

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

This Report on the Observance of Standards and Codes on Data Module for Germany 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 November 11, 2005. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Germany or the Executive Board of the IMF.

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

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GERMANY

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

Prepared by the Statistics Department

Approved by Robert W. Edwards and Michael Deppler

November 11, 2005

The Report on the Observance of Standards and Codes (ROSC) data module provides an assessment of Germany's macroeconomic statistics against the Special Data Dissemination Standard (SDDS), complemented by an assessment of data quality based on the IMF's Data Quality Assessment Framework, July 2003 version (DQAF). The DQAF lays out internationally accepted practices in statistics, ranging from good governance in data producing agencies to practices specific to datasets.

The datasets covered in this report are national accounts, producer price index, government finance, and balance of payments statistics. The agencies that compile the datasets assessed in this report are the Federal Statistical Office (Statistisches Bundesamt) and the Deutsche Bundesbank.

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

Statistisches Bundesamt: [http://www.destatis.de/e\\_home.htm](http://www.destatis.de/e_home.htm)

Deutsche Bundesbank: <http://www.bundesbank.de/index.en.php>

This report is based on publicly available information and on information provided prior to, and during, a staff mission from the IMF's Statistics Department during July 5–20, 2005 that had discussions with the Federal and Länder statistical offices, the Bundesbank, the Federal Ministry of Finance, and a range of users of German statistics in Wiesbaden, Frankfurt, and Berlin. The mission team was headed by Mr. Robert Edwards and included Messrs. Paul Austin, Cornelis Gorter, Vincent Marie (all IMF Statistics Department), David Collins (Expert), and Ms. Maria Eloisa Villanueva (Administrative Assistant, IMF Statistics Department).

Germany is a member of the European Statistical System (ESS), which comprises the Statistical Office of the European Communities (Eurostat) and the statistical offices, ministries, and central banks that collect statistics in the countries of the European Economic Area. These countries presently comprise the European Union (EU) member states, Iceland, Liechtenstein, and Norway.

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## ABBREVIATIONS

<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
<i>BOP Book</i>	<i>European Union Balance of Payments/International Investment Position Statistical Methods</i>
<i>BOPSY</i>	<i>Balance of Payments Statistics Yearbook</i>
<i>BPM5</i>	<i>Balance of Payments Manual, fifth edition</i>
Bundesbank	Deutsche Bundesbank
c.i.f.	Cost, Insurance, and Freight
COFOG	Classification of Functions of Government
CPC	Central Product Classification
DQAF	Data Quality Assessment Framework, July 2003 version
DSBB	Dissemination Standards Bulletin Board (IMF)
EC	European Commission
ECB	European Central Bank
<i>ESA 95</i>	<i>European System of Accounts 1995</i>
ESS	European Statistical System
EU	European Union
Eurostat	Statistical Office of the European Communities
EU-STS	EU Regulation on Short-term Statistics
FDI	Foreign Direct Investment
f.o.b.	Free on Board
FSO	Federal Statistical Office (Statistisches Bundesamt)
GDP	Gross Domestic Product
<i>GFSM 1986</i>	<i>A Manual on Government Finance Statistics, 1986</i>
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
LSO	Land Statistical Office (Statistisches Landesamt)
MFI	Monetary and Financial Institutions
PPI	Producer Price Index
<i>PPI Manual</i>	<i>Producer Price Index Manual: Theory and Practice, 2004</i>
ROSC	Report on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard

## I. OVERALL ASSESSMENT

1. Germany subscribed to the IMF's Special Data Dissemination Standard (SDDS) on December 2, 1996 and started posting its metadata on the Dissemination Standards Bulletin Board (DSBB) on September 12, 1997. Germany met the SDDS requirements on March 23, 2000 and is currently in observance of the SDDS. It meets the SDDS specifications for coverage, periodicity, and timeliness for all data categories. The SDDS data categories are disseminated on Germany's National Summary Data Page, which is hyperlinked on the DSBB, and is updated on a timely basis. Appendix I provides an overview of Germany's dissemination practices compared to the SDDS.
2. Germany's membership in the European Statistical System (ESS) shapes official statistical policies and practices. The legal requirements of the ESS drive much of Germany's statistical work program. Federal Statistical Office (FSO) and Deutsche Bundesbank (Bundesbank) statisticians participate with colleagues from other member countries in working groups, committees, and other fora leading to close cooperation on statistical matters, increasing opportunities for sharing good practices, and enhancing professionalism.
3. In applying the IMF's Data Quality Assessment Framework, July 2003 version (DQAF), the remainder of this section presents the mission's main conclusions. The presentation is done at the level of the DQAF's quality dimensions, by agency for the first two dimensions, and across datasets for the remaining four. Section II provides a summary assessment by agency and dataset based on a four-part scale. This is followed by staff recommendations in Section III. The authorities' response to this report and a volume of Detailed Assessments are presented in separate documents.
4. The Report on the Observance of Standards and Codes (ROSC) data module contains the following main observations.

### **Prerequisites of quality**

5. Germany's system of official federal statistics is based on the principles of legality, functional concentration, and regional decentralization. The system results in a coherent and comprehensive suite of federal, Land, and local statistics. The FSO is responsible for the compilation and publication of most statistics at the federal level. In accordance with the mandate given by the *Federal Statistics Law*, the FSO and the Länder statistical offices (LSOs) must adhere to the principles of neutrality, objectivity, and scientific independence. All federal statistics require a specific federal or European Union (EU) legal basis. Much of the collection and processing of federal statistics is undertaken by the LSOs. The extensive coordination required between the FSO and the LSOs results in high overhead costs. Over the last 10 years, the FSO and the LSOs have experienced significant reductions in their resource bases, while the statistical workload has increased, particularly because of the growing European demand. The growing imbalance between resources and tasks under the given institutional arrangements is being addressed through the "masterplan" for the reform of official statistics in Germany, which, among other things, provides for a more efficient

split of responsibilities for statistical operations and for “competitive tendering” among offices for elements of the statistical program.

6. The legal framework for federal statistics in Germany derives from the *Basic Law* (Constitution) of 1949 and a 1983 decision of the Federal Constitutional Court. The rigidities inherent in this framework imply long lead times for the national statistical system to adapt to emerging statistical needs.

7. The Bundesbank has an effective legal and institutional framework that supports the collection of good quality balance of payments statistics. While the legal mandates do not prescribe data dissemination responsibilities, the Bundesbank has a tradition of dissemination as a public service. The *Foreign Trade and Payments Act* and the *Bundesbank Act*, supported by European regulations, establish an adequate legal mandate for data collection. The Bundesbank’s Service Centers for External Sector Audits promote respondent compliance with statistical requirements, and the appointment of a Data Protection Officer enhances confidence in the data confidentiality regime. Effective data sharing arrangements are in place between the Bundesbank and the FSO. Staffing levels are commensurate with the balance of payments statistics work program, although the balance of payments expertise base has diminished significantly as a result of a transitional high increase in staff turnover arising from the planned physical relocation of the balance of payments division to Mainz in July 2005. The Bundesbank demonstrates awareness of quality as the cornerstone of its statistical work.

### **Assurances of integrity**

8. The statistics producing agencies adhere to the principle of objectivity in the collection, processing, and dissemination of statistics. They demonstrate professionalism, are transparent in their policies and practices, and provide guidelines to staff on ethical conduct. Statistical policies and practices in the Bundesbank are transparent but could be further enhanced by alerting users in advance of planned changes in methodology, source data, and statistical practices.

### **Methodological soundness**

9. The German macroeconomic statistics generally follow internationally accepted standards and guidelines on concepts and definitions, scope, classification and sectorization, and basis for recording.

10. Establishment type units are not distinguished in the national accounts, but this has no effect on the level of gross domestic product (GDP).

11. For SDDS purposes, Germany has identified its cash-based government finance statistics, which generally accord with the concepts, definitions and classifications in *A Manual on Government Finance Statistics, 1986 (GFSM 1986)*. A migration path has not been developed to base the statistics on the *Government Finance Statistics Manual 2001 (GFSM 2001)*, but Germany has been developing quarterly statistics according to the

accruals principles of the *European System of Accounts (ESA 95)*. Publication of these data will be subject to European Commission approval. The coverage of general government debt data does not currently include the very small debt of the social security funds, although the recently amended *Law on Finance and Personnel Statistics* provides that this debt should be included in total general government debt data, starting with the first quarter of 2005. (It should be noted that the debt figures compiled for purposes of reporting under the Growth and Stability Pact do cover the debt of social security funds.) The classification of general government quarterly financing and debt does not include breakdowns by type of creditors, and the functional classification of cash-based expenditure differs slightly from the Classification of Functions of Government (COFOG).

12. Germany's balance of payments statistics are generally consistent with the conceptual framework of the IMF's *Balance of Payments Manual*, fifth edition (*BPM5*). Some departures from the *BPM5*-based classifications reflect mainly national preferences in data presentation, regional guidelines, and the nature of the data collection program.

### **Accuracy and reliability**

13. The national accounts are broadly accurate and reliable. However, the sources for estimating value added for a few categories of service industries could be improved. A direct source for quarterly changes in inventories, which is an important contributor to short-term deviation in the trend GDP growth rate, is lacking. Statistical techniques are generally sound.

14. The data sources for the producer price index (PPI) generally provide a sound basis for compiling the index, though there is no systematic, proactive process to monitor the ongoing representativeness of the samples of local units and products between rebases. Statistical techniques and validation processes are sound.

15. Comprehensive data reporting systems support the accuracy and reliability of the government finance and balance of payments statistics. Source data and statistical techniques for both datasets are generally sound and are under continuous review to ensure that statistical outputs generally portray reality.

### **Serviceability**

16. The German macroeconomic statistics are available with periodicities and timeliness that sometimes exceed SDDS requirements. Users are generally very positive in their assessments of the statistics. A comprehensive and cohesive statistical framework would support the analysis of price transmission processes. Consistency within datasets is adequate, except for government finance statistics where the links between the flow tables and the debt stock data are not apparent. The quarterly government finance statistics differ somewhat in coverage from the annual data, and the series are not always comparable over time.

## **Accessibility**

17. Germany's macroeconomic statistics data are readily accessible. Prompt and knowledgeable support is provided to users of the four assessed datasets.

18. There is scope to produce more complete, and more detailed, metadata for specialized users of the PPI. The summary methodology for government finance statistics, as presented in the IMF's DSBB, could be elaborated to better inform users. The Bundesbank is working on a contemporary, comprehensive publication on concepts, sources, and methods for balance of payments statistics. Documentation on the relationship between data on transactions in foreign direct investment (FDI) and capital links statistics (enterprise-based data on the stocks of German direct investment abroad and foreign direct investment in Germany) is not current.

## **II. ASSESSMENT BY AGENCY AND DATASET**

19. Assessments of the quality of four macroeconomic datasets—national accounts, producer price index, government finance statistics, and balance of payments statistics—were conducted using the DQAF. In this section, the results are presented at the level of the DQAF elements and using a four-point rating scale (Table 1). Assessments of the prerequisites of data quality and the assurances of integrity (Dimensions "0" and "1" of the DQAF) are presented in Tables 2a–b. For each dataset, the assessment of methodological soundness, accuracy and reliability, serviceability, and accessibility (Dimensions "2" to "5" of the DQAF) are shown in Tables 3a–d.

Table 1. Data Quality Assessment Framework July 2003—Summary Results<sup>1/</sup>

Key to symbols: O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; NA = Not Applicable					
	National Accounts	Producer Price Index	Government Finance Statistics	Balance of Payments Statistics	
<b>Datasets</b>					
<b>Dimensions/Elements</b>					
<b>0. Prerequisites of quality</b>					
0.1 Legal and institutional environment		O			O
0.2 Resources		O			O
0.3 Relevance		O			O
0.4 Other quality management		O			O
<b>1. Assurances of integrity</b>					
1.1 Professionalism		O			O
1.2 Transparency		O			LO
1.3 Ethical standards		O			O
<b>2. Methodological soundness</b>					
2.1 Concepts and definitions	O	O	LO		O
2.2 Scope	O	O	LO		O
2.3 Classification/sectorization	O	O	LO		LO
2.4 Basis for recording	O	O	O		O
<b>3. Accuracy and reliability</b>					
3.1 Source data	LO	LO	O		O
3.2 Assessment of source data	O	O	O		O
3.3 Statistical techniques	O	O	O		O
3.4 Assessment and validation of intermediate data and statistical outputs	O	O	O		O
3.5 Revision studies	O	O	O		O
<b>4. Serviceability</b>					
4.1 Periodicity and timeliness	O	O	O		O
4.2 Consistency	O	O	LO		O
4.3 Revision policy and practice	O	O	O		O
<b>5. Accessibility</b>					
5.1 Data accessibility	O	O	O		O
5.2 Metadata accessibility	O	LO	O		LO
5.3 Assistance to users	O	O	O		O

**Practice observed:** current practices generally meet or achieve the objectives of the DQAF internationally accepted statistical practices without any significant deficiencies. **Practice largely observed:** some departures, but these are not seen as sufficient to raise doubts about the authorities' ability to observe the DQAF practices. **Practice largely not observed:** significant departures and the authorities will need to take significant action to achieve observance. **Practice not observed:** most DQAF practices are not met. **Not applicable:** used only exceptionally when statistical practices do not apply to a country's circumstances

<sup>1/</sup> For dimensions 0 and 1, the assessments across national accounts, producer price index, and government finance statistics are for the Federal Statistical Office, and the assessments for balance of payments statistics are for the Deutsche Bundesbank.

Table 2a. Germany: Assessment of Data Quality—Dimensions 0 and 1—Federal Statistical Office

<p><b>0. Prerequisites of quality</b></p> <p><b>Legal and institutional environment</b></p> <ul style="list-style-type: none"> <li>• Essential provisions regarding the federal statistics and responsibilities of the FSO are laid down in the Constitution and the <i>Federal Statistics Law</i>.</li> <li>• The system of official statistics is based on three principles:             <ol style="list-style-type: none"> <li>(i) Legality—in general, statistics require a specific legal basis, which may be federal or EU law;</li> <li>(ii) Functional concentration—most statistical work is undertaken by the statistical offices at the federal, Land, and municipal levels;</li> <li>(iii) Regional decentralization—with the implication that much of the collection and processing of federal statistics is undertaken by the Länder statistical offices (L.SOs).</li> </ol> </li> <li>• The FSO is an independent authority under the administrative supervision of the Federal Ministry of the Interior. It adheres to the principles of neutrality, objectivity, and scientific independence.</li> <li>• The Statistical Advisory Committee advises the FSO on fundamental issues. The FSO and the L.SOs discuss common issues in the Conference of Heads of Statistical Offices. Both these bodies have specialist subcommittees. The Interministerial Committee for Coordination and Rationalization of Statistics coordinates statistics at the federal level.</li> <li>• The <i>Federal Statistics Law</i> strictly protects confidentiality. The FSO has taken adequate measures to prevent disclosure of individual information.</li> <li>• Respondents are informed about their rights and obligations.</li> <li>• Both the legislative bodies and the FSO carefully monitor the burden placed on respondents.</li> </ul> <p><b>Resources</b></p> <ul style="list-style-type: none"> <li>• The number of FSO and LSO staff has decreased considerably during the last 10 years. At the same time, the statistical workload has increased. The “masterplan” for the reform of official statistics aims to mitigate this situation.</li> <li>• Current legal and administrative arrangements result in significant overhead costs.</li> <li>• The FSO invests considerably in human resources development.</li> <li>• The FSO uses high-performance computers and modern software packages.</li> <li>• A 2005 survey showed that FSO staff is generally satisfied with its workplace conditions.</li> <li>• The FSO’s strategic plan (“fit 2008”) has efficiency as one of its strategic objectives.</li> </ul> <p><b>Relevance</b></p> <ul style="list-style-type: none"> <li>• The Statistical Advisory Committee and other bodies advise on the relevance of the FSO’s statistics. Much statistical activity is driven by EU requirements.</li> </ul> <p><b>Other quality management</b></p> <p>The FSO actively participates in European quality work (leadership group, working groups, and task forces) dealing with quality issues. For all statistical areas, data quality reports are being produced covering the components of the European and national quality standards.</p>	<p><b>1. Assurances of integrity</b></p> <p><b>Professionalism</b></p> <ul style="list-style-type: none"> <li>• The President of the FSO is appointed by the Federal President. Being a civil servant, he/she cannot be dismissed, unless by disciplinary proceedings. He/she retires at age 65.</li> <li>• Extensive development opportunities are available to FSO staff, and an active research program is promoted.</li> <li>• The FSO chooses data sources on best fit for the statistical needs.</li> <li>• No governmental approval is needed to publish statistical information.</li> <li>• The FSO comments on erroneous interpretation of statistics.</li> </ul> <p><b>Transparency</b></p> <ul style="list-style-type: none"> <li>• The terms and conditions under which the FSO operates are available on its website.</li> <li>• All publications are clearly identified by name and logo, and they include full contact information.</li> <li>• Government access to statistics prior to their release is documented on the IMF DSBB but should also be presented on the FSO website to better inform local users.</li> <li>• Information on changes in methodology, source data, and statistical techniques is given to users well in advance.</li> </ul> <p><b>Ethical standards</b></p> <ul style="list-style-type: none"> <li>• The ethical standards for official statistics are set out in the <i>Federal Statistics Law</i> and in the FSO’s corporate vision and strategic objectives.</li> <li>• Ethical standards for staff behavior are part of employment contracts and civil servants’ appointment. New staff have to take a vow of secrecy and fidelity.</li> <li>• The FSO’s corporate vision and strategic objectives have been distributed to all staff and are available on the Internet.</li> </ul>
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Table 2b. Germany: Assessment of Data Quality—Dimensions 0 and 1—Deutsche Bundesbank

0. Prerequisites of quality	1. Assurances of integrity
<p><b>Legal and institutional environment</b></p> <ul style="list-style-type: none"> <li>• The Bundesbank's responsibility for compiling the balance of payments dates back to a 1954 interagency agreement, and is reinforced in the <i>Foreign Trade and Payments Act</i> and supported by the <i>Bundesbank Act</i>, which provides for reporting from monetary financial institutions (MFIs).</li> <li>• The legal mandates do not prescribe data dissemination responsibilities but the Bundesbank has a tradition of dissemination as a public service.</li> <li>• Data sharing arrangements between the Bundesbank and the FSO are adequate.</li> <li>• Bundesbank's Service Centers for External Sector Audits promote respondent compliance with statistical requirements, and the appointment of a Data Protection Officer enhances confidence in the data confidentiality regime.</li> </ul> <p><b>Resources</b></p> <ul style="list-style-type: none"> <li>• Resources are commensurate with the Bundesbank's statistical programs, although the balance of payments expertise base has diminished significantly. The diminishment is a result of a transitional high increase in staff turnover arising from the planned physical relocation of the balance of payments division to Mainz in July 2005.</li> </ul> <p><b>Relevance</b></p> <ul style="list-style-type: none"> <li>• The relevance and practical utility of existing statistics are monitored by user surveys and regular contacts with principal data users. User feedback is encouraged through the Statistics Department's online user service facility.</li> <li>• Information on new and emerging requirements is obtained in meetings and international working groups, including those of the European Central Bank (ECB), Eurostat, and the IMF.</li> </ul> <p><b>Other quality management</b></p> <ul style="list-style-type: none"> <li>• The focus on quality awareness is highlighted both in staff contributions to work on data quality at the European level and in managerial decisions geared toward optimal trade-offs within the data quality dimensions.</li> <li>• Trade-offs are discussed at the level of the ECB's Statistics Committee, which advises the ECB Governing Council on guidelines for statistical production, and the Committee on Monetary, Financial and Balance of Payments Statistics (CMFB) and other EU committees, which assists the European Commission in developing and implementing statistical work programs.</li> <li>• The Bundesbank also has a legal obligation to the ECB and Eurostat to assess and monitor the quality of national contributions to the euro area and the EU balance of payments aggregates.</li> </ul>	<p><b>Professionalism</b></p> <ul style="list-style-type: none"> <li>• Article 12 of the <i>Bundesbank Act</i> establishes the central bank's independence from other government authorities. This is further emphasized by the ECB and European System of Central Bank Statutes.</li> <li>• Staff is actively involved in professional bodies, working groups, and regional/international committees (e.g., the IMF Committee on Balance of Payments Statistics and Balance of Payments Technical Expert Group, which are both advising on the <i>BPM5</i> update).</li> <li>• Choices of data sources and statistical techniques are made on the basis of statistical research, other countries' experiences, and the guidelines of international and regional institutions, taking into account country-specific conditions and the benefit/cost of expanding or modifying statistical collections.</li> </ul> <p><b>Transparency</b></p> <ul style="list-style-type: none"> <li>• The terms and conditions under which statistics are collected and processed are disseminated on the Bundesbank's website and are cited in all reporting forms.</li> <li>• Access to the current account is provided to the FSO and the Ministry of Economy and Labor, one or two days in advance of the Bundesbank's balance of payments press release. These arrangements are explained in the SDDS metadata but should also be presented on the Bundesbank's website to better inform local users.</li> <li>• Advance notice of major changes in methodology, source data, and statistical techniques is not given; these changes are communicated to users when they are introduced, usually in the March edition of the Bundesbank's <i>Monthly Report</i>.</li> </ul> <p><b>Ethical standards</b></p> <ul style="list-style-type: none"> <li>• Ethical standards are included in employee contracts and civil service personnel statutes. In April 2005, a General Code of Conduct came into force for all Bundesbank staff.</li> <li>• Observance of the Code of Conduct is an integral part of the professional culture of the Bundesbank.</li> <li>• At the time of employment, and on an annual basis, staff is required to affirm/reaffirm that they have taken note of the ethical standards.</li> </ul>

Table 3a. Germany: Assessment of Data Quality—Dimensions 2 to 5—National Accounts

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p><b>Concepts and definitions</b></p> <ul style="list-style-type: none"> <li>The FSO compiles the national accounts according to the conceptual framework of the <i>ESA 95</i>.</li> <li>The conceptual basis of the national accounts does not reflect the establishment (local kind of activity unit).</li> </ul> <p><b>Scope</b></p> <ul style="list-style-type: none"> <li>The FSO compiles all tables and accounts recommended for the <i>System of National Accounts 1993 (1993 SNA)</i> implementation.</li> <li>The delimitations of the economy and production boundary are conceptually correct.</li> <li>Research and development on own account is not explicitly measured.</li> </ul> <p><b>Classification/sectorization</b></p> <ul style="list-style-type: none"> <li>The FSO uses classifications and sectors derived from appropriate EU standards.</li> </ul> <p><b>Basis for recording</b></p> <ul style="list-style-type: none"> <li>All transactions are recorded on an accruals basis, except for some imports and exports of services.</li> <li>Merchandise imports and exports are valued correctly at f.o.b. prices.</li> </ul>	<p><b>Source data</b></p> <ul style="list-style-type: none"> <li>The available sources are broadly adequate.</li> <li>A single, consistent business register is being constructed.</li> <li>No primary statistics exist for a few service activities.</li> <li>Household final consumption is mainly estimated from turnover data from suppliers.</li> <li>Government sources are sound.</li> <li>Administrative data on financial institutions are comprehensive.</li> <li>The available price indices are broadly sound and sufficiently detailed.</li> <li>No direct sources exist for quarterly changes in inventories.</li> <li>Source data are mostly consistent with the national accounts and are available on a timely basis.</li> </ul> <p><b>Assessment of source data</b></p> <ul style="list-style-type: none"> <li>Source data are adequately checked.</li> </ul> <p><b>Statistical techniques</b></p> <ul style="list-style-type: none"> <li>Statistical techniques are broadly sound.</li> <li>The use of older fixed coefficients is limited.</li> <li>Agricultural work-in-progress is recorded.</li> <li>Financial intermediation services indirectly measured are allocated to users.</li> <li>Double deflation is used throughout.</li> <li>Volume measures are chain-linked.</li> <li>Case-by-case methods are used to benchmark quarterly data to annual data.</li> </ul> <p><b>Assessment and validation of intermediate data and statistical outputs</b></p> <ul style="list-style-type: none"> <li>Validation procedures are extensive.</li> <li>Remaining statistical discrepancies between production and expenditure methods (1 to 2 percent) are removed at the aggregate level.</li> <li>The reliability of the statistics is periodically assessed by conducting revision studies.</li> </ul> <p><b>Revision studies</b></p> <ul style="list-style-type: none"> <li>Revision studies are published.</li> </ul>	<p><b>Periodicity and timeliness</b></p> <ul style="list-style-type: none"> <li>Periodicity meets, and timeliness exceeds, SDDS requirements.</li> </ul> <p><b>Consistency</b></p> <ul style="list-style-type: none"> <li>The statistics are internally consistent.</li> <li>Time series for unified Germany go back to 1991.</li> <li>The recently implemented major revision will be backcast to 1970 (early years for West Germany only).</li> <li>The national accounts are consistent with the balance of payments (apart from a few clearly documented differences) and with government finance statistics.</li> </ul> <p><b>Revision policy and practice</b></p> <ul style="list-style-type: none"> <li>Periodic revisions follow a regular and transparent schedule.</li> <li>There are no strict rules on the identification of preliminary or revised data.</li> <li>Studies and analysis of revisions are conducted and made public as a matter of policy.</li> </ul>	<p><b>Data accessibility</b></p> <ul style="list-style-type: none"> <li>National accounts are published in a clear manner.</li> <li>Publications include extensive explanations.</li> <li>Relevant series are published seasonally adjusted and corrected for working days. These calculations are made in close cooperation with the Bundesbank.</li> <li>Data are released in a way that facilitates redissemination (press releases, electronic files).</li> <li>The advance release calendar is strictly followed and data are made available to all users at the same time, with the exception that four official agencies receive the data one hour in advance under embargo.</li> <li>A few additional details are available on request, but most data are published.</li> </ul> <p><b>Metadata accessibility</b></p> <ul style="list-style-type: none"> <li>Comprehensive and up-to-date documentation is available (in electronic form it is free of charge).</li> <li>A metadata-driven database is accessible through the Internet.</li> <li>Both a brochure for nonspecialist users and scientific articles are available on national accounts issues.</li> </ul> <p><b>Assistance to users</b></p> <ul style="list-style-type: none"> <li>Knowledgeable user support is provided during working hours.</li> <li>Teaching materials have been prepared for different user groups.</li> <li>Catalogs, clearly including prices, are published in hard copy and on the Internet.</li> </ul>

Table 3b. Germany: Assessment of Data Quality—Dimensions 2 to 5—Producer Price Index

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p><b>Concepts and definitions</b></p> <ul style="list-style-type: none"> <li>The PPI follows the concepts and definitions of the <i>ESA 95</i> and the EU regulation on short-term statistics (EU-STS).</li> </ul> <p><b>Scope</b></p> <ul style="list-style-type: none"> <li>The scope relates to the domestic sales of all resident market enterprises classified to the mining and quarrying, manufacturing, and electricity, gas, steam, and water supply industries.</li> <li>Changes in inventories and own-account production for final consumption are not included, consistent with the EU-STS.</li> </ul> <p><b>Classification/sectorization</b></p> <ul style="list-style-type: none"> <li>The <i>1993 SNA</i> is followed in the classification of institutional units and transactions.</li> <li>The classifications used for industries and commodities follow international standards.</li> <li>Statistical Classification of Economic Activities in the European Communities (NACE Rev.1) is used to classify local units and enterprises according to their principal activity, and the Central Product Classification (CPC) and List of Products of the European Communities (PRODCOM) are used to classify commodities.</li> </ul> <p><b>Basis for recording</b></p> <ul style="list-style-type: none"> <li>Producers' market transaction prices are recorded on an accruals basis.</li> </ul>	<p><b>Source data</b></p> <ul style="list-style-type: none"> <li>The commodity and industry weights are derived from comprehensive monthly and quarterly surveys of all local units belonging to enterprises with employment of 20 or more.</li> <li>The monthly price survey collects transaction prices for 12,900 fully specified products from 7,150 local units each month.</li> <li>Comprehensive five-yearly rebases are implemented with a delay of over two and a half years. In between the rebases, local units and products are replaced when the FSO becomes aware that a business has closed down or a product is discontinued.</li> <li>However, no systematic, proactive process is in place to monitor the representativeness of the samples of local units, and products, on an ongoing basis between rebases.</li> </ul> <p><b>Assessment of source data</b></p> <ul style="list-style-type: none"> <li>Source data for both the prices and the weights are rigorously and routinely assessed.</li> </ul> <p><b>Statistical techniques</b></p> <ul style="list-style-type: none"> <li>The techniques used conform to those specified in the <i>Producer Price Index Manual: Theory and Practice, 2004 (PPI Manual)</i>, and special emphasis is given to the application of hedonic quality adjustment techniques for computers and computing equipment.</li> </ul> <p><b>Assessment and validation of intermediate data and statistical outputs</b></p> <ul style="list-style-type: none"> <li>Intermediate results and outputs are routinely assessed and validated.</li> </ul> <p><b>Revision studies</b></p> <p>A detailed analysis of the effects on the index series of the new samples and weights is undertaken and published after each rebase.</p>	<p><b>Periodicity and timeliness</b></p> <ul style="list-style-type: none"> <li>The PPI meets the SDDS requirement for periodicity and exceeds the timeliness standard.</li> </ul> <p><b>Consistency</b></p> <ul style="list-style-type: none"> <li>The PPI is monitored for consistency internally, over time, and in relation to other relevant statistics.</li> <li>Continuous series at an aggregate level are available from 1949 onward, and from 1995 onward at the four-digit industry level.</li> <li>A comprehensive and cohesive statistical framework would support the analysis of price transmission processes.</li> </ul> <p><b>Revision policy and practice</b></p> <ul style="list-style-type: none"> <li>Users are well aware of the FSO revision policy and practices, which are very systematic.</li> </ul>	<p><b>Data accessibility</b></p> <ul style="list-style-type: none"> <li>The accessibility of PPI data is impressive in terms of the dissemination formats, targeting of the different market segments, and the large volume of detailed series that users can access.</li> <li>The PPI is the most popular dataset on the FSO web-based Statistics-Shop.</li> <li>An annual advance release calendar with "no later than" dates, and weekly calendars with precise release dates, support effective dissemination.</li> </ul> <p><b>Metadata accessibility</b></p> <ul style="list-style-type: none"> <li>The available metadata are of good quality.</li> <li>However, for more specialized users, more detailed, and more complete, information is required on important aspects such as statistical techniques, survey characteristics for the weighting sources, and compilation techniques.</li> </ul> <p><b>Assistance to users</b></p> <ul style="list-style-type: none"> <li>Contact points are fully specified in publications, etc., and a prompt service is provided to clients.</li> <li>A catalog of publications is produced twice yearly and updated on the Internet.</li> </ul>

Table 3c. Germany: Assessment of Data Quality—Dimensions 2 to 5—Government Finance Statistics

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p><b>Concepts and definitions</b></p> <ul style="list-style-type: none"> <li>• Cash quarterly and annual statistics on general government transactions and debt statistics broadly conform with the <i>GFSM 1986</i> methodology.</li> <li>• Germany does not have a migration path toward adopting the <i>GFSM 2001</i> for SDDS purposes but has been developing quarterly general government statistics according to accruals principles based on the <i>ESA 95</i>, which will be published subject to EC approval.</li> <li>• The <i>ESA 95</i> residency criterion is followed.</li> </ul> <p><b>Scope</b></p> <ul style="list-style-type: none"> <li>• All cash transactions identified in the <i>GFSM 1986</i> are covered.</li> <li>• Statistics broadly cover the general government sector.</li> <li>• Some very small government special services providers are currently excluded from the quarterly coverage of government finance statistics.</li> <li>• The general government debt data currently exclude the very small debt of the social security funds.</li> <li>• Recently amended legislation provides that the above-mentioned exception on coverage will no longer exist starting from the first quarter of 2005.</li> </ul> <p>(Figures reported for Growth and Stability Pact purposes cover the debt of social security funds and also cover the government special services providers.)</p> <p><b>Classification/sectorization</b></p> <ul style="list-style-type: none"> <li>• The analytical framework of the cash-based statistics does not strictly correspond to an internationally recognized standard.</li> <li>• The national classification practices are broadly in line with the <i>GFSM 1986</i> methodology.</li> <li>• The classification of quarterly financing and debt data does not include breakdowns by type of creditors, and the functional classification of expenditure differs slightly from the COFOG.</li> <li>• The delimitation of the government sector and of its subsectors conforms to internationally recognized criteria.</li> </ul> <p><b>Basis for recording</b></p> <ul style="list-style-type: none"> <li>• Revenue and expenditure are recorded on a strict cash basis.</li> <li>• Gross debt is valued at face value.</li> <li>• Foreign currency is converted using the mean of buying and selling market rates on the date of recording.</li> <li>• Where applicable, market prices are used, and grossing and netting does not depart significantly from the <i>GFSM 1986</i> rules.</li> </ul>	<p><b>Source data</b></p> <ul style="list-style-type: none"> <li>• Data on flows and debt are obtained from budget reports through a well-coordinated reporting system according to which source data are reported to the FSO, either directly or indirectly through the LSOs or through the Ministry of Health for some social security funds.</li> <li>• The classification of the source data approximates the classification of the statistics.</li> <li>• Source data are comprehensive and timely.</li> </ul> <p><b>Assessment of source data</b></p> <ul style="list-style-type: none"> <li>• Source data are assessed by the FSO and by the LSOs when the reporting transits through them.</li> </ul> <p><b>Statistical techniques</b></p> <ul style="list-style-type: none"> <li>• Few statistical techniques are used because the data are almost exclusively based on consistent and comprehensive records.</li> <li>• The few estimates that need to be made are sound.</li> </ul> <p><b>Assessment and validation of intermediate data and statistical outputs</b></p> <ul style="list-style-type: none"> <li>• The FSO assesses the data prepared by the LSOs.</li> <li>• Unexpected fluctuations and apparent discrepancies are investigated, including possible classification errors.</li> </ul> <p><b>Revision studies</b></p> <ul style="list-style-type: none"> <li>• No revision studies are made for the quarterly cash statistics, because these revisions, which concern only the four aggregates published in the press release, are small, and their components published only with the final data, are not subject to revisions.</li> </ul>	<p><b>Periodicity and timeliness</b></p> <ul style="list-style-type: none"> <li>• Data for central government operations and central government debt are disseminated according to the periodicity prescribed by the SDDS. The periodicity of the data for general government operations exceeds the periodicity prescribed by the SDDS. These three data categories are disseminated according to the timeliness requirements of the SDDS for fiscal sector data.</li> </ul> <p><b>Consistency</b></p> <ul style="list-style-type: none"> <li>• Links between the flow tables and the debt stock data are not apparent.</li> <li>• Statistics are consistent within the dataset, but they are not always comparable over time, owing to classification changes. There is consistency between cash statistics and accrual based <i>ESA 95</i> as well as other datasets because the cash government statistics constitute a data source for the other statistics.</li> </ul> <p><b>Revision policy and practice</b></p> <ul style="list-style-type: none"> <li>• Final data in the press release are not identified as such. Occasionally, the press release includes preliminary data. In such cases, where and when the final data will be published is not indicated in the press release itself, but can only be inferred from the methodological note linked to the release and from the FSO's advance release calendar.</li> </ul>	<p><b>Data accessibility</b></p> <ul style="list-style-type: none"> <li>• A broad range of data at varying levels of detail are disseminated through a variety of media including hard copy, Internet, and CD-ROM.</li> <li>• Accessibility is excellent, and dissemination respects the publicly available release calendar.</li> </ul> <p><b>Metadata accessibility</b></p> <ul style="list-style-type: none"> <li>• Extensive notes accompany the publication of the final quarterly and annual data.</li> <li>• The summary methodology that must accompany the basic SDDS metadata on the DSBB should be elaborated.</li> </ul> <p><b>Assistance to users</b></p> <ul style="list-style-type: none"> <li>• Assistance is extensive through various means.</li> <li>• Contact information accompanies publication of data.</li> <li>• Dissemination catalogs exist.</li> </ul>

Table 3d. Germany: Assessment of Data Quality—Dimensions 2 to 5— Balance of Payments Statistics

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p><b>Concepts and definitions</b></p> <ul style="list-style-type: none"> <li>The balance of payments statistics are compiled in broad conformity with the guidelines of the IMF's <i>BPM5</i>.</li> </ul> <p><b>Scope</b></p> <ul style="list-style-type: none"> <li>In principle, all resident-nonresident transactions are recorded in the balance of payments. Some deviations exist in practice.</li> </ul> <p><b>Classification/sectorization</b></p> <ul style="list-style-type: none"> <li>Classification is in broad conformity with <i>BPM5</i>.</li> <li>Departures are based mainly on national preferences in data presentation, regional guidelines, and constraints on data collection. They include the following: the goods imports are not recorded on a c.i.f. basis in the national monthly balance of payments; there are no breakdowns for goods; personal and business travel credits are not distinguished; cross-border construction is largely classified as a service; other investment income does not include income on trade credits and the interest share of financial leasing; loans are not classified separately from currency and deposits in other investment; and fees and commissions related to the sale and purchase of securities are partly recorded in the financial account.</li> </ul> <p><b>Basis for recording</b></p> <ul style="list-style-type: none"> <li>Market prices are generally used.</li> <li>Accrual-based recording is adopted, but actual practice is subject to the nature of the reporting system (e.g. loan repayments, EU transfers).</li> </ul>	<p><b>Source data</b></p> <ul style="list-style-type: none"> <li>A comprehensive data collection program is based primarily on direct reporting by bank and nonbank enterprises, individuals, and public authorities.</li> <li>The resident transactor is responsible for statistical reporting.</li> <li>Source data are timely and reasonably approximate <i>BPM5</i> guidelines on definitions, scope, classifications, valuation, and time of recording.</li> </ul> <p><b>Assessment of source data</b></p> <ul style="list-style-type: none"> <li>The reporting system is closely monitored.</li> <li>For balance of payments statistics, there are on-site inspections of enterprises' statistical reporting.</li> </ul> <p><b>Statistical techniques</b></p> <ul style="list-style-type: none"> <li>The statistical techniques are generally sound. Possible sources of errors and omissions are continuously investigated.</li> </ul> <p><b>Assessment and validation of intermediate data and statistical outputs</b></p> <ul style="list-style-type: none"> <li>Intermediate results and outputs are routinely assessed and validated.</li> </ul> <p><b>Revision studies</b></p> <ul style="list-style-type: none"> <li>Studies of revision trends are conducted biannually for the calculation of the quantitative and qualitative indicators on data quality.</li> <li>Findings are used to revise preliminary data and refine data collection programs for subsequent periods.</li> </ul>	<p><b>Periodicity and timeliness</b></p> <ul style="list-style-type: none"> <li>Data exceed the SDDS periodicity and timeliness requirements.</li> </ul> <p><b>Consistency</b></p> <ul style="list-style-type: none"> <li>Statistics are consistent within dataset, because quarterly and annual data are based on monthly data.</li> <li>Errors and omissions are actively monitored.</li> <li>Data are reconcilable with those obtained from other frameworks.</li> <li>Reconciliation work with the national accounts, and the monetary and financial statistics, is also undertaken in the context of ECB/Eurostat task forces and ECB consistency checks, respectively.</li> <li>Consistent time series are available, dating back to 1971 for partial series.</li> </ul> <p><b>Revision policy and practice</b></p> <ul style="list-style-type: none"> <li>Periodic revisions follow a regular and transparent schedule.</li> <li>The status of data (preliminary or revised) is clearly identified.</li> <li>Analysis of revisions is usually published in the March edition of the Bundesbank's <i>Monthly Report</i>.</li> </ul>	<p><b>Data accessibility</b></p> <ul style="list-style-type: none"> <li>The accessibility of the balance of payments data is excellent in terms of the data dissemination formats, targeting of the different market segments, and the volume of detailed series, including geographical breakdowns.</li> <li>An annual advance release calendar identifies "no later than" release dates; the actual date is identified on the Friday preceding the week of the data release.</li> <li>Full balance of payments statistics are released simultaneously to all users. The FSO and the Ministry of Economy and Labor have prior access to the current account aggregates under long-standing arrangements.</li> </ul> <p><b>Metadata accessibility</b></p> <ul style="list-style-type: none"> <li>Articles on methodological changes, SDDS metadata, ECB's <i>BOP Book</i>, and IMF's <i>Balance of Payments Statistics Yearbook (BOPSY)</i> country notes are the main sources of documentation on concepts, sources, and methods.</li> <li>A contemporary, comprehensive publication is not available. Revisions to an earlier Bundesbank (1992) publication are under way.</li> <li>Documentation on the relationship between capital links statistics and FDI data is not current.</li> </ul> <p><b>Assistance to users</b></p> <ul style="list-style-type: none"> <li>A separate unit in the Balance of Payments Division is tasked with responding to user requests.</li> <li>Service quality is gauged by a customer satisfaction survey. Users can sign up for email alerts.</li> </ul>

### **III. STAFF'S RECOMMENDATIONS**

20. Based on the review of Germany's statistical practices, discussions with the data producing agencies, and discussions and responses from data users (see Appendix III of the Detailed Assessments volume), the mission has a set of recommendations. They are designed to further increase Germany's adherence to internationally accepted statistical practices and would, in the mission's view, enhance the analytical usefulness of Germany's statistics. Some additional technical suggestions are included in the Detailed Assessments volume.

