistical programs.*	0.2.1 Staff, financial, and computing resources are commensurate with statistical programs. 0.2.2 Measures to ensure efficient use of resources are implemented.
	0.3 Quality awareness—*Quality is a cornerstone of statistical work.*	0.3.1 Processes are in place to focus on quality. 0.3.2 Processes are in place to monitor the quality of the collection, processing, and dissemination of statistics. 0.3.3 Processes are in place to deal with quality considerations, including tradeoffs within quality, and to guide planning for existing and emerging needs.
1. Integrity *The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.*	**1.1 Professionalism**—*Statistical policies and practices are guided by professional principles.*	1.1.1 Statistics are compiled on an impartial basis. 1.1.2 Choices of sources and statistical techniques are informed solely by statistical considerations. 1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.
	1.2 Transparency—*Statistical policies and practices are transparent.*	1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public. 1.2.2 Internal governmental access to statistics prior to their release is publicly identified. 1.2.3 Products of statistical agencies/units are clearly identified as such. 1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.
	1.3 Ethical standards—*Policies and practices are guided by ethical standards.*	1.3.1 Guidelines for staff behavior are in place and are well known to the staff.

Data Quality Assessment Framework
(DQAF)—Generic Framework
(July 2001 Vintage)

Quality Dimensions	Elements	Indicators
2. Methodological soundness *The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.*	**2.1 Concepts and definitions—** *Concepts and definitions used are in accord with internationally accepted statistical frameworks.* **2.2 Scope—***The scope is in accord with internationally accepted standards, guidelines, or good practices.* **2.3 Classification/sectorization—** *Classification and sectorization systems are in accord with internationally accepted standards, guidelines, or good practices.* **2.4 Basis for recording—***Flows and stocks are valued and recorded according to internationally accepted standards, guidelines, or good practices.*	2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices: see dataset-specific framework 2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices: see dataset-specific framework. 2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices: see dataset-specific framework. 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.

Data Quality Assessment Framework
(DQAF)—Generic Framework
(July 2001 Vintage)

Quality Dimensions	Elements	Indicators
3. Accuracy and reliability *Source data and statistical techniques are sound and statistical outputs sufficiently portray reality.*	**3.1 Source data**—*Source data available provide an adequate basis to compile statistics.*	3.1.1 Source data are collected from comprehensive data collection programs that take into account country-specific conditions. 3.1.2 Source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required. 3.1.3 Source data are timely.
	3.2 Statistical techniques—S*tatistical techniques employed conform to sound statistical procedures.*	3.2.1 Data compilation employs sound statistical techniques. 3.2.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.
	3.3 Assessment and validation of source data—*Source data are regularly assessed and validated.*	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.
	3.4 Assessment and validation of intermediate data and statistical outputs—*Intermediate results and statistical outputs are regularly assessed and validated.*	3.4.1 Main intermediate data are validated against other information where applicable. 3.4.2 Statistical discrepancies in intermediate data are assessed and investigated. 3.4.3 Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated.
	3.5 Revision studies—*Revisions, as a gauge of reliability, are tracked and mined for the information they may provide.*	3. 5.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes.

Data Quality Assessment Framework
(DQAF)—Generic Framework
(July 2001 Vintage)

Quality Dimensions	Elements	Indicators
4. Serviceability *Statistics are relevant, timely, consistent, and follow a predictable revisions policy.*	**4.1 Relevance**—*Statistics cover relevant information on the subject field.*	4.1.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.
	4.2 Timeliness and periodicity—*Timeliness and periodicity follow internationally accepted dissemination standards.*	4.2.1 Timeliness follows dissemination standards. 4.2.2 Periodicity follows dissemination standards.
	4.3 Consistency—*Statistics are consistent within the dataset, over time, and with major datasets.*	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.
	4.4 Revision policy and practice—*Data revisions follow a regular and publicized procedure.*	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.

**Data Quality Assessment Framework
(DQAF)—Generic Framework**
(July 2001 Vintage)

Quality Dimensions	Elements	Indicators
5. Accessibility *Data and metadata are easily available and assistance to users is adequate.*	**5.1 Data accessibility**—*Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.*	5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts). 5.1.2 Dissemination media and formats are adequate. 5.1.3 Statistics are released on the preannounced schedule. 5.1.4 Statistics are made available to all users at the same time. 5.1.5 Nonpublished (nonconfidential) subaggregates are made available upon request.
	5.2 Metadata accessibility—*Up-to-date and pertinent metadata are made available.*	5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines or good practices are annotated. 5.2.2 Levels of detail are adapted to the needs of the intended audience.
	5.3 Assistance to users—*Prompt and knowledgeable support service is available.*	5.3.1 Contact person for each subject field is publicized. 5.3.2 Catalogs of publications, documents, and other services, including information on any charges, are widely available.

Note: The elements and indicators included here bring together the "pointers to quality" that are applicable across the five identified dimensions of data quality.

Bulgaria: Users' Survey

Summary of results of survey of data users

With the assistance of the authorities and the Resident Representative in Sofia, and as a complement to the mission's own assessment of the quality of Bulgaria's statistics, a survey was conducted in English and Bulgarian among users of macroeconomic statistics. The survey asked users to evaluate a range of aspects of national accounts, prices (both consumer price and producer price indices), fiscal, monetary, and balance of payments statistics. Out of 46 questionnaires sent, the mission received 32 responses, i.e., a response rate of 70 percent.

In general, users were satisfied with the coverage, level of detail, and periodicity of statistics in Bulgaria. Availability and timeliness were deemed appropriate for most of the assessed series. While a majority of users reported being aware of advance notice calendars, a number of respondents did not seem to be aware of their availability. Regarding metadata, users generally considered them accessible and sufficiently clear. The respondents expressed confidence in the accuracy of data and in the soundness of underlying methodology, although they expressed mixed reactions to the clarity of information on revisions. They considered that official macroeconomic statistics of Bulgaria compared favorably to those of neighboring countries.

All the respondents were familiar with the Internet websites of the disseminating agencies and extensively use the other official dissemination media. In addition, several of them noted that they directly requested information from the agencies through email.

A number of the respondents provided comments and suggestions. Some of them noted that they preferred a higher level of detail for some datasets. Also some users expressed a lack of satisfaction with the availability of data on government finance and requested full compliance of the national accounts with international guidelines, including more detailed series. Two respondents remarked on the need for improvements to the coverage of the balance of payments data, errors and omissions, and comprehensiveness. One respondent pointed to the lack of consistency between datasets.

Many commented on the timeliness of data and suggested the introduction of a release calendar and encouraged the adoption of user-friendly techniques of dissemination, such as more details on the Internet (English and Bulgarian) for national accounts and government finance statistics.

Follow-up discussions were held with a selection of users. The following key areas where there is scope for improving Bulgaria's statistical service were identified: more comprehensive and accessible ARCs; more user-friendly websites; wider dissemination of data and metadata in English; increased timeliness of data release; and greater transparency of revisions policies and practices.