#### **Crosscutting recommendations**

- Investigate options for further streamlining the split of responsibilities for statistical operations between the FSO and the LSOs with a view to freeing up resources to meet the emerging demand for new statistics.
- Document on the FSO and the Bundesbank websites the respective arrangements for prior access, under embargo arrangements, to statistics so that the arrangements are more transparent to local users of statistics.
- Improve statistical metadata for the PPI, government finance statistics, and balance of payments statistics.

#### **National Accounts**

- Ensure that all productive activities, including services, are covered by primary annual source data.
- Develop source data for the quarterly estimate of changes in inventories. Changes in inventories, together with net exports, are the main contributors to short-term deviations in the trend GDP growth rate.
- Give high priority to the completion of the integrated business register.

#### **Producer Price Index**

- In order to ensure that the price indicators remain representative of contemporary market activity, implement procedures for (1) the periodic monitoring of local unit samples based on the quarterly production survey results, and (2) the ongoing review of product samples based on a rolling program of interviews with respondents between index rebases.
- Investigate opportunities for a more centralized PPI organizational model, in order to yield efficiency and effectiveness gains and provide opportunities for closer contact with reporting units, for instance, for maintaining the product samples.

- Undertake empirical studies to assess the index quality improvements that would be derived by updating the industry and commodity weights more frequently than five-yearly. Determine and implement the optimum update frequency.
- Develop a comprehensive and coherent statistical framework for the presentation of the current and future array of partial price indicators to support price transmission studies and increase users' understanding of the relationships between the different indices.
- For the PPI, develop and publish more detailed, and more complete, metadata that fully articulate information on index concepts, data sources, statistical techniques, compilation procedures, etc. to support the needs of more specialized users.

### **Government Finance Statistics**

- Take action to enable government finance statistics based on either the *ESA 95* or *GFSM 2001* framework to be used for SDDS purposes. This will require, among other things, attention to the classification of financing and debt and an expanded functional split for expenditure. The flow statistics should also be published in conjunction with the detailed debt stock data.
- Expand the coverage of debt data to include social security funds.  
(The recently amended *Law on Finance and Personnel Statistics* provides that the debt of social security funds should be included in total general government debt, starting with the first quarter 2005.)
- Improve the press release for general government statistics by including more breakdowns for financing, by explicitly indicating whether or not the data are subject to revisions, and by stating the revision practice.
- Review and revise the metadata posted on the DSBB.

### **Balance of Payments Statistics**

- Adopt a policy of providing advance notice of significant changes in methodology, source data, and statistical techniques.
- For monthly national data on goods, consider (1) reporting imports on a f.o.b. basis; and (2) providing *BPM5*-based breakdowns of goods.
- With a view to bringing monthly presentation formats closer to the *BPM5* standard presentation, consider the development of sources and methods to (1) distinguish business and personal travel credits; (2) adjust the portfolio securities transactions

data on account of fees and commissions (and include the latter in the current account); (3) include income on trade credits and the interest share of financial leasing under other investment income; and, (4) distinguish loans from currency and deposits under other investment.

- In addition to publishing the comprehensive concepts, sources, and methods manual, update the documentation on the relationship between capital links statistics and FDI statistics as an aid to users.

Table 4. Germany: Practices Compared to the SDDS Coverage, Periodicity, and Timeliness of Data

SDDS Data Category	Coverage (meets SDDS requirement)	Periodicity		Timeliness		Comments
		SDDS	Germany	SDDS	Germany	
<b>Real Sector</b>						
National accounts	Yes	Q	Q	1Q	45 D	Timeliness exceeds SDDS requirements.
Production Index/indices	Yes	M	M	6W <i>(1M encouraged)</i>	6W	
<i>Forward-looking indicators</i>	<i>(encouraged data category)</i>	<i>M or Q</i>		<i>M or Q</i>		Germany has not identified any forward looking indicators for SDDS purposes.
Employment	Yes	Q	M	1Q	30D	Periodicity exceeds SDDS requirements.
Unemployment	Yes	Q	M	1Q	10D	Periodicity and timeliness exceed SDDS requirements.
Wages/earnings	Yes	Q	Q	1Q	No later than 3M	
Consumer price index	Yes	M	M	1M	2W	Timeliness exceeds SDDS requirements.
Producer price index	Yes	M	M	1M	No later than 3W	Timeliness exceeds SDDS requirements.
<b>Fiscal Sector</b>						
General govt. operations	Yes	A	Q	2Q	3M	Periodicity and timeliness exceed SDDS requirements.
Central govt. operations	Yes	M	M	1M	1M	
Central govt. debt	Yes	Q	M (outstanding debt) Q (central government debt guarantees)	1Q	No later than 1M; December data, no later than 2 months	Periodicity (outstanding debt) and timeliness exceed SDDS requirements.
<b>Financial Sector</b>						
Analytical accounts of the banking sector	Yes	M	M	1M	1M	
Analytical accounts of the central bank	Yes	M (W recommended)	M	2W <i>(1W encouraged)</i>	14D	
Interest rates	Yes	D	D (central government bonds)	↓	D	
Stock market: share price index	Yes	D	D	↓	D	

SDDS Data Category	Coverage (meets SDDS requirement)	Periodicity		Timeliness		Comments
		SDDS	Germany	SDDS	Germany	
<b>External Sector</b>						
Balance of payments	Yes	Q	M	1Q	6–8W	Periodicity and timeliness exceed SDDS requirements.
International Reserves and Foreign Currency Liquidity	Yes	M (W recommended)	M	1W for official reserve assets  1M (1W encouraged) for the reserves template	1W  1W	Timeliness for the reserves template exceeds SDDS requirements.
Merchandise trade	Yes	M	M	8W (4–6W encouraged)	40D	Timeliness exceed SDDS requirements.
International Investment position	Yes	A (Q recommended)	A	3Q (1Q encouraged)	8–9 M	
External debt	Yes	Q	Q	1Q	1Q	
Exchange rates	Yes	D	D	<sup>1</sup>	D	
<b>Addendum: Population</b>	Yes	A	Q	...	No later than 7M	

**Note:** Periodicity and timeliness: (D) daily; (W) weekly or with a lag of ## week(s) from the reference date; (WD) working days, or business days; (M) monthly or with a lag of ## month(s); (NLT) not later than; (Q) quarterly or with a lag of ## quarter(s); (A) annually; (SA) semiannual; and (...) not applicable.

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

INTERNATIONAL MONETARY FUND

GERMANY

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

**Response by the Authorities**

November 11, 2005

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## I. INTRODUCTION

The visit of the delegation of the International Monetary Fund (IMF) led by Robert Edwards, Director of the IMF Statistics Department, to check adherence to international standards and codes for selected official statistics was held in a very constructive and cooperative atmosphere. The IMF representatives held intensive discussions at the management and expert level within the Federal Statistical Office (FSO) and the Deutsche Bundesbank. Moreover, the IMF delegation met major users of official statistics in Wiesbaden, Frankfurt, and Berlin, representatives of the European Central Bank and the Land statistical offices (LSOs) of Baden-Württemberg, Hessen, and Rheinland-Pfalz as well as the competent colleagues at the Federal Ministry of Finance and the Federal Ministry of the Interior.

In its final report, the IMF delegation gives helpful recommendations on possible improvements—not only for the statistics primarily concerned (national accounts, producer price index, public finance statistics and balance of payments statistics) but also for cross-section issues of German official statistics. The German Federal Government comments as follows on the most important recommendations of the IMF delegation:

## II. GENERAL RECOMMENDATIONS

***1.) Investigate options for further streamlining the split of responsibilities for statistical operations between the FSO and the LSOs with a view to freeing up resources to meet the emerging demand for new statistics.***

For many years already, work sharing has been practiced between the LSOs and the FSO in the field of software development, which means that one of the offices develops for all other offices coordinated standard programs for statistical processing.

According to a decision of the governments of the Federation and the Länder, such work sharing shall be extended to other spheres of work as outlined in a framework agreement between the Federation and the Länder and in the “Master Plan to Reform Official Statistics” of the statistical offices. The “Master Plan” is a strategic program to further develop the production of official statistics in Germany. It defines the common modernization activities of the FSO and the LSOs. The Master Plan has two major goals: Improving the efficiency of the statistical system and disburdening the respondents. To achieve those goals, various measures and tools are applied. An important goal of the reform program is the concentration of statistical processing activities: One of the statistical offices performs such activities in a centralized manner for other offices as a “processing centre,” it provides IT services, grants online access to the data, organizes work flows and possibly also does the subject-specific handling. In six pilot projects, the new concepts are gradually introduced and tested with several offices being involved. The first pilot projects have successfully been finished, new forms of cooperation have satisfactorily been tested, and information gains have been achieved through process optimization for centralized processes.

Since a solid legal basis for the transmission of data between the statistical offices—as a prerequisite for an extended work sharing following the principle “One or several offices for all offices”—was deemed necessary, the Federal Statistics Law was amended for that purpose in 2005. Modernizing the production process is monitored by a working group of the FSO and the LSOs. The work program of that working group currently consists of ten measures whose implementation is to standardize major processes considered as priorities: checking of incoming data and reminding procedure, data collection, maintenance and use of reported and regional data, register, coding, data editing, and analysis. In the project “eSTATISTIK.core,” the data required by statistics from the business accounting system, which is the main source of business data, are compiled in an automated manner and are transmitted electronically to a central address designed for receiving statistical data. With eSTATISTIK.core, the FSO and the LSOs won the 5th eGovernment competition 2005 in the political area of “economy and labor” and also won the 7th Speyer International Quality Competition. Despite such successes, it must be stated that, altogether, implementing the Master Plan to Reform Official Statistics is making only slow progress, especially because of the institutional framework conditions of the federally structured statistical system. Therefore, the Statistical Advisory Committee in early September 2005 recommended that, as a pilot project within the scope of the reform of federalism, the German statistical system should be further developed in organizational and institutional terms.

As regards the investigation of opportunities for a more centralized PPI, see the comments on recommendation number 2 (PPI).

***2.) Document on the FSO and the Bundesbank websites the respective arrangements for prior access, under embargo arrangements, to statistics so that the arrangements are more transparent to local users of statistics.***

The metadata provided by the Bundesbank for the Dissemination Standards Bulletin Board of the IMF already indicate that the FSO and the Federal Ministry of Economics and Labor have access to balance of payments data shortly before the press release of the Bundesbank. The balance of payments site of the Bundesbank website is linked to these DSBB metadata. In order to further improve transparency for local users of the statistics, the Bundesbank will also provide this information on its own website. The IMF recommendation will be implemented by the Bundesbank for all SDDS indicators for which it takes responsibility.

The FSO Office will provide general information for prior access, under embargo arrangements, to statistics on its own website. At the moment this information is only part of the German metadata for the Dissemination Standards Bulletin Board of the IMF for all SDDS indicators for which the FSO takes responsibility.

***3.) Improve statistical metadata for the PPI, government finance statistics, and balance of payments statistics.***

**PPI:** The most detailed publicly accessible descriptions of methods presently are the standardized quality report and methodology papers published in “Wirtschaft und Statistik”

when the index is rebased. We intend to improve the situation in the year to come by preparing and publishing a comprehensive methodology handbook of German producer price statistics. The provision of human resources for that purpose and for implementing the other recommendations is in preparation.

**Government Finance Statistics:** The metadata for the data categories “Central government operations” and “Central government debt” (responsibility of the Federal Ministry of Finance) and “General government or public sector operations” (responsibility of the Federal Statistical Office) are currently checked quarterly and proposed changes are communicated to the IMF. A more detailed presentation of the metadata as requested by the IMF is currently being implemented according to the provisions of the “Updated Guidance on the SDDS” and in agreement with the IMF.

The IMF proposal to present the quarterly data on debt in greater detail on the National Summary Data Page is being checked in coordination with the IMF and the Federal Ministry of Finance.

**Balance of Payments:** A comprehensive documentation on concepts, sources and methods for German balance of payments statistics is currently under review and is expected to be ready for publication by the end of the year. Improved and more up-to-date documentation on the relationship between capital links statistics and Foreign Direct Investment (FDI) statistics will be produced for the next publication of capital links statistics scheduled for April 2006. The relationship with FDI statistics will be outlined in the explanatory notes that accompany the tables.

#### **A. National Accounts**

***1.) For the purpose of compiling proper regional accounts, improve information on local kind of activity units and collect information on the productive activities of such units (section 2.1.1).***

The computation methods of national accounts at regional level in Germany are subject to a continuous improvement process and have already been checked in detail and assessed positively at European level in recent years. When improving the statistical system, the possibilities of producing regional results are always considered as well. A major improvement may result from linking enterprises and local units in an efficient business register.

***2.) Consider compiling full annual balance sheets, revaluation accounts, and other changes in the volume of asset accounts. This would serve both analytical needs and be an important statistical tool in preparing national accounts estimates (section 2.2.1).***

The FSO is aware of the fact that there is a need to develop the annual balance sheets in German national accounts further regarding the theoretical concepts of the SNA and the ESA.

However, German national accounts presently comply with the binding data requirements agreed upon in the EU (ESA data transmission program), and further development should also take account of the European context. Compared with other essential tasks, however, this complex does not have the highest priority.

***3.) Give high priority to the completion of the integrated business register (section 3.1.1).***

Continuous improvement of the business register is among the core tasks of official statistics in Germany. The data stock of the business register are of growing importance also for national accounts as well, both directly as a source of information and indirectly through the inclusion of sample survey results in specialized statistics.

***4.) Ensure that all productive activities, including services, are covered by primary annual source data (section 3.1.1).***

Statistical coverage of the services sectors by means of primary surveys has already improved considerably through the introduction of statistics in the field of enterprise related service statistics (NACE 50, 51, 55, Section I, Divisions 72 and 74)—(first time for reference year 2000). Further development involving the inclusion of other economic areas will be effected in the European context (structural business statistics).

***5.) Develop source data for the quarterly estimate of changes in inventories. Changes in inventories, together with net exports, are the main contributors to short-term deviations in the trend of GDP growth (section 3.1.1).***

Ensuring an improved statistical coverage of changes in inventories as part of quarterly national accounts has long been a major concern of German national accounts. At present three approaches are being pursued: finding “best practices“ in the international context and especially in the European Statistical System, improving the statistical model presently used to estimate quarterly changes in inventories and checking the possibilities of direct statistical coverage which will be examined in connection with the present reform of enterprise statistics in Germany.

***6.) Consider using an automated method as the lead technique to benchmark quarterly accounts data to the annual data (section 3.3.2).***

Within the framework of a project already implemented, the standard methods used to link quarterly and annual data in national accounts have already been examined closely. The FSO does not regard using a single standard procedure as satisfactory. Instead, we prefer a solution tailored to the individual case. Moreover, by drawing upon seasonally adjusted results the perceived break between the final quarter and the first quarter of the following year can largely be avoided.

***7.) Consider accelerating existing plans to prepare supply and use tables for the preliminary annual estimates. In the mean time, always balance the accounts at the lowest possible level of aggregation (section 3.4.3).***

This recommendation to integrate supply and use tables to an increased extent into the balancing procedure of gross domestic product is completely in line with our plans. For reference periods, too, for which complete supply and use tables are not yet available, we intend to intensify the balancing procedure of the production and expenditure approaches at the disaggregated level drawing upon input-output accounts.

***8.) Consider indicating with the tables which estimates are still provisional, that is, expected to be subject to revision (section 4.3.2).***

We will consider this recommendation and check which additional notes should be included into the publications to make data users aware of the provisional character of results.

## **B. Producer Price Index**

***1.) Implement procedures for (i) the periodic monitoring of local unit samples based on the quarterly production survey results, and (ii) the ongoing review of product samples based on a rolling program of interviews with respondents between indexes rebases (3.1.1).***

- (i) So far, local unit samples have been checked and resampled systematically every five years when the index was rebased to a new price base. Within each five-year base period reporting units are replaced whenever necessary (e.g., in cases where data are not supplied). The most recent data of the quarterly production statistics are used as a sampling basis. Consequently, adequate basic data are available also for annual systematic checks of sample topicality. The IMF recommendation will be implemented soon.
- (ii) So far, priced items have been replaced whenever reporting firms themselves initiated such a substitution on the basis of data collection guidelines or when the necessity to change the product became evident during plausibility checks carried out at the statistical offices.

A systematic rolling survey of the reporting units as recommended by the IMF involves much effort, and in the present situation characterized by the distribution of work between the Federation and the Länder it can be implemented only with difficulty. For such an approach, specifically trained staff is needed which is often not available at the statistical offices of the Länder as they do not compute their own producer price indices. In order to implement the proposal, it would therefore be helpful to modify the distribution of work by striving for more centralization (see No. 2). In an initial step, the statistical offices of the Länder might grant the FSO blanket permission to contact the reporting units directly in order to check at regular intervals, among other things, the topicality of goods descriptions and trading

conditions. A proposal to this end is going to be discussed at the forthcoming expert meeting.

The situation may be improved in the short run by modifying the survey documents and writing to the reporting firms regularly with that aim in mind. Furthermore, plausibility checks are being improved in connection with the present reprogramming of automated processing.

***2.) Investigate opportunities for a more centralized PPI organizational model, in order to yield efficiency and effectiveness gains and to provide opportunities for closer contact with reporting units, e.g., for maintaining the product samples (3.2.1).***

In view of the fact that no regional results are computed in producer price statistics, centralization would have a number of advantages as realized by the IMF. In particular, the more direct contact between the reporting units and the FSO would facilitate an improvement of quality with regard to the recommendations of No. 1). For that reason, the legal and subject matter related possibilities of centralization are going to be examined in the course of the continued implementation of the master plan in cooperation with the statistical offices of the Länder.

***3.) Undertake empirical studies to assess the index quality improvements that would be derived by updating the industry and commodity weights more frequently than five-yearly. Determine and implement the optimum update frequency (3.3.2).***

Every time an index is rebased, the effects of updating the weights are examined in detail. So far, index revisions have always been on a very small scale amounting to only a few tenths of a percentage point. Therefore, studies assessing the need for a more frequent updating of weights have no priority at present. In the event of profound structural changes at short notice, the situation would have to be reconsidered.

***4.) Develop a comprehensive and cohesive statistical framework for the presentation of the current and future array of partial price indicators, in order to support price transmission studies and increase users' understanding of the relationships between the different indices (4.2.3).***

The first priority in German price statistics at the present time is supplementing the system by producer price indices for services, which would be an essential prerequisite for the analysis recommended.

The recommendation will be discussed in the months to come, in particular with the national accounting experts (input-output accounts). As a first step, an analysis will be made to determine whether potential users would be interested in such a system.

**5.) For the PPI develop and publish more detailed and more complete metadata that fully articulate information on index concepts, data sources, statistical techniques, compilation procedures, etc., as support the needs of more specialized users (5.2.1).**

As regards the further improvement of statistical metadata for the PPI, see FSO's comments above (cross-cutting recommendation number 3).

### **C. Government Finance Statistics**

**1.) Take action to enable government finance statistics based on either the ESA 95 or the GFSM 2001 framework to be used for SDDS purposes.**

- **Continue to compile cash data if necessary but adopt the analytical framework of the Sources and Uses of Cash table found in Chapter 4 of the GFSM 2001 (2.1.1).**
- **For the presentation of revenue, expenditure, and financing transactions, adopt the GFSM 2001 detailed classification categories for revenue, expense, acquisition less disposal of non-financial assets, acquisition less disposal of financial assets, and incurrence less extinction of liabilities. Adopt the COFOG to present the expenditure split by function (2.3.1).**
- **Compile a financial balance sheet (2.2.1).**
- **Ensure consistency between outstanding debt and net lending/borrowing (4.2.1).**
- **Move gradually toward an accrual basis for recording of statistics (2.4.2).**

Currently the FSO calculates both yearly and quarterly data on government finance according to the *ESA 95* (or *GFSM 2001*). Already now, the yearly data are published and transmitted also to the IMF. The quarterly data according to the *ESA 95* can be published only after the European Commission (Eurostat) has given a positive assessment in the quality report, which is legally required to be submitted by the end of 2005.

Breaking down government expenditure by COFOG one-digit-items is in line with the current legal situation according to the *ESA 95* data supply program; further breakdown is to be checked in a research project.

A financial balance sheet for the financial activities of the total government sector has been published so far as part of financial accounting performed by Deutsche Bundesbank. However, the data basis for the financial assets is not satisfactory.

Through the adoption of the law on the statistics of public finance and of public service personnel (FPStatG) as published on 8 March 2000 (Federal Law Gazette I p. 206), last

amended by Article 1 of the law of 25 June 2005 (Federal Law Gazette I p. 1860), which entered into force on 1 January 2005, the basis has been created for the Federal Statistical Office to cover the financial assets of the individual government levels according to *ESA 95*. The data for 2004 will presumably be available at the end of 2005. On that basis, the financial assets and debts will, for the individual government levels, be integrated for the first time in the financial accounting and be transferred to Eurostat in accordance with a Regulation of the EU.

Currently, the types of revenue and expenditure and the debt types are shown separately in the publication tables on quarterly cash statistics. The feasibility of integrating the two presentations will be checked with the Federal Ministry of Finance.

Differences occur regularly between the development of debt and of net borrowing. Such differences are not due to consistency problems; the main reason is that changes in debt occur which contain financial transactions that do not have any effect on liquidity (e.g., exclusion from the core budgets). Such changes in debt are separately covered by statistics every year, although they are not covered quarterly.

***2.) Expand the coverage of (quarterly) debt data to include social security funds (2.2.1). (The recently amended Law on Finance and Personnel Statistics of June, 25, 2005 provides that the debt of social security funds will be included in total government debt, starting with the first quarter 2005).***

The debt of statutory social insurance funds was not covered in terms of public finance statistics until reference year 2004. However, it was included in the Deutsche Bundesbank reports on debt according to the Maastricht Treaty. Through the amendment of the law on the statistics of public finance and of public service personnel (FPStatG), it has become possible to cover on a quarterly and yearly basis the debt of social insurance funds in order to approximate the finance-statistical debt to the debt according to the Maastricht Treaty. Thus this IMF recommendation will be implemented from reference year 2005.

***3.) Expand the coverage of quarterly statistics to include all special public service providers (Zweckverbände) which have a government function (2.2.1).***

The finance of the approximately 3.300 special-purpose associations (*Zweckverbände*) and persons of inter-municipality cooperation similar to *Zweckverbände* (some municipal functions are performed by them instead of by municipal entities), which do cameralistic accounting, is currently covered on a yearly basis. Their share in the public finance volume is very small. Especially at the municipal level, however, there is an increasing trend towards applying the commercial accounting system. For *Zweckverbände* applying commercial accounting, quarterly coverage will be possible in the future. The experts of the Federation and the Länder responsible for public finance statistics have already agreed on checking that issue.

***4.) Improve the press release for general government statistics to include more breakdowns for financing and indicate whether the data are provisional or final; in the press release, state the revision policy and calendar of revisions (5.1.1 and 4.3.1).***

The data published in the quarterly press release on the finance of public budgets may contain provisional, i.e., estimated data. However, this is not the rule. The data of the press release are published at the same time in the IMF SDDS and generally are marked there as “provisional.” As soon as the Fachserie (Subject-Matter Series) has been published, the data are qualified as “final” and are again reported to the IMF. The inconsistency caused by that procedure will in the future be eliminated by qualifying the finance data in the press release as “provisional,” as is done in the SDDS. Since 2003, the press releases have no longer included information on the publication of final data. In the future, they will again include information on the publication medium and the approximate time of publication of the final results.

For the press releases, key data tables are prepared which is a first evaluation of the data. Data processing and publication must be limited to major aggregates. The press releases contain all the SDDS categories currently published (expenditure, revenue, financial balance, and net borrowing). More detailed data are presented about six weeks later as part of preparing and publishing the *Fachserie*. The IMF proposal to present in greater detail the special financing operations can be implemented in the short term with the current analysis program. More far reaching breakdowns requiring changes in the analysis program will be checked (cf. comment on No. 5).

***5.) Review and revise the metadata posted on the DSBB and expand the financing and debt breakdowns shown on the National Summary Data Page (5.2.1).***

As regards the further improvement of statistical metadata for the Government Finance Statistics, see FSO’s comments above (cross-cutting recommendation number 3).

## **D. Balance Of Payments Statistics**

***1.) Adopt a policy of providing advance notice of significant changes in methodology, source data and statistical techniques.***

According to current practice, information on changes in methodology, source data, and statistical techniques is provided by the Bundesbank at the same time when data based on the new methods is first released. The information on significant methodological changes is usually prominently placed in text boxes that accompany the analytical text on balance of payments developments during the past year, which is included in each March issue of the Bundesbank’s Monthly Report. This practice will be continued in order to maintain conspicuousness of such methodological explanations and with a view to the Monthly Report being the most appropriate publication medium for this purpose. In addition, the Bundesbank will consider how the IMF recommendation on advance notice of such changes can best be implemented. One way might be to alert users to any upcoming changes by including

comments in an earlier press release, pointing to the March edition of the Monthly Report for more detailed (technical) explanations.

**2.) For monthly national data on goods, consider (i) reporting imports on a f.o.b. basis; and (ii) providing BPM5-based breakdowns of general merchandise.**

Monthly data on goods imports are already produced on an f.o.b. basis and will be included in the national publications as from March 2006 onwards. *BPM5*-based breakdowns of general merchandise are produced for the quarterly balance of payments data submitted to the IMF. We shall consider including these breakdowns in the monthly national data on goods. However, including new breakdowns in the layout of the tables on general merchandise requires substantial resources and lead time since it involves changes to the databases, checking procedures and most likely changes to other tables contained in the publication (due to constraints in the overall size of the publication). Additional problems may be encountered because the basic data sources are not in all cases suitable for producing the breakdown on a monthly basis. Therefore, the implementation of this recommendation may take more time than by March 2006.

**3.) With a view to bringing monthly presentation formats closer to BPM5 standard presentation, consider the development of sources and methods to (i) distinguish business and personal travel credits; (ii) adjust the portfolio securities transactions data on account of fees and commissions (and include the latter in the current account); (iii) include income on trade credits and the interest share of financial leasing under other investment income; and, (iv) distinguish loans from currency and deposits under other investment.**

It will be analyzed whether available information is sufficient to implement the above mentioned recommendations in the short term (i.e., by March 2006), either on the basis of available source data or by developing estimation methods. For the same reasons as indicated above and in particular, where current data sources are not sufficient to implement the standard presentation of *BPM5* for the above mentioned items, some more lead time may be necessary.

**4.) In addition to publishing the comprehensive concepts, sources and methods manual, update the documentation on the relationship between capital links statistics and FDI statistics as an aid to users.**

See Bundesbank's comments on the cross-cutting recommendations regarding improvement of statistical metadata.

INTERNATIONAL MONETARY FUND

GERMANY

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

Prepared by the Statistics Department

Approved by Robert W. Edwards and Michael Deppler

November 11, 2005

This document contains a detailed assessment by dataset of the elements and indicators that underlie the data quality dimensions discussed in Germany's Report on the Observance of Standards and Codes (ROSC)—Data Module. It also includes as appendices a summary of the Special Data Dissemination Standard (SDDS), the DQAF generic framework, a summary of users' views as established through discussions and users' survey, and an overview of the relationship between the various sets of government finance statistics available in Germany.

Germany is a member of the European Statistical System (ESS) that comprises the Statistical Office of the European Communities (Eurostat) and the statistical offices, ministries, and central banks that collect official statistics in the countries of the European Economic Area (EEA). These countries presently comprise the European Union Member States, Iceland, Liechtenstein, and Norway.

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## ABBREVIATIONS

<i>1968 SNA</i>	<i>System of National Accounts 1968</i>
<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
BIS	Bank for International Settlements
<i>BOP Book</i>	<i>European Union Balance of Payments/International Investment Position Statistical Methods</i>
<i>BOPSY</i>	<i>Balance of Payments Statistics Yearbook</i>
<i>BPM5</i>	<i>Balance of Payments Manual, fifth edition</i>
Bundesbank	Deutsche Bundesbank
COFOG	Classification of Functions of Government
COPC	Current Operating Performance Concept
COICOP	Classification of Individual Consumption by Purpose
CPA	Classification of Products by Activity
CPC	Central Product Classification
CPI	Consumer Price Index
<i>CPI Manual</i>	<i>Consumer Price Index Manual: Theory and Practice, 2004</i>
CPIS	Coordinated Portfolio Investment Survey
DQAF	Data Quality Assessment Framework, July 2003 version
DSBB	Dissemination Standards Bulletin Board (IMF)
EC	European Community
ECB	European Central Bank
EEA	European Economic Area
EMU	European Monetary Union
<i>ESA 95</i>	<i>European System of Accounts 1995</i>
ESCB	European System of Central Banks
ESS	European Statistical System
EU	European Union
Eurostat	Statistical Office of the European Communities
EU-STS	EU Regulation on Short-term Statistics
FDI	Foreign Direct Investment
FMOF	Federal Ministry of Finance
FSO	Federal Statistical Office (Statistisches Bundesamt)
GDP	Gross Domestic Product
GFS	Government Finance Statistics
<i>GFSM 1986</i>	<i>A Manual on Government Finance Statistics, 1986</i>
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
GP 2002	German commodity classification of production, version 2002
HIES	Household Income and Expenditure Survey
IIP	International Investment Position
ILO	International Labour Organisation
ISI	International Statistical Institute
ISWGNA	Intersecretariat Working Group on National Accounts
IT	Information Technology
ITRS	International Transactions Reporting System

KAU	Kind of Activity Unit
LEG	(European Union) Leadership Expert Group
LSO	Land Statistical Office (Statistisches Landesamt)
MFI	Monetary Financial Institutions
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
NACE	Statistical Classification of Economic Activities in the European Communities
OECD	Organisation for Economic Co-operation and Development
PPI	Producer Price Index
<i>PPI Manual</i>	<i>Producer Price Index Manual: Theory and Practice, 2004</i>
PRODCOM	List of Products of the European Communities
ROSC	Report on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard (IMF)
UN	United Nations
VAT	Value Added Tax

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

The following detailed information on indicators of statistical practices in the areas of the national accounts, producer price index, government finance statistics, and balance of payments statistics was gathered from publicly available documents and information and documents provided by the German officials. This information, 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 as shown in Germany's Report on the Observance of Standards and Codes (ROSC)—Data Module.

Official statistics in Germany are organized in accordance with the federal nature of the country. The Federal Republic of Germany has a Federal Statistical Office (Statistisches Bundesamt) (FSO), and 15 Länder statistical offices<sup>1</sup> (Statistische Landesämter) (LSOs) involved in producing the vast majority of federal and Land statistics. In addition, about 100 independent statistical offices at municipal and community levels carry out statistical and analytical work.

In a few exceptional cases, bodies other than the FSO and the LSOs have been mandated with the production of federal statistics. Major examples are the Deutsche Bundesbank (Bundesbank) for compilation of monetary, banking, and balance of payments/international investment position statistics, the labor administration with statistics on the labor market, and the Federal Ministries of Agriculture and Transport, and the Federal Environmental Agency that compile some statistics in their respective areas of work, typically as a by-product of their administrative functions.

With the FSO being responsible for national accounts, prices, and government finance statistics, the assessments for the FSO of the two institutionally oriented dimensions of the DQAF—Prerequisites of Quality and Assurances of Integrity—are presented once, in Section 0, immediately below. The assessments of the national accounts, producer price index, and government finance statistics in Sections I to III refer back to this Section, while also commenting on aspects of the two dimensions that may be particular to the subject field. The assessment of the institutionally oriented dimensions of balance of payments statistics, focusing on the Bundesbank, and the product-oriented dimensions of that dataset, are contained in Section IV.

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<sup>1</sup> The statistical offices of two Länder administrations have merged into one statistical office.

## 0. FEDERAL STATISTICAL OFFICE (STATISTISCHES BUNDESAMT)

### 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 Basic Law (Constitution) establishing the Federal Republic of Germany in 1949 assigns to the Federation the exclusive legislative power in matters of statistics for federal purposes. On July 3, 1953 the *Federal Statistics Law*<sup>2</sup> was adopted by the Bundestag. The Federal Statistical Office (FSO) and the Länder statistical offices (LSOs) had previously been established. With the reunification of October 3, 1990, the statistical laws of the Federal Republic of Germany came into force in the territory of the former German Democratic Republic. LSOs were set up in the new Länder within a short period of time.

The system of official statistics in Germany is based on three fundamental principles:

- 1) **Legality.** Within the context of the Basic Law and the over-arching *Federal Statistics Law*, all statistics require a specific legal basis, which may be laws or ordinances of the Federation, or regulations of the European Community, which are immediately applicable in the Member States. In Germany, normally an additional national legal act is required. (About two-thirds of German statistical activity derives its legal mandate from European Union (EU) regulations.)
- 2) **Functional concentration.** Federal statistical work is mostly undertaken by the specialized statistical offices at federal, and Land levels. (See the introductory remarks on page five for some exceptions to this general principle.)
- 3) **Regional decentralization.** The statistical tasks are distributed between the Federation and the Länder in accordance with the federal structure of the Federal Republic of Germany. According to the Basic Law, the Federation is entitled to pass laws in the field of statistics and is thus authorized to order compilation of statistics at the national level. Article 3 of the *Federal Statistics Law* mandates that the collection and processing aspects of federal statistics are, in principle, undertaken by the LSOs.<sup>3</sup> (In

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<sup>2</sup> Subsequently fundamentally amended in 1987, *Law on Statistics for Federal Purposes (Federal Statistics Law) of 22 January 1987*. The last amendment of the *Federal Statistics Law* has recently been passed by the Bundestag.

<sup>3</sup> Some statistical work, such as compilation of foreign trade statistics, does not involve the LSOs.

addition to their contribution to federal statistics, the LSOs compile some statistics for Länder purposes.)

Reflecting in part the 1983 Decision of the Federal Constitutional Court concerning the population census (which in consequence was deferred from 1983 to 1987), the *Federal Statistics Law of 1987* covers, among other things:

- the definition of federal statistics and the duties of the FSO;
- the role and modus operandi of the Statistical Advisory Committee;
- the requirement for specific legal bases for statistical surveys and statistical use of administrative files;
- arrangements for the compilation of federal statistics;
- the obligation to provide information, statistical confidentiality, and notification requirements for survey respondents; and
- penalties and fines for violation of statistical confidentiality or the obligation to provide information.

Each law to authorize a statistical survey must state whether or not the requirement to respond is compulsory. Surveys carried out for statistical purposes at the European level (see below) can only be carried out on a compulsory basis if the governing EU legal act or national legislation explicitly provides for such. Surveys may be carried out for short-term purposes without due legal process, but their scope is limited and compliance is voluntary. Legal authorization is not necessary to compile federal statistics by “drawing exclusively upon data from generally accessible sources.” The FSO/LSOs may only be granted access to “closed” databases, such as those for taxation and social security, if the underlying legislation or other legal provisions stipulate that these databases may be transmitted to them for statistical purposes.

The *Federal Statistics Law* mandates the FSO as an independent superior federal authority (selbständige Bundesoberbehörde) under the administrative supervision of the Federal Ministry of the Interior, thus requiring Ministry approval for decisions on organizational structure, legal matters with regard to personnel, and finance.<sup>4</sup> The FSO also falls under the specialist supervision of the various federal ministries with respect to particular statistical subjects, meaning that the relevant ministry assumes the political accountability for correct implementation of specific laws relating to federal statistics. Regarding the actual statistical work, the FSO is not bound by instructions and has to adhere only to the principles of neutrality, objectivity, and scientific independence as provided for in the *Federal Statistics Law*.

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<sup>4</sup> The Federal Ministry of the Interior manages the FSO budget through the federal budgetary processes. That Ministry also has responsibility for taking care of the overall strategic development of statistics in Germany, which includes dealing with any policy aspects of EU statistical requirements and overall relationships between the FSO and LSOs.

As previously noted, much statistical work in Germany derives from the needs of the EU. The division of labor and principles of cooperation between Eurostat (the Statistical Office of the European Communities) and the statistical institutes of the Member States are laid down in *Regulation (EC) No. 322/97 on Community Statistics*. A large number of EU acts regarding individual statistics stipulate the methodological and conceptual requirements for comparability of major statistics for Community purposes.

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

*Coordination*

The functional centralization and regional decentralization dimensions to the German statistical arrangements necessitate well-developed coordination and data-sharing arrangements among data-producing agencies. Figure 1 depicts the system of federal statistics in Germany.

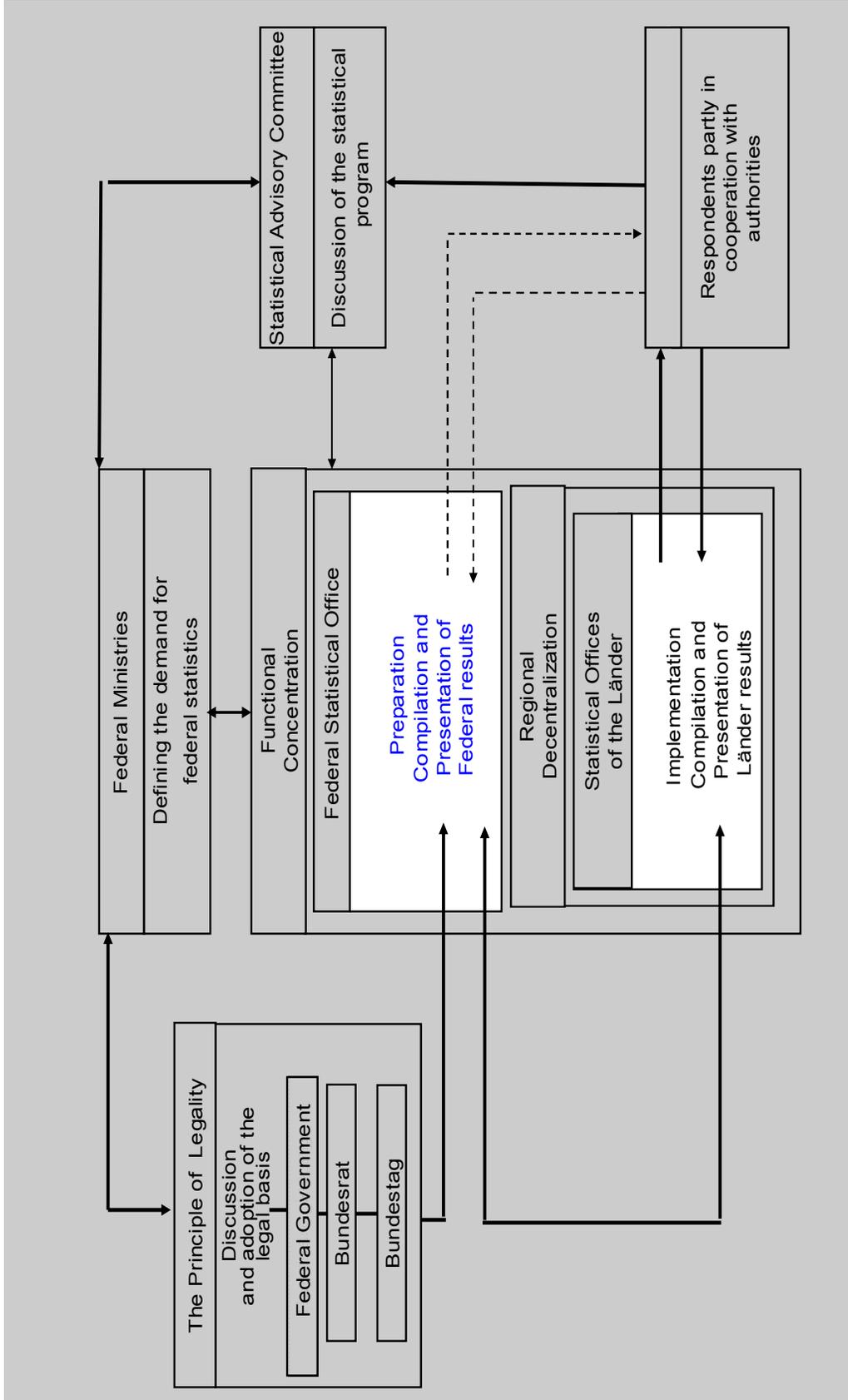
Within the system of federal statistics, the FSO responsibilities include the methodological and technical preparation of federal statistics, the coordination of individual statistics, and the compilation, presentation, and publication of federal results. The FSO has to ensure that federal statistics are produced in the LSOs without overlaps, according to uniform concepts, and on time. The main share of the work related to the conduct of surveys is performed by the LSOs, which collect and process data for federal statistics on a large scale.

A number of key coordination bodies exist:

- a) The Statistical Advisory Committee, comprising LSOs, federal ministries, the Bundesbank, the Federal Commissioner for Data Protection, municipal central associations, business associations, environmental and agricultural organizations, trade unions, science, and Eurostat, advises the FSO on fundamental issues. Specialist committees advise on particular subject fields.
- b) The Conference of Heads of the Statistical Offices is the key body for discussion and decision making at the level of the heads of the FSO and LSOs. Experts meetings to discuss technical and organizational questions are convened.
- c) The Inter-Ministerial Committee for Coordination and Rationalization of Statistics coordinates statistics between the federal ministries.

Section 0.3.1 below gives further details and also describes the expert committees and working parties that undertake coordination activities in Germany.

Figure 1: System of Federal Statistics<sup>5</sup>



<sup>5</sup> Reference: Federal Statistical Office, *Survey of German Federal Statistics, 1998*.

### *Data sharing*

The legislation governing the data sharing arrangements between the FSO and the LSOs in the conduct of federal statistics has been described above. Administrative data are used in federal statistics to a large extent in areas such as education statistics, health statistics, finance and tax statistics, and aspects of labor market statistics. Increasing efforts are being made to use administrative by-product data in the compilation of economic statistics. As a general rule, the statistical offices only have access to administrative data sources if this is explicitly stipulated by law. Two examples are the law on statistical registers (Statistikregistergesetz) and the law on the use of administrative data (Verwaltungsdatenverwendungsgesetz). For reasons of statistical confidentiality it is not permitted to use statistical surveys for register updating purposes outside the statistical offices.

At the federal level, close cooperation exists between the FSO and the Bundesbank which, on the one hand, receives foreign trade data for balance of payments compilation from the FSO and, on the other hand, compiles financial accounts data for purposes of national accounts compilation. The FSO and the Bundesbank cooperate closely on the seasonal adjustment of important time series prior to their dissemination by FSO.

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

The German situation can be considered in respect of three dimensions:

##### *a) Rules and regulations to prevent disclosure*

German legal acts strictly protect confidentiality. Procedures exist and are agreed at the European level. The confidentiality of individual data is seen as much more than a legal obligation; the statistical system depends on being trusted and accepted by the citizens, especially to ensure high-quality responses to statistical enquiries.

As regards statistics, confidentiality is guaranteed by Article 16 of the *Federal Statistics Law*. This is stricter than the *German Data Protection Act* by which confidentiality and data privacy are generally regulated in Germany.

The *Federal Statistics Law* requires that respondents must be informed about their rights and obligations in providing statistical information. This rule is strictly followed. This applies also to the notification that individual data are only used for statistical purposes and possibly—subject to protection procedures—for scientific purposes.

The unauthorized disclosure of individual statistical data by the statistical staff entrusted with the operation of federal statistics, or by the persons specially sworn in for public service, is a punishable act. Pursuant to Article 203 of the *Penal Code*, a violation of confidentiality is liable to a fine or to imprisonment of up to two years. Staff members of the FSO (public

officials and employees) will have to face disciplinary or labor law consequences—in addition to the above criminal penalties—if they violate their vow of secrecy and fidelity.

So far, there have been no criminal proceedings for violations of confidentiality, indicative of the fact that the statistical staff are strictly and completely abiding by their obligation of confidentiality. The *Federal Statistics Law* also provides for penalties in the case of violations of the prohibition on reidentification of respondents for other than statistical purposes (Article 21, *Federal Statistics Law*). Under penalty of imprisonment for one year or of a fine, it is prohibited to willfully match individual data from federal statistics to establish a reference to persons, enterprises, establishments, or local units.

b) *Protection of confidentiality in tables and microdata files*

As regards the confidentiality of data in tables, methods of primary and secondary confidentiality checking have been developed and are used. For business and agriculture surveys, disclosure risk assessment is based on concentration-rules. Cell suppression is used to prevent residual disclosure in tables for dissemination.

In 2001, the FSO established a research data center. Another research data center was set up in March 2002 as a joint facility of all LSOs. The major goal of these research data centers is to facilitate access to the underlying microdata of official statistics for the scientific community under strictly regulated conditions.

c) *Confidentiality during storage and destruction of records/security of the IT systems*

A system of central data storage with selective access operates at the FSO. The secure deletion of files and disposal of paper and other data media (disks, CD-ROMs, hard disks, magnetic tapes, etc.) is guaranteed in accordance with data protection rules (secure-access storage until collection and shredding by a contractor).

Access to the FSO's premises is only possible with a service identity card (card reader) or with registration at the reception. The details concerning visitors, cleaners, and others are laid down in the *Rules of Procedure* for the FSO and in the FSO's instructions to the reception staff. Buildings or rooms that contain the computing center, central data interchange points, telephone installations, data media and programming files archives, or other classified materials are additionally monitored or protected by fences with barbed wire tops, infrared barriers, video surveillance, partly hardened facades, and police-monitored burglar alarm systems.

Access to the computing center is controlled by code cards and single-person gates. Additional security zones have been established in the computing center and the adjoining IT areas, which can only be accessed using a code card or key (master key system) by authorized persons on an individual need basis. As regards the IT areas, special access arrangements exist for visitors, cleaners, and maintenance staff.

The individual offices are usually not locked. Registration on any IT system requires a personal user identification and password, which are adequately secured by cryptographic techniques. The internal network is secured against unauthorized outside access by a redundant firewall architecture.

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

As previously described, a foundational issue for Germany's statistics is the principle of legality. In its judgment of December 15, 1983 on the 1983 population census, the Federal Constitutional Court determined that statistical surveys involving the obligation to provide information must be considered in the context of the constitutional right to informational self-determination (Article 2 of the Basic Law). Such surveys require specific legal authorization that is clearly defined in advance. Therefore—with very few exceptions—laws are passed that define all major parameters of particular surveys (especially variables, group of reporting units, periodicity). The Ministry responsible for the subject field of the survey oversees a process in which the FSO drafts a bill to cover the particular new survey. Extensive coordination is required, involving all stakeholders, ultimately leading to the bills being submitted for Bundestag and Bundesrat consideration. In practice, parliamentary debate on the bill focuses on issues of costs and reporting load, in a context where the survey content and parameters have been fully considered during the coordination process. While the process of having the new legislation passed can take up to two years, the laws typically relate to surveys that will be on-going rather than addressing short-term, one-off issues.

The law covering a particular federal statistic must determine whether, and to what extent, the survey is to be conducted with or without an obligation to provide information. If an obligation to provide information has been stipulated, all natural legal persons under private and public law, associations of persons, public authorities of the Federation and the Länder, as well as communities and local authorities shall be liable to reply to duly ordered questions. If a person does not render information at all or misleadingly, not completely, or not in due time, this irregularity may be punishable by a fine not exceeding 5,000 euros (Article 23 of the *Federal Statistical Law*).

Official statistics in Germany are also determined by a large number of European laws, mainly regulations of the European Parliament and of the Council, supplemented by regulations of the Commission.

The legislative bodies, when considering statistical laws, take into account the burden placed on respondents. The FSO takes measures to reduce the burden on respondents and, in cooperation with the statistical offices of the Länder, endeavors to use readily understood wordings in the questionnaires. Also, a system is being developed to obtain data direct from the businesses' accounting systems.

A study of statistical burden on enterprises was conducted in Germany for the first time in 1979. In 2003, the FSO presented updated results for selected centralized surveys.

Currently, the burden placed on enterprises and local units in Germany by all surveys conducted in 2004 by the statistical offices is being studied jointly with the German Institute for Economic Research. On the basis of the findings, the FSO will set up a reporting system for the measurement of statistical burden. That system will compare the statistical burden to that of other administrative reporting and quantify the change in burden caused by changes over time in reporting obligations of the enterprises.

The response burden is also being reduced by measures such as restricting sample sizes and range and detail of surveys to the essential minimum, making more extensive use of data from administrative registers, and applying rotation schemes in sample designs to ensure that the response load is spread as widely as possible over survey populations.

Every questionnaire indicates contact persons who can provide assistance in responding. Questionnaires are standardized with information (e.g., the questionnaire heading is always put at the same place on the questionnaire). Also, every questionnaire provides information on how to complete the questionnaire and explanations for answering the questions. The respondents are provided with information on the results of the survey. Also, every paper and Internet questionnaire contains legally required information on the purpose, type, and scope of the survey, obligation to provide information, reporting unit, confidentiality, and other aspects of the survey.

## **0.2 Resources**

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

#### *Staffing*

Over the last 10 years the number of staff of the FSO and the LSOs has decreased considerably at the same time as the statistical workload has been increasing. In July 2005, the total number of staff of the FSO is 2,780 (14 percent A-Level—higher service, 33 percent B-Level—higher intermediate service, 48 percent C-Level—intermediate and ordinary service, 5 percent—apprentices). Currently, 5,674 staff in total work in the LSOs. Under the existing institutional arrangements, the total number of staff deployed in statistics may prove to be insufficient in the future, given the increasing demands for statistics. See section 0.2.2 for further discussion on this matter.

The current legal and administrative arrangements for statistics in Germany result in significant overhead costs that some other national statistical systems (such as those in Canada and Australia) do not need to bear.

There is significant investment in human resources development, which is embedded in the corporate culture of the FSO. Formal performance management assessments for civil servants are undertaken every three years, with the intention to move to annual assessments.

For employees, no regular performance assessments are undertaken. Performance management arrangements could be strengthened for all staff.

Remuneration arrangements for FSO staff are consistent with wider public administration arrangements, and are assessed as appropriate.

#### *Computing resources*

High performance computers with the latest technology are used in compiling and disseminating statistical series. The IT Budget for expenditures on material and services amounts to 13 million euros per year. Modern data storage arrangements and wide area networks with high bandwidth support the work of the statisticians. Innovative applications in concert with the e-Government program of the national administration are running for all customers of the statistical office.

For compiling and analyzing statistics, the FSO uses modern and updated standard software packages (SAS Version 9, Office XP, etc.) complemented by in-house developed software. The FSO won the national e-Government award in 2005 for one of its IT developments. Strong technical cooperation exists between the FSO and the LSOs. According to the principle “one for all,” software is developed to be portable and used in each of the 16 computer centers within the national statistical system. Internet technology has been used in the closely linked but distributed production system. Standard tools for online reporting, processing, and dissemination via statistical information systems are used to build up the national distributed IT architecture.

The security of IT systems is of particular importance (see Section 0.1.3 above). An IT Security Plan was developed on the basis of the methodology of the *Baseline Protection Manual* of the German Federal Office for Security in Information.

#### *Physical facilities*

According to an employee survey conducted in early 2005, the staff of the FSO is generally satisfied with its workplace conditions: 77 percent are satisfied with the size of their offices, 67 percent with their furnishings, 85 percent with the workplace PC equipment, and 52 percent with the conference room capacities. A replacement building complex for the staff of the headquarters of the FSO will be provided in the course of the next few years.

#### *Financial resources*

Budgeting for national statistics is independent of the European statistical requirements and programming decisions.

The FSO is budgeted as an authority in the Federal Ministry of the Interior's sphere of responsibility. The LSOs are funded by the Länder governments.

Up to now, budgeting has been done on a cameral basis. Funds are assigned to major groups with input orientation and allocated between categories, such as personnel expenditure, material and administrative expenditure, building investment expenditure, and other investment expenditure. In addition to the cameral budget, the FSO has introduced on a trial basis a system of cost and activity accounting, which is a reporting system to record, analyze, and document the costs incurred and to process the data collected for the use by chief executives and for auditing purposes. In that system, cost types—in a breakdown by cost centers (organizational units) and cost units (products)—are developed as part of a reporting system, and processed for the president and the controlling system. Because more than 70 percent of the budget is used for staff resources, the product-oriented deployment of staff at the FSO is particularly important. For that purpose, a web-based module is used to collect time spent on particular activities. Staff members record their time spent (input) for the relevant products (output). The response rate for such recordings is consistently over 98 percent.

A product portfolio based on cost-benefit analyses was drawn up earlier in 2005 to support priority-setting.

The medium-term financial plan of the federal budget provides information on the resources likely to be available over the next five years. To cope with the additional and other foreseeable medium-term statistical tasks, taking into account a parallel reduction in the available financial and human resources and doing this with an acceptable quality, there is a need to organize work more effectively and to set priorities. In response, the FSO in 2004 launched a systematic multiannual program and resource planning scheme, based on its strategic goals. Proceeding from the resources available to the office, priority is given to those projects that will yield the comparatively largest contribution to the achievement of the strategic goals. The result will be documented in the Integrated Strategy and Program Plan. In the future, program planning is to be done jointly with the LSOs.

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

The FSO and the LSOs have recognized the increasingly tight resource situation facing them in the medium term. The strategic plan of the FSO (“fit 2008”) has efficiency as one of its strategic objectives.

A master plan for cooperation between the FSO and the LSOs based on a decision of the relevant federal and Land ministries, is being implemented, which reassesses the traditional mutual statistical arrangements. With continuing attention to efficient operational arrangements, especially in minimizing the overhead costs implicit in the federal/Länder split of responsibilities, there are probably sufficient resources within the national statistical system to address the additional demands on the German statistical system.

Actions already under way to improve efficiency include the following:

- a) making further progress on projects to optimize cooperation (“one for all”) and standardization of data production processes;
- b) developing and introducing new procedures for data editing;
- c) developing and using central lists and registers; and
- d) establishing a joint pool of financial and personnel microdata for all municipalities and associations of municipalities.

The FSO together with the LSOs has established a working group on standardizing statistical production. This working group develops and examines standards for documenting steps in production. Within this framework, uniform standards have already been specified for the subprocesses on questionnaire design and plausibility checks.

### **0.3    *Relevance***

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

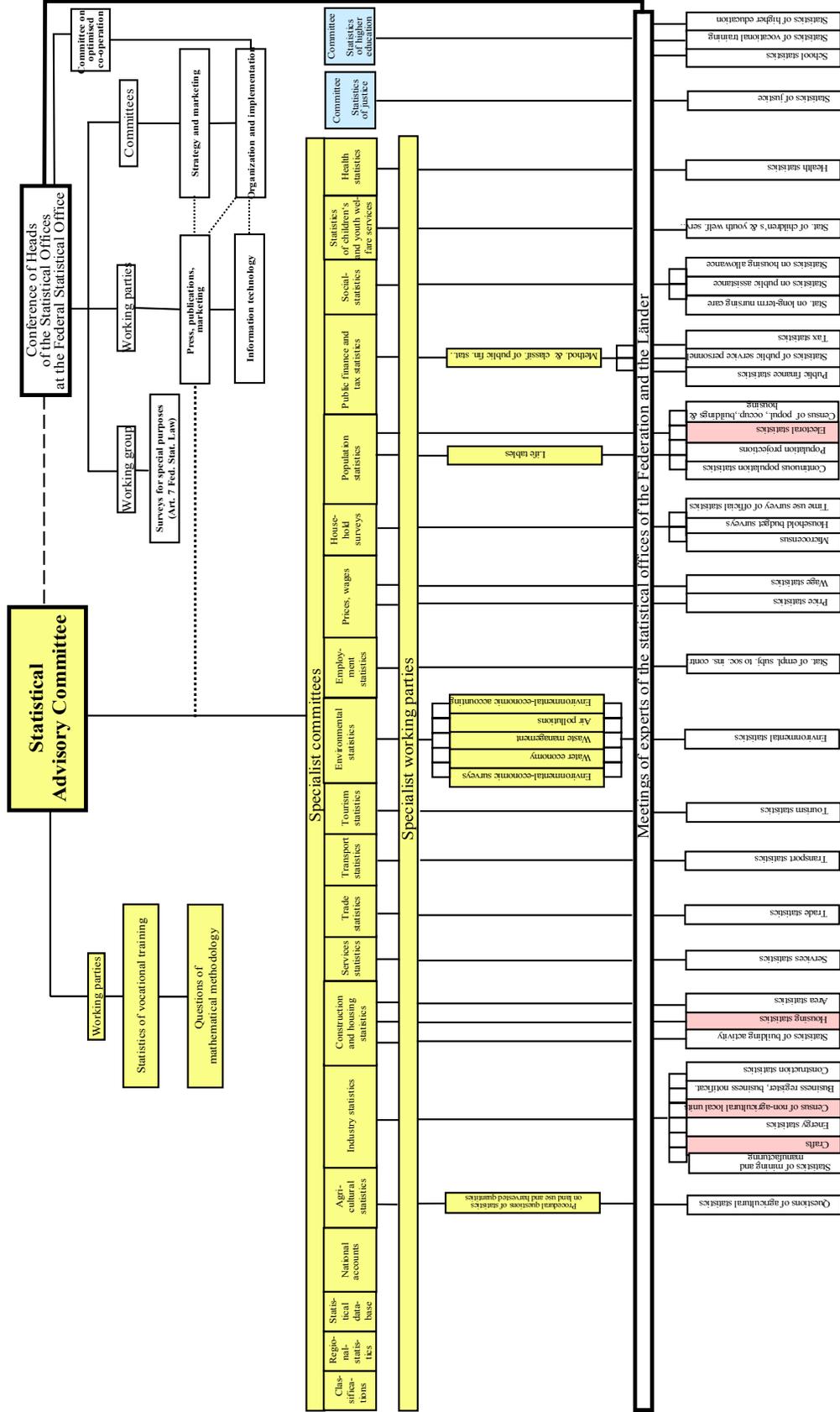
The Statistical Advisory Committee advises the FSO on fundamental issues and initiates plans for further developments. It prepares a report at the end of the legislative term in which it evaluates proposals for the statistical program of the past period and makes new proposals for the period to come. Its legal provisions are laid down in Article 4 of the *Federal Statistics Law*.

The Statistical Advisory Committee comprises representatives of all groups involved in producing federal statistics, as well as users and respondents (LSOs, federal ministries, the Bundesbank, the Federal Commissioner for Data Protection, municipal central associations, business associations, environmental and agricultural organizations, trade unions, science, and Eurostat). It is convened once a year, with meetings chaired by the President of the FSO. The statistical offices, as well as the federal ministries, have no right to vote (the committee has a purely advisory function).

Expert committees commissioned by the Statistical Advisory Committee and other statistical working parties deal with specialist subjects. Discussions of expert committees can make it possible to tap the knowledge and the experience of external experts for the planning and development of official statistics. Users and respondents are given a chance to articulate their interests. At the same time, representatives of official statistics may explain their concerns and clarify the feasibility of proposals in discussions with the parties concerned.

The expert bodies, as a rule, are consistent with the subject matter organizational structure of the FSO. Thus, for example, expert committees meet on statistics on manufacturing, environmental statistics, and social statistics. Also expert committees exist for cross-sectional areas of statistics, such as classifications and regional statistics. The expert committees are chaired by the responsible departmental heads of the FSO. Figure 2 depicts the various advisory/technical groups involved in federal statistics.

Figure 2: Bodies of the Statistical Advisory Committee and Other Selected Bodies of Federal Statistics



Source: Federal Statistical Office, July 2005.

User surveys are conducted periodically. For example, in the context of developing a new corporate design, a user survey was conducted among the media, scientists, policymakers and others. In this context, the public at large was also surveyed (if the office is known, what reputation it has, etc.). Further surveys were conducted among Internet users visiting the FSO's homepage, and special surveys asked parliamentary users about their satisfaction with statistical services or special statistical areas. A user satisfaction survey was undertaken as part of this data module ROSC assessment; see Appendix III for a summary assessment of users' views.

Emerging data requirements are an important element in the Strategy and Program Plan of the FSO, which will be compiled every year as a rolling forecast, initially covering a period of two years and to be extended to five years in the future.

Prior to adopting new statistical laws, the departments or units responsible for a subject field typically organize meetings enabling users to express their needs for data, before the conclusion of the legislative process.

Representatives of German official statistics closely cooperate with scientists on further developments in statistics. Annual seminars held jointly with the German Statistical Society are frequently devoted to developing methodological improvements in official statistics. A newly created Council for Economic and Social Data articulates the statistical requirements of the scientific community.

As previously noted, the program of official statistics in Germany is determined very strongly by the (new) data needs of European institutions.

At the European and international level, the FSO participates in international meetings of chief statisticians and of working groups held by various institutions, such as the European Council Working Party for Statistics, the Statistical Programme Committee (Eurostat), and the Statistical Commission (United Nations). The FSO participates in statistical meetings of the International Labour Organization (ILO), the United Nations Economic Commission for Europe (UNECE), the Organisation for Economic Co-operation and Development (OECD), and the European Advisory Committee on Statistical Information in the Economic and Social Spheres (CEIES). Germany has also played an active role in the International Statistical Institute (ISI) and the International Association for Official Statistics (IAOS). The FSO made a major contribution to the organizational and thematic arrangements in preparation for the 54<sup>th</sup> ISI World Session held in Berlin in August 2003, which was attended by approximately 2,000 participants. From a scientific point of view, the FSO attaches great importance to participation in the ISI and its sections.

## **0.4 Other quality management**

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

The system of official statistics follows international and European quality standards. Germany has adopted the UN Fundamental Principles for Official Statistics and subscribed to the IMF Special Data Dissemination Standard (SDDS). The FSO is establishing a quality management system based on the framework of the European Foundation for Quality Management (EFQM).

The commitment to quality is one of the key issues in the FSO's strategic objectives ("fit 2008"). Managers are held accountable for quality as the annual planning cycle focuses on the results obtained relative to the strategic objectives. In addition, data quality is a standard module in the mandatory training programs for new staff (comprising all hierarchical levels). Staff training programs on data quality are offered periodically. In addition, staff is encouraged to participate in European training courses.

The FSO actively participates in working groups or task forces dealing with quality issues: the FSO was a member of the EU Leadership Expert Group (LEG) on Quality and is now a member of the LEG on Quality Implementation. The most recent example is the participation of the FSO in the development of a "Code of Practice" for Eurostat and the national statistical institutes of the EU, which was adopted by the Statistical Programme Committee in February 2005. At the present time, the implementation of the Code is being discussed at the European level.

Based on the quality concept developed in the European Statistical System, a joint quality concept for German official statistics was agreed upon with the statistical offices of the Länder in 2004. A further document, the *Quality Standards of German Official Statistics*, details quality assurance measures applied in statistics production, including possible trade-offs. Data quality issues related to specific statistical programs are also discussed in detail by expert committees and subcommittees of the Statistical Advisory Committee.

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

The organization of the FSO provides for methodological expertise in all subject matter departments. In addition, expert advice is provided by three specialist groups:

- The Mathematical Statistical Methods group advises on sample design, weighting, variance estimation, seasonal adjustment, disclosure control, and other mathematical statistical methods.
- The Institute for Research and Development in Federal Statistics advises on survey design and survey modes, questionnaire design and testing, data editing and imputation, methodological issues related to ad hoc surveys, confidentiality and disclosure control, etc.

- IT User Services advises on data analysis and data management.

Data quality reports are currently being produced for all statistical areas. The quality reports cover all quality components of the ESS Standard Quality Report and briefly describe for users the data quality in each of the federal statistics. They are to be updated on an annual basis and published in all standard publications as well as on the Internet. By the end of 2005, quality reports will be published for all federal statistics.

In addition, a new concept of quality reviews, possibly including elements of self-assessment and auditing, is currently under discussion. For the quality dimension “punctuality,” a monitoring system has been established (an early alert system). The results of the alert system are regularly reported to the heads of the LSOs. This enables each statistical office to compare the punctuality of its data delivery with others for benchmarking purposes. Also at the European level, the timeliness of major economic indicators is checked regularly by Eurostat by way of benchmarking.

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

The strategic goals of the FSO are defined in the (previously mentioned) “fit 2008” and form the basis for the annual and multiyear planning cycle. The actual statistical program is set out in the Strategy and Program Plan.

Goal 2 of “fit 2008” states, “The FSO supplies high quality information required by its users on the state and development of the society, economy and environment.” The FSO’s Research and Development Plan addresses individual quality aspects in detail. Specific activities include the following:

- further improving the GDP flash estimates;
- further developing government finance statistics as part of the system of national accounts;
- offering new sets of statistics on renewable energy sources and the use of energy;
- reforming the system of business statistics; and
- evaluating the information system for health reporting.

## **1. Integrity**

### ***1.1 Professionalism***

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

Article 1 of the *Federal Statistics Law* mandates that “Federal Statistics shall be subject to the principles of neutrality, objectivity and scientific independence.” Article 2 of the *Law* prescribes the FSO as an independent superior federal authority (selbständige

Bundesoberbehörde) within the portfolio of the Federal Minister of the Interior. The President of the FSO is appointed by the Federal President on the proposal of the Federal Government.

The term of office of the President of the FSO, as a civil servant, is unlimited until 65 years of age. Dismissal is not possible because he/she is a civil servant. Removal from service would only be feasible based on disciplinary law. Because he/she is a civil servant he/she can, in principle, be moved to another (nonstatistical) post without a specific reason. This has never happened against the will of the person. If there is a change in the government of the Federal Republic of Germany, this will not impact on the position of the President of the FSO. He/she will not be removed from the post. It might be noted that the President of the FSO is, at the same time, ex officio Federal Returning Officer, responsible for the federal, and the German component of European, elections; no conflict of interest, real or apparent, is seen to arise in this regard.

The FSO actively promotes professionalism. Careful selection of staff is undertaken to match new recruits with the needs of the organization. Extensive staff development and training opportunities are available, and an active research and development program is promoted. Staff frequently participate in international meetings. To encourage academic statisticians to contribute to the research on official statistics, each year the FSO (on the basis of the decision of a jury of external experts) rewards outstanding degree and doctoral dissertations dealing with topics of relevance for official statistics with an award called the “Gerhard-Fürst-Preis.” The FSO publication *Wirtschaft and Statistik* and other publications provide staff with an opportunity to publish papers on research and development activities in German statistics.

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

Within the context of the *Federal Statistics Law’s* mandate for neutrality, objectivity, and scientific independence, the FSO chooses data sources based on best fit for the statistical needs. LSOs are involved in these deliberations, as appropriate.

The *Federal Statistics Law* requires federal statistics to be published.

The statistical results are first published in a press release. The FSO publishes about 550 press releases per year. The day before publishing, the responsible statistical departments prepare the releases, the press office finalizes the content and format, and the President of the FSO gives the final approval. The FSO does not need political approval to publish statistical information. This also holds for press releases. Within the context of defined pre-embargo access arrangements, statistics are made available to all users at the same time. In exceptional cases, ministries with specific subject-matter interests are provided with advance information at close of business on the day preceding publication (on the morning of publication in the case of national accounts). This applies to statistics that the media typically expect the ministries to comment on immediately after they have been issued by the statistical office.

The corresponding press release of the FSO is not furnished with commentary by the federal ministries.

While the access arrangements to statistics prior to their release are documented on the IMF Dissemination Standards Bulletin Board (DSBB), these arrangements should also be documented on the FSO website where they are likely to be more accessible to local users of statistics.

The press releases are published at 8:00 a.m. (CET) in Wiesbaden by fax, satellite, e-mail, and on the Internet. The publication dates are announced in a yearly and weekly advance release calendar. Statistical data of top interest to journalists are announced in a press conference (about 10–20 events yearly).

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

The reactions of the media in Germany to publications of the FSO, as well as articles in the media on other aspects of the office, are monitored and evaluated daily. In the case of inappropriate reporting by the media, the FSO, depending on the circumstances, may:

- contact the journalists or the editors-in-chief; or
- write a letter to the editor; or
- publish a press release; or
- in extreme cases, complain to the German Press Council (Deutsche Presserat).

**1.2 Transparency**

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

Information on the terms and conditions under which statistical series are compiled and disseminated are available to the public at the website [www.destatis.de](http://www.destatis.de).

Information on the mandate of the FSO, its function, its objectives, the Strategy and Program Plan, the *Annual Report*, and further information about the organization is provided on the website in a special menu item “About Us.” Further, the *Federal Statistics Law* and all relevant legal texts for statistical production are published on the website, comprising relevant information on confidentiality and the handling of confidential data. The menu item entitled “Scientific Forum” provides information on major national and international trends in the field of official statistics and information on the Joint Scientific Colloquia of the FSO and the German Statistical Society.

In “Statistics from A–Z” on the website, a special service is presented to journalists and other interested users. The documentation presents all relevant statistical metadata for a given issue.

In the case of new statistics, journalists receive methodological information at press conferences, where the head of the office regularly provides information about statistical topics of current interest. All information for press conferences is also published on the website for the public as well.

All statistical publications of the FSO refer to the website, where detailed information about the FSO and its products can be found. All publications mention persons for contact, postal addresses, telephone numbers, facsimile numbers, e-mail addresses and other relevant information of interest. In addition, a special link (“Contacts”) on the Internet site provides contact details for the respective experts for the individual statistical fields, including contact persons for technical questions.

Both at management and working levels, the FSO is represented regularly at national (e.g., Statistical Week) and international conferences. The results are frequently published by the organizers on the respective Internet websites and in print publications.

The menu item entitled “Calendar of Events” on the FSO website provides the dates of trade fairs, events, and press conferences.

The information offered on the Internet is supplemented by links to other relevant institutions involved and databases. There are links provided, for example, to the “Statistics Portal of the Statistical Office of the FSO and of the Länder,” the Statistical Advisory Committee and organizations such as Eurostat and the IMF.

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

See section 1.1.2 above regarding pre-embargo access arrangements.

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

All products of the FSO can be clearly identified as such by the name and the logo of the FSO (in publications as well as on the website). Every publication and the website contain copyright information, for instance “Reproduction and free distribution, also of parts, for noncommercial purposes are permitted provided that the source is mentioned ...”

In the case of press releases, the first paragraph names the source: “as reported by the Federal Statistical Office.” Press releases contain statements made by the FSO, with no policy interpretation.

In addition, the FSO and the LSOs have a common logo and a common statistics portal. The joint publications of the statistical offices of both the FSO and the Länder offices are easily recognizable by the common logo.

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

Information on changes in methodology, source data, and statistical techniques are given to users in advance and when they are introduced. Explanation of new methods and changes in source data and statistical techniques are published on the website and in all relevant print publications. Special publications also make changes transparent. Major changes are also discussed with users in the subcommittees of the Statistical Advisory Committee.

In the case of a revision to national accounts, users receive detailed information about the revision on the homepage well in advance, before the first results are published. Furthermore, the changes are discussed in the subcommittee “National Accounts” of the Statistical Advisory Committee. Users are also notified of all changes in classifications well in advance.

**1.3 Ethical standards**

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

The main principles of German official statistics are set out in the *Federal Statistics Law*, and the corporate vision and strategic objectives of the FSO (“fit 2008”).

Ethical standards for staff behavior are part of the contracts of employees and the appointment of civil servants. New staff are informed of the general staff behavior, in particular rules on statistical confidentiality and on the acceptance of gifts and rewards. Soon after recruitment, new staff have to take a vow. Moreover, they have to attend comprehensive training courses after entry to the FSO, including the possibility of receiving advice by a mentor (senior employee or civil servant) for the first 18 months. All these arrangements ensure that new staff fully understand the professional culture of the FSO.

The corporate vision and strategic objectives (and thus ethical standards) are available on the Intranet and have been distributed to all staff members of the FSO. Also, the ethical standards (including international) are explained during training courses. The corporate vision and the strategic goals have been given to every staff member, with the clear instruction that staff must implement them in their daily work. In internal training programs, it is explicitly pointed out to the staff that international standards and guidelines (UN Fundamental Principles, the IMF SDDS, the recent Code of Practice at European level) have to be followed.

Moreover, clear directives for the specialized units have been discussed, adopted, and communicated by all heads of departments and are also distributed via the Intranet. If, for example, ministries attempt to exert influence after having been informed in advance about

publications of the FSO, such requests would be rejected and communicated at once to the President of the FSO, so that the required measures could be taken.

### **Recommendations<sup>6</sup>**

- Investigate options for further streamlining the split of responsibilities for statistical operations between the FSO and the LSOs with a view to freeing up resources to meet the emerging demands for new statistics (0.2.1 and 0.2.2).
- Document on the FSO website the arrangements for prior access, under embargo arrangements, to statistics so that the arrangements are more transparent to local users of statistics (1.1.2).

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<sup>6</sup> Recommendations are made here in the order of the DQAF.

Table 1. Germany: Data Quality Assessment Framework (July 2003): Summary of Results for Federal Statistical Office<sup>7</sup>—  
Dimensions 0–1

Criteria	Element	NA	Assessment				Comments
			O	LO	LNO	NO	
<b>0. Prerequisites of quality</b>							
0.1	Legal and institutional environment		X				
0.2	Resources		X				
0.3	Relevance		X				
0.4	Other quality management		X				
<b>1. Assurances of integrity</b>							
1.1	Professionalism		X				
1.2	Transparency		X				
1.3	Ethical standards		X				

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

<sup>7</sup> The Federal Statistical Office is responsible for the national accounts, producer price index, and government finance statistics. The two institutionally oriented dimensions of the Data Quality Assessment Framework—Prerequisites of Quality and Assurances of Integrity—are presented once, in this table, for the three datasets.

## I. NATIONAL ACCOUNTS

**For assessments of the Prerequisites of Quality (0) and Assurances of Integrity (1) dimensions, see Section 0 for the Federal Statistical Office (Statistisches Bundesamt)**

### 2. Methodological soundness

#### 2.1 Concepts and definitions

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

Since 1999 the Federal Statistical Office (FSO) has followed the *European System of Accounts 1995 (ESA 95)* as the general framework for compiling national accounts statistics.

In one important respect the German national accounts deviate from the usual interpretation of the *ESA 95*: local kinds of activity units (local KAUs)<sup>8</sup> are generally not recognized. The authorities, however, believe that they are in line with the international recommendations, in particular with paragraph 2.106 of the *ESA*, where it states that “The institutional unit’s information system must be capable of indicating or calculating for each local KAU at least the value of production, compensation of employees, the operating surplus and employment and gross fixed capital formation.” Reportedly, in the German situation it is usually impossible to collect such information (in particular output and intermediate consumption) for local KAU-type units.<sup>9</sup> The authorities also think it is not necessary to split enterprises into KAUs, because typically different institutional units are set up in case a concern is involved in more than one economic activity.<sup>10</sup> The regional aspect of local KAUs has no influence on the precision of gross domestic product (GDP) estimates at the federal level.<sup>11</sup>

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<sup>8</sup> The label used in the *System of National Accounts 1993 (1993 SNA)* is “establishments.”

<sup>9</sup> With the exception of some parts of government, for which local KAUs are defined. For private enterprises active in mining; electricity, gas, and water supply; construction; manufacturing; and wholesale and retail trade, at least some of the required data would be available (such as number of employees, wages and salaries, and gross-fixed capital formation). However, the national accounts do not define local KAUs in these cases.

<sup>10</sup> A study has shown this to be the case at the two-digit Statistical Classification of Economic Activities in the European Communities (NACE) level.

<sup>11</sup> The regional accounts apply different methods to estimate regional product, depending on the available sources. One often used method is to split gross value added of enterprises into a labor and a capital related part and to regionalize these components separately (e.g., using  
(continued)

As agreed among European Union (EU) members, as yet no explicit estimates are made with respect to illegal criminal activities. However, in January 2002 the FSO started a project to analyze the feasibility of including such estimates in the national accounts.

## **2.2 Scope**

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

The FSO compiles on a regular basis all the tables and accounts that the Intersecretariat Working Group on National Accounts (ISWGNA) determined as a minimum requirement for the implementation of the *1993 SNA*.<sup>12</sup> These are the following:

- 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 (up to financial accounts) with an annual frequency; and
- annual rest-of-the-world accounts (up to net lending).

The FSO also compiles on a regular basis the tables and accounts that the ISWGNA determined as recommended for *1993 SNA* implementation, as listed below:

- quarterly value added and GDP at current and constant prices by activity;
- quarterly expenditures of GDP at current and constant prices;
- annual supply and use tables.

It is noted that the supply and use tables (and input-output tables) compiled in Germany are published within three years after the end of the reference year.

The German national accounts do not yet comprise other changes in asset accounts or full balance sheets, although capital stock data are compiled, and the Bundesbank compiles and publishes annual data on financial flows and stocks in accordance with the *ESA 95*.

A working group comprising the Länder statistical offices, the FSO, and a representative of the municipal statistical offices, chaired by the statistical office of Baden-Württemberg, compiles regional accounts for the Länder that are fully consistent with the national data.

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compensation of employees, which is normally available for local units, and, on the other hand, an estimated stock of capital formation for the regional allocation of gross operating surplus).

<sup>12</sup> This assessment takes the *ESA 95* and the *1993 SNA* as equivalent standards.

Satellite accounts and tables are regularly compiled for the environment, while social accounting matrices and tourism satellite accounts are also published. The satellite accounts received strong support in user discussions (see Appendix III).

The delimitation of the constituent units of the economy is in accordance with international recommendations. This means, among other things, that the following are included as part of the economy:

- territorial enclaves in the rest of the world;
- free zones/bonded warehouses/factories operated by offshore enterprises under customs control; and
- residents who work part of the year abroad. Main categories are commuters, residents employed by the Allied forces in Germany, residents employed in other countries' diplomatic, consular, and cultural missions or in offices of international organizations located in Germany, as well as students in paid employment abroad.

The economic territory is properly covered. The German community of Büsingen, although completely surrounded by Switzerland, is included in the data. Conversely, the Austrian village of Jungholz, which can only be reached by road from Germany, is excluded. The source for information on free zones/bonded warehouses/factories operated by offshore enterprises under customs control is the balance of payments compiled by the Bundesbank. These data are included in the national accounts without modification.

The national accounts largely define the production boundary in accordance with international recommendations. Conceptually, the following items are in the scope for output (irrespective of actual full coverage):

- a. own-account production of all goods for own final consumption;
- b. output of goods for own-account fixed capital formation;
- c. mineral exploration;
- d. production of entertainment, literary, or artistic originals;
- e. production of purchased and own-account computer software (including databases);  
and
- f. illegal output sold to willing buyers.

In contrast with international recommendations, research and development on own account is not explicitly measured. The FSO reasons that such data do not influence overall GDP or contribute to gross fixed capital formation. As noted earlier, no explicit estimates are made for illegal criminal output sold to willing buyers.

The asset boundary in the German national accounts is in accordance with the *ESA 95*. Specifically it includes:

- a. defense-related assets that could be used for civilian purposes;

- b. valuables and historical monuments (although major restoration works to historical monuments are recorded as fixed capital formation);
- c. agricultural work-in-progress;
- d. mineral exploration (whether successful or not);
- e. systems and standard application computer software and databases (purchased or built in-house); and
- f. entertainment, literary, or artistic originals.

Transactions involving patented entities and leases and other transferable contracts (such as purchased goodwill) are not yet recorded.

### **2.3 Classification/sectorization**

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

The classifications of institutional units and transactions follow the *ESA 95*. The industrial classification used is the Statistical Classification of Economic Activities in the European Communities (NACE) Rev 1., and products are classified by the Classification of Products by Activity (CPA). Machinery and equipment is classified by the List of Products of the European Communities (PRODCOM), which is identical to the CPA up to the six-digit level. The Classification of Individual Consumption by Purpose (COICOP) serves to break down household final consumption, and the Classification of the Functions of Government (COFOG) is used to classify functions of government.

### **2.4 Basis for recording**

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

Flows and stocks are valued in accordance with the *ESA 95* recommendations. Market output is valued at basic prices, and intermediate consumption at purchasers' prices. Output for own use is valued at equivalent market prices. Value-added tax is, as recommended, included in the valuation of intermediate consumption, apart from the deductible part. The deductible part of value-added taxes also is excluded from the valuation of final uses. So far, no explicit corrections are made for transfer prices because there are no possibilities to detect such prices. The totals of merchandise imports and exports are valued at f.o.b. prices; the corrections to revalue the imports of merchandise as recorded in foreign trade statistics are made on the basis of c.i.f.–f.o.b. margins calculated by the Bundesbank. Foreign transactions derived from the balance of payments are mostly recorded using conversion rates applied by respondents. Declaration rules for the imports and exports of merchandise allow considerable flexibility with respect to the exchange rate used to convert foreign currencies into euros, and thus merchandise may not reflect the recommended valuation. In particular, imports and exports of merchandise may include services for the exchange of foreign currency.

*2.4.2 Recording is done on an accrual basis.*

All transactions are recorded on an accrual basis, except for some imports and exports of services. Work-in-progress is recorded in the period it is produced. Corrections are made to government transactions, which the basic statistics usually record on a cash basis.

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

As establishments are not differentiated (see section 2.1.1 above), it is not possible to record transactions between local KAUs within the same enterprise on a gross basis, such as is recommended in the international guidelines. Other gross/netting procedures are consistent with international standards.

### **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 available sources are broadly sufficient to prepare accurate and reliable national accounts statistics (see the two tables below summarizing the sources for the annual and quarterly accounts). Nevertheless, in a few areas, source data are scarce or late. This is, for instance, the case for inputs for some service activities in the annual accounts. In the quarterly accounts, change in output has sometimes to be approximated using employment data. No direct sources exist for quarterly changes in inventories. Extrapolation models have been developed when recent data are lacking. An example is the extrapolation of the stock of dwellings (the housing census dates back to 1987 for the old Länder and 1995 for the new Länder), needed to compute the services of dwellings.

Data sources are kept under continuous review. This is a task of the various thematically defined units within the Department for National and Environment Accounts and Employment. These units are in regular contact with ministries and other agencies to remain on top of any major economic and/or legal change related to their working fields. New sources will be analyzed and, if appropriate, incorporated on the occasion of the next major revision. An example is the new survey on services launched as a result of the increasing importance of the tertiary sector. Other examples of closely monitored developments include changes in the *Unemployment Act* and the significant additions to the social security system with respect to long-term care.

## *Sources for annual GDP*

### *Business register*

The business register covers all NACE industries except agriculture, government, domestic services, and extraterritorial organizations. It is constructed from the Länder enterprise and local unit registers, which, in turn, make use of tax registers, social insurance registers, the results of censuses and surveys, and other available information. The register is updated annually. There is a separate register for agricultural units, equally regionally compiled and organized, and another for government units. Work is still under way to come to a fully integrated business register for Germany. The expected introduction of a single system of enterprise numbers will assist in business register maintenance.

### *Enterprise surveys*

The enterprise sample surveys are conducted using appropriate sample designs. In this connection the legal processes to establish surveys should be mentioned, both at the national and at the EU level.<sup>13</sup> For instance, Regulation (EC) No. 58/97 contains guidelines concerning structural business statistics, and Regulation (EC) No. 1165/98 does the same for short-term statistics. These regulations define the following issues:

- g. the activities for which the statistics are to be compiled;
- h. the types of statistical unit to be used for the compilation of the statistics;
- i. the list of characteristics for which statistics are to be compiled;
- j. a list of statistics to be compiled on business demography;
- k. the frequency for the compilation of the statistics;
- l. the timetable showing the first reference years for the statistics to be compiled;
- m. the standards relating to representativeness and quality evaluation;
- n. the timeliness of the results; and
- o. the maximum length of the transitional period that may be conceded.

The FSO has compiled a handbook on survey design, which details the standards applicable to all official statistics. In addition, a special unit in the FSO provides support in efficient data capturing and minimizing nonsampling errors.

As indicated earlier, the Länder statistical offices (LSOs) conduct the majority of the surveys. The data collected from enterprises are broadly sufficiently detailed to derive national accounts aggregates. Official statistics in general are rather close to the national accounts, although some conceptual modifications may be necessary. Administrative sources, on the

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<sup>13</sup> The principle of legality was described above in section 0.1.1 of the prerequisites of quality pertaining to the FSO.

other hand, generally require more adjustments toward the concepts and definitions of national accounts.

Table 2. Main Sources for the Annual Accounts

<b>NACE Rev 1. section</b>	<b>Main source</b>
Agriculture, hunting, and forestry	<ul style="list-style-type: none"> <li>- Agriculture accounts prepared by the Ministry of Agriculture</li> <li>- Data on acquisitions by processing industries (dairies, slaughterhouses, sugar factories, etc.)</li> <li>- Sales of fodder, seeds, fertilizer, etc.</li> <li>- Forestry output and input data collected by the Ministry of Agriculture</li> </ul>
Fishing	<ul style="list-style-type: none"> <li>- Fishery statistics (sea and coast landings)</li> <li>- Cost survey by Ministry of Agriculture</li> <li>- Statistics on catch for inland waters</li> <li>- No direct information on cost structure of inland fishing</li> </ul>
Mining and quarrying	<ul style="list-style-type: none"> <li>- Annual turnover and cost structure surveys for enterprises with 20 or more employed persons</li> <li>- Annual survey of small establishments' output</li> <li>- Quarterly crafts and trades reports</li> </ul>
Electricity, gas, and water supply	<ul style="list-style-type: none"> <li>- Annual energy and water supply survey for output</li> <li>- Annual cost structure survey</li> </ul>
Construction	<ul style="list-style-type: none"> <li>- Annual turnover and cost structure surveys of construction enterprises with 20 or more employed persons</li> <li>- Annual survey of small establishments</li> <li>- Quarterly Crafts and trades reports</li> <li>- VAT statistics for total output (additional source)</li> <li>- Annual turnover and cost structure of complementary construction enterprises (installation, electricity, etc.)</li> </ul>
Wholesale and retail trade, repair of motor vehicles, and personal and household goods	<ul style="list-style-type: none"> <li>- Annual structural business statistics</li> <li>- VAT statistics for output (additional source)</li> <li>- Federal Agriculture and Food Office</li> <li>- Oil reserves committee</li> </ul>
Hotels and restaurants	<ul style="list-style-type: none"> <li>- Annual structural business statistics</li> <li>- VAT statistics for output (additional source)</li> <li>- Four-yearly costs structure survey (for previous years)</li> </ul>
Transport, storage, and communication	<ul style="list-style-type: none"> <li>- Annual structural business statistics</li> <li>- State Railway and German Post accounts (output and inputs)</li> <li>- Balance of payments output for sea transport</li> <li>- VAT statistics for output private railways, taxis, storage, private communication, travel bureaus, etc.</li> </ul>
Financial intermediation	<ul style="list-style-type: none"> <li>- Four-yearly cost structure statistics for transport enterprises</li> <li>- Data from supervisory bodies</li> <li>- Bundesbank accounts</li> </ul>

NACE Rev 1. section	Main source
Real estate, renting, and business activities	<ul style="list-style-type: none"> <li>- VAT statistics</li> <li>- Employment statistics</li> <li>- Business accounts for certain enterprises</li> <li>- Annual structural business statistics</li> <li>- Construction statistics for real estate</li> <li>- Accounts of subsidized organizations</li> </ul>
Public administration and defense; compulsory social security	<ul style="list-style-type: none"> <li>- Quarterly and annual government accounts</li> </ul>
Education/ Health and social work	<ul style="list-style-type: none"> <li>- Education and Health Ministry's statistics</li> <li>- Health insurance data</li> <li>- Data from professional organizations (dentists, etc.)</li> <li>- VAT statistics</li> <li>- Four-yearly cost structure statistics for certain categories</li> <li>- Bi-annual nursing care statistics</li> <li>- Employment statistics</li> </ul>
Other community, social, and personal service activities	<ul style="list-style-type: none"> <li>- VAT statistics</li> <li>- Employment statistics</li> <li>- Often no direct information on cost structure</li> </ul>
Net taxes less subsidies on products	<ul style="list-style-type: none"> <li>- Monthly statements from the Ministry of Finance</li> <li>- Quarterly statements of taxes levied by municipalities</li> </ul>
Household final consumption expenditure	<ul style="list-style-type: none"> <li>- Turnover data of suppliers to households (in particular retail trade)</li> <li>- Special product assessments (e.g., motor vehicles, fuel, tobacco)</li> <li>- Household income and expenditure surveys (additional source)</li> </ul>
Final consumption expenditure of nonprofit institutions serving households	<ul style="list-style-type: none"> <li>- See production approach</li> </ul>
Government final consumption expenditure	<ul style="list-style-type: none"> <li>- See production approach</li> </ul>
Acquisitions less disposals of tangible fixed assets	<ul style="list-style-type: none"> <li>- Commodity flow</li> <li>- Quarterly data on permits for motor vehicles</li> <li>- Investment statistics from acquiring enterprises</li> </ul>
Acquisitions less disposals of intangible fixed assets Additions to the value of nonproduced nonfinancial assets	<ul style="list-style-type: none"> <li>- Commodity flow</li> <li>- Irregular surveys on acquired software</li> <li>- Administrative data on transfer costs</li> <li>- Commodity flow for land improvements</li> </ul>
Changes in inventories	<ul style="list-style-type: none"> <li>- Agricultural accounts prepared by Ministry of Agriculture</li> <li>- Cost structure surveys</li> <li>- Wholesale and retail trade surveys</li> <li>- Oil reserves committee</li> </ul>
Acquisitions less disposals of valuables	<ul style="list-style-type: none"> <li>- Commodity flow approach</li> </ul>
Exports and imports of goods	<ul style="list-style-type: none"> <li>- Foreign trade statistics</li> </ul>
Exports and imports of services	<ul style="list-style-type: none"> <li>- Balance of payments prepared by the Bundesbank</li> </ul>

The above table indicates that many sources are available to the national accountants. For a few service categories however, no primary statistics exist. In those cases the compilers have to fall back on value-added tax (VAT) statistics for making estimates of output. While VAT data can be used to extrapolate the results from a benchmark survey for short periods, they are not particularly appropriate as a single source of production for the following reasons:

- In Germany, it may be concern-type units rather than enterprises that are liable to pay taxes;
- The classification of units by economic activity may differ between the FSO business register and the VAT register;
- Several categories of enterprises are not liable to pay VAT taxes;
- VAT data should be adjusted for changes in inventories and own-account production to arrive at output as required in the national accounts.

When cost structure surveys are only held every four years, the coefficients used in the national accounts may be quite old because the survey results can only be incorporated on the occasion of a large revision. For a small number of service industries, moreover, there are no direct sources at all on cost structure, implying that the national accountants have to make estimates by analogy.

#### *Household surveys*

Household income and expenditure surveys (HIES) have generally been conducted every five years since 1962/63. In 1993, the survey was carried out for the first time in all 16 federal states. The HIES is a quota sample that is not based on a register of all households. Rather, the sampling units are recruited by seeking cooperation of households, for instance, by contacting households participating in the Microcensus (annual compulsory household survey, based on an area probability sample, and covering 1 percent of the total population).<sup>14</sup> Households thus select themselves in the sample. The sample is stratified by characteristics according to the desired results breakdown and with a high impact on representativity such as household type, monthly household net income, and social status of main income earner. Additionally, for quota determination a detailed classification by region *Länder* is applied. No refreshment of the sample takes place during the reporting period. Substitutional post-recruitment approaches are used to compensate for nonresponse in specific, difficult to recruit social groups (for instance farmers, unemployed, single parent households, and low-income households). All private households with their residence in the national territory are covered by the HIES, except for persons without fixed abode, persons living in institutional or collective accommodation, and households with a monthly household net income of more than 18,000 euros.

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<sup>14</sup> The LSOs use various methods to recruit households for participation in the HIES, including advertising through brochures, placing posters, broadcast messages, and address buying.

The HIES covers a full year. There is an introductory interview for all sampling units at the beginning of the year where basic socio-demographic and welfare-related data are collected. Each sampling unit is then assigned to one specific quarter out of the four quarters of the year in such a way that the total sample size is distributed evenly. Each sample household thus is asked to record its income and consumption during a three-month period (by way of a household diary). Additionally, a subsample of households record details on their consumption of beverages, food and tobacco (detailed log book) for one month during the three-month reporting period.

The survey questionnaires for the HIES are constructed on sound design principles that ensure effectiveness in terms of several criteria such as data validity, clarity, and user-friendliness. The HIES data-processing procedure applies comprehensive budget plausibility checking.

It should be noted that the HIES is not the principal source for the estimate of household final consumption expenditure in the national accounts. The national accounts start from data on turnover from suppliers, adjusted for parts of that turnover that are acquired by sectors other than households. During major revisions, a cross-checking with the results from the HIES is conducted.

#### *Government finance statistics*

The methods used for compiling the accounts for general government are closely monitored both within Germany and at the EU level in view of their importance for the Maastricht criteria.

The data are comprehensive, covering all levels of government (federal, Länder, municipality, as well as social security agencies) and including the operations of extra-budgetary funds as well as all defense-related expenditures. Federal and Länder agencies apply exactly the same bookkeeping standards; the classification methods followed by municipalities may deviate from those of the higher levels of government. Data on the stock of fixed capital are calculated by way of the perpetual inventory method, but full balance sheets are not being compiled.

Detailed data are available to measure output and other important categories.

#### *Administrative data*

Even though the FSO strongly prefers survey data above administrative sources, the national accounts use administrative data to some extent. Insofar as these data deviate from the national accounts concepts, adjustments are made. For instance, gaps in the coverage of the VAT statistics are filled by making upward adjustments (for instance for educational institutions that are largely not liable to pay VAT on their production). Administrative data from finance, insurance, and credit institutions are very comprehensive. These are collected

by the Bundesbank and the agency supervising insurance enterprises. If appropriate, again the original data are converted to the national accounts concepts.

### *Periodic surveys*

When annual surveys do not exist, periodic surveys may be conducted. An example is the cost structure surveys conducted every four years for some service industries. Such surveys adhere to the same quality standards as annual surveys.

### *Price statistics*

Price statistics used in the national accounts include, among other things, the consumer price index, the producer price index, and foreign trade price indices. These statistics are generally available at sufficient level of detail for nearly all economic activities. The demands are high, as the FSO consistently applies the double-deflation method<sup>15</sup> to calculate the constant price value added of market enterprises. Output deflators are very detailed and mostly meet national accounts requirements. Certain gaps used to exist in the services sector, for example for attorneys, notary services, and architects. However, new price data are becoming available for many of these economic activities.

Price statistics are generally very close to national accounts needs in terms of concepts and coverage. In a few cases, modifications are needed. For example, the national accountants construct a deflator from two price indices to calculate research and development at constant prices. Price statistics generally use a fixed year for their weights. The national accounts, however, have adopted annual chain-linking since April 2005.

### *Sources for quarterly GDP*

The FSO calculates quarterly accounts according to the production and the expenditure approaches as independently as possible. For the quarterly production approach it relies mainly on the monthly production index, retail trade statistics, employment and working hours, and quarterly public finance statistics. For nearly all expenditure categories, sufficient monthly or quarterly data are available. Investment in machinery and equipment is estimated according to the commodity flow approach. Changes in inventories are estimated with the help of a model that uses (the difference in) production and turnover indices, as well as business opinions about inventories. Users have expressed regret at the lack of direct sources for quarterly changes in inventories. An important reason is that changes in inventories, together with net exports, are the main contributors to short-term deviations in the trend of quarterly GDP growth.

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<sup>15</sup> This method calculates constant price value added by taking the difference between separately deflated output and intermediate consumption.

The available indicators usually are consistent with the variables to be measured, and they are also close to the sources used for the annual accounts. However, hours worked may be a quite indirect indicator for several activities, because there may be only an indirect relationship between value added and labor input in the short run.<sup>16</sup>

The indicators are mostly available with the needed timeliness.

Table 3. Main Sources for the Quarterly Accounts

Production Approach		
NACE Rev 1. sections	Main sources	Adequacy for quarterly estimates
Agriculture, hunting, and forestry	- Planted area and expected yield data for many types of crop - Data on acquisitions by processing industries (dairies, slaughterhouses)	Good
Fishing	- None	Not satisfactory
Mining and quarrying	- Production index	Good
Manufacturing	- Production index	Good
Electricity, gas, and water supply	- Production index	Good
Construction	- Hours worked - Turnover statistics for complementary construction enterprises (installation electricity, etc.)	Good
Wholesale and retail trade, repair of motor vehicles, and personal and household goods	- Turnover statistics	Good
Hotels and restaurants	- Turnover statistics	Good
Transport, storage and communication	- Person/kilometer and Ton/kilometer statistics - Turnover for some transport companies - Balance of payments - Returns from associations of travel agencies etc. (irregularly received) - Statements from large communication companies	Good
Financial intermediation	- Bank statistics from Bundesbank - Premiums life and health insurance	Good

<sup>16</sup> The national accountants adjust for changes in productivity based on the trend in annual data.

Production Approach		
NACE Rev 1. sections	Main sources	Adequacy for quarterly estimates
Real estate, renting, and business services	- Building permits, price indices - Number of persons employed - Hours worked per person employed	Reasonable
Public administration, Education/Health and social work	- Government finance statistics - Statements from social security funds - Statements from obligatory health insurance	Good
Other community, social, and personal service activities	- Number of persons employed - Hours worked per person employed	Reasonable
Net taxes less subsidies on products	- Statements Ministry of Finance - Balance of payments	Good
Expenditure Approach		
Expenditure category	Main sources	Adequacy for quarterly estimates
Household final consumption expenditure	- Detailed turnover indices of retail trade, crafts, and hotels, restaurants, and cafes - Car registrations	Good
Final consumption expenditure by government and nonprofit institutions serving households	- Government finance statistics - Statements from social security funds	Good
Gross fixed capital formation	- Hours worked in construction - Detailed quarterly production statistics and foreign trade for machinery and equipment	Good
Changes in inventories	- Production index manufacturing - Turnover index manufacturing - Opinions on inventories (these indices are inputs in a model)	Less than satisfactory
Exports and imports	- Foreign trade statistics - Balance of payments for services	Good

### *Ad hoc studies and versatility*

Ad hoc surveys are seldom conducted to supplement the regular surveys. This is because new statistics require a law/ordinance that needs parliamentary approval. Still, there is a possibility of conducting certain ad hoc surveys with less legal burden. A survey conducted on the economic activities of lawyers, notaries, and attorneys comes into this category. In the national accounts estimates, the FSO also uses results of surveys conducted by nongovernmental research institutions.

Because the data collection program can only be changed with considerable effort, the FSO seeks extensive advice from experts within and outside the business community on changes

in that program. The working group “Improving the Statistical System” of the Statistical Advisory Committee has been very active in this field. Explicitly for national accounts, annual meetings are organized with the press, representatives from the government and industry and contacts with the trade unions, scientific institutions, private banks, etc. It should be noted that a large portion of the statistical program is decided at the EU level. The EU has its own external advisory committees that provide inputs in the decision making.

The FSO monitors press and scientific journals for information on activities that need to be taken into account in the national accounts compilation system. The FSO also monitors closely the international standards, guidelines, and practices for changes that need to be incorporated in the national accounts compilation system. There are many Eurostat working groups and task forces in this respect. Germany participates also in international working groups, for example in the Canberra group on capital measurement and in *SNA*-revision groups at the OECD and in discussions at UN level.

In general the national accounts division is keen to receive information on any possible changes to the data sources, and it keeps closely in touch with the supplying agencies for that purpose. This is true for all surveys, as well as for administrative data used in the national accounts.

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

National accounts statistics have an important influence on the design of official statistical surveys. For this reason, the source data are in nearly all cases consistent with the definitions, scope, and classifications required by the national accounts. An example in point is the cost structure statistics conducted with enterprises. Administrative information, however, may deviate more from national accounts requirements. In this case the data are adjusted. This is, for instance, the case with the administrative data on insurance. Similarly, interest, taxes, and social contributions from the government administration are adjusted to bring them on an accrual basis.

The coverage of total economic activities (in terms of value added) by all data sources is good. A 1995 research project showed that the overall source coverage is approximately 90 percent. The coverage is also good at the level of the most important industrial groups.

*3.1.3 Source data are timely.*

The publication schedule of the national accounts statistics is as follows:

Annual accounts:

- First provisional data—January following the reference year;
- Main report—September following the reference year.

Quarterly accounts:

- Flash GDP—45 days after the reference quarter;
- Complete series—55 days after the reference quarter.

Input-output tables:

- Irregular—usually three years after the reference year.

Regional accounts:

- First GDP data—about two months after the reference year. Details in later months.

By and large, the data collection and processing timetables are adequate to meet timeliness and periodicity for disseminating the national accounts statistics. A standard procedure informs respondents of the deadlines set for reporting to the statistical offices. In fact, a seven-step follow-up procedure ensures the timely receipt of source data.

## **3.2 Assessment of source data**

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

The accuracy of the data collected through surveys is routinely assessed. In 2002, the FSO and the statistical offices of the Länder started a project to both improve the timeliness of statistics and increase the efficiency of the data editing processes. This resulted in a new editing concept that became operational in 2004. Under the new concept, an Excel program validates reported data on criteria suggested by subject matter statisticians. In addition, a data editing process manager has been created. The new concept improves the efficiency of data editing by a combination of measures: a relocation of editing stages,<sup>17</sup> the implementation of selective editing methods and automatic edit and imputation methods, and finally the improvement of management documents. In addition the FSO develops quality reports for every official survey. These reports include information on nonsampling errors, survey operations and biases, over/under coverage, misclassifications, processing, and nonresponse. These reports are published together with the statistical information they describe. For example, for trade statistics they are included in the monthly and yearly publication.

Source data are analyzed in depth in the context of main revisions, which take place about every five years. Nonperiodic and new statistics are carefully reviewed before incorporation

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<sup>17</sup> For instance, the FSO offers programs to data suppliers that conduct a first check on the data while they are being entered in the electronic questionnaire (so part of the editing is “outsourced” to the respondent). Fifty such electronic questionnaires will be available by the end of 2005.

into the national accounts during major revisions. The effects of changes to questionnaires on survey estimates are also assessed.

Administrative data sources are regarded as second-best sources for national accounts: if possible, national accounts rely on official survey information. Administrative data generally do not need much editing because they are supplied by auditing institutions (for instance data on insurance companies), or the information is subject to official auditing institutions (such as the Court of Auditors for tax information and government finance statistics).

### **3.3 *Statistical techniques***

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

The national accounts division checks the information received before using it. This is done mostly by sectoral specialists. As the data refer to aggregates rather than individual units, the analysis often focuses on temporal consistency and revisions in the data. It was noted, for instance, that the preliminary production index for energy often was changed at a later stage. A new estimation procedure was therefore developed to correct this deficiency.

Also, the national accounts specialists compare their sources extensively with other data sources for consistency. For example, the plausibility of the trade statistics is investigated using data on VAT statistics. This type of plausibility check is conducted very carefully because it is possible that slightly different concepts exist between the different surveys.

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

A case-by-case approach is followed to incorporate unobserved activities in the national accounts. With the introduction of the *ESA 95*, a major effort was undertaken to develop specific estimation methods with respect to illegal work; in construction; in hotels, restaurants, and cafés; for illegal trade; as well as for tips and prostitution.

#### *Production approach procedures*

The estimates are compiled at a sufficient level of detail. Output and intermediate consumption estimates are compiled at least at the two-digit industry level, in many cases at the four-digit level, and in some cases even at the five-digit level. They are published at the two-digit level (60 activities).

The reliance on fixed ratios derived from benchmarks or other sources is limited. Usually annual data are available, for instance from the annual cost structure survey (structural business statistics). A few cost-structure surveys, however, are carried out every four years. In these cases it is not possible to use the results in the annual revisions, meaning that they can only be incorporated on occasion of major revisions. These take place about every five years. Additionally, in a very limited number of industries (especially for private enterprises

in NACE Rev.1 sections M, N, O),<sup>18</sup> estimated fixed ratios have to be used. These industries contribute less than 10 percent to GDP.

The output of owner-occupied dwellings is correctly recorded as the estimated rentals that tenants would pay for similar accommodation. The stock of dwellings is stratified by a number of characteristics that affect rent levels, such as surface and age, leading to 495 effective categories in the old Länder and 360 in the new ones. The rents actually paid for rented accommodation are then applied to owner-occupied accommodation in the same category.

The *ESA 95* is followed by treating as work-in-progress growing crops, standing timber, and orchard and fruit farms. However, this is not done for stocks of fish in view of the minor importance of river and lake fishing and of aquaculture. Animals intended for breeding or productive use at a later date and that are not yet of breeding age are recorded as inventories. Work-in-progress in respect of large construction projects is not recorded as such, but is included in gross-fixed capital formation. In principle, ongoing work on the production of large equipment such as ships is treated as work-in-progress, but the quarterly estimates are a bit shaky as they have to be derived by comparing two basic statistics.

For national accounts purposes, adjustments need to be made to business statistics because these provide data on turnover and acquisitions rather than output. One of these adjustments concerns changes in inventories. Although the FSO adjusts the valuation of opening and closing inventories toward average period prices, this procedure would only correctly remove holding gains for changes in inventories if enterprises valued their inventories at current market prices (which is very unlikely).

The perpetual inventory method is used as the conceptual basis for estimating consumption of fixed capital.

The FSO converts to an accrual basis the received data on taxes and subsidies on products, as well as other government revenues and expenditure, which are recorded on a cash basis in the source statistics.

Double deflation methods are used to compile volume measures of GDP. For both output and intermediate consumption, suitable deflators are available at least at the two-digit level. In the annual accounts, value data for output and intermediate consumption are deflated separately. The quarterly accounts presume fixed technology and inflate the volume data for output and intermediate consumption separately to arrive at value added at current prices.

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<sup>18</sup> Education; health and social work; and other community, social, and personal services activities.

Volume measures of taxes/subsidies on products are correctly estimated by applying base year tax rates to the value of transactions subjected to a specific tax/subsidy in prices of the base year, or by applying the tax/unity rate to the volume of transactions subjected to a specific tax/subsidy.

Output volume of trade margins is properly estimated by extrapolating the base-year-trade margins using volume extrapolators of sales.

Since April 2005, GDP volume change is measured using annual chain indices. Earlier, a fixed base year was used that was changed every five years.

#### *Expenditure approach procedures*

The expenditure approach to estimate GDP is mainly based on sources independent from the production approach. Household final consumption expenditure relies primarily on the supplier method (turnover by suppliers to households, adjusted for goods and services they provide to other units) and thus is largely independent. Gross-fixed-capital formation relies primarily on the commodity flow method, using both data on production and on foreign trade. Changes in inventories rely primarily on business surveys. The values of imports and exports are derived from the independent sources of foreign trade and balance of payments.

The detail provided for the expenditure categories is sufficient. Household final consumption expenditure is compiled at least at the four-digit level of COICOP, and government final consumption expenditure is compiled at least at the one-digit level of COFOG. The main approach to compile gross fixed capital formation is by type of asset. In addition, it is calculated by activity of the acquiring enterprises. Changes in inventories are compiled for 60 industries.<sup>19</sup> A breakdown of changes in inventories by materials and supplies, work in progress, finished goods, and goods for resale is also made, but these data are not published.

The use of fixed ratios more than five years old is limited. For most categories of the expenditure approach there are annual base statistics and sometimes quarterly accounting methods (for example the commodity flow procedure for investment in machinery and equipment). For private consumption, mainly annual information is available, in addition to the HIES that is conducted every five years. For gross fixed capital formation additional annual information exists in the shape of investment accounts by industry. For changes in stocks, annual information is available, especially for manufacturing and retail trade.

#### *Specific GDP issues*

Appropriate techniques are used to address a number of specific issues in GDP compilation. For instance, government final expenditure excludes incidental sales. Expenditure of

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<sup>19</sup> Within wholesale and retail trade a further subdivision by 44 categories is made.

residents abroad is included in household final consumption expenditure and in imports. Conversely, expenditure of nonresidents in Germany is excluded from household final consumption expenditure and included in exports. Financial intermediation services indirectly measured are allocated to users following a methodology agreed among EU member states.

Expenditures on items that are considered stores of wealth (such as jewelry, works of art) are included in the estimates of valuables. As noted earlier, restoration work to historical buildings is included under fixed capital formation.

#### *Volume measures*

Dedicated price indices/deflators are used to deflate GDP components at least at the one-digit level of the corresponding classifications. Household final consumption is mainly deflated by the consumer price index, compiled at least at the four-digit level of detail. For investments in machinery and equipment the FSO works with price indices down to a nine-digit level, differentiating between about 800 categories of domestically produced goods and 600 categories for imported goods.

The household consumption implicit deflator is consistent with the consumer price index (CPI), though not identical. Government final consumption expenditure is derived by deflating cost components of output for final use.

#### *Specific quarterly techniques*

The FSO does not use a standard technique to benchmark quarterly data to annual data. Instead, it analyzes and adjusts data on a case-by-case basis, which reportedly would avoid the “step” problem between the data for fourth quarter of a year and those for the first quarter in the following year.

The quarterly compilation system derives quarterly series from seasonally unadjusted source data, thus providing unadjusted quarterly estimates. However, series may be seasonally adjusted throughout the compilation process to assess the reliability of the data. The internationally recognized Census X-12-ARIMA package is used for this purpose.

The FSO prepares the published working day and seasonally adjusted data in close cooperation with a specialized group in the Bundesbank once the work on the original quarterly national accounts estimates has been finalized. This group also uses Census

X-12-ARIMA.<sup>20</sup> To accommodate certain users, the FSO in addition calculates and publishes seasonally adjusted series on the basis of the German-developed BV4.1 technique.<sup>21</sup>

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

#### *3.4.1 Intermediate results are validated against other information where applicable.*

Intermediate data—that is, the data before the balancing process takes place—are thoroughly checked by the sectoral specialists at every step of the compilation procedure. Attention is given to the following aspects, among other things:

- changes in value, volume, and price from the previous year;
- changes from the previous national accounts estimate for the same period;
- consistency between registered turnover data with VAT statistics;
- consistency between wages and salaries and information on employment;
- comparison between salaries recorded in the cost structure statistics, household surveys, and social security;
- consistency between labor input and output, as well as other inputs;
- comparison of gross capital formation according to the commodity flow method and the investment account method; and
- development of disposable income and saving.

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

Discrepancies in intermediate data are routinely investigated and measures are taken to remove them. If no other explanation can be found, the tendency is to assume that the higher value is correct and compensates for underreporting and other problems in reaching full coverage.

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

The FSO intensively uses supply and use tables on the occasion of major revisions as a tool to avoid or mitigate statistical discrepancies. Germany's compilation of supply and use tables is limited to strict compliance with the EU legal requirement of having such tables within 36 months after the reference year, but preliminary tables are internally used at an earlier stage.

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<sup>20</sup> For the sake of transparency, all choices made in the application of the package are made available to users.

<sup>21</sup> The FSO has been using this so-called Berlin procedure since 1972.

The FSO plans to use supply and use tables as an integration tool more frequently in the future. At present, discrepancies detected between the estimates are treated in a number of steps. First, sectoral specialists try to agree on making adjustments to the source data that improve the consistency across the various sections. Second, they can study problematic cases at a detailed level of aggregation. Third, they remove remaining statistical discrepancies by way of analyzing the data at the aggregate level. Step three is applied when the differences of supply and use are reduced to about 1 to 2 percent of GDP.

The national accounts data are extensively validated against estimates by other agencies. This includes, for instance, the calculations on quarterly accounts by the Deutsche Institut für Wirtschaftsforschung (German Institute for Economic Research). This organization also compiles a business cycle barometer that the FSO uses for validation. FSO studies prognosis prepared by various other private research agencies, including those in the larger banks. In addition, the FSO looks at national accounts prognosis by international organizations like the ECB, the European Commission, and the OECD.

### **3.5 Revision studies**

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

The FSO regularly investigates whether any systematic biases exist in the GDP data. The last such study was published in 2003. The revisions in the subsequent estimates do not show any systematic underestimation or overestimation of the preliminary data in comparison with the final estimates. The magnitude of the revisions is comparable with those recorded for other West European countries.<sup>22</sup>

The FSO specifically investigates possible sources of error (for example in the retail trade statistics) and periodically publishes articles analyzing fluctuations in the data.

Measures are undertaken to incorporate the findings from revision studies in the estimation process. For instance, repeated corrections in the production index for energy made it necessary to improve the coordination between national accounts and the energy statistics. In this case, a new and detailed analysis of the affected time series was conducted to remove the irregularities.

Documentation on revisions is well maintained. It includes, in addition to internal notes and studies, a general inventory. Several national accounts publications contain tables listing the

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<sup>22</sup> See, for instance, “Revisions to Quarterly GDP Estimates, A Comparative Analysis for Seven Large OECD Countries,” prepared by Nadim Ahmad, Sophie Bournot, and Francette Koehlin, Statistics Directorate, OECD, available at [www.oecd.org/document/23/0,2340,en\\_2649\\_34245\\_33729303\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/23/0,2340,en_2649_34245_33729303_1_1_1_1,00.html)

differences between earlier and current estimates for the same variables, as well as the difference in growth rate implied by the new data. Periodically, revision articles are written and specific studies are prepared for Eurostat.

#### **4. Serviceability**

##### **4.1 *Periodicity and timeliness***

###### *4.1.1 Periodicity follows dissemination standards.*

The periodicity of the national accounts is annual and quarterly in accordance with the SDDS requirement.

###### *4.1.2 Timeliness follows dissemination standards.*

The timeliness of the quarterly national accounts exceeds the SDDS, which requires publication within a quarter after the reference period. FSO publishes main quarterly aggregates in 55 days. It publishes a flash estimate of quarterly GDP with a timeliness of 45 days.

##### **4.2 *Consistency***

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

The statistics are internally consistent in the sense that:

- the statistical discrepancies between the estimates according to the production approach and the expenditure approach are removed in accordance with users' requests;
- GDP estimates at current prices, volume measures, and deflators are consistent within the "value = volume x price" framework; and
- all totals are the sum of the details (yearly/quarterly, nominal/price adjusted, original/seasonally adjusted, national/ regional, sectoral/general). However, a statistical discrepancy between the financial and nonfinancial accounts for the rest-of-the-world exists, mirrored in a similar statistical discrepancy recorded for the nonfinancial corporations sector.

As stated earlier, the Bundesbank compiles financial accounts in close consultation with the FSO.

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

The FSO publishes consistent time series for the main aggregates for 1970–1991 (old Länder) and from 1991 onwards (total Germany). Data according to the most recent revision refer to the years 1991 through 2004. By 2006, the FSO intends to publish back data to 1970.

There are no breaks in the FSO's national accounts series. Twice a year, it explains unusual changes in economic trends in an article that is both published in hard copy and made available with the database.

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

The national accounts statistics are consistent with balance of payments (tables are published that explain the differences—all definitional) and government finance statistics.

**4.3 Revision policy and practice**

*4.3.1 Revisions follow a regular and transparent schedule.*

The revision cycle for the provisional estimates is predetermined, stable from year to year, and published in the FSO's annual calendar. The major revisions the FSO carries through have a cycle of every five, or sometimes six, years.

The revision cycle is made known to the public by way of the Internet, press releases, and publications. The reasons underlying the revisions cycle are explained in FSO's general inventory and in the main national accounts publication.

Extensive documentation of revisions is included in the publication of the statistical series and in the database accessible to users.

Revisions outside the regular cycle do not normally happen in Germany. Extraordinary revisions, such as was the case after the reunification, are explained to the public.

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

The preface to the publications informs users, as appropriate, that data are preliminary (particularly so for the first annual data published in January), but such information is not normally provided with the tables. This would also be difficult because the German national accounts do not define a fixed period after which the estimates are considered "final." Usually they are considered final after four years.

The preface to the publications may indicate the years or quarters for which the data have been revised since the most recent issue. Press releases include explicit information on which data have been revised.

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

An article containing an analysis of revisions is published once a year in number 9 of the FSO series *Wirtschaft und Statistik* (Economy and Statistics). In addition, the general inventory of methods is revised after a major revision, so that it can be used as a reliable source of changed methods and data. Besides statistical publications on revisions, there are meetings with main users of national accounts where revisions are explained.

An analysis of differences between revised and preliminary data is published for some aggregates to allow users to assess the reliability of the preliminary data.

## 5. Accessibility

### 5.1 Data accessibility

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

National accounts data are published in a clear manner. Charts and about 15 pages of explanatory text, especially on methodology, accompany the data, facilitating the analysis. The Internet provides additional background information to clarify concepts. Different levels of detail are distinguished. The main annual and quarterly aggregates are published first. This is followed by publications that break down these aggregates by industry, sector, function, etc. Supply and use tables and symmetric input-output tables follow at the end (those compiled following Eurostat requirements distinguish between 60 types of goods and services; in addition tables by 71 types of goods and services are also published). A complete overview is provided on the Internet at [www.destatis.de/themen/d/thm\\_volksw.php](http://www.destatis.de/themen/d/thm_volksw.php).

Analysis of current-period developments accompanies the dissemination—first in the press releases and afterwards in an introductory text to the main (September) publication. There are also accompanying articles in the January and September issues of the review *Wirtschaft und Statistik*.

FSO disseminates estimates at a sufficient detailed level and with time series. The *FSO Statistical Yearbook* contains time series for about 15 years.

Relevant national accounts series are disseminated in seasonally adjusted form. A special publication also disseminates seasonal and calendar adjusted series according to the Census X-12 ARIMA and BV4.1 methods.

*5.1.2 Dissemination media and format are adequate.*

The national accounts are first disseminated in ways that facilitate redissemination in the media (a press release). The Internet dissemination provides tables in Excel and PDF format.

The FSO has adopted a policy of providing more comprehensive and detailed statistics in downloadable formats (PDF, xls, html, CSV), because many users want to work with the data on their own computers. All national accounts publications are available in electronic form. All national accounts statistics and publications can be accessed through FSO's electronic statistic shop and are free of charge there. Data users also have the possibility to access the general time series database GENESIS (a fee is charged for special software functions).

*5.1.3 Statistics are released on a preannounced schedule.*

A schedule (accessible at <http://www.destatis.de/presse/deutsch/cal.htm>) announces in advance the dates the statistics are to be released. The release calendar is known to a large majority of the 180 users that responded to the informal user survey (see Appendix III), and the data are released punctually according to the preannounced schedule.

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

FSO inform the public of the statistics being released and of the procedures to access them (Internet, the eight annual press releases, and other publications).

The press release is published at 8 a.m. on the release day for quarterly data, and a press conference is held for the first annual results. A few selected users (Ministry of Economy and Labor, Ministry of Finance, Bundesbank, Chancellor's Office) have access to the results, under embargo, one hour in advance of their release for the preparation of press releases. It should be noted that Eurostat, as constituting part of the ESS, receives the data one day earlier under embargo to allow this organization to prepare EU-wide national accounts statistics.

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

Most national accounts data that are fit for dissemination are published in hard copy or are made available in GENESIS-Online and the Statistics-shop. However, to a limited extent, other data can be made available upon request. Depending on the requested statistics and the amount of work involved, they are provided free of charge or for a small fee.

Customized tabulations to meet specific requests can be provided for a fee depending again on the work necessary to answer the request and on the availability of staff. The above options are not advertised.

## 5.2 *Metadata accessibility*

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

A number of publications (*Fachserie 18, Reihe S.22, S.23 and S.24*) contain comprehensive documentation on the methodologies followed for compiling annual accounts, quarterly accounts, and price and volume measurement, respectively. These publications are accessible via FSO's online Statistics-shop (in electronic form free of charge).

The methodological publications mentioned here provide:

- information on concepts, definitions, classifications, data sources, compilation methods, statistical techniques, and other relevant methodological aspects and procedures; and
- departures from internationally accepted standards, guidelines, or good practices.

The publication *Das Arbeitsgebiet der Bundesstatistik* (Work Domain of the Federal Statistics) contains information on survey sources—survey characteristics (response rates, survey monitoring, and studies of nonsampling errors) and other survey features (method, sample frame, sample design and selection, estimation and imputation techniques, etc.)—and on the nature of administrative data sources and main linkages with related major data systems. The quality reports of the different basic statistics also provide such information.

FSO reviews and updates the SDDS metadata and summary methodologies on a quarterly basis. However, these descriptions are quite summary.

GENESIS-Online is a metadata-driven database with full documentation of all statistics and variables, available via the Internet.

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

A 24-page general-use brochure about national accounts statistics<sup>23</sup> is available both in print and on the Internet. A national accounts leaflet with selected quarterly and annual tables and charts is used for dissemination at conferences, embassies, etc.

At the other end of the scale, the FSO's review *Wirtschaft und Statistik* provides background articles for specialist and scientific users.

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<sup>23</sup> *Volkswirtschaftliche Gesamtrechnungen, Wichtige Zusammenhänge im Überblick* (National Accounts, Overview of Important Relationships).

### **5.3 Assistance to users**

#### *5.3.1 Contact points for each subject field are publicized.*

*Adequate assistance is given to users of statistics.*

Prompt and knowledgeable service is available to users via a special national accounts information and support service (telephone, e-mail). More general questions can be dealt with by FSO's general information desk (both available all year at office working hours, Monday through Thursday from 8:00 a.m. until 5:00 p.m., and Fridays from 8:00 a.m. until 3:00 p.m.).

Each publication and the website contains full information on how to contact the statistical information desk and the specialized contact persons.

In addition to the already mentioned brochure on national accounts, teaching materials (including on video tape) have been developed for different user groups.

The number of e-mail requests answered is monitored and reviewed monthly.

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

An annual publication catalog is available in hard copy and on the Internet. The hard copy is published once a year; the electronic version is updated at least twice a year. Prices are clearly indicated, and FSO's statistical information desk provides assistance in placing orders. The same is true for the electronic distribution platform Statistics-shop.

Catalogs are also available for articles published in *Wirtschaft und Statistik* (in German and English).

Table 4. Germany: Data Quality Assessment Framework (July 2003): Summary of Results for National Accounts  
(*Compiling Agency: Federal Statistical Office*)

Element	NA	Assessment				Comments
		O	LO	LNO	NO	
<b>2. Methodological soundness</b>						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
<b>3. Accuracy and reliability</b>						
3.1 Source data			X			<ul style="list-style-type: none"> <li>No direct sources exist for quarterly changes in inventories.</li> <li>Annual primary statistics are lacking for a few service industries.</li> <li>Work is still under way regarding the integrated business register for Germany.</li> </ul>
3.2 Assessment of source data		X				
3.3 Statistical techniques		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
<b>4. Serviceability</b>						
4.1 Periodicity and timeliness		X				
4.2 Consistency		X				
4.3 Revision policy and practice		X				
<b>5. Accessibility</b>						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

## Recommendations<sup>24</sup>

- For the purpose of compiling proper regional accounts, improve information on local kind of activity units in all industries, and collect information on the productive activities of such units (section 2.1.1).
- Consider compiling full annual balance sheets, revaluation accounts, and other changes in the volume of asset accounts. This would serve analytical needs and be an important statistical tool in preparing national accounts estimates (section 2.2.1).
- Give high priority to the completion of the integrated business register (section 3.1.1).
- Ensure that all productive activities, including services, are covered by primary annual source data (section 3.1.1).
- Develop source data for the quarterly estimate of changes in inventories. Changes in inventories, together with net exports, are the main contributors to short-term deviations in the trend of GDP growth (section 3.1.1).
- Consider using an automated method as the lead technique to benchmark quarterly accounts data to the annual data (section 3.3.2).
- Consider accelerating existing plans to prepare supply and use tables for the preliminary annual estimates. In the meantime, always balance the accounts at the lowest possible level of aggregation (section 3.4.3).
- Consider indicating with the tables which estimates are still provisional, that is, expected to be subject to revision (section 4.3.2).

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<sup>24</sup> Recommendations are listed here in the order of the DQAF.

## II. PRODUCER PRICE INDEX

**For assessments of the Prerequisites of Quality (0) and Assurances of Integrity (1) dimensions, see Section 0 for the Federal Statistical Office (Statistisches Bundesamt)**

### 2. Methodological soundness

The report below relates to the industrial producer price index (PPI). It also refers to other price indices compiled, or under development, to provide an understanding of the overall system of price statistics in Germany.

#### 2.1 *Concepts and definitions*

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

In general, the PPI follows the *European System of Accounts 1995 (ESA 95)* concepts and definitions, especially in relation to the principles of price and volume measurement and classifications. The *ESA 95* focuses on the application of the PPI for deflation purposes, while the principal purpose of the PPI is to measure inflation. Therefore, some of the concepts vary from those in the *ESA 95* but are consistent with those in the European Union regulation on short-term statistics (EU-STIS). The PPI, in disaggregated form, is also used for deflation purposes after certain adjustments by national accounts statisticians.

The PPI is an output price index. Its weights are derived from turnover of a local kind of activity units—equivalent to establishment units in the *System of National Accounts 1993 (1993 SNA)*—where turnover comprises:

- sales of manufactured products (including energy and by-products);
- sales of services (including mounting, installation and repairs);
- sales of goods purchased for resale in the same condition as received;
- invoiced charges for packaging and transport;
- invoiced hours for labor subcontracting to third parties;
- invoiced installments;
- sales of waste and scrap materials; and
- excise duties.

The following are excluded from turnover:

- transactions between units of the same enterprise;
- sales of land and fixed assets;
- sales or leases of own properties; and
- interest receipts and dividends.

Given that the weights for the PPI are derived from domestic turnover data, they do not include changes in inventories, net accumulation of work-in-progress, and output of market goods and services for own final use as consumption or fixed capital formation. (See 2.2.1 below).

The concepts for price collection comply with the standards described in the *Producer Price Index Manual: Theory and Practice, 2004 (PPI Manual)*. Price quotations refer to representative transactions. The specifications include, in addition to product characteristics, all the price-determining characteristics relating to the conditions of sale.

The PPI is compiled according to internationally based classifications; the Statistical Classification of Economic Activities in the European Communities (NACE) Rev.1 for industries, and the “German commodity classification of production statistics, version 2002” (GP 2002), based on the Central Product Classification (CPC) and List of Products of the European Communities (PRODCOM), for commodities.

## **2.2 Scope**

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

The PPI covers domestic sales by the mining and quarrying, manufacturing, and electricity, gas, steam and water supply industries (sections C, D and E of the NACE Rev.1).

In accordance with the EU regulation on short-term statistics (EU-STIS), the following groups and classes of NACE are excluded from the index because of particular pricing difficulties:

- processing of nuclear fuel;
- manufacture of weapons and ammunition;
- building and repair of ships; and
- manufacture of aircraft and spacecraft.

A number of other industries are also excluded from the PPI because the industries do not exist in Germany, their share of turnover is very low, or there are fundamental pricing difficulties. The total share of the industries excluded from turnover is approximately 1.6 percent.

In most cases, the turnover of excluded NACE classes is assigned to a related class or distributed among the other classes of the corresponding NACE group. Exceptions are 35.11 Building and repair of ships, and 35.30 Manufacture of aircraft and spacecraft. Their potential shares are excluded from the weights because it is considered that their price experience cannot be represented by that of other classes.

The Federal Statistical Office (FSO) produces—apart from the industrial PPI—separate output price indices for agricultural products and forestry (NACE section A), construction (NACE section F), and wholesale trade and retail trade (NACE section G). It also compiles import and export price indices; it uses the preferred direct pricing approach, rather than unit values.

In 2003, a program commenced to develop a comprehensive system of producer price indices for services. This program is consistent with the planned amendment of the EU-STS regulation. Over the next few years, the FSO plans to supplement relevant consumer price index (CPI) services indices with corresponding PPIs for:

- rail transport;
- air transport;
- post and courier activities; and
- telecommunications.

For PPIs for services that are predominantly business oriented, the main industries being targeted are:

- road freight transport;
- legal activities;
- accounting, book-keeping and auditing activities, tax consultancy;
- market research and public opinion polling; and
- advertising.

FSO would find value in developing a comprehensive statistical framework to provide for the presentation of all these indices as they are developed (see also 4.2.3).

All resident market producers classified to NACE sections C–E are in scope for the PPI. The domestic turnover of market enterprises is used to derive the weights.

The weights are derived from monthly and annual surveys covering domestic turnover of local units in NACE sections C-E, which means that the following exclusions represent variations from the *1993 SNA*:

- changes in output inventories;
- own-account production of market goods for own final consumption;
- output of market goods for own-account fixed capital formation;
- illegal market goods sold to willing buyers;
- production of selected services for own final consumption;
- production of services for own-account fixed capital formation; and
- illegal market services sold to willing buyers.

Country PPI weights often have such exclusions. While the *PPI Manual* indicates that value of production-based weights would best align with the concept of the comparable national accounts aggregate, it provides for the use of turnover data.

Because the principal purpose of the PPI is to measure inflation, only actual market transaction prices are included.

## **2.3 Classification/sectorization**

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

In the construction of the PPI, the classification of institutional units and transactions in the source data conforms to the *1993 SNA*.

The PPI is compiled according to both industry and commodity classifications. Industries correspond to the NACE Rev.1 divisions (two-digit), groups (three-digit), and classes (four-digit). Commodities are categorized according to the GP 2002 with the first five digits corresponding to the CPC, the next three digits corresponding to the European PRODCOM, and the last digit being national.

Initially, all basic index calculations are undertaken at the commodity level, with the results for industries derived by aggregating the corresponding commodity indices. As a consequence, only the prices of the principal type of production (i.e., commodities corresponding to the code of the industry) are represented in industry indices; that is, secondary production is not included. In most cases, the principal production covers more than 90 percent of the total output of the corresponding NACE two-digit industry.

As the principal purpose of the German PPI is to measure inflation, this coverage is considered to be adequate. For national accounts, deflators are compiled using a supply table and PPIs at the nine-digit level of the GP 2002.

## **2.4 Basis for recording**

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

All standards applied to the PPI are consistent with the EU-STS regulation. For the calculation of weights, the output is valued at producers' prices, that is, including (nondeductible) excise taxes and excluding value-added tax. Prices are also defined as producers' prices. For national accounts deflation, detailed commodity indices are converted to basic prices by excluding excise taxes.

To support pricing to constant quality, all the price determining characteristics of transactions are fully specified. Therefore, in addition to the product description, a detailed itemization of all the transaction characteristics is included, as well as a technical description of the product

and a description of the most important selling conditions (e.g., class of customer, freight terms, mode of transport, rebates/supplements, packaging, quantity of purchase, method of payment).

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

Recording of the transaction flows for both the weights and the prices for the PPI is undertaken on an accrual rather than a payments basis. Although the timing of the flows is at slight variance from the *1993 SNA* ideal of time of production, it is consistent with the EU-STS regulation.

The basic source data for deriving the weights come from the monthly survey of mining and manufacturing units, in which turnover is recorded at the time of invoicing.

Because the German PPI aims to measure inflationary processes as early as possible, the preferred timing for the recording of prices is as soon as the contract is agreed—the first point at which a firm market transaction price becomes available.

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

Stage of processing indices are not produced.

Transactions between local units within the same enterprise are excluded from the weights; they are not captured in the source data because they are generally not invoiced by the producer. For pricing purposes, goods supplied at market-based transfer prices are included, while those supplied at nonmarket-based internal transfer prices are excluded. In cases where the producer cannot provide a market price for a product at the preferred level of distribution, but the market price is available at a higher level of distribution within the same enterprise, for instance, from the sales department or the marketing company, this price may be used in the index.

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

#### **3.1 Source data**

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

The main source data for compiling the PPI weights are derived from the following surveys:

The monthly survey of mining and manufacturing units provides the domestic turnover according to a four-digit breakdown of NACE sections C and D. All local units attached to enterprises with 20 or more employees are surveyed. For some classes of NACE, lower cut-off limits are defined. The domestic turnover taken from this survey, cumulated over a

one-year period, forms the basis for deriving the PPI weights. The survey for the year 2000—the current base year of the PPI—covered approximately 49,000 enterprises comprising 65,000 local units. Response rates were close to 100 percent.

The annual survey of enterprises in energy and water supply provides the domestic turnover data for enterprises according to section E of NACE. Most of the data items, including turnover, are surveyed for enterprises as well as local units. The survey for the year 2000 covered approximately 3,300 enterprises comprising 5,200 local units.

These surveys form the basis for the weights broken down by economic activities (four-digit level of NACE). Within each selected industry, information for a further breakdown by commodity is taken from a quarterly production survey of mining and manufacturing units. This survey covers all local units in NACE sections C and D that belong to enterprises with 20 or more employees. Commodity output produced for sale, at basic prices, classified at the nine-digit level of the GP 2002 is collected. For the purpose of constructing PPI weights, about 2,000 commodities have been selected representing approximately 79 percent of the total output of sections C and D of NACE. The internal weights for section E of NACE have been developed in cooperation with industry associations in these fields.

The sample frame for these surveys is drawn from comprehensive LSO-based business registers. Where an enterprise has a local unit based in another Land, that record is replicated on the registers in both Lander. This necessitates the ongoing exchange of information between different LSOs. A development program is underway to develop a single national register to increase the efficiency of maintenance; migration is planned for completion at the end of 2007.

Administrative data are used to update the regional registers annually. The main sources are taxation authorities for enterprise and establishment records and turnover data, and the labor agency for employment data. The registers are maintained in the regions on a continual basis drawing on information obtained from the monthly and quarterly FSO surveys.

The samples of local units for the monthly industry survey, and the quarterly commodity survey, are reselected each year using the criterion of all units belonging to enterprises with employment of 20 or more persons.

For the monthly producer price survey, the sample frame is based on the quarterly production survey. The sample is augmented by secondary sources, especially contacts with industry associations.

A sampling process occurs in three stages. As described above, first, a sample of commodities is drawn from the quarterly production survey. Currently, there are about 2,000 nine-digit GP 2002 commodities included. Next, for each selected commodity, it is determined how many price observations are required for the calculation of a representative index. The number of observations depends on two criteria: the weight of the commodity—as a general rule, a minimum of one observation is required per 0.1 percent of the weight—and

the variation in the spread of the product price changes recorded within the commodity. The third step involves ranking all local units, in decreasing order of output, for each selected commodity. Based on this list of units, a combination of judgmental and cut-off sampling procedures is used to select the respondent sample.

The number of price observations to be obtained from each selected unit, for each selected commodity, is predetermined on the basis of the degree of industry concentration and the relative size of each of the units.

The reporting units are asked to select a sample of a set number of specific products for price observation. Detailed instructions are provided on how to undertake the selection, and complete an initialization questionnaire. The units are asked to describe the selected products in detail, covering the physical characteristics and selling conditions. Currently, 7,150 local units report a total of 12,900 prices each month in the PPI survey.

The responsible staff monitor press and research papers regularly to ensure that new market developments are captured. At the time of rebasing, the staff consult intensively with industry associations and other users, especially about the composition of the commodity selection, and the samples of units.

The samples of commodities, local units, and product specifications for repeat pricing are completely renewed each five years as a part of the index rebase program when the industry and commodity weights are updated. On an ongoing basis, units that close down or relocate are replaced in the index as quickly as possible, by reference to the latest available commodity survey results. Also, products that become obsolete or unrepresentative are replaced when the FSO is notified by the reporting unit, or if detected during routine query action or discussion with industry associations during the rebase process. Further, technical information is obtained on an ongoing basis to support the hedonic quality adjustment work for computers and computing equipment (see 3.3.1).

However, currently, no systematic, comprehensive, proactive process is in place for the ongoing monitoring of the samples of local units, and of products, to ensure the continuing representativeness of the price indicators of a dynamic marketplace.

Given that about one third of the reporting units were replaced as a result of the resampling during the last index rebase, regular, ongoing monitoring of the sample of units should be undertaken, by reference to the quarterly commodity production survey results, to ensure that the sample remains up-to-date and representative.

Similarly, a rolling program of interviews with the reporting units should be established to monitor the product specifications, to ensure that they remain representative volume sellers. As a point of interest, during the user consultations, the mission was informed that evolutionary changes to electronic components can make them completely noncomparable within twelve months.

Such monitoring processes would provide for the early detection of, and reaction to, market changes. While additional resources, or re-prioritization, would be involved, the workload at the time of the five-yearly rebases would be substantially reduced. Refer to paragraphs 1.367–1.373 of the *PPI Manual* for a discussion on such a sample monitoring process. Sufficiently detailed data are collected to support the publication of indices at the two-, three- and four-digit level of NACE and the release on the Internet of commodity indices down to the nine-digit level of the GP 2002.

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

The source data are consistent with the definitions, scope, classifications, and timing of recording as required by the EU-STS regulation. To the extent that there are variations from the 1993 *SNA*, for example by the exclusion from the weights of changes in inventories, and output of market goods and services for use in own final consumption or fixed capital formation, this is recognized in the *PPI Manual* as being acceptable country practice.

### *3.1.3 Source data are timely*

Point-in-time prices are collected referring to the 15<sup>th</sup> of the month. Establishments are required to send the completed questionnaires to the responsible regional statistical office no later than the 17<sup>th</sup> of the reporting month. In the case of missing price observations, the staff of the relevant statistical office contact the establishments by telephone to obtain the prices. No average monthly prices are collected.

## **3.2 Assessment of source data**

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

The source data for the weights are surveys of all local units belonging to enterprises with 20 or more employees. That is, the full universe above the employment size cutoff is covered. The survey response rates are very close to 100 percent.

For the monthly price reporting, judgmental sampling techniques are used to select the samples of reporting units. As described in 3.3.3, selection is based on a combination of a commodity and local unit size cutoff approach and the degree of variation in the spread of price change among the products reported for each commodity. The monthly response rate is approximately 95 percent.

The monthly price collection is undertaken using a well-designed shuttle form as the collection vehicle. In the main, Land statistical office staff undertake the collection control and basic input editing work, and send the raw data to the FSO for index compilation,

dissemination, etc. Separate Länder-PPI are not compiled. This raises the issue of the efficiency and effectiveness of such a decentralized collection model, with the associated doublehandling of data and documents: prima facie, there would be gains if a centralized model could be implemented. Such a model would also provide for closer respondent relations for FSO staff to monitor product samples, and would also streamline staff training.

Detailed plausibility checks are applied to the collected prices. Priority is given to a thorough analysis of unusual price changes with current price movements compared with their historical trend, and with price changes of similar products, taking account of the type of product. Reference is made to supplementary information on recent market developments gathered by the responsible specialist PPI staff member, each of whom is responsible for a set of product groups and has specialist knowledge of the relevant market sectors.

Suspect prices are queried with the reporting unit by telephone, and confirmed or amended, along with reasons.

In the case of missing prices, different imputation techniques are applied depending upon the type of product and the availability of additional information. For more details, see 3.3.1 below.

Administrative data are not directly included in the PPI. Stock notifications, which are checked daily, serve as secondary sources for some raw materials (e.g., basic metals). For natural gas and water supplied to private households, the results of consumer price collections are incorporated.

For each reported price, staff analyze changes by comparison with the previous month and the corresponding month of the previous year. They also compare with the average price experience within the same product group.

They use additional data sources for verifying the price changes, for instance, other price statistics, information about changes in tax rates, and information gained from economic and specialized press.

The coverage rate of the sectors in scope for the industrial PPI is very high, at 98.4 percent (see section 2.2.1 above).

As stated under 2.2.1, producer price indices are currently compiled for the NACE sectors A–H, and a set of PPIs for service industry output is under development for progressive introduction over the next few years. Meanwhile, national accounts use a combination of different methods for deriving volume estimates for service activities, for example, deflation using consumer price indices, and/or input price indices such as PPIs for intermediate consumption and indices of wages and salaries, or extrapolation using indicators of volume changes. Service industries contribute some 70 percent to Germany's GDP and, pending the development of the service industry PPIs, implicit deflators from the national accounts provide indicators of price change in these sectors.

### 3.3 *Statistical techniques*

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

The source data for deriving weights at the commodity level do not fully meet PPI requirements, given that they record values at basic prices and do not include excise taxes. Therefore, adjustments are made by adding tax estimates for the relevant products, that is, mineral oil products, tobacco, and alcoholic beverages, to convert the valuation basis to producers' prices.

In the producer price collection, staff correct the reported prices in instances where they detect mistakes or implausible prices. The responsible product specialist contacts the relevant reporting unit to verify or correct such prices. Automatic office corrections are not applied. In cases of nonresponse, or missing prices, imputations are made, as described below.

Prices for temporarily missing products are usually imputed by extrapolating the previous month's observation using the price trend of either similar products from the same reporting unit, or the average price trend of the same product group. In certain cases, the price is kept constant if the price history indicates this is appropriate. Specific decisions on the technique to be applied are made case-by-case, depending upon the type of product and market, and its price experience.

Only a limited number of seasonal products are in the industrial PPI. Using clothing as an example, to the extent that production of the same season's clothing is not year-round, the technique applied is to splice the price movements for the new season's products onto those for the previous season. The assumption is that the differences between the price levels for the last observations of the old season's products, and the price levels for the first observations of the new season's prices, are attributable to quality differences. Particular care is taken in cases where there are end of season price falls. Note that the *PPI Manual* observes that no consensus exists on the best practice to apply in the case of seasonal products, but recommends against repeating prices for the period that products are out of season (i.e., not produced for sale). The FSO conforms to this recommendation.

In cases where a product becomes permanently unavailable, a replacement is selected as soon as possible. The preferred procedure is the selection of a similar product from the same reporting unit. If this is not possible, a new reporting unit for this product category is chosen based on the most recent information from the quarterly production survey. Until the new price observation can be introduced, the same procedures are applied as for temporarily missing products.

When any changes in the price determining characteristics of a product have been identified, efforts are made to eliminate the quality change component. A range of implicit and explicit techniques (as documented in the *PPI Manual*) are used, for example direct price comparison, linking, overlap pricing, the matched model approach, and expert estimations.

The carry-forward method is not used. The method employed depends upon a number of factors including the importance of the product, the extent of the quality change, and the availability of information to support a particular adjustment technique.

For a range of selected computers, computer equipment, and electronic components, hedonic adjustment procedures have been introduced.

In relation to new products, FSO distinguishes between those belonging to a selected commodity category (nine-digit level of the GP 2002) within the index structure, and those associated with a completely new product category. In the first case, new products are introduced by replacement as they gain a significant market share, with the decision on when this point is reached made by the reporting establishment based on guidelines contained in the FSO's price reporting instructions. Completely new products are only included at the time of the five-yearly rebases when a new list of GP 2002 commodities is defined for the PPI.

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

The arithmetic mean of price relatives—the Carli formula—is used for calculating the elementary level indices. With the next change of the index base (base year 2005) the possibility of introducing a new formula—geometric mean of price relatives—will be examined. The individual price relatives are calculated as a long-term price change from the price reference period.

The Laspeyres formula is applied for aggregating elementary indices to higher level indices. The indices are fully rebased each five years, with a delay of more than two-and-a-half years for implementation, which conforms to the minimum standard specified by Eurostat. That is, the weights of price indices should be updated at least every five years. In general, the weights are based on the results of monthly, quarterly, and annual surveys, which would support the timely reweighting of the PPI on a more frequent periodicity than the current five-yearly basis, if required.

The current weight reference period and price reference period for the index are the same (year 2000), so no alignment of the weights to the prices of the price reference period is necessary. The current weight reference period was introduced in October 2003.

When a new weight base year is introduced, all indices starting from January of the new base year are recalculated with the new weights. That means that the indices published on the previous index base are revised back to the beginning of the new base year. For the calculation of long-term index series, linking factors are compiled for each index series at each level of aggregation (whenever possible), as the ratio of the January index of the new base year for the rebased series and the corresponding index for the old series. Using these

linking factors, all indices until December of the year prior to the new base period are re-based to the new base year.

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

#### *3.4.1 Intermediate results are validated against other information where applicable.*

During the compilation process, PPIs at different levels of aggregation are compared with the relevant components taken from other price indices, especially the import and export indices. For relevant consumer commodities and industries, results are cross-checked with CPI series. Additional information is also obtained from the press and other sources.

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

Unusual index movements arising from special market conditions in particular sectors are investigated during the compilation process. The price reporting units are contacted to obtain background information on price trends to assist in eliminating any misreporting errors, or confirm and explain the unusual movements. The reasons for unusual index movements are provided in regular or special press releases.

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

PPIs for economic activities (NACE) and aggregations for commodities under the GP 2002 are derived directly from the lowest level (nine-digit) commodity indices by a single, progressive hierarchical aggregation process, so discrepancies between aggregates cannot occur.

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

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

A distinction needs to be made between short-term corrections of any errors, and regular index revisions resulting from a change in the index weighting base period, as different procedures are applied.

In the rare situation in which errors are detected in a published aggregate for a particular month, a retrospective correction is made in the subsequent month's release. The corrected figures are flagged in the affected tables and, if necessary, the reason for the correction explained in the publication.

In the case of regular index rebases (as a rule every five years), the effects of changes in the commodity basket, weighting scheme, sample of reporting units, etc., are thoroughly investigated. For this purpose the time series of the index on the old and the new basis are

compared in the overlapping period of time from the beginning of the rebase period. Index changes attributable to each of the above factors, as well as resulting from any changes in the calculation methodology, are presented in detail in the FSO monthly journal *Wirtschaft und Statistik*. The latest index revision was discussed in the January 2004 edition.

During the conduct of the rebase, all PPI data sources are examined thoroughly. Special attention is given to the analysis of the samples of local units and products in order to improve the representativeness of the index samples. New products that have become significant are introduced into the index; products that have become insignificant are either replaced by products whose importance has increased or deleted from the basket. During the latest index rebase, 49 commodities (at the nine-digit level of the GP 2002) were introduced, and 104 were deleted. The sample of units was revised considerably, with approximately one third of the old sample replaced.

#### **4. Serviceability**

##### **4.1 Periodicity and timeliness**

*4.1.1 Periodicity follows dissemination standards.*

The PPI is compiled monthly and meets SDDS requirements.

*4.1.2 Timeliness follows dissemination standards.*

The PPI is usually released 20 days after the end of the reference month, thus exceeding the SDDS requirement. Germany's PPI release is one of the most timely among the EU countries.

##### **4.2 Consistency**

*4.2.1 Statistics are consistent within the dataset.*

One single hierarchical commodity and industry classification structure is used, so there is no scope for inconsistent aggregations.

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

Consistent time series are available at least since the beginning of the most recent base year. Whenever possible, longer time series are produced by linking the new series to the old series at the beginning of the new index weighting base period. Where there are changes in the classifications used, for instance, with the 1995 rebase when the Central Product Classification (CPC) and the NACE replaced the old national classifications, the most appropriate linking procedures are applied, but there are certain limitations due to difficulties in finding precise concordances between the old and the new series. Nevertheless, time series at aggregate levels are available for the period between 1949 and the present. At the four-

digit level of the CPC and the NACE, indices are available from January 1995 for the majority of commodity groups and industries. FSO provides appropriate documentation for users of these time series. Detailed methodological notes identifying and explaining the main changes in the time series are presented in articles published in *Wirtschaft und Statistik* at the time of the release of the rebased index (see 3.5 above).

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

The principal purpose of the German system of price statistics is to measure inflation at different stages of the economic processes of production, distribution, consumption, and foreign trade. Therefore, all indices are compiled using the same principles, in particular the measurement of pure price change. The same index formula (Laspeyres with a rebase every five years) is used, the base years and the index reference periods coincide, and all price indices use the same classification framework—NACE and GP 2002—except for the CPI which uses the Classification of Individual Consumption by Purpose (COICOP).

This raises the issue of the longer-term presentation of the array of German price indices as service industry and other developments proceed. It would be valuable to develop and implement a comprehensive and cohesive statistical framework that would support the analysis of price transmission processes. Such a presentation would also assist users to understand the relationship between each of the index data sets. Some references are provided in the *PPI Manual*.

The main principles of the *1993 SNA* regarding price and volume measurement are applied in all price statistics. Possible differences, for example as outlined in 2.2.1 above, are described in detail to the users who can then apply any appropriate adjustments, for instance, for national accounts purposes.

### **4.3 Revision policy and practice**

#### *4.3.1 Revisions follow a regular and transparent schedule.*

Regular index rebases occur every five years, with base years usually ending with five or zero. The resultant revisions to the index series are finalized within three years after the end of the chosen base year. The rebasing is announced at least one month in advance in a press release. The latest index revision took place in October 2003. High-quality documentation of revisions is published.

The rare revisions associated with the identification of errors are flagged in all publications, and the reasons explained to users.

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

Preliminary data are not published. All figures are final when first published, subject to the well-known and well-established practices described in 4.3.1. When revisions occur, users are advised at the time of release.

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

This is covered under 3.5.1.

## **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 data dissemination program of the FSO is impressive in terms of the dissemination formats, the targeting of different market segments, and the large volume of detailed series that users can readily access.

In general, broader level aggregates are published to satisfy the needs of the general public, and more detailed data are provided for specialist applications.

The PPI data are published in different formats:

- A monthly press release is issued around the 20<sup>th</sup> of the month following the reporting month. The current results are published together with a short description of the most important developments in the current period. The press release also contains a table and chart with the overall PPI series for the last 13 months.
- A regular brochure (*Fachserie 17, Reihe 2*) containing the current results at a detailed level (all GP 2002 four-digit indices and at a more detailed level for selected industries and commodities) is published in printed and electronic format. The electronic version is free of charge. A short methodological description is included as well as comments about the most important current-period developments.
- For all industries/commodities contained in *Fachserie 17, Reihe 2* (see above), time series, generally starting from January 1995, are published in electronic form in the Statistics-shop of the FSO, free of charge.
- Very detailed PPI data at all levels of aggregation (down to the nine-digit level of the GP 2002) can be accessed via a time series database of the FSO (GENESIS-Online). The access is free of charge for the two-, three-, and four-digit levels of the CPC; for more detailed results, users are charged an access fee.

*5.1.2 Dissemination media and format are adequate.*

As described under 5.1.1. above, the FSO clearly distinguishes between the different markets for PPI data and tailors the dissemination media and formats to serve each particular market.

*5.1.3 Statistics are released on a preannounced schedule.*

An annual release schedule advises twelve months in advance the “not later than” dates of release of each set of statistics. The actual release dates are firmed up closer to the actual release, and the statistics are always released according to this schedule.

Each Friday of the week before publication, a schedule published on the website of the FSO ([www.destatis.de/presse/deutsch/cal.htm](http://www.destatis.de/presse/deutsch/cal.htm)) announces the releases for each day of the following week.

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

As described under 5.1.3, the public is informed in advance of the timing of release of each data set and the procedures to access them (e.g., Internet, publications).

Apart from special, predetermined arrangements for selected users (see below), the statistics are made available to all interested users simultaneously.

On the publication day the press release is issued at 8:00 a.m. A few selected users (Ministry of Economy and Labor, Deutsche Bundesbank) have access to the data in advance, under strict embargo.

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

All PPI results are made available to users via different media (printed form, customized electronic tables in the Statistics-shop, access via the Internet to the electronic database GENESIS-Online). Information on how to obtain PPI data is provided on the website of the FSO. Users are informed about the possibility of obtaining PPIs in a detailed formalized letter, if required.

The most detailed data are released, subject to confidentiality, on the database “GENESIS-Online” and the Statistics-shop, that is, 1,400 time series of indices down to the nine-digit level of the GP 2002 commodity classification are available. Thus, users are able to readily access the data they require. Only in exceptional cases is it necessary to provide special tabulations, upon request.

## 5.2 *Metadata accessibility*

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

A description of the sources and methods used in the PPI is published regularly in the monthly *Fachserie 17, Reihe 2* and on the website of FSO (<http://www.destatis.de/presse/deutsch/abisz/erzeugerpreise.htm>). This description includes information on concepts, definitions, classifications, data sources, compilation methods, and other methodological aspects and procedures. Additional information is provided on how to access PPI data. Further information is provided in the general publication *Das Arbeitsgebiet der Bundesstatistik* (Work Domain of the Federal Statistics). A standardized quality report is also released on the FSO website.

In addition, following each five-yearly rebase of the PPI, a very informative document is published summarizing the rebase process, presenting and comparing the old and the new weighting patterns, and providing a detailed analysis of the impact on the index of the change in the weighting pattern.

The metadata that are provided are of a good quality. However, for more specialized users, more detailed, and more complete, information is required on important aspects such as statistical techniques (e.g., lower level index formulae, imputation techniques, quality adjustment), survey characteristics for the weighting data sources (e.g., response rates, methods, sample frame, sample design), and compilation procedures (e.g., data validation techniques, analysis).

The metadata are readily accessible (website, links in press releases and other regular publications), and their availability is cross-referenced in data releases.

The SDDS metadata, SDDS summary methodologies, and other related descriptions are reviewed quarterly and updated if necessary.

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

General-use information about the PPI and other price indices is available and made public on the website of the FSO ([http://www.destatis.de/themen/d/thm\\_preise.php](http://www.destatis.de/themen/d/thm_preise.php)). This website contains a short description of the German system of price statistics, and it links to more specialized information about the industrial PPI and each of the other separate indices.

### **5.3 Assistance to users**

#### *5.3.1 Contact points for each subject field are publicized.*

All publications containing the PPI include information about contact points (names, telephone numbers, facsimile numbers, and e-mail addresses). A special e-mail address account has been introduced for PPI statistics ([erzeugerpreise@destatis.de](mailto:erzeugerpreise@destatis.de)).

The PPI information and support service is available each working day from 8:00 a.m. until 5:00 p.m. (Fridays until 3:00 p.m.).

Table 5. Germany: Data Quality Assessment Framework (July 2003): Summary of Results for Price Statistics (Producer Price Index)  
(*Compiling Agency: Federal Statistical Office*)

Element	NA	Assessment				Comments
		O	LO	LNO	NO	
<b>2. Methodological soundness</b>						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
<b>3. Accuracy and reliability</b>						
3.1 Source data			X			Samples of local units, and products, require refreshing on an ongoing basis in between five-yearly index rebases, to ensure the price indicators continue to represent contemporary market activity.
3.2 Assessment of source data		X				
3.3 Statistical techniques		X				
3.4 Assessment and validation of source data		X				
3.5 Assessment and validation of intermediate data and statistical outputs		X				
3.6 Revision studies		X				
<b>4. Serviceability</b>						
4.1 Periodicity and timeliness		X				
4.2 Consistency		X				
4.3 Revision policy and practice		X				
<b>5. Accessibility</b>						
5.1 Data accessibility		X				
5.2 Metadata accessibility			X			For specialized users, more detailed, and more complete, information is required on important aspects such as index concepts, data sources, statistical techniques, and compilation procedures.
5.3 Assistance to users		X				

## **Recommendations**

- Implement procedures for (1) the periodic monitoring of local unit samples based on the quarterly production survey results, and (2) the ongoing review of product samples based on a rolling program of interviews with respondents between index rebases (3.1.1).
- Investigate opportunities for a more centralized PPI organizational model, in order to yield efficiency and effectiveness gains and to provide opportunities for closer contact with reporting units, e.g., for maintaining the product samples (3.2.1).
- Undertake empirical studies to assess the index quality improvements that would be derived by updating the industry and commodity weights more frequently than five-yearly. Determine and implement the optimum update frequency (3.3.2).
- Develop a comprehensive and cohesive statistical framework for the presentation of the current and future array of partial price indicators, in order to support price transmission studies and increase users' understanding of the relationships between the different indices (4.2.3).
- For the PPI develop and publish more detailed and more complete metadata that fully articulate information on index concepts, data sources, statistical techniques, compilation procedures, etc., to support the needs of more specialized users (5.2.1).

### III. GOVERNMENT FINANCE STATISTICS

**For assessments of the Prerequisites of Quality (0) and Assurances of Integrity (1) dimensions, see Section 0 for the Federal Statistical Office (Statistisches Bundesamt). Additional information relating to these dimensions, specific to government finance statistics, is provided below.**

The statistics assessed for the fiscal sector of this ROSC are the quarterly and annual cash-based statistics for general government compiled by the FSO. The quarterly statistics are obtained from the quarterly cash results of the federal, Länder, and municipal authorities, and the annual statistics are obtained from the statements of accounts of the federal, Länder, and municipal authorities, and of the other local government institutions belonging to the group of units reporting to finance statistics for general government (*Gesamthaushalt*). Also covered are quarterly and annual debt data. Other fiscal sector statistics being compiled in Germany, under the cash standard, are the monthly federal budget (*Bundeshaushalt*) statistics and central government debt statistics prepared by the Federal Ministry of Finance (FMOF). These statistics, constituting the German official government finance statistics (*finanzstatistische Abgrenzung*), are used in fiscal reporting on general government and its subsectors in the federal budget documents and by the Federal Statistical Office (FSO).

The cash-based statistics, which constitute a major part of the German government finance statistics, are used for the dissemination of fiscal sector statistics on general government operations, central government operations, and central government debt under the Special Data Dissemination Standard (SDDS).<sup>25</sup> Appendix IV describes the relationship between the various sets of government finance statistics.

In addition, statistics are being compiled for the general government sector according to the *European System of Accounts 1995 (ESA 95)* government sector national accounts, by the FSO (nonfinancial accounts) and by the Deutsche Bundesbank (Bundesbank) (financial accounts and debt) for purposes of Germany's national accounts and to report to the European Commission. While these statistics are not being assessed, they are discussed as relevant.

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<sup>25</sup> The cash statistics are referred to as *Finanzstatistik* in Germany. In what follows, reference will be made to "cash statistics."

## **0. Prerequisites of quality**

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

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

The FSO's responsibility for government finance statistics derives principally from the *Law on Finance and Personnel Statistics* of June 11, 1960, amended as of June 25, 2005. This law designates government statistics as "federal statistics," which, in conformity with Article 73 of the German Basic Law, means that the responsibility for such statistics belongs with the federal government. Article 3 of the *Federal Statistics Law*, in combination with the Law on Finance and Personnel Statistics, identifies the FSO as being responsible for the compilation of government finance statistics.<sup>26</sup>

General government cash statistics on transaction flows and debt are prepared by the FSO in the Public Budgets and Enterprises Division of the Elections, Population, Public Sector and Education Department, and government sector national accounts statistics in the National Income, General Government, External Economic Transactions Division of the National and Environmental Accounts, Employment Department. Working arrangements are consistent with the split of responsibilities between the federal government and the Länder as laid out in the German Basic Law, and the FSO closely cooperates with the Länder statistical offices (LSOs). Working arrangements exist between the FSO and the Bundesbank for the latter to prepare the financial accounts in accordance with *ESA 95*.

Consistency of methods and results for the government finance statistics processed by the FSO and the LSOs is ensured to a large extent by the fact that the revenue and expenditure classification and recording bases (time of recording, valuation, and netting) derive from the common budgetary classification and recording procedures used by the federal and Länder governments. Local governments use a different but common budget classification, as is also the case for social security funds, which, in addition, use commercial accounting principles.<sup>27</sup> The consistency of results in this case is achieved through the use of appropriate bridge tables. Consistency is further promoted by the fact that the department heads at the FSO and LSOs in charge of government finance statistics meet regularly to discuss recording and collection issues.

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<sup>26</sup> The website of the FSO provides links to the main German statistical laws, including laws governing government finance statistics. Furthermore, the introductions of the principal FSO publications on government finance statistics refer to the various laws and relevant texts.

<sup>27</sup> The classification for the federal budget and the Länder budgets is the joint responsibility of the FMOF and the Länder Ministries of Finance. The classification for the local governments is the joint responsibility of the Interior Ministries at the Länder level. The FSO participates regularly in the work concerning classification issues.

Because the *Law on Finance and Personnel Statistics* applies to both the federal government and the Länder, no conflict or potential conflict arises between the legal authority to produce the statistics and other legal provisions. The LSOs directly contact reporting entities at the local level.

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

The various data-producing agencies involved in compiling the cash government finance statistics are the FSO and the 15 LSOs.<sup>28</sup> Because Article 3 of the *Federal Statistics Law* mandates the FSO to ensure that collection and processing programs of federal statistics are uniformly and duly carried out by the Länder, procedures are in place to provide for the effective and timely flow of source data to the FSO. The FMOF, Länder governments and some social security funds provide data on the operations of their budgets directly to the FSO (for some social security funds, the data are provided through the Ministry of Health and Social Security). The local governments provide their source data to their respective LSO, which, after processing, transmit the consolidated results to the FSO.<sup>29</sup> The FSO is responsible for consolidating the statistics for the general government sector and for their dissemination. The FSO and the LSOs all subscribe to a “Minimum Publication Program (*Mindestveröffentlichungsprogramm*).”

Contacts and meetings are organized regularly between the FSO and the LSOs. Therefore, the reporting requirements are clear to all reporting LSOs, notably since the data need to conform to a uniform budgetary nomenclature. The fact that the Land of Brandenburg coordinates the electronic reporting of local government finance data of Länder to the FSO should be mentioned as a factor contributing to a consistency and uniformity of results. Reporting requirements are also clear to other reporting entities (social security funds). The participation of these entities in working groups on recording and reporting issues contributes to that understanding.

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

To the extent that government finance source data received by the FSO are aggregated, access to individual data is limited. Data reported by individual units (for example by local government entities to the LSOs and by social security funds to the FSO) cannot be revealed

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<sup>28</sup> This is one fewer than the number of the Länder. Land Schleswig-Holstein and Hamburg share the same statistical office.

<sup>29</sup> This process is facilitated by the fact that, according to German constitutional arrangements, many areas of local government activities fall under the authority of the Länder governments.

or disseminated separately, at least before these data are published by these entities themselves as required by law.

The rules and regulations to prevent disclosure mentioned in Section 0, under indicator 0.1.3, also apply.

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

According to Article 11 on the obligation of response in the *Law on Finance and Personnel Statistics*, all legal entities covered by this law are obligated to report their source data to the FSO and LSOs. The provisions for penalties mentioned in the *Federal Statistics Law*, in case of nonreporting or willful misreporting, also apply in principle to all public reporting entities.

Response burden is generally kept to a minimum because the compilation process is fairly routine. The process predominantly relies on administrative source data that are generally readily available. However, the burden on respondents is nevertheless a concern of the FSO, as demonstrated for example by the introduction of electronic questionnaires for the reporting of financial assets and liabilities by government entities.<sup>30</sup>

Concern regarding the quality of government finance statistics is reflected in the current discussions in Germany about the need to modify the government accounting system through the adoption of an accruals and double-entry accounting system. The introduction of such an accounting system would improve government finance statistics sources and the scope of the statistics. (For example, it would ensure that noncash transactions are taken into account and facilitate the production of balance sheets, improving their meaningfulness.) It would also significantly facilitate the compilation of statistics according to *ESA 95*, which uses an accrual basis of recording, and would increase the prospects for the adoption of the *Government Finance Statistics Manual 2001 (GFSM 2001)*.

However, the pace of reform of the public accounting system is likely to be slow. Local governments are expected to adopt accrual accounting in 2005, followed by the Länder governments.<sup>31</sup> During discussions with the mission, the FMOF expressed reservations regarding such a move for its own accounting system.<sup>32</sup>

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<sup>30</sup> The FSO sees the introduction of electronic questionnaires for many types of statistics as leading to reduced costs to itself as well as to respondents.

<sup>31</sup> The Land of Hessen is at the forefront of accounting reform and will have implemented double-entry accrual accounting in 2008.

<sup>32</sup> See also *The Budget System of the Federal Republic of Germany* by Dr. Weiland, Federal Ministry of Finance, October 2000, page 35.

## **1. Assurances of integrity**

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

The availability of statistical sources for government finance statistics is quite restricted. The *Law on Finance and Personnel Statistics* and secondary legislation, such as the Federal Budget Code (*Bundeshaushaltsordnung*) and budgetary instructions (*Verwaltungsvorschriften zur Haushaltssystematik von Bund und Ländern*), stipulate precisely the classification that must be used for federal and Länder budgetary revenue and expenditure. Municipal finances are covered according to the municipal functional classification (Gliederungen) and the system of classification by object (= Gruppierungen). The classifications used for the cash statistics are essentially the same as the budgetary classification. For government finance transactions, the sources are derived from budget statements. For government debt, a questionnaire is used.

## **1.2 Transparency**

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

As already indicated, relevant laws on statistics, including the *Federal Statistics Law* and the relevant EU legislation, are posted on the website of the FSO. More specifically, the laws governing the compilation of cash-based statistics are specifically referred to in the explanatory notes of the publications where these statistics are presented. Notably, these are the three relevant subject matter publications (*Fachserie*): *Vierteljährliche Kassenergebnisse des öffentlichen Gesamthaushalts* (Quarterly cash results of the overall public budgets); *Rechnungsergebnisse des öffentlichen Gesamthaushalts* (Annual accounting results of the overall public budgets); and *Schulden der öffentlichen Haushalte* (Debt of the overall public budgets).

As regards *ESA 95* government sector and debt data, all relevant EU texts are also available on the EU and FSO websites.

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

The data on federal budget operations and debt data compiled by the FMOF are the direct product of budgetary statements. Besides being used by the FMOF, these data are communicated to other relevant government and other public agencies, such as the Bundesbank. While not explicitly made public other than on the Dissemination Standards Bulletin Board (DSBB), this practice is well understood by the general public.

As regards the general government cash statistics compiled by the FSO, ministries with specific interest are provided with advance information at the close of the business day

preceding publication of the data. This practice is indicated in Germany's fiscal sector statistical metadata posted on the IMF's DSBB.

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

Data on monthly federal budget operations and on central government debt are published on the FMOF website and in that Ministry's monthly bulletin (*Monatsbericht*), where the FMOF is clearly identified by name. Cash-based data on general government transactions and on debt compiled by the FSO are published on the FSO's website and in the above mentioned subject matter publications where the name and logo of the FSO are prominently displayed. The same applies to *ESA 95* government sector data published by the FSO. Bundesbank statistical publications are also clearly identifiable.

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

Because the cash data compiled by the FMOF and the FSO are the by-product of budgetary recording, the underlying methodology and classification derives for the most part from the relevant laws, ordinances, and instructions, as previously mentioned. Therefore, any major change in methodology and classification generally requires a change in legislation, and the public is *de facto* informed of such developments, for example through the Bundestag's agenda and articles in the specialized media. Furthermore, resultant changes in the statistics are published in *Methods, Procedures, Development (Methoden... Verfahren... Entwicklungen)* before these changes take effect.

## **2. Methodological soundness**

The methodological soundness for the cash statistics compiled by the FSO is assessed in this section against the *A Manual on Government Finance Statistics, 1986 (GFSM 1986)* methodology, because these statistics broadly follow the analytical framework, classification, and recording rules of that methodology. There is no intention at present to adopt the *GFSM 2001* methodology for government finance statistics in Germany or to replace the cash statistics by *ESA 95*-based statistics. However, Germany has been developing quarterly general government finance statistics according to the accruals principle of the *ESA 95*. The statistics will be published subject to European Commission approval.

### **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 monthly, quarterly, and annual cash-based data broadly follow the concepts and definitions of the *GFSM 1986*. As already indicated, there is no intention at present to adopt the *GFSM 2001* methodology for government finance statistics.

The most complete set of government finance statistics available are the cash-based quarterly and annual statistics compiled by the FSO, which constitute the statistical reference for much of the public finance debate in Germany. The statistics on general government transactions (flows) are available on a quarterly and annual basis. The statistics on debt are available also on a quarterly and annual basis.<sup>33</sup> In addition, central government quarterly debt statistics are compiled by the FMOF, and *ESA 95*-based statistics are compiled by the FSO (nonfinancial accounts) and the Bundesbank (financial accounts).

These cash-based statistics on government transactions do not formally follow a particular internationally accepted standard, and no reference is made in FSO publications to the *GFSM 1986* methodology. Rather, these statistics are compiled on the basis of an analytical framework and the classification categories prescribed in various laws and regulations pertaining to the recording and presentation of German budgetary operations at the federal, Länder, and municipal levels. Revenue comprises all statutory budget receipts, and expenditure comprises all statutory budget payments. While, in the budget, transactions in financial assets for liquidity purposes other than cash are included in budgetary revenue and expenditure, the FSO publishes a table in which these transactions are classified “below the line” as financing, in line with the *GFSM 1986* methodology. Revenue is broken down according to its nature (taxes, administrative fees, revenue from property, repayments of loans, current transfers, credit received, and use of reserves). Expenditure is broken down according to an economic classification (*nach Arten*): employee compensation, administrative expenditure on goods and services, interest, transfers to other levels of government, subsidies to enterprises, repayments of loans, interest subsidies, constitution of reserve, and investment expenditure (including lending and acquisition of equity and participations).

The *ESA 95 Manual on Government Deficit and Debt* categories are used for the general government sector in presenting national accounts data (nonfinancial and financial accounts).

## 2.2 Scope

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

In practice, the scope of the quarterly cash statistics on government transactions is broadly consistent with guidelines outlined in the *GFSM 1986*. The institutional coverage relates to most government entities that use government accounting, and the local government special service providers are excluded. These entities are included in the annual data. Quarterly debt data currently exclude the very small debt of social security funds.

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<sup>33</sup> As will become clear, however, the transaction and debt data do not constitute a unified set.

As regards central government, the cash data cover all the transactions of the federal government budget (*Bund*),<sup>34</sup> the German share of EU-operations, the Equalization of Burdens Fund (*Lastenausgleichsfonds*), the European Recovery Program Special Fund (*ERP-Sondervermögen*), the German Unity Fund (*Fonds "Deutsche Einheit"*), the Federal Railway Fund (*Bundeseisenbahnvermögen*), the Inheritance Burden Sinking Fund (*Erblastentilgungsfonds*), the Compensation Fund (*Entschädigungsfonds*), the Federal Civil Service Reserve Fund (*Versorgungsrücklage*), and the Flood Fund (*Aufbauhilfe*). Since 2005, the Equalization Fund and the German Unity Fund Finance are integrated in the federal government budget. The concept of residency used is the same as in balance of payments statistics, and embassies and consulates abroad are included in the institutional coverage of the data. However debt data, almost entirely denominated in euros, only distinguish between domestic and foreign financing in case of direct loans.

At the state government level, the quarterly cash data cover the transactions of the 16 Länder, (including Berlin, Hamburg, Bremen), about 15,000 municipalities (*Gemeinden*), and municipal associations (*Gemeindeverbände*), but exclude about 3,500 municipal special purpose service providers (*kommunale Zweckverbände*). These entities are included in the annual accounting data.<sup>35</sup>

Social security comprises social security funds (about 600 *Sozialversicherungsträger* excluding statutory accident insurance entities in quarterly cash statistics) and the Federal Labor Agency (*Bundesagentur für Arbeit*). The transactions of accident insurance entities, which are not obligated to report their data quarterly but annually, are estimated so as to ensure full coverage; the magnitude involved is small. The very small liabilities of social security funds are currently not included in the debt data. The recently amended Law on Finance and Personnel Statistics provides that the debt of social security funds should be included in total government debt, starting with the first quarter 2005. The debt of the municipal special purpose service providers is included in the annual debt data.<sup>36</sup>

The quarterly cash statistics compiled by the FSO cover all economic transactions within the scope of the *GFSM 1986*. Stock accounts other than debt data are not compiled.<sup>37</sup> Because

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<sup>34</sup> Certain extrabudgetary operations such as those of universities are excluded.

<sup>35</sup> These liabilities are included in the *ESA 95*-based debt data compiled by the Bundesbank and reported to the European Commission.

<sup>36</sup> Maastricht debt figures, published by the Bundesbank, cover the debt of social security funds and the municipal special purpose service providers.

<sup>37</sup> The recently revised *Law on Finance and Personnel Statistics* now requires all government entities already covered by the law to provide data on their financial assets, starting with the federal, social security, Länder and local governments. The FSO sent a questionnaire to that effect to these governments early in July 2005.

they are on a cash basis, these statistics exclude noncash transactions, such as, for example, the assumption of debt and flows due to factors other than transactions (revaluations and change in volume). Additionally, these statistics do not comprise a complete financial balance sheet. These gaps constitute a major weakness of the *GFSM 1986*-based cash system.

Quasi-fiscal activities, such as interest rates subsidies, are conducted by numerous public financial entities but do not appear to be extensive. These entities are not brought under the government coverage, contrary to the recommendations of the *GFSM 1986*, but in accordance with those of the *GFSM 2001*, which classifies institutional units on the basis of their predominant function and does not recommend separating the quasi-fiscal activities.

The quarterly debt statistics compiled by the FMOF cover all the contractual liabilities of the budgetary central government. The annual debt statistics compiled by the FSO cover all the contractual liabilities of the general government other than the small debt of social security funds.

The *ESA 95*-based statistics include all institutional units that have a government function, which conforms to that methodology. The coverage of these statistics is therefore more comprehensive than the coverage of the cash statistics.

The data are not presented in tables or formats similar to those recommended either by the *GFSM 1986* or *GFSM 2001* but include most of the aggregates and many of the components found in the *GFSM 1986* methodology. Therefore, several of the tables of the *GFSM 1986* can be reconstituted. In particular, Table 2.1 of the above-mentioned subject matter publications would permit compilation of the main categories for the following tables recommended in the *GFSM 1986*: Revenue and Grants; Expenditure and Lending minus Repayments by Economic Type; and Financing by Debt Instruments. Debt by instruments can also be compiled from the publication on general government debt (excluding social security).<sup>38</sup> It is not possible to compile quarterly debt data by type of creditors; and neither is it possible to classify expenditure strictly according to the COFOG classification.

The *ESA 95* data comprise the categories of the *ESA 95* framework and classification. Accordingly the coverage comprises special service providers, regardless of the system of accounting they use, and *ESA 95*-based debt data cover social security fund liabilities.

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<sup>38</sup> With most financing and debt being denominated in euros, no distinction is made between domestic and foreign financing, as already indicated.

## 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 for the cash statistics broadly conform with guidelines outlined in the *GFSM 1986*. The institutional sectors of the German economy, including the general government sector, are broadly defined in line with the 1993 *SNA* criteria (i.e., conforming to the *GFSM 1986*, *GFSM 2001* and *ESA 95*). Government subsectors correspond to those recommended by internationally accepted methodologies: central government (the federal budget and the special funds), state governments (the Länder), local governments (the municipalities, municipal associations and special purpose service providers) and social security.

Sectorization rules for debt statistics are the same as for the transactions. Data on debt guarantees cover public entities outside government (entities following commercial accounting including public enterprises) on the basis of the “50 percent” criterion, in line with the *ESA 95 Manual on Government Deficit and Debt*.

The classification categories for revenue and expenditures by economic type broadly reflect those recommended in either the *GFSM 1986* or *GFSM 2001* methodologies. Financing and debt categories by type of instruments differ from these methodologies, but could be linked by informed users to the main categories that the methodologies recommend. Annual financing and debt data by detailed type of creditor are available. Quarterly financing and debt data include only two categories.<sup>39</sup>

The *ESA 95* data comprise the categories of the *ESA 95* framework and classification, including a breakdown of revenue and expenditure similar to the *GFSM 2001* breakdowns for revenue, expense, and disposal and acquisition of nonfinancial assets, in accordance with EU Regulation 1500/2000 on the definition of revenue and expenditure according to *ESA 95*.<sup>40</sup> *ESA 95*-based transactions in financial assets and liabilities are compiled and published by the Bundesbank.

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<sup>39</sup> The statistics do not explicitly show the variations of cash balances, which constitute the residual between financing and the deficit/surplus. As a result, the analytical framework used by these statistics departs from the *GFSM 1986*, according to which the deficit/surplus is equal to total financing.

<sup>40</sup> The *ESA 95* expenditure data do not distinguish between expense and the net acquisition of nonfinancial assets as does the *GFSM 2001*.

## **2.4 Basis for recording**

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

Valuation rules used for recording transactions follow the principle of market valuation. The cash data compiled by the FSO are derived from the budget execution reports of the various reporting entities. The value recorded is therefore the value used in the transactions, which corresponds to the market value for most expenditures on goods and services. Where applicable, foreign currency is converted using the mean between buying and selling on the day of the transaction.

Debt data are valued at face value, which is in accordance with the *GFSM 1986*.

For the general government sector national accounts, valuation follows *ESA 95* rules. Transactions are therefore generally valued at market prices.

### *2.4.2 Recording is done on a cash basis*

The statistics compiled by the FMOF for monthly federal budget operations and the FSO for quarterly and annual general government operations, as well as on annual debt, are on a strict cash basis.

For *ESA 95* data, the data are adjusted to an accrual basis in accordance with the principles of that methodology.

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

The FSO cash statistics are derived from accounting records according to government accounting and budgetary rules. The Federal Budget Code (*Bundeshaushaltsordnung*) specifies that transactions for the federal and Länder budgets should generally be recorded on a gross basis. As a result, the statistics, which reflect the recording practice used to record budgetary transactions, are generally shown on a gross basis, which is in accordance with both the *GFSM 1986* and the *GFSM 2001* methodologies. Similarly, the budget transactions of local governments and social security funds are recorded on a gross basis. However, so-called “corrective” transactions reflecting tax refunds and government excess payments are treated on a net basis, that is, as negative revenue and expenditure, respectively, which is also in accordance with the *GFSM 1986* and the *GFSM 2001* methodologies. Data on financing by instrument, which are partly obtained on a net basis from reporting units, are grossed-up to show drawings/issues and amortizations.

Recording for the general government national accounts is done according to the *ESA 95*, that is, recording is generally in gross terms for the nonfinancial accounts, with the exception of capital formation, which is recorded in net terms (acquisition minus disposals). Financial accounts transactions are recorded on a net basis.

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

#### **3.1 Source data**

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

Data sources are nearly complete. For cash statistics (transactions and debt), the data sources derive entirely from administrative records (budget statements of revenue and expenditure and reports of liabilities), with the exception of data on statutory accident insurance that are estimated for the quarterly statistics and special purpose service providers. No sampling estimation of local government data is needed. For the general government and its subsectors, comprehensive registers of individual government sector units at the various levels of government exist, which are regularly monitored to permit the identification of changes in coverage. As a result, the coverage of the cash transactions of general government and of each of its subsectors is nearly complete and covers most resident government institutional units. Because the presentation of the data follows for the most part the official uniform budget classification, the need for bridge tables is kept to a minimum and is limited to the processing of local government and social security source data.

An elaborate and well-tested reporting system is in place, and the statistical classification is rigorously bridged to the very detailed underlying budget nomenclatures at the federal, Länder, and local government levels. Federal government quarterly budget reports are transmitted directly to the FSO. Länder government budgetary transactions are also reported directly to the FSO. Local government and quarterly reports are transmitted to the FSO through the LSOs under an electronic system (FIPS)<sup>41</sup> coordinated by the Land of Brandenburg. Social security reports are sent either directly to the FSO or indirectly through the Ministry of Health and Social Security.<sup>42</sup> The data on the Federal Republic of Germany's shares in financing the EU are obtained from an annex to the federal budget.

The data for social insurance are reported either by the Federal Ministry of Health and Social Security or directly by the social insurance institutions, depending on the branch of social insurance. In part, the data have to be converted from commercial accounting concepts to budgetary categories of revenue and expenditure.

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<sup>41</sup> With the exception of the special funds of the Länder, which do not report electronically.

<sup>42</sup> The annual accounting results of the municipal budgets and of the special-purpose service providers are collected and processed by the LSOs, which all use the same classification (structural classification and system of classification by object) and then transmitted to the FSO.

*ESA 95*-based general government national accounts statistics rely for the most part on the cash statistics as the data source. The cash statistics themselves are regularly checked, and the adequacy of data sources is discussed in close cooperation with the division in charge of cash statistics. Revision studies can provide useful hints about the adequacy of the data sources. An exchange of views is carried out several times a year with Eurostat.

The FSO keeps abreast of changes in international definitions and concepts and is actively participating in related discussions. It is aware of trends and developments in public accounting. It also participates in Eurostat's Financial Accounts Working Party and related task forces, as well as in the Committee on Monetary, Financial and Balance of Payments Statistics, comprising representatives of central banks and statistical offices. Legally binding modifications to the *ESA 95* are implemented, as evidenced by the recent revision of the *Law on Finance and Personnel Statistics* that now permits the collection of data on financial assets in accordance with the EU regulation on revenue and expenditure according to *ESA 95*.

The FSO monitors fiscal and economic developments at the various levels of government as a way to ascertain the reasonableness of the source data. It also remains in contact with source providers, notably through several working groups and subworking groups. It works closely with the LSOs, which can contact local government entities on its behalf.<sup>43</sup> Developments in the local government accounting reform toward adopting a double-entry accrual system are being closely followed.

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

Major factors that contribute to the adequacy of the sources as regards definitions, scope, classification, valuation, and time of recording are the uniform budgetary classification (*Haushaltssystematik*) and recording basis used by the Federation and the Länder governments, as well as the distinct but also common classification used by the various entities at the local level. The budgetary classification of the Federation and the Länder is prescribed in administrative regulations, that is, the general note on the system of classification by nature and by function (*Verwaltungsvorschriften des Bundes, Allgemeine Hinweise zum Gruppierungs- und Funktionenplan*). For municipal finances, the municipal functional classification and the system of classification by nature (*kommunalen Gliederungs- und Gruppierungsplan*) are used. The source data are classified according to the "key (*Zuordnungsschlüssel*) for processing the results of annual accounts of the overall public budget," which is adjusted annually to changes in budgetary subclassifications. Allocation keys for the period to which the data relate are published in tables in the respective subject matter publications mentioned above. Even though the sources are extremely detailed, changes in the underlying budgetary classification can affect the

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<sup>43</sup> The FSO cannot contact directly the local governments.

comparability of the statistics over time (see 4.2.2). The cash basis of recording for the statistics does not differ from the basis used for budget recording purposes at the federal, Länder, and municipal levels. Detailed bridge tables exist to process the data from local governments and social security funds which use a different budgetary recording systems. From 2005–06, some local governments are starting to report their data on the basis of commercial accounting system. Detailed bridge tables for those reporting units are in progress. Transfers between governments are identified in the sources and permit consolidation of the data within budgets, subsectors, and general government.

The debt statistics are based on the uniform questionnaires of the Federation and Länder on the one hand, and of the municipal level, on the other.

In the case of *ESA 95* general government national accounts statistics, which depart in several respects from the data sources, the FSO's national accounts division carries out the necessary adjustments (e.g., reclassification and adjustments to accruals basis) based on *ESA 95* guidelines and the guidelines laid down in the *ESA 95 Manual on Government Deficit and Debt*. Hence, these data are consistent with the *1993 SNA* and, for the most part, with the *GFSM 2001*.

### *3.1.3 Source data are timely.*

The source data are provided with sufficient timeliness and periodicity to permit the publication of the cash data within the timeliness of the SDDS. Deadlines for reporting source data are communicated in writing to the reporting units every year, before the beginning of the reporting year. Receipt of data at the LSOs is subject to centralized deadline control. Reporting units failing to respect the deadlines are reminded accordingly. Statistics reporting is subject to control through the “joint early-warning system.” In the rare cases of late delivery from individual reporting units, estimates are performed.

The national accounts division receives the necessary source data with sufficient timeliness, so that all Eurostat requirements regarding reporting dates of the annual and quarterly national accounts data for general government and for the subsectors are met. For the fourth quarter, some estimates are required (health insurance, Länder, municipalities). As in the case of cash data, reporting units are well aware of the reporting deadlines; if data are not received on time, the relevant reporting units are directly contacted.

## **3.2 Assessment of source data**

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

Cash and *ESA 95*-based accruals statistics are based on very comprehensive administrative records that ensure a nearly complete coverage of general government. Transmission errors

are possible only to a limited extent, and the data can be checked by using the budgets and the annual accounts of the Federation. The necessary processing is kept to a minimum since, as already explained, the statistics reflect the uniform budget nomenclature and recording basis of the source data. Nevertheless, source data accuracy and consistency is ensured by comprehensive plausibility checks. Implausible data (such as seemingly misreported data) are checked by contacting the reporting units or the LSOs.

It might also be noted that the budget reports of revenue and expenditure of the various government entities are subject to the auditing of the relevant Court of Audit or responsible offices at the federal, Länder, or local levels. This ensures a high degree of reliability and accuracy of budget execution reports, which constitute the primary source for government finance statistics.

### **3.3 Statistical techniques**

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

Because data sources for the cash statistics consist of budget reports (or questionnaires in the case of debt data), no statistical techniques are needed. Errors in the source data are identified by means of plausibility checks and corrected. Nonresponse is usually minimal. If source data are not available on time, they are estimated by means of trend estimations or on the basis of detailed indicators and relevant additional information for the purpose of the first release. The estimated data are replaced by the actual data for the purpose of the subsequent more detailed presentation six weeks later in the relevant subject matter publication. For social security funds, it is necessary to transform the source data from commercial accounting concepts to budgetary concepts.

The sum of the data results for the first to the fourth quarter of a reporting year is completed through the addition of a so-called fifth quarter in a table in which end-of-year accounting and complementary period operations and other closing entries are recorded and archived.

*ESA 95* general government national accounts statistics do not use questionnaires but use predominantly data from the set of cash-based public finance statistics. Therefore, adjustments for nonresponse are not necessary. If source data are not available on time, they are estimated for first release by means of trend estimations or on the basis of detailed indicators and relevant additional information. Errors in the source data are identified by means of plausibility checks and corrected. Preliminary or estimated data are replaced routinely during so-called current (or regular) revisions. Modifications of data sources are also implemented as part of the regular revisions.

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

Elaborate classification keys are agreed in working groups and subgroups to derive broader aggregates from the very detailed components.<sup>44</sup> Data adjustments and transformations are sound. Other procedures involve transforming net flows into gross flows, eliminating payments between government units, reclassifying the data obtained from reporting entities and ensuring that the impact of changes in the underlying budgetary nomenclature on the statistics is minimal. The data for these adjustments are extracted from the source data and do not normally require estimates.

Explicit bridge tables are also available for the adjustments needed to produce *ESA 95*-based national accounts for the general government sector. Indicator-based extrapolations are applied when missing data occur for some institutions in the case of the first quarterly estimate. All calculation techniques used have been chosen in line with *ESA 95*. If missing data have to be imputed, mainly statistical and econometric procedures are used. Another procedure relates to the estimation of imputed social contributions.

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

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

The FSO validates the statistics it obtains from the LSOs, for example by checking the data against data made available by the Federal and Länder Ministries of Finance, LSOs, and the Bundesbank.

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

The data processed and transmitted by the LSOs to the FSO constitute intermediate data for the cash statistics. Extensive plausibility checks are used to ensure that the statistics comply with specific regulations concerning budgetary recording and classification. Also data are checked against corresponding data of other institutions. Comparison with previous years' data is carried out on the data reported by the various entities. Different categories of expenditure and revenue are compared. Direct contacts with counterparts of reporting entities are made. As already indicated, the need for monitoring the characteristics of the data is facilitated by the uniformity of budget classification for the federal and Länder budgets.

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<sup>44</sup> These working groups comprise representatives of the FSO, FMOF, the Länder Ministries of Finance, and the Interior Ministries in cases involving the classification of local authorities budgets.

The cash-based statistics constitute the main intermediate output for the *ESA 95-based* government sector national accounts. These cash-based data are reviewed for plausibility by the national accounts division.

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

The cash statistics are compared with both the source data and the data from the Bundesbank and the FMOF and checked for plausibility. If results do not correspond to what was expected, for instance if there are outliers, the causes are studied. If no statistical reason is found for the discrepancy, economic causes are examined to see whether they explain the phenomenon.

The *ESA 95-based* aggregates calculated by the national accounts division at the FSO are compared with the results of the FMOF and the Bundesbank and checked for plausibility. All time series are checked for consistency by monitoring the trend of the time series, and any out-of-trend data are examined. If no explanation is found as regards the processing of the data, economic causes are examined. The identification of discrepancies leads to discussions with source data reporters and with the compilers of the cash statistics at the FSO in the public sector division.

### **3.5 Revision studies**

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

Quarterly cash statistics aggregates can be preliminary upon first release to the extent they contain estimations for missing reports from some entities. Final data are published six weeks later in the relevant subject matter publication. Revisions are small, and because the budget reports that constitute the source data are not revised, there is no other reason to revise the data, and no revision studies are conducted.

As regards *ESA 95-based* government sector national accounts data, two sets of revisions are made: “current” or regular revisions, which are carried out in principle quarterly, and major revisions, which are carried out every five years on the average. Explanations for current revisions are not published, but it is possible to get such information by e-mail or telephone. The revision methods for major revisions are explained and published in *Wirtschaft und Statistik*.

The results of government sector national accounts data are archived, including the magnitude and sources of all revisions. Differences are consigned in a set of tables, updated after each revision. These tables record when a time series was revised and the magnitude of the revision, without necessarily identifying the underlying cause of the revision. Differences due to revisions are published and commented upon in the press release and in *Wirtschaft und Statistik*.

Findings from revision studies are used to refine preliminary data and data compilation procedures. Persistent structural distortions that might be identified by revisions would be corrected, but, so far, there have been no such distortions.

## **4. Serviceability**

### **4.1 *Periodicity and timeliness***

#### *4.1.1 Periodicity follows dissemination standards.*

Statistics on general government operations are published quarterly, which exceeds the annual requirement of the SDDS.

Statistics on central government operations are published monthly by the FMOF, which accords with the requirement of the SDDS.

Statistics on central government debt are published quarterly by the FMOF, which accords with the SDDS requirement.

#### *4.1.2 Timeliness follows dissemination standards.*

Cash data for general government operations of the last quarter are published within one quarter after the end of the reference year. The timeliness of the annual data is therefore in accordance with SDDS requirements.

FMOF monthly cash data for central government are published within one month of the reference month in accordance with SDDS requirements.

FMOF quarterly debt data for central government operations are published within one quarter of the reference quarter, also in accordance with SDDS requirements.

## **4.2 Consistency**

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

For general government, cash statistics on transactions flows are consistent within the narrowly defined dataset, but are not consistent with the debt statistics, which currently exclude the very small debt of social security funds. Consistency of coverage, however, is broadly maintained between the two sets of statistics at the level of the other subsectors.

The cash quarterly and annual finance data follow the same classification for revenue and expenditure and use the same recording basis. The difference between the sum of the four

quarters and the annual data is due to differences in coverage<sup>45</sup> and the inclusion of year-end recording for the purpose of closing the accounts.

A table in which a “fifth” quarter is added to show year-end accounting and complimentary period operations is published in *Fachserie 14, Reihe 2 Vierteljährliche Kassenergebnisse des öffentlichen Gesamthaushaltes (Quarterly Cash Results of Public Budgets)*.

The sum of components adds up to totals, and the deficit/surplus is equal to revenue minus expenditure. The variation of cash balances is treated as a residual and is not published; nor is the precise nature of the residual described. As a result, the deficit/surplus is not explicitly equal to the identified financing.

The data for consolidated general government are equal to the sum of the data for the underlying subsectors, taking into account intergovernmental payments, which are consolidated.

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

Time series are available for the annual cash statistics by levels of government, selected types of revenue and expenditures, and selected functions. They are based on the underlying budgetary classifications of the Federation, the Länder, and the municipal levels, which may change from year to year and thereby affect the comparability of the data over time. No corrections are made to historical series, but discontinuities are indicated in the methodological notes and in footnotes in the respective subject matter publications.

Government sector national accounts data are normally adjusted back to 1970 to obtain uniform and consistent time series, when new source data methods or calculation techniques are introduced, as may happen on the occasion of five-yearly major revisions. Breaks in time series are not used in such cases. Breaks due to fiscal or structural developments (e.g., introduction/establishment of a tax) are usually explained in the publication.

In the case of significant deviations from the long-term trend, explanations are made in the press release and/or *Wirtschaft und Statistik*. For both datasets, there is a structural discontinuity due to German unification in 1991. Data on the former German Federal Republic are available from 1970 to 1991.

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<sup>45</sup> As already indicated, the quarterly statistics do not include the special purpose service providers the Länder special funds and data for the statutory accident insurance are estimated.

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

Cash data are reconcilable with the government sector national accounts,<sup>46</sup> as well as with other statistical frameworks such as monetary statistics and balance of payments, because cash government statistics constitute a data source for these other frameworks as well.

*ESA 95* general government sector national accounts, for which balance of payments data are used as a source, are consistent with the latter after taking into account an adjustment in customs duties.

### **4.3 Revision policy and practice**

*4.3.1 Revisions follow a regular and transparent schedule.*

Without being necessarily explicit, the revision cycle is predetermined and stable over time for both the cash data and the government sector national accounts. Revisions outside the established cycle do not normally occur.

Whenever some estimates are needed for the press release because of missing data reports, the quarterly cash data are indicated as being preliminary. The preliminary character of the data is however not indicated when, in rare occasions, the data published in the press release are later subject to revisions for other reasons. The data published six weeks later in the subject matter publications are final. The annual cash and debt data are not subject to revisions.

As regards government sector national accounts, the general revision practices are explained in the relevant subject matter publication (*Fachserie 18, Reihe 1.3*), along with the reasons for setting specific revision dates. “Current revisions” of general government sector data take place at the same time as revisions for other national accounts aggregates. As a rule, current revisions may take place with every quarterly publication. Revisions are generally based on the availability of new data. “Major revisions” take place every five years. As in the case of cash statistics, revisions outside the regular cycle are extremely rare (e.g., the revisions that followed German reunification in 1990). Modifications due to major revisions are published, and differences due to revisions are explained briefly in the press release, as well as in *Wirtschaft und Statistik*.

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

While the preliminary character of the quarterly cash data is not always indicated when first released, users can find this information through a link on the press release posted on the

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<sup>46</sup> However no bridge table linking the two sets of data is published.

FSO's website. The link directs the user to a section of "Statistics from A to Z" (in the German version as well), which provides a brief description of cash data and explains where to find the "final data." The provisional character of the data is therefore implicitly provided, and the timing of the release of the final data can be inferred from the advance release calendar.

Only the aggregates in the press release (revenue, expenditure, deficit/surplus, net borrowing of credit and debt) are published. The detailed breakdowns are not provided in the press release but as final statistics in subject matter publications.

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

The revisions to cash quarterly statistics after their first release are not the subject of an assessment or explanation because the revisions are normally very small.

As regards government sector national accounts, current revisions are explained briefly in press releases. In addition, current revisions are explained every year in the September issue of *Wirtschaft und Statistik*. Major revisions, undertaken every five years, are the topic of a special article in that publication.

## **5. Accessibility**

### **5.1 Data accessibility**

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

Statistics are presented mostly clearly. Quarterly cash data on general government are published in a press release<sup>47</sup> at the latest on the last working day of the quarter following the quarter of reference. The German version of the press release, which is more complete than the English one, consists—for the main subsectors of general government—of total revenue, total expenditure, the deficit/surplus, the net borrowing of credit, and the debt on a cumulated basis since the beginning of the year; no breakdowns are shown for these components. Because the variation of cash balances is not shown, the deficit/surplus is not shown explicitly to equal financing. The press release is accessible simultaneously to all users after transmission to the FMOF one day earlier under embargo arrangements.

The press release is accompanied by a brief commentary of about half a page on recent public finance developments and, on the FSO website, is linked to a methodological note of

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<sup>47</sup> For example [Öffentliche Finanzen, 1. Quartal 2005](#) or [Financial Situation of General government, 1st Quarter of 2005](#) and [Öffentliche Finanzen im Jahr 2004](#) or [Financial Situation of general government, year 2004](#).

about one page directed to the general public. The length of the commentary differs depending on the possibilities of data interpretation, which is more limited in the first quarter.

While the press release does indicate the preliminary character of the data, only in cases where they include estimates, the methodological note indicates that the final data will be published in *Fachserie 14, Reihe 2 Vierteljährliche Kassenergebnisse des öffentlichen Gesamthaushalts* (Quarterly Cash Results of Public Budgets). It also indicates that the annual and semiannual data are also published in *Wirtschaft und Statistik*.

The quarterly final data that are published in *Fachserie 14, Reihe 2* are also available on the Internet. The presentation in this publication is very detailed but confusing to nonexperts. Data are presented according to the official budget classification for the various subsectors of general government (federal government, special funds, Länder governments, local governments, and social security funds) as well as for the consolidated general government as a whole. Table 2.1 of that publication is of particular relevance since it best approximates the *GFSM 1986* framework by classifying “below the line” all transactions in liabilities and in financial assets other than for policy purposes. Revenue is presented by type of tax, nontax, and other revenue, and expenditure is broken down between current expenditure, capital expenditure, and expenditure “related to assets and liabilities” (i.e., balance sheet items). The data are normally published in tabular form but also include a limited number of charts illustrating some salient features. The data are also shown at the level of individual Länder and for components of local government.

Annual cash-based data are presented in *Fachserie 14, Reihe 3.1*. This publication is similar to the publication used to present the quarterly data. It contains also a table in which the data are presented within the framework and with the breakdowns of the quarterly data mentioned in the previous paragraph, as well as public revenue and expenditure according to a common functional classification.

The subject matter publications include extensive methodological notes but do not include commentaries on revenue and expenditure. However, public finance developments are commented upon at length in various publications of the FSO, including *Wirtschaft und Statistik*, in particular on the occasion of the publication of half-yearly and annual results.

Annual *ESA 95* government sector national accounts are presented and commented on at a press conference. The full presentation of the data is published in the annual national accounts. The components are presented in tabular form in line with the *ESA 95* regulations and the *ESA 95 Manual on Government Deficit and Debt*. This publication includes also charts. *ESA 95*-based government sector accounts developments are commented on at length in *Wirtschaft und Statistik*.

#### 5.1.2 Dissemination media and format are adequate.

The dissemination formats meet user needs for all government finance statistics compiled by the FSO. After being first disseminated through a press release, these statistics are made

available on the Internet, other electronic support (e.g., CD-ROM), as well as in paper format. Current statistics and longer time series can be obtained through the Genesis-Online database. In addition to the data for the last period and recent periods, long time series can be obtained under the above-mentioned formats. Data are also available in Excel and Access formats, thereby permitting redissemination.

#### *5.1.3 Statistics are released on a preannounced schedule.*

All statistics are released according to publicly preannounced dates, and checks are made to ensure that these dates are adhered to. A calendar of data release is published on the FSO website. Furthermore the catalog of publications of the FSO, released at the beginning of the year, contains a list of all the publications scheduled for dissemination within the current year. Changes in release dates are announced through press releases and other publication media. The advance release calendar is also available on the IMF's DSBB, which may be accessed on the homepage of the FSO. The press releases are also announced in the weekly preview on the homepage of the FSO.

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

Subject to well-defined pre-embargo access arrangements, users receive the information at the same time. Representatives of the press do not obtain any information before the press release is actually disseminated. The Bundesbank, the Federal Ministry of Economics and Labour, and the FMOF receive the data the day before publication to enable them to prepare statements for the press. These arrangements are documented on the IMF's DSBB but should also be presented on the FSO website to better inform local users.

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

Certain data, and more detailed information on calculation procedures, are available upon request. The FSO will also produce additional tables or results. As a rule, work that can be completed in less than one hour is performed free of charge, while longer tasks are subject to a fee. Each publication of the FSO contains contact information on where to seek assistance (phone and fax numbers, e-mail, and the Internet address of the FSO).

## **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.*

Quite extensive methodological notes are published in the respective subject matter publications where the data are published for quarterly and annual data on flows, as well as for debt data. The information contains material on concepts, definitions, classification, data sources, compilation methods, statistical techniques, and other relevant methodological

aspects and procedures. Methodological descriptions are also available in Germany's *Statistical Yearbook*.

As already indicated, brief methodological descriptions regarding these statistics are published in "Statistics from A to Z" on the FSO's website, and further methodological information is available upon request. The methodological notes are also available in hard-copy format.

The summary methodology for the fiscal sector data that are posted on the DSBB need to be developed further.

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

Different levels of metadata detail are made available to meet users' requirements. The methodological note included in "Statistics from A to Z" on the FSO's website is directed at the informed but nonspecialized general public, while the introductory note that accompanies the subject matter publications is aimed at specialists, students, and academics.

## **5.3 Assistance to users**

### *5.3.1 Contact points for each subject field are publicized.*

Each publication, including the press releases, contains contact information on where to seek further information, including the name, telephone number, and e-mail address of the person to contact. For each dataset, queries are answered by a staff member of the relevant division, in most cases by the head of the section or a senior executive officer.

In addition, individual queries can be directed to the General Information Service at the FSO by phone or by mail. Depending on the amount of work involved, queries are answered free of charge or for a fee.

Informational brochures and other material presenting the FSO and its work are made available. In addition, the FSO is present at various events such as fairs or expert conferences where information booths are sometimes set up.

Assistance to users is monitored and reviewed periodically. The number and nature of user queries is recorded and analyzed by the FSO.

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

Catalogs of publications, documents, and other services to users are available and updated regularly, in printed form and on the Internet. Electronic subject matter publications are free of charge. The price of other forms of publications is provided, and information is provided on how to obtain assistance.

Table 6. Germany: Data Quality Assessment Framework (July 2003): Summary of Results for Government Finance Statistics  
(*Compiling Agency: Federal Statistical Office*)

Element		NA	Assessment			Comments
			O	LO	LNO	
<b>2. Methodological soundness</b>						
2.1	Concepts and definitions			X		Use of an outdated methodology for SDDS purposes; no migration path in place to adopt <i>GFSM 2001</i> -based statistics.
2.2	Scope			X		Quarterly debt data exclude social security. (This exclusion will disappear as a result of the amended Law on Finance and Personnel Statistics of June 25, 2005). Coverage of quarterly data somewhat less comprehensive than annual data (accident insurance and special purpose service providers).
2.3	Classification/sectorization			X		Classification of financing, debt, and functional classification incomplete; quarterly financing and debt data not classified by creditor; national functional classification differs slightly from COFOG.
2.4	Basis for recording		X			
<b>3. Accuracy and reliability</b>						
3.1	Source data		X			
3.2	Assessment of source data		X			
3.3	Statistical techniques		X			
3.4	Assessment and validation of intermediate data and statistical outputs		X			
3.5	Revision studies		X			
<b>4. Serviceability</b>						
4.1	Periodicity and timeliness		X			
4.2	Consistency			X		Financing flows and debt statistics not compiled as an integrated set. The quarterly GFS differ somewhat in coverage from the annual data, and the data are not always comparable over time due to classification changes.
4.3	Revision policy and practice		X			
<b>5. Accessibility</b>						
5.1	Data accessibility		X			
5.2	Metadata accessibility		X			
5.3	Assistance to users		X			

## Recommendations<sup>48</sup>

- Take action to enable government finance statistics based on either the *ESA 95* or the *GFSM 2001* framework to be used for SDDS purposes.<sup>49</sup>
  - Continue to compile cash data if necessary but adopt the analytical framework of the Sources and Uses of Cash table found in Chapter 4 of the *GFSM 2001* (2.1.1).
  - For the presentation of revenue, expenditure, and financing transactions, adopt the *GFSM 2001* detailed classification categories for revenue, expense, acquisition less disposal of nonfinancial assets, acquisition less disposal of financial assets, and incurrence less extinction of liabilities. Adopt the COFOG to present the expenditure split by function (2.3.1).
  - Compile a financial balance sheet (2.2.1).
  - Ensure consistency between outstanding debt and net lending/borrowing (4.2.1).
  - Move gradually toward an accrual basis for recording of statistics (2.4.2).
- Expand the coverage of debt data to include social security funds (2.2.1). (The recently amended Law on Finance and Personnel Statistics of June, 25, 2005 provides that the debt of social security fund will be included in total government debt, starting with the first quarter 2005.)
- Expand the coverage of quarterly statistics to include all special public service providers (*Zweckverbände*) that have a government function (2.2.1).
- Improve the press release for general government statistics to include more breakdowns for financing and indicate whether the data are provisional or final; in the press release, state the revision policy and calendar of revisions (5.1.1 and 4.3.1).
- Review and revise the metadata posted on the DSBB and expand the financing and debt breakdowns shown on the National Summary Data Page (5.2.1).

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<sup>48</sup> Recommendations are made here in the order of the DQAF dimensions.

<sup>49</sup> This recommendation would support a recommendation of the August 27, 2003 Report on the Observance of Standards and Codes, Fiscal Transparency Module which stated that "... planning, budgeting, and reporting of the general government fiscal position (as defined by *ESA 95*) must be strengthened. Budget documents need to be presented so that an assessment of the obligations under the Maastricht Treaty is possible."

#### IV. DEUTSCHE BUNDESBANK AND THE BALANCE OF PAYMENTS STATISTICS

**Dimensions 0 and 1, discussed below and which relate mainly to institutions, concentrate on the Deutsche Bundesbank (see Section 0 for Dimensions 0 and 1 for the Federal Statistical Office). Dimensions 2 through 5, in respect of balance of payments statistics, are also discussed in this section.**

### 0. Prerequisites of quality

#### 0.1 *Legal and institutional environment*

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

The responsibility for collecting, processing, and disseminating the German balance of payments statistics is assigned to the Deutsche Bundesbank (Bundesbank) by an agreement between the Federal Ministry of Economics, the Federal Ministry of Economic Cooperation, the Federal Ministry of Transportation, the Federal Statistical Office (FSO), and the predecessor of the Bundesbank—Bank Deutscher Länder. This agreement dates back to 1954.

An administrative agreement between the Federal Government (represented by the Ministry of Economics) and the Bundesbank dating from October 1961 further specifies the sharing of tasks and the obligation to coordinate between the Federal Government and the Bundesbank in executing the Foreign Trade and Payments Act.<sup>50</sup> Article 26 (2) of the Foreign Trade and Payments Act governs the data collection for balance of payments purposes. The Act enables the government to enact reporting regulations for specific purposes, including for compiling the balance of payments of the Federal Republic of Germany. Accordingly, the Foreign Trade and Payments Regulation<sup>51</sup> specifies in detail these reporting requirements, which form the core of the balance of payments data collection system. The regulation also identifies the Bundesbank as the authority responsible for the data collection.

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<sup>50</sup> *Außenwirtschaftsgesetz (AWG)* (Foreign Trade and Payments Act) of April 28, 1961, last amended by the law of December 21, 2004.

<sup>51</sup> *Außenwirtschaftsverordnung (AWV)* (Foreign Trade and Payments Regulation) of November 22, 1993, last amended by regulation of April 29, 2005.

In addition, on the basis of Article 18 of the Bundesbank Act<sup>52</sup> and the Regulation of the European Central Bank (ECB) concerning the consolidated balance sheet of the monetary financial institutions sector,<sup>53</sup> the Bundesbank may collect statistics in the field of money and banking from all credit institutions to fulfill its tasks. Such data are also used partly for balance of payments statistics purposes.

Although the responsibility for disseminating balance of payments statistics is not defined in the Foreign Trade and Payments Act, the Bundesbank Act, or the Federal Statistics Act, the Bundesbank has assumed primary responsibility for this task. However, a tradition of having the FSO first release the current account results (in its monthly press release on foreign trade statistics) exists; the Bundesbank's press release on balance of payments statistics, with more detailed results, usually follows within one or two working days of the FSO's press release.

Since the start of Stage Three of the European Monetary Union (EMU) in January 1999, Germany (along with the other members of the euro area) also contributes euro area balance of payments data to the ECB. The legal authority for collecting balance of payments and IIP statistics is provided by (1) Article 5 of the Protocol on the Statute of the European System of Central Banks (ESCB) and of the ECB; (2) the Council Regulation (EC) 2533/1998 of November 23, 1998 that governs the collection of statistical information for the fulfillment of the tasks of the ESCB; and (3) the ECB Guideline 2004/15 (July 16, 2004) on the statistical reporting requirements of the ECB in balance of payments and IIP statistics, and the international reserves template. While the Bundesbank is responsible for collecting data in Germany, the ECB is responsible for compiling and disseminating the euro area aggregates.

Similarly, the Bundesbank provides data to the Statistical Office of the European Communities (Eurostat) for the purposes of compiling the quarterly and annual European Union (EU) balance of payments on the basis of the European Parliament and Council Regulation (EC) No.184/2005 of January 12, 2005.

Within the Bundesbank, the Statistics Department's Balance of Payments Division is tasked with the responsibility for compiling the balance of payments and IIP statistics (national, and contributions to EU and euro area aggregates).

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<sup>52</sup> *Gesetz über die Deutsche Bundesbank* (Bundesbank Act), in the wording of the announcement of October 22, 1992, as last amended by Article 1 of the Seventh Act amending the Bundesbank Act of March 23, 2002.

<sup>53</sup> Regulation (EC) No 2423/2001 of the ECB of November 22, 2001 concerning the consolidated balance sheet of the monetary financial institutions sector (ECB/2001/13), last amended by Regulation (EC) No 2181/2004 of the ECB of December 16, 2004.

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

For compiling balance of payments statistics, the Bundesbank relies primarily on its open international transactions reporting system (ITRS) and on the FSO's statistical collections. While no formal agreement exists between the FSO and the Bundesbank on data sharing procedures, a data transmission calendar for foreign trade statistics is agreed between the Bundesbank and the FSO each year in advance, taking into account both the timetables for disseminating national balance of payments and the transmission deadlines of the ECB for euro area balance of payments data. The Bundesbank arranges regular meetings with compilers of foreign trade statistics and other statistical areas of the FSO, when relevant, to discuss and coordinate any changes in the data requirements or statistical collection and compilation methods.

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

All statistics compiled by the Bundesbank are subject to the same confidentiality regime as other federal statistics. Specifically, Article 26 (4) of the Foreign Trade and Payments Act and Article 18 of the Bundesbank Act refer to Article 16 of the Federal Statistics Act of 1987, which requires that individual data be kept confidential unless otherwise determined by another legal instrument. Article 16 also specifies the exceptions to this general rule: namely, if disclosure is agreed to in writing; if individual data refer to public authorities and are publicly available from other sources; if individual data of different respondents are aggregated and presented in statistical results; or if individual data cannot be attributed to the respondent or the individual concerned. Article 16 further prescribes strict rules for the transmission of individual data to other statistical and other public authorities or to universities and similar institutions for research purposes. Article 16 (2) of the Federal Statistics Act further stipulates that access to individual data is to be restricted to those persons or units who require the information for compiling the statistics.

With regard to data transmissions to Eurostat and the ECB, European legislation authorizes national authorities to transmit confidential statistical data to those institutions for statistical purposes, namely for compiling the EU and euro area balance of payments.<sup>54</sup>

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<sup>54</sup> Regulation (EC) No 184/2005 of the European Parliament and the Council of January 12, 2005 on Community Statistics concerning balance of payments, international trade in services, and foreign direct investment. This relates to Council Regulation No 1588/90 of June 11, 1990 on the transmission of data subject to statistical confidentiality to the Statistical Office of the European Communities; and Council Regulation (EC) No 2533/98 of November 23, 1998 concerning statistical information by the ECB.

Through explanatory notes in all reporting forms and in other communications, respondents are informed of the legal basis and the statistical purpose of the data collection, the confidentiality regime, as well as their obligation to provide the information. For the survey on travel expenditure, where provision of information is voluntary, respondents are informed about the voluntary character of the survey.

In general, public service staff are bound to professional secrecy regulations. Bundesbank staff rules also explicitly refer to the observance of the provisions of the Federal Data Protection Act and other legal instruments (including the Federal Statistics Act) that include specific provisions on the protection of individual data. On joining the Bundesbank, and on an annual basis, staff are required to take note of these regulations. Regarding the Bundesbank's outsourcing of some data entry activities (transferring hard copy reporting forms into electronic reports), the contractual arrangements include confidentiality safeguards. Violation of the confidentiality provisions can result in disciplinary measures and may lead to fines or prison sentence. The Bundesbank has also appointed a Data Protection Officer whose duties include oversight for the application of data security protocols to new electronic reporting initiatives.

For the presentation of balance of payments results, aggregates need to include individual data of at least three different enterprises in order to prevent disclosure of individual data. When respondents are not identifiable (i.e., no enterprise identification number is assigned because the transactor is either a household or small enterprise and/or the transaction is infrequent) at least six individual reports are included in the disseminated aggregate. If these requirements are not met for a specific aggregate, data are concealed in the publication table. Indirect disclosure of individual data is prevented by checking whether data that are not disclosed could be calculated as a residual within the balance of payments tables. In such circumstances, additional cells are appropriately flagged in the table.

Specific organizational and technical measures exist to safeguard individual data during storage and during discarding of records. Physical records need to be kept under supervision of staff or have to be securely stored when staff leaves the office. Electronic records are protected by the information technology (IT) and organizational measures (password protection, etc.). Secured containers are used to discard individual physical records.

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

Reporting for balance of payments purposes is mandatory under the Foreign Trade and Payments Regulation and for those statistics that are mandated on the basis of Article 18 of the Bundesbank Act. Article 26 (4) of the Foreign Trade and Payments Act and Article 18 of the Bundesbank Act also refer to Article 15 of the Federal Statistics Act, which identifies the obligations of respondents when provision of the information is mandatory.

Under Article 70 of the Foreign Trade and Payments Regulation, fines may be imposed on respondents in case of noncompliance (no reporting, late or incorrect reporting). Usually,

these provisions are only employed when there is persistent noncompliance with the reporting regulations. Respondent compliance is monitored by the auditing activities of the Bundesbank's Service Centers for External Sector Audits in the case of financial institutions, and of the Regional Finance Offices (Oberfinanzdirektionen) in the case of nonfinancial enterprises.<sup>55</sup>

Generally, the maximum fine that can be imposed is EUR 25,000 according to Article 33 (6) of the Foreign Trade and Payments Act. However, higher fines may be imposed when there is evidence that the enterprise derived a competitive advantage (or sizable economic benefit) by not complying with the reporting obligations.

Regarding the reporting of the external positions of the monetary financial institutions (MFIs) sector (within the context of monetary and financial statistics), provisions for onsite inspections on behalf of the Bundesbank do not exist. However, for private banks there is an obligation for certified public accountants to spot-check financial institutions' compliance with certain reporting requirements when auditing the banks' annual accounts. German savings banks (Sparkassen) and credit co-operatives (Kreditgenossenschaften)—currently 1,800 in total number—are subject to internal audit procedures of their respective associations. The auditing includes cross-checking the balance sheet statistics submitted during the audit period.

The Bundesbank carefully considers response burden for balance of payments statistics. The Foreign Trade and Payments Act (Article 26, 4) stipulates that reporting requirements may not exceed those data requirements necessary for the specified purposes. New data requirements need to be introduced through changes of the legal basis, that is, the Foreign Trade and Payments Regulation, and have to be justified, taking into account any costs for data providers. In the past, attempts were made to balance additional requirements by reduced reporting in other areas, for example, by periodically raising reporting thresholds or exempting specific transactions from reporting where alternative data sources became available. Periodic reviews of the overall data collection program thus occur when necessary changes to the legal basis for reporting are prepared.

The balance of payments reporting forms are designed to facilitate data reporting. Descriptions and reporting instructions are provided in the reporting forms; these are complemented with additional details on the Bundesbank's website as well as in a special

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<sup>55</sup> The legal basis for the audits of both the Bundesbank and the Regional Finance Offices is Article 44 of the Foreign Trade and Payments Act. For the Regional Finance Offices, statistical reporting has not been the main objective of their audits, but the Bundesbank's Service Centers for External Sector Audits are actively working to make statistical reporting an integral part of the Regional Finance Offices' audits.

publication describing the transaction codes in detail.<sup>56</sup> The Bundesbank provides IT tools to respondents to simplify reporting and further limit the response burden. Also, the central bank contacts major IT enterprises developing technical solutions for business accounting, including IT solutions for statistical reporting, with the aim of matching enterprises' terminology and record-keeping systems with the Bundesbank's statistical reporting requirements. Respondents may also seek assistance from the Bundesbank when developing their own IT solutions for statistical reporting. On all reporting forms and notices for respondents, a toll-free telephone number is indicated for providing immediate assistance to respondents.

The Bundesbank attaches great importance to good and frequent direct contacts with respondents. This includes providing training for reporting agents on reporting requirements and on the purpose of collecting these data in order to ensure respondents' cooperation. These activities are undertaken primarily by Bundesbank's service centers for external sector audits.

## **0.2 Resources**

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

The Balance of Payments Statistics Division has 79 staff members. In addition, two sections of the Banking and External Stock Statistics Division, with a total of 32 staff, collect and compile external stock data that are also used for compiling the balance of payments and IIP. With a staff of 50, a service center for external statistics in Mainz is responsible for collecting the statistical reports, processing the reports of smaller respondents, and carrying out some administrative tasks. Four service centers for external sector audits (in Mainz, Düsseldorf, Hannover, and München) are staffed with 47 persons total. A section within the IT Division of the Statistics Department with 14 staff provides the IT support for the Balance of Payments Statistics Division.

The overall number and qualification of staff are adequate for compiling balance of payments and related external statistics. However, structural reform of the Bundesbank—including the reorganization of the statistical areas of the Bundesbank and an overall reduction of staff in the statistical data collection and processing—has impacted staff turnover in the last two years. A number of very experienced staff took the opportunity for early retirement, and the situation is aggravated by the planned relocation of the Balance of Payments Statistics Division from the Bundesbank's main premises in Frankfurt to Mainz in July 2005. As of mid-July 2005, about 50 percent of the balance of payments staff have been exchanged during the last two years.

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<sup>56</sup> Deutsche Bundesbank, Special Statistical Publication 7, *Explanatory notes on the coding list for the balance of payments* (in German only).

Computing resources are adequate to perform the required tasks. Computer applications for balance of payments statistics (databases, reporting and analytical tools) are generally developed in-house by the dedicated section of the IT Division within the Statistics Department. Enhancements to these applications are realized according to the requirements of the Balance of Payments Statistics Division. The launch of larger IT projects requires a project planning phase (fact-finding, detailed project specifications) to ensure allocation of sufficient resources in the annual budgeting process.

Back-up systems protect the Bundesbank's statistical series. In the context of the ECB's Risk Management Framework, the ESCB is developing a recovery plan to ensure a relatively swift resumption of statistical production in the event of extreme disruptions.

Physical facilities are adequate. While the Bundesbank's Statistics Department expects that the relocation of the Balance of Payments Statistics Division to Mainz will not disrupt the main statistical production processes, modes of interaction and coordination with other statistical divisions of the Bundesbank may be constrained by physical distance.

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

Resources are allocated through the Bundesbank's general budgeting process, starting from the strategic goals of the Statistics Department, then reviewing the operational objectives and measures, and estimating the impact on personnel and other resources as well as on necessary investments. The Bundesbank is required by law to employ cost accounting procedures, including annual analysis of budgeted figures and actual costs and investment, to assist in its management and administrative tasks.

The Bundesbank's statistical program is largely influenced by requirements and priority-setting of the ECB/ESCB and the Eurostat, as identified in the work programs of the respective statistical committees. Any new data collections that are required by the ECB, as one of the major data users, undergo a formal benefit/cost assessment, which has been agreed within the ESCB to ensure efficient use of resources.

The Bundesbank's Internal Auditing Department reviews work processes, staffing, and efficient use of resources intermittently. Such reviews may also be conducted at the ESCB level. External audits of truth and fairness of accounts and of cost effectiveness are carried out through spot checks by the Federal Court of Auditors. Their findings are reported to the parliament annually.

The Bundesbank reviews staff performance according to a predetermined schedule for all staff. The Bundesbank also focuses on providing project managers with project management skills by providing opportunities for both on- and off-the-job training.

### **0.3 Relevance**

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

At the national level, the Balance of Payments Statistics Division regularly contacts major users of German balance of payments data, such as the Economics Department of the Bundesbank, ministries, and other principal data users in order to be aware of emerging new national data needs, to discuss priorities and trade-offs, and to receive feedback on intended changes in methods, presentations, etc., if applicable. The Balance of Payments Statistics Division also actively participates in numerous international and European working groups, which include representatives of other major data users such as the ECB, the European Commission, and other international organizations. Further, the Bundesbank is a consultative member of the Statistical Advisory Committee on statistics of the FSO and also participates in relevant specialist committees of the Advisory Committee.

The Bundesbank is a member of the German Statistical Society, the International Statistical Institute (ISI), and the Irving Fisher Committee on Central Bank Statistics and regularly participates in their meetings.

On specific occasions, the Bundesbank conducts user surveys, addressed to a wider range of users, including research institutes, professional associations, etc. For example, it carried out a user survey to receive feedback on the need to continue producing national balance of payments data after the start of the monetary union and the availability of euro area statistics. A user survey undertaken by the Bundesbank as part of this data module ROSC assessment indicated a high degree of user satisfaction with Germany's balance of payments statistics.

Feedback from users is also actively sought by the user service area of the Balance of Payments Statistics Division (by means of a short questionnaire). The continuous flow of data requests and other inquiries received from different users is documented and periodically analyzed to identify emerging data needs and to adapt the publication program according to these needs. One example is the decision to publish the data on foreign direct investment (FDI) flows by geographical and industry breakdowns on the Bundesbank's website.

### **0.4 Other quality management**

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

The importance of the quality of statistical data is emphasized and promoted throughout the Bundesbank. A commitment to compile and disseminate quality statistics, considered fundamental to well-founded economic decision making as well as for sound forecasting, is communicated to the public through appropriate publications, on the Bundesbank's website, as well as in public speeches or statements. Data quality is also recognized in the strategic goals for the Bundesbank's Statistics Department.

As a member of the ESCB, the Bundesbank shares the mission, strategic intent, and organizational principles of the ESCB. Among other things, strategic guidelines highlight the importance that the ESCB attaches to credibility, trust, transparency, and accountability in fulfilling its tasks. The mission statement, strategic intent, and organizational principles of the Eurosystem have been distributed to all staff and are published by all ESCB members. Further, staff from the Bundesbank's Statistics Department are attuned to the quality initiatives within the European Statistical System and were represented on the recent ECB/Eurostat Task Force on the Quality of Balance of Payments Statistics.

Staff training in statistics, both through formal courses and on-the-job training, highlights the importance of data quality. Staff are encouraged to suggest changes to current processes and statistical practice that may enhance the data quality. Staff have also presented papers on data quality at international conferences.<sup>57</sup>

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

The quality of the balance of payments statistics is monitored continuously. Processes have been established and measures are in place to detect errors at various levels of the collection and compilation process.

An early information and alert system is established to ensure that management of the balance of payments division is informed at the earliest convenience on preliminary results and possible problems of the monthly balance of payments. The tables distributed to management of the division prior to the publication are produced when most of the information for the monthly results has been processed. They usually lack information on the short-term financial transactions of nonfinancial enterprises, which are the last data to be finalized before publication. These tables are used to assess the broad developments and can give a first indication of the magnitude of monthly errors and omissions.

The ECB regularly assesses data quality of euro area balance of payments and IIP data, including the euro area Member States' contributions to the aggregate. These assessments are distributed to the national data providers for monitoring purposes. In January 2005, the ECB began publishing an annual balance of payments data quality report. The report is restricted to an assessment of the euro area data.

A quality report on German balance of payments statistics is being developed on the basis of the work done by the joint ECB/Eurostat Task Force on the Quality of Balance of Payments Statistics. The report is planned to be produced on an annual basis. The indicators that have been developed by this task force are compiled and monitored semiannually for national

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<sup>57</sup> See for example, Sabine Guschwa, "Measuring the Quality of Balance of Payments Statistics." Paper presented to the European Conference on Quality and Methodology in Official Statistics, Mainz, Germany, May 2004.

balance of payments data as well as for the contributions to the euro area aggregates. Plans exist to integrate these indicators into regular management reports.

The Bundesbank also has a legal obligation to the ECB and Eurostat to assess and monitor the quality of national contributions to euro area and EU balance of payments aggregates. In this context, the central bank annually reviews a national action plan for balance of payments statistics to maintain quality and ensure implementation of required actions.

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

Data quality is explicitly reflected in the strategic goals of the Statistics Department, and measures for maintaining or improving data quality are regularly addressed in the annual work programs. Management is aware of trade-offs among dimensions of quality, such as between consistency with other data sets and maintaining a regular and transparent revision schedule or between timeliness and accuracy. These trade-offs are taken into account when choices are made.

As an example, although consistency with other related data sets is acknowledged to be of high importance, absolute numerical identity is sometimes difficult to achieve in the context of different revision schedules. As a consequence, monitoring and analysis of differences are included in the work program of balance of payments statistics. Regarding quality considerations in the trade-off between timeliness and accuracy, less detailed estimation and compilation procedures have been developed for quarterly IIP data, which would be produced with a timeliness of one quarter. While the quarterly IIP data may be less robust than the annual IIP data (the latter relies on annual data sources and a more detailed estimation procedure), a decision has been taken that the quarterly data would be published with an accompanying note on the accuracy and reliability of the results.

Trade-offs are also discussed at the level of the ECB's Statistics Committee, which advises the ECB Council on guidelines for statistical production, and the Committee on Monetary, Financial, and Balance of Payments Statistics (CMFB), which assists the European Commission in developing and implementing statistical work programs.

## **1. Assurances of integrity**

### ***1.1 Professionalism***

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

Article 12 of the Bundesbank Act establishes the central bank's independence from other government authorities in exercising its powers, thereby guaranteeing, among other things, the absence of interference in respect of the compilation and dissemination of statistical information. This is further emphasized by the ECB and ESCB Statutes which stipulate that "when exercising the powers and carrying out the tasks and duties conferred upon them...,

neither the ECB nor a national central bank nor any member of their decision making bodies shall seek or take instructions from Community institutions or bodies, from any government of a Member State or from any other body. The Community institutions and bodies and governments of the Member States undertake to respect this principle and not to seek to influence the members of the decision making bodies of the ECB or of the national central banks in the performance of their tasks.”<sup>58</sup>

Staff recruitment and promotion are based on relevant skills or expertise in statistics or in relevant subject matter fields. Training in methodology and compilation methods is provided to staff in formal courses by internal experts and through participation of qualified staff in courses and seminars offered by the IMF, the ECB, or other institutions. Formal training also includes participation of expert staff in external courses on specialist subject matters. On-the-job training in methodological issues and compilation methods is considered equally important and provided on an on-going basis.

The Bundesbank is actively involved in professional bodies and encourages staff to contribute to conferences and seminars of such bodies. All staff publications are subject to internal review and approval by the Head of the Economic Analysis and Statistics Directorate. Staff in the Bundesbank’s Statistics Department are also actively involved in a number of international and regional committees, working groups and task forces, including the Committee on Balance of Payments Statistics (BOPCOM). As part of the Bundesbank’s technical central bank cooperation activities, the Balance of Payments Division regularly hosts study tours from foreign central banks, including those of former Soviet Union states.

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

Decisions on data sources and statistical techniques are guided by statistical considerations only. Choices of data sources and statistical techniques are made on the basis of statistical research, other countries’ experiences, and the guidelines of international and regional institutions, taking into account country-specific conditions and the benefit/cost of expanding statistical collections.

Within the framework of the Foreign Trade and Payments Act, the Ministry of Economy and Labor is responsible for approving new statistical collections and modifications to (or dismantling of) existing statistical collections.<sup>59</sup> In this role, the Ministry safeguards reporting overburden and would seek the opinion of the European Central Bank and national

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<sup>58</sup> Article 7 of Protocol 18 on the Statute of the European System of Central Banks and of the ECB.

<sup>59</sup> The formal authorization is via Cabinet Decree, published in the *Official Journal*.

interest groups on any proposals made by the Bundesbank.<sup>60</sup> For example, in 2000, the Ministry sought the opinion of the ECB regarding the proposals to raise the threshold for exemptions from reporting obligations for balance of payments purposes from DM 5,000 to EUR 12,500 and to repeal the obligation to report merchandise import payments for balance of payments statistics purposes to the Bundesbank. The ECB issued a “no-objection” opinion.

The German system has undergone continuous, mainly gradual changes in the past, ensuring continuity of the data collection and compilation. It takes advantage of modern technology and accounts for institutional changes, new types of transactions, or business practices. More substantive changes are envisaged for the next few years, in particular for the collection of data on trade in services, planned to be conducted through surveys using sampling techniques. Investigations are under way with regard to the design and possible update of an appropriate business register for that purpose. Statistical considerations—in particular, maintenance of a comprehensive data collection program—are guiding these preparations.

Decisions on all aspects of data dissemination are driven by statistical considerations and, in particular, by users’ needs.

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

The Bundesbank provides explanatory material to users to prevent misinterpretation or misuse of statistics. Additional guidelines on data interpretation are also provided on request; such requests are frequently in the area of foreign direct investment. Annotations and table layouts are designed to prevent misinterpretations (e.g., by showing how the balance of payments signs should be interpreted in each table on financial account transactions).

The Bundesbank monitors media coverage of all its activities including statistics. The press service produces a daily press review accessible to all staff. When erroneous interpretations of the statistics occur, the Communication Department is informed by the Economic Analysis and Statistics Directorate on the correct reading and/or analysis of the data. The Communication Department may then inform the media appropriately. Public comments by the Bundesbank on such errors have occurred in the past and may depend on how prominently the misinterpretation has appeared in the media or other fora.

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<sup>60</sup> The ECB’s authority to deliver an opinion is based on the fourth indent of Article 2(1) of the Council Decision (EC) No. 98/415 of June 1998 on the consultation of the ECB by national authorities regarding draft legislative provisions.

## **1.2 Transparency**

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

The Bundesbank Act, as well as additional information on its tasks, objectives, and organization, is provided on the Bundesbank's website. Reporting forms, citations of the relevant legal texts underpinning the data collection, and the terms and conditions relating to the confidentiality of individually identifiable information are also posted on the Bundesbank's website.

The Protocol on the Statute of the ESCB and of the ECB, along with the texts of all other relevant EU and ECB regulations, is available on the ECB Internet website.

All statistical publications of the Bundesbank identify where users may obtain more information about the Bundesbank and its statistical products. The street and postal addresses, telephone number, and the URL of its Internet address are provided.

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

On the IMF's Dissemination Standards Bulletin Board (DSBB), Germany's SDDS metadata indicates that government access to the balance of payments data prior to release is provided to the FSO and the Federal Ministry of Economy and Labor. Both institutions receive the current account balances (namely on goods, services, income, and transfers) one or two days in advance of the Bundesbank's release of the balance of payments statistics. The arrangements are not explained on the Bundesbank's website.

Early access to these current account data is provided to the FSO because its monthly press release on foreign trade statistics includes the current account results produced by the Bundesbank.

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

All data compiled by the Bundesbank are clearly identified as the Bundesbank's product. The Bundesbank's publications are easily recognizable by the Bundesbank's logo and a common layout. On each page of all hard copy publications, the Bundesbank is identified in the header.

In the case of the press release of the FSO on foreign trade statistics, the Bundesbank is cited as the source of the data on adjustments to foreign trade statistics, services, income, and transfers. The Bundesbank also requires attribution when its statistics are reproduced (e.g., in the case of the regular reproduction of foreign direct investment flow data on the website of the Federal Ministry of Economy and Labor and other institutions). The Bundesbank's statistical publications stipulate that "reproduction permitted only if source is stated."

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

Advance notice of major changes in methodology, source data, and statistical techniques is not given; these changes are communicated to the users when they are introduced. Since introduction of methodological changes generally occurs at the time of the publication of annual balance of payments data, explanations on new methods, sources, and statistical techniques are communicated annually in the March issue of the Bundesbank's *Monthly Report* and on the Bundesbank's website. Major changes in the statistical framework are explained in methodological boxes that accompany the analytical text.

**1.3 Ethical standards**

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

Ethical standards for staff behavior are part of the staff contracts or the personnel statutes for employees and federal civil servants, respectively. These include, in particular, rules on secrecy and on the acceptance of gifts and rewards. Further internal ethical guidelines exist to prevent corruption and to advise staff on correct behavior outside of the office in order to maintain the reputation of the institution. To ensure staff compliance with rules for financial transactions (i.e., on insider trading), a special appointee has been nominated by the Bundesbank.

Since April 2004, an external Corporate Governance Compliance Adviser ensures independent and objective external oversight of compliance with the corporate governance rules. Together with this external adviser, the Executive Board developed a new Code of Conduct for the members of the Executive Board of the Bundesbank, which was adopted in July 2004. In April 2005, a General Code of Conduct for staff, applicable to all staff of the Bundesbank, came into force. The Codes of Conduct set out the basic principles for correct staff behavior and give more precise guidance for specific situations with potential conflict of interest. The general principles that apply enable board members and staff to perform their duties independently, impartially, and selflessly.

Observance of these codes is an integral part of the professional culture of the Bundesbank. Within a month of joining the Bundesbank, and on an annual basis, staff is required to take note of the Bundesbank's rules and guidelines for staff behavior. Further, staff is required to reaffirm once a year that it has taken note of these ethical standards.

## **2. Methodological soundness**

### **2.1 Concepts and definitions**

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

Germany's balance of payments statistics are generally consistent with the conceptual framework of the IMF's *Balance of Payments Manual*, fifth edition (*BPM5*). Current, capital, and financial accounts of the balance of payments are defined according to the *BPM5* guidelines, and transactions in assets and liabilities are recorded separately. Resident institutional units are defined in conformity with *BPM5* as those that have a center of economic interest in Germany. Regulations, agreements, guidelines and recommendations applicable to members of the European Union and the euro area also impact the overall structure of Germany's balance of payments statistics. Accordingly, major changes in the presentation of the German balance of payments data were introduced following the implementation of the *BPM5* in early 1995 and with the start of the EMU in January 1999. Further changes in concepts and definitions have been introduced whenever methodological guidelines were modified (e.g., the classification of financial derivatives) or clarified. Departures from guidelines or standards are relatively minor and are kept under review.

The double-entry system followed in the German balance of payments statement ensures that the balance of the current account in principle is equal (with sign reversed) to the net capital and financial account balance. The net residual is embedded in the errors and omissions item.

The concept of residency applied in the German balance of payments follows the recommendations of *BPM5*. International or supranational organizations that are located in Germany, such as the ECB, are not considered residents of the German economy, whereas their employees are treated as German residents. General government units (e.g., embassies, military bases) located abroad, including their German staff, are considered as German residents. Conversely, such units belonging to foreign governments and located in Germany are treated as nonresidents. The residence of enterprises operating in German free trade zones, unincorporated branches and special purpose entities located in Germany are all attributed to the German economy. However, changes in the residency status of individuals, which should, in principle, result in balance of payments entries under migrants' transfers in the capital account, are usually difficult to identify. Such transactions are assumed to be of relatively minor importance.

Regarding the definition of balance of payments transactions, the German balance of payments records both exchanges and unrequited transfers. Most of these transfers are government transfers to and from the EU. Transfers to the EU are largely contributions to the EU budget and are, by definition, classified as current transfers. Transfers from the EU are classified either as current or as capital transfers, consistent with the *BPM5* guidelines.

The goods and services components of the current account are clearly distinguished from the income component according to *BPM5* definitions. Transactions in the current and capital account are recorded and presented on a gross basis; for example, for receipts and expenditure separately.

In the financial account, transactions in assets and in liabilities are recorded separately. In addition, for most of the assets and liabilities components of the financial account, also gross data on new investments and liquidations are available. Only financial derivatives are recorded net, that is, as the overall balance of transactions in both assets and liabilities. This treatment accords with the treatment in the euro area balance of payments.

Foreign direct investment is generally recorded according to the directional principle. In the case of short-term loans (including trade credits) that are derived from monthly stock statistics on external assets and liabilities of affiliated enterprises, the directional principle for loans between direct investors and direct investment enterprises is applied in most of the cases. This is done by using information on the status of the German reporting enterprise (i.e., German investor or direct investment enterprise) derived from an internal business register used for compiling the capital links statistics.<sup>61</sup> Where an allocation is not feasible, the assets/liabilities principle is applied as best proxy.

For identifying direct investment, the 10 percent ownership rule is applied in accordance with *BPM5* recommendations.

The definition of reserve assets is in line with *BPM5* guidelines and with the recommendations of the *International Reserves and Foreign Currency Liquidity (Guidelines for a Data Template)*. With the start of the EMU, the definition of monetary reserves changed for euro area member states. In addition to gold holdings and the Reserve Position in the Fund, only those liquid claims denominated in foreign currency that the Bundesbank has on noneuro area residents are part of its reserves. The Bundesbank's claims on residents of other EMU member states, regardless of the currency, are part of other external assets.

## **2.2 Scope**

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

In principle, Germany's balance of payments statistics cover all transactions between residents (of the Federal Republic of Germany) and nonresidents.<sup>62</sup> Resident institutional

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<sup>61</sup> Capital links statistics are derived from enterprise-based annual reporting on the stocks of German direct investment abroad and foreign direct investment in Germany.

<sup>62</sup> From July 1990 onward, the balance of payments statistics also include the external transactions of the former German Democratic Republic (GDR).

units are defined in conformity with the *BPM5* concepts of economic territory and center of economic interest (see also 2.1.1).

In practice, constraints on data sources may preclude full coverage in some areas, as follows:

- Currently, no estimates for smuggling are included in the FSO's foreign trade data, and no coverage adjustments for smuggling are made in the goods account in the balance of payments. However, since Eurostat requires inclusion of illegal and other informal activities in national accounts, the FSO has initiated research on this topic, including on smuggling.
- Migrants' transfer debits and credits, in particular, are not adequately covered. The available information is combined with inheritances, legacies, and donations under capital transfers.
- Direct investment earnings data do not include the relevant share of all indirectly-owned direct investment enterprises.
- Reporting gaps exist for the portfolio transactions (and positions) of resident individuals that are undertaken (held in custody) with banks abroad. Estimates to close these gaps, which are based mainly on information from the custodian statistics and other sources, are not always sufficiently timely or accurate.<sup>63</sup>
- Stock data on financial derivatives are not available because data sources do not provide sufficient information on asset and liability positions corresponding to valuation at market prices and to the *BPM5* residency principle.

### **2.3 Classification/sectorization**

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

In principle, the classification of transactions in the German balance of payments broadly conforms with *BPM5*. In practice, deviations result from a number of factors, including national preferences in data presentation, EU guidelines, and the nature of the data collection system. The national authorities have also indicated that, in some cases, some components are not recorded because the transactions are either largely nonexistent or are materially insignificant. With few exceptions, the departures from *BPM5* are documented. Drawing on the available public documentation and on the discussions with the national authorities, the deviations are as follows:

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<sup>63</sup> Improvements are expected from the introduction of more frequent (quarterly) and more detailed custodian statistics in 2006.

- Monthly imports of goods are reported on a c.i.f. basis for the national balance of payments. *BPM5* guidelines for reporting imports data on an f.o.b. basis are applied only to the monthly reporting of euro area data to the ECB and to the quarterly and annual series (including data reported to the IMF).
- In national presentations, goods are not broken down into the five categories recommended by *BPM5* (general merchandise, goods for processing, repairs on goods, goods procured in ports by carriers, and nonmonetary gold). These breakdowns are made in the quarterly data submitted for IMF statistical publications.
- The distinction between personal and business travel credits is not made.
- Cross-border construction activity is largely classified as a service export or import, even if the project life exceeds one year.<sup>64</sup> This practice accords with an EU agreement that was reached for balance of payments statistics to classify construction activity as a service.
- Financial services generally cover fees paid and received in connection with financial transactions. However, fees and commissions related to the sale and purchase of securities are partly recorded in the financial account because they are reported as a lump sum together with the purchase price of the securities. Some entities are, however, reporting them separately.
- Computer hardware-related services, such as repairs on computers and peripherals, are not included under computer and information services, as recommended in *BPM5*, but are classified as engineering and other technical services.<sup>65</sup>
- For direct investment income, national presentations report a correcting item “contributions to cover losses,” which is not explicitly linked to a *BPM5* component.

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<sup>64</sup> Construction and public works projects are recorded as services when it is difficult to apply the one-year guideline for unincorporated enterprises. Under some conditions specified in *BPM5*, they should be recorded under the direct investment heading (with counterpart entries under merchandise trade and investment income). When there is clear evidence of a direct investment relationship (i.e., in most cases this would involve an incorporated enterprise), the *BPM5* guidelines are followed.

<sup>65</sup> As recommended in *BPM5*, nonstandardized software is classified under computer services while standardized software together with computers are classified as goods.

- Other investment income does not include income on trade credits and the interest share of financial leasing.<sup>66</sup>
- For direct investment, private, nonbusiness real estate investment is recorded under other capital instead of under equity capital.
- Under other investment, loans are not classified separately from currency and deposits

With regard to insurance services, only the service charge—estimated as a percentage from gross premiums paid—is classified under insurance services. Remaining premiums and all claims are classified as current transfers in the case of nonlife insurance or under other investments for life insurance. Transactions related to reinsurance are classified as insurance services in accordance with *BPM5* guidelines.

Transfers related to transactions with the European Institutions are classified into current or capital transfers following the specific recommendations of the EU working groups.

German *Schuldscheine* are classified as loans within the other investment account in the German balance of payments statistics, in line with the treatment in monetary and financial statistics and the accounting practice of banks.

Since 1999, security repurchase agreement (repo) transactions are regarded as collateralized loans and thus recorded in the other investment account.

The short- and long-term attribution of transactions in the other investment component is made according to the original maturity of the financial instrument.

With regard to the sector classification, the German balance of payments distinguishes between the Deutsche Bundesbank as the monetary authority, other MFIs (based on the common euro area definition of banks), the general government, and other sectors. Notably:

- transactions in bonds and notes issued by former public enterprises (such as the Bundesbahn and the Bundespost) are attributed to the private sector (“other sectors”); and
- government guaranteed external claims of German exporters (so-called Hermes guarantees), which are attributed to the original creditor sector, are reclassified into the general government sector when claims are transferred to the government institution of Hermes due to default of the debtor.

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<sup>66</sup> The authorities indicated that more than 50 percent of the value of trade credit transactions is conducted between affiliated enterprises.

## **2.4 Basis for recording**

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

In general, the valuation is based on market prices prevailing when the transaction takes place. Nominal values are generally used for the valuation of loans.

For the quarterly and annual balance of payments data series, data obtained from foreign trade statistics are adjusted to change imports from a c.i.f. to an f.o.b. basis. In foreign trade statistics, the market price is collected, even if the delivery does not involve a payment for the goods (e.g., in the case of unrequited transfers, processing, etc.).

Current account transactions are valued at the actual transaction prices which, in most cases, should be a good proxy for the market price. Exceptions may exist for transactions between affiliated enterprises.

Market values are applied to most securities transactions within portfolio investment and reserve assets. Due to the short maturity, nominal values for money market instrument liabilities issued by enterprises and the general government are applied. Differences between the nominal and actual market prices are classified as interest.

Portfolio investment positions are mainly compiled from modified accumulated flows, which are cross-checked with information from banks' balance sheets and the Bundesbank's custodian statistics. Assets relating to money market instruments are compiled using the monthly stock statistics of MFIs and non-MFIs. Stock data are also used for other portfolio investment assets of the MFI sector.

To estimate market values for portfolio investment positions, balance of payments transactions during the reporting period are converted into nominal transactions and added to the nominal stocks of the previous reporting date. The conversion is performed using average market prices and exchange rates for individual countries/regions, instruments, and sectors. The new nominal stocks are then converted into market values using the market prices and exchange rates as at the reporting date. Appropriate indices are used for market valuation. Market valuation is not applied for money market instruments because of their short maturities.

Since February 2002, portfolio transactions are compiled on a security-by-security basis. For the large majority of securities stocks, security-by-security information is planned to be available by 2006 with the introduction of the new quarterly custodian statistics. Together with information from the Centralized Securities Database (CSDB) that is being developed by the ECB, this may facilitate a more accurate and comprehensive application of the market valuation for all portfolio investment transactions and stocks.

Book values are currently applied to equity capital (own funds) within direct investment enterprises abroad and in Germany, even if the shares are quoted. In accordance with an

ESCB agreement, equity capital relating to listed companies will be valued at market prices as from the reporting year 2005 onwards. For that purpose, the Bundesbank's reporting forms have been adapted to distinguish listed and unlisted direct investment enterprises.

For MFIs, assets and liability transactions that are derived from stocks exclude the exchange rate and other effects. MFIs report underlying currencies, which allows separation of developments caused by transactions and those caused by exchange rate effects. Regarding non-MFIs' short-term financial transactions, including trade credits, which are derived from monthly stocks, no information on exchange rate effects is available. The reporters convert transactions at the rates they use for their internal accounting. For short-term deposits of resident non-MFIs held with nonresident banks, which are derived from the Bank for International Settlements (BIS) mirror statistics on the liabilities of nonresident banks vis-à-vis German residents, exchange rate effects again can be separated.

Data on international reserves are taken from the Bundesbank's Accounting and Payments System Divisions. In line with the compilation of the Template on International Reserves and Foreign Currency Liquidity, the reserves stocks are valued by the Balance of Payments Statistics Division on a monthly basis, by using the end-of-period market prices and exchange rates. Monetary gold is valued at the market price of the London fixing of 10:30 a.m. Valuation and other changes are excluded for all reserve assets transactions.

Most data are reported for the balance of payments statistics in euros. Respondents usually use the same conversion rates they use for their accounting records, which should be close to market rates in most cases. There is, however, no possibility to check the conversion of data reported in euros. Where information is reported in foreign currencies, conversion to euros is based on the monthly average exchange rate of the reporting month, in the case of transactions, or the exchange rate prevailing in the market at the reference date, in the case of stocks.

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

Transactions are in principle recorded in the German balance of payments when the change in ownership occurs.

However, as with other countries, the accrual basis is only approximately achieved in the sources used in the German balance of payments data. For merchandise trade statistics, the change in ownership of goods is approximated by when goods cross the frontier in the case of non-EU countries (Extrastat data based on customs declaration). It is approximated at the time when the transaction is recorded in the books of the enterprise in the case of trade with other EU member countries (Intrastat data based on enterprise reporting).

Depending on the specific reporting arrangements, services are recorded either at the time when the payment occurs or when the transaction is recorded in the books of the reporting entity. Some exceptions apply, in particular for those services that are compiled on the basis

of estimates or other data sources other than the ITRS (e.g., travel). In those cases, recording occurs at the time the service is actually rendered.

Transfers to the European Community are recorded on a cash basis instead of on an accrual basis.

For recording interest income on an accrual basis, an interim solution was implemented in March 2005 (see 3.3.2).

Dividends are recorded as of the day they are paid. However, owing to monthly reporting, in most cases this coincides with the dates payable.

Reinvested earnings are attributed to the year in which the earnings arose based on balance sheet information of the direct investment enterprises.

Loan drawings are entered in the accounts at the time of actual disbursement. Loan repayments are recorded when paid, because the German compilation system provides no information on a due-for-payment recording basis. Therefore, short-term liability entries are not made in the balance of payments when loan repayments are due but not yet paid.

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

Grossing and netting procedures are broadly consistent with *BPM5* recommendations.

The current and capital accounts are recorded on a gross basis, that is, data are recorded for credits and debits separately. Within the financial account, data are recorded for investments and disinvestments in foreign direct investment, for purchases and sales of portfolio securities, for disbursements and repayments of long-term loans, and for assets and liabilities separately. In the case of financial derivatives, no distinction is made between transactions in assets and liabilities (see also 2.1.1).

Repairs on goods, to the extent they are recorded in foreign trade statistics, are recorded as the gross value of the goods imported and exported. This treatment is under review since it is not in line with *BPM5* recommendations. The net value of the repairs is recorded in the goods account only in the case of repairs on transport equipment.

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

#### **3.1 Source data**

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

Germany's balance of payments statistics are obtained from a comprehensive data collection program described as an open international transactions reporting system (ITRS), based primarily on direct reporting by bank and nonbank enterprises, individuals, and public authorities. The resident transactor is responsible for statistical reporting, including when payments are made through resident banks. However, for certain items (e.g., securities and some travel-related transactions), banks report on behalf of their customers. The data collection program is based mainly on monthly reporting and is supplemented by the following data sources:

- monthly foreign trade statistics compiled by the FSO;
- a household sample survey on travel expenditure;
- an annual foreign direct investment (FDI) stock survey;
- an annual custodian survey on portfolio investment;
- monthly reports on the external positions of banks and nonbanks;
- the accounts of the Deutsche Bundesbank for reserve assets;
- administrative data; and
- partner country data, BIS statistics, Coordinated Portfolio Investment Survey (CPIS), bilateral data exchange, and estimates.

Table 5 provides an overview of the major data sources for balance of payments components, reporting features, exemptions, frequency, and timeliness. Under the Bundesbank's data collection program, 15 reporting forms are used to collect transactions and positions data for balance of payments purposes.<sup>67</sup>

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<sup>67</sup> Including the monthly "R-series" forms, used primarily to collect data on foreign assets and liabilities for monetary and financial statistics but also used to derive monthly balance of payments transactions.

Table 7: Germany's Balance of Payments Source Data Reporting

Item	Data Source/Reporting Form	Reporting Features and Exemptions	Reporting Frequency and Timeliness
<b>Current and Capital Accounts</b>			
<b>Goods</b>			
-General merchandise	FSO, based on Intrastat and Extrastat collections.	Intrastat data based on enterprise reporting. If an enterprise had export or import transactions totaling EUR 300,000 in the previous year, they are required to report fully in current year.  Extrastat data are based on customs declarations.	Monthly reporting by enterprises, within 10 days after the end of the reference month.  FSO receives Extrastat data in electronic format on a daily basis.  FSO reports monthly foreign trade statistics in electronic format to the Bundesbank within 4-5 weeks after the end of the reference month.
Services	Bundesbank reporting forms (Z1 and Z4)	Z1 for payments made through resident banks. Transactions up to EUR 12,500 exempted.  Z4 for other receipts and payments, including those conducted through accounts abroad. Transactions up to EUR 12,500 exempted.	Reporting at time of transaction.  Monthly reporting by MFIs and non MFIs within 7 days after the end of the reference month.
Travel	Bundesbank reporting form Z12 and Z13.  Travel Survey conducted by a private institute	Covers purchase and sale of banknotes and other means of payments. No reporting exemptions.  Credit card companies use Z4 form.  A household survey on German residents expenditure abroad. Sample size is at least 20,000 trips per year.	Monthly reporting by MFIs within 5 days after the end of the reference month.  Survey conducted continuously, enumerating trips made in last three months. Data available on a quarterly basis.
Sea Transportation	Bundesbank reporting form Z8  (Z1 and Z4 also used).	No reporting exemptions.	Monthly reporting of receipts and expenditures of maritime shipping companies within 7 days after the end of the reference month.

Item	Data Source/Reporting Form	Reporting Features and Exemptions	Reporting Frequency and Timeliness
Income	Bundesbank reporting forms Z1 and Z4.	Z1 for payments made through resident banks. Transactions up to EUR 12,500 exempted.	Reporting at time of transaction.
		Z4 for other receipts and payments, including those conducted through accounts abroad. Transactions up to EUR 12,500 exempted.	Monthly reporting by MFIs and non MFIs within 7 days after the end of the reference month.
	Z11 for interest and dividends on domestic securities.	Covers interest and dividends on domestic securities that are paid by MFIs to nonresidents or are received by MFIs from foreign depositories. No reporting exemptions.	Monthly reporting by MFIs within 5 days after the end of the reference month.
	Z14/Z15: Own account interest on cross border loans and deposits.	Transactions up to EUR 12,500 exempted	Monthly reporting by MFIs within 7 days after the end of the reference month.
EU Transfers (current and capital).	Ministry of Finance		Monthly reporting within 7 days after the end of the reference month.
Current Transfers- other sectors	Z1 and Z4 forms used. For workers' remittances, data on cash transfers via banks and post offices are accessed.	Z1 for payments made through resident banks. Transactions up to EUR 12,500 exempted.	Reporting at time of transaction.
		Z4 for other receipts and payments, including those conducted through accounts abroad. Transactions up to EUR 12,500 exempted.	Monthly reporting by MFIs and non MFIs within 7 days after the end of the reference month.
Financial Account			
Direct Investment	Bundesbank Z4 reporting form	Receipts and payments, including those conducted through accounts abroad. Transactions up to EUR 12,500 exempted.	Monthly reporting by enterprises within 7 days after the end of the reference month
	Bundesbank K3/K4 reporting forms—annual survey of direct investment enterprises	Reporting exemption: participating interests of less than 10% or a balance sheet total of up to EUR 3 M (or equivalent)	Annual reporting by German resident investors abroad and by FDI enterprises in Germany within 6 months following the reference date. Survey results available after a minimum of 15 months after the end of the reference year.

Item	Data Source/Reporting Form	Reporting Features and Exemptions	Reporting Frequency and Timeliness
Portfolio Investment	Bundesbank Z10 reporting form	Transactions in securities with nonresidents on own account and account of customers. Transactions up to EUR 12,500 exempted. Data collected on a security-by-security basis.	Monthly reporting by MFIs and non-MFIs within 5 days after the end of the reference month.
Financial Derivatives	Bundesbank Z10 reporting form		
Other Investment	Bundesbank Z4 reporting form	Covers long-term loans and deposits. Transactions up to EUR 12,500 exempted.	Monthly reporting by MFIs and non MFIs within 7 days after the end of the reference month.
	Resident banks' and nonbanks' stock of external assets and liabilities, collected through Bundesbank "R-series" and Z5/Z5a reporting forms.	R-series: no reporting exemptions. Used to compile transactions data for MFIs on short-term and long-term loans and deposits.  Z5/Z5a:-reporting exemptions for nonbanks with external assets and external liabilities under EUR 5 M. (Z5: assets and liabilities of German nonbanks vis-à-vis nonresident banks; Z5a: assets and liabilities of German nonbanks vis-à-vis nonresident nonbanks.)	Resident MFIs report monthly balance sheet within 8 working days after the end of the reference month.  Monthly reporting within 10 days after the end of the reference month.
	BIS data on the liabilities of nonresident banks to German nonbanks.	Used to compile missing data on transactions of German residents with nonresident banks.	Quarterly, available 5–6 months after the end of the reporting quarter.
Reserve Assets	Flow data obtained from the Bundesbank's balance sheet		Monthly

Under the legal provisions of the Foreign Trade and Payments Regulation, resident economic agents should report all resident/nonresident transactions (subject to the exemption thresholds identified in Table 5). In this regard, monthly reports are not based on a formal enterprise register or mailing frame. However, the Bundesbank maintains a database of large enterprises. Also, the financial press is closely monitored for information on international transactions, especially for financial account transactions such as direct investment and large portfolio investments. The *Official Journal (Bundesanzeiger)* is also monitored daily to detect company registrations and bankruptcies. The Bundesbank screens new companies to determine if they are potential balance of payments respondents and adds them to the enterprise database if necessary. Active declarants in the database currently stand at about

40,000, including approximately 2,000 banks. The database is used by the Bundesbank's central office and service centers to gauge monthly reporting.

In addition to the general monthly reporting of transactions, the Bundesbank's data collection program includes the following.

Stock data on foreign assets and liabilities of resident nonbanks are reported on a monthly basis. The figures are used to derive the short-term financial transactions in deposits and loans of nonbanks for the balance of payments (including trade credits).

Banks—in addition to their reporting obligations as resident economic agents—are also subject to special reporting requirements. They report to the Bundesbank on a monthly basis:

- travel purchases and sales, including means of payment such as foreign exchange, travelers' checks, credit and debit card transactions (without an exemption threshold);
- interest and dividends paid to nonresidents on domestic securities, or received from foreign depositories, reported monthly (without an exemption threshold);
- interest on their own account (except interest on securities) on current and savings accounts and other deposits; and
- securities and financial derivatives transactions with nonresidents for their own account and on behalf of customers, including redemption of securities on a monthly basis.

Banks' short-term cross-border financial transactions as well as their long-term loans transactions are derived from their monthly reports on external assets and liabilities, eliminating effects of exchange rate changes and statistical breaks. Banks are required to report their foreign asset and liability positions on a monthly basis without applying any threshold. Regarding banks' reporting of securities transactions on their own account and on behalf of their customers, the sectoral split for transactions in portfolio investment assets is derived from their monthly reports on external assets and liabilities (with the remainder assumed to account for the "other sectors").

Banks and nonbanks also report on their foreign direct investment stocks on an annual basis for the purposes of compiling direct investment stock data and the corresponding reinvested earnings. Foreign direct investment stock data of banks and nonbanks with a balance sheet total of up to EUR 3 million are exempted from reporting.

For the monetary authorities sector, information on reserve assets is derived from the accounts of the Bundesbank. The data are provided by the Accounting Division and the Payments System Division, which acts as a back office settling market operations. Generally, the government sector is subject to the general reporting requirements as described in Table 5

(Z1 and Z4 forms). In addition, supplementary administrative information is available to adjust or estimate specific balance of payments components.

The source for data on trade in goods is the foreign trade statistics compiled by the FSO on a monthly basis. The method of data collection differs for trade among EU countries (Intrastat) and trade with non-EU countries (Extrastat). For intra-Community trade, where no customs border exists, the exporting and importing enterprises are obliged by law to send monthly declarations directly to the FSO. Extrastat data are based on customs declarations. For both imports and exports, Intra-EU trade accounts for approximately 65 percent of the total value of Germany's merchandise trade.

For travel expenditures, a household sample survey was introduced to cover the loss of information on banknote transactions resulting from the introduction of the euro. This sample survey is conducted by a private institute on behalf of the Bundesbank on a continuous basis. Since the data from this survey are only available with a time-lag of five to six months after the reference quarter, preliminary figures are estimated (ARIMA estimates). The credit side of travel is compiled on the basis of ITRS reports, supplemented by partner country data and other secondary data sources, including FSO accommodation statistics.

An annual custodian survey is used to supplement the data on portfolio investment from the ITRS reporting system. Reported data are checked and verified on the basis of the custody statistics and, where necessary, estimates are made.

For German nonbanks' deposits with foreign banks, BIS data on foreign banks' liabilities to German residents are used to complement information from the reporting system.

In general, the variety of data sources in the German compilation system allows for some flexibility regarding changes in the data sources used and adaptations to new developments in cross-border transactions. Examples include the introduction of the household sample survey in 2001 for compiling travel debits and the increase in the reporting threshold from DM 5,000 to EUR 12,500 in 2001 following the adoption of an EU-directive on European bank transfers. In the case of the latter, the loss of information was analyzed in advance of the change, and estimation procedures were effected to fill the coverage gaps.

International standards, guidelines, and practices are monitored for changes that need to be taken into account in the German balance of payments compilation system. The Bundesbank participates in a number of committees of the financial services industry. It also organizes meetings with individual respondents to keep track of new developments regarding the nature or business practices of international transactions that may affect the reporting of such transactions. Through international working groups, the Bundesbank is following changes in balance of payments guidelines and standards and actively participates in preparing such changes, for instance, through the IMF's Balance of Payments Committee (BOPCOM), the Balance of Payments Technical Expert Group (BOPTTEG), and various OECD, Eurostat, and ECB working groups.

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

The source data for Germany's balance of payments are broadly in line with *BPM5* guidelines on definitions, scope, classifications, valuation, and time of recording. In cases where deviations occur, adjustments to source data are effected to conform with *BPM5*.

FSO's monthly data on foreign trade data statistics include coverage adjustments for the loss of information associated with the Intrastat threshold reporting<sup>68</sup> and for missing or late reports. Monthly data on value-added tax (VAT) declarations are the main basis for these adjustments. The Bundesbank also provides additional information used to adjust the trade data to bring it closer to balance of payments concepts. However, repairs on goods are recorded with the gross value of the goods imported and exported (see 2.4.3). This treatment is under review since it is not in line with *BPM5* recommendations.

For the financial account (and related income) source data, attempts are made to fill the reporting gap for private individuals' portfolio transactions settled through nonresident banks (and in portfolio holdings in custody with foreign banks). To do so, the Bundesbank uses various secondary data sources, such as information from its annual custodian statistics, and information on mutual funds, etc.<sup>69</sup> Holdings of German securities ascribed to nonresidents are possibly distorted because foreign purchases sometimes include orders placed by German residents abroad.

Code lists used to collect data from the ITRS are largely *BPM5*-compliant. The resident sector is usually identified from the reports with the exception of portfolio assets transactions that are reported by banks also on behalf of their customers. Here, banking statistics are used to derive the breakdown for banks' portfolio assets and those of other sectors.<sup>70</sup>

Currently, the annual balance sheet survey of direct investment enterprises in Germany and abroad does not collect income data according to the current operating performance concept (COPC). However, the Bundesbank plans to modify the survey, including to seek reporting on a COPC basis; this would facilitate the recording of earnings in line with *BPM5*. In the interim, estimation methods are used (see 3.3.2).

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<sup>68</sup> Firms are required to report all intra-EU goods transactions in year (t) if the value of their merchandise trade transactions exceeded EUR 300, 000 in year (t-1).

<sup>69</sup> See footnote 66.

<sup>70</sup> The general government sector does not hold significant portfolio investment assets, and the Bundesbank's transactions in/holdings of portfolio investment securities holdings are included in reserve assets.

### 3.1.3 Source data are timely.

Overall, the source data for compiling the monthly balance of payments are timely (see Table 5 for reporting deadlines). In a few cases, where data are only available with a certain time lag, preliminary estimates are made.

Foreign trade data are available from the FSO four to five weeks after the end of the reference month.

The reports on cross-border outgoing payments conducted via domestic bank accounts are provided at the time when the payment order is addressed to the resident bank (Z1 form). Resident banks then forward the statistical information to the Bundesbank on an ongoing basis.

Banks and nonbanks should submit to the Bundesbank all reports on cross-border transactions and the reports concerning the special reporting obligations for banks on interest on loans and deposits and on travel debits/credits with a timeliness of seven days after the end of the reporting month. Banks are required to report on debits for dividends and interest on domestic securities five days after the end of the reporting month; banks and nonbanks also report on cross-border securities transactions within this deadline.

Banks are required to report on their monthly external position with a timeliness of 10 days after the end of the reporting month. Nonbanks should submit their monthly stock data on claims and liabilities vis-à-vis foreign banks with a timeliness of 10 days after the end of the reporting month, and their data on claims and liabilities vis-à-vis foreign nonbanks within 20 days. Mutual funds are required to report their monthly assets and liabilities 12 days after the end of the reference month or when the fund is created or modified.

Monthly travel data from the household survey are available from the private institute, which conducts the survey on an ongoing basis. Data are available four times a year with a timeliness of five to six months after the end of the reference quarter. Thus for the latest six months, data on travel debits are obtained from estimation procedures.

Deadlines for respondents are mandated by the Foreign Trade and Payments Regulation and orders and notices of the Bundesbank. The deadlines are clearly identified in the reporting forms, as well as in the Bundesbank Special Statistical Publication 7, *Explanatory notes on the coding list for the balance of payments* and on the Bundesbank website.

Respondent timeliness is monitored on an ongoing basis. Staff in the respective subdivisions responsible for monitoring individual bank and nonbank enterprises ensure that the declarations arrive and are on time. Staff and the immediate supervisors regularly meet to discuss current developments. In accordance with structured follow-up procedures, late reporting is pursued in the same way as nonreporting or inaccurate reporting. Meetings and audits are also used to inform respondents about their reporting obligations, including

reporting deadlines, and to follow up on timely and accurate data reporting when problems were encountered in the past.

### **3.2 Assessment of source data**

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

Enterprise-based data are assessed by the Balance of Payments Statistics Division in the Central Office (for large enterprises) and by the Service Center for External Statistics (for small and medium-sized enterprises). Several validation procedures and plausibility checks are in place. Initially, incoming reports (hard copies or electronic reports) of major regular respondents are checked for comprehensiveness. Nonresponse is assessed using a specific database (register) that stores past reporting trends.

For enterprises with large-scale transactions, an enterprise identification code is assigned; the bank identifier code is used for banks. The reports are then stored on an individual respondent basis in the primary database (DIKAP database).<sup>71</sup>

In general, three stages of checking are undertaken in the primary database:

- First, checks are made for balance of payments relevance, completeness, and availability of all relevant information: economic code, country, amount, and International Securities Identifying Number (ISIN) codes in the case of securities. Data inputs from hard copy reports are performed twice to avoid input or processing errors (“four-eyes principle”).
- Second, the report is checked to determine if the details stated in the reports are part of the current nomenclature (“validation check”) and if combinations are valid. Error lists are displayed in case of errors or noncompliance. The consistency and plausibility of the report are investigated, for instance, in the case of securities: are the securities reported registered in the external database (database of the national numbering agency, WM data). All major transactions are checked individually for plausibility (“four-eyes principle” for large-scale transactions). If the report is incomplete or implausible, the respondent is contacted to resolve the problem.
- Third, after completing the data entry into the database, the staff generates several reports for further checking procedures, especially for large volume data or large-

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<sup>71</sup> Checking procedures are performed on the three different balance of payments databases. (The procedures for the time series databases ZABDB and ZEWI are discussed under 3.4.1.)

scale activities (e.g., for securities). Reports and time series for individual respondents and economic codes are checked for outliers. A data profile is also generated for enterprises and banks and is checked for plausibility. Unusual fluctuations in the monthly data reported by large enterprises are monitored, and the reporters are asked for an explanation. For significant international transactions, checks are also performed on the basis of media and industry-based information.

Cumulated transactions on securities are used for verification purposes. Where possible, data are checked for plausibility by referencing secondary data sources, e.g., the securities issues statistics or data on redemption. This allows compilers to detect double or missing reports.

Travel-related transactions are assessed against accommodation statistics from the FSO on a monthly basis to check the accuracy of the reported data (credit side). Partner country data are also used to verify and supplement the travel data. For travel debits, the preliminary ARIMA estimates for the latest period are also cross-checked against monthly data on travel-related transactions, such as credit card transactions. The staff cross-check the results from the household sample survey (used for the compilation of travel debits) and the preliminary ARIMA estimates (used before the results of the survey become available). They compare these results with the reports on purchase and sale of foreign banknotes and debit and credit card transactions in order to investigate the coverage of the primary data sources.

In Germany, the arrangements for collecting and verifying statistical data provide for on-site inspections in the field of balance of payments statistics (see 0.1.4). The results of such inspections have guided work on the statistical program.

### **3.3 *Statistical techniques***

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

The sample survey on travel expenditure employs sound statistical techniques that are described in the document *Travel Expenditure Abroad—Survey Methodology*. This internal document describes the methodological approach of the two-stage survey procedure (telephone and mail survey), the multistratified sample structure, and the weighting and extrapolation procedures used in the outputs. The documentation is regularly updated.

For the general reporting by banks and nonbanks under the ITRS, compilation procedures minimize processing errors such as coding, editing, and tabulation errors. Adjustments to individual reports are made only when required or when confirmed with the respondent.

For missing observations and/or undercoverage of the data sources, staff use of secondary data sources to replace or complement the primary data sources (FSO's use of VAT information to adjust the Intrastat data on merchandise trade is discussed in 3.1.2). Estimates are used to make the necessary adjustments to the data (see 3.3.2).

Appropriate measures are taken to prevent systematic errors from becoming too large. In-depth investigations are conducted when preliminary estimates show signs of systematic errors, and auditing activities may be intensified or focused on specific areas that are assumed to be the source of these errors. For example in the case of portfolio investment collections (on a security-by-security basis), signs of systematic errors led to intensified auditing of the larger banks in 2004. The results indicated that certain transactions were not reported because respondents were unclear whether these transactions should be reported. Accordingly, instructions to the code lists were updated to address this issue.

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

The Bundesbank uses a number of statistical procedures, as discussed below.

#### *Estimating transactions below the reporting threshold*

Staff estimate transactions below the exemption threshold of EUR 12,500 where relevant. On the basis of the figures for 2001 and previous years when the threshold was at DM 5,000, for each item and country, ratios were calculated for data below and above the new threshold. These ratios have been applied to the figures for subsequent years. The ratios are assumed to decrease over time due to inflation, leading to a shift of transactions from below to above the threshold. For current account transactions such as income and transfers, most individual transactions fall below the reporting threshold, and some respondents are not aware of their reporting obligation. Thus, additional calculations are made based on secondary data sources; for example, data on cross-border commuters and seasonal workers from the Federal Employment Agency (Bundesagentur für Arbeit) are used to calculate figures on gross income and social security contributions. FSO provides income data of Germans abroad and of foreign students in Germany. Data on foreign students in Germany are broken down by country of origin using FSO statistics on education.

#### *The c.i.f./f.o.b. adjustment*

The c.i.f./f.o.b. adjustment for imports is based on a ratio dating back to 1992 as a consequence of the loss of very detailed information on trade, freight, and insurance data with the introduction of the Intrastat system in 1993. The existing ratios are broken down by mode of transport and by country and have been applied to data from 1993.<sup>72</sup>

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<sup>72</sup> This interim method has been under review since the European Task Force on Transportation started its work. The final report of the task force was approved by the Eurostat Balance of Payments Working Group in March 2005. Following the outcome of the task force, a new method, called “modified invoice based approach,” will be implemented in 2006.

#### *Household sample survey for travel debits*

On behalf of the Bundesbank, a private institute has undertaken a travel survey on the foreign travel of domestic residents since the beginning of 2001. Initial results were compared with the data collected under the old method for at least one year, and the findings were subject to a quality test. Overall, the results of the household sample survey are fairly reliable for travel expenditures as a whole and for the geographical breakdown of the most important destinations, as confirmed by the mirror data of the respective partner countries. Since the survey-based data are only available with a time lag of five to six months, current figures are based on ARIMA estimates. The outcome of test calculations for 2001 indicated acceptable results for the ARIMA estimates. To avoid breaks in the series arising from the changeover to the survey-based method for collecting trade debits (in particular likely for non-EU countries), country-specific and region-specific factors were calculated on the basis of the figures for the “link” year 2001 and were applied to earlier years, in some cases dating back to 1971.

#### *Travel credits*

Travel credits continue to be compiled on the basis of the reported payments data from debit cards and credit cards and by bank settlements available from the reporting system. In addition, this information is combined with monitoring of possible changes in paying habits (e.g., increased use of cash instead of debit card as a consequence of the introduction of the euro) to extrapolate total receipts from foreign travel. The ITRS-generated estimates are adjusted on the basis of FSO accommodation statistics and mirror data from major partner countries.

#### *Estimation of workers' remittances*

Data on workers' remittances are based primarily on reports on cash transfers by banks and post offices. This information is supplemented with estimates on the basis of statistics from the Federal Employment Agency on the number of employed and unemployed foreign nationals subject to social insurance contributions.

#### *Income: compilation of accrued interest on investment income*

For recording interest income on an accrual basis, an interim solution was implemented in March 2005. As the German compilation system does not yet cover the recording of debt securities income on a security-by-security (accrual) basis, a simplified method to calculate the accrual of interest was used for historical data (1971 to 2003). Actual interest payments that were originally recorded have been distributed evenly over the preceding interest period – usually a twelve-month period. Thus, a monthly figure calculated on an accrual basis comprises one twelfth of the interest payments of the month concerned and one twelfth of the interest payments of each of the following eleven months. This is based on the assumption that the majority of securities considered have annual coupon dates. In the case of money

market instruments, three-month coupons were assumed on the assets side and six-month coupons on the liabilities side.

Using this interim method, accrual-based figures cannot be calculated for periods for which no payments have been made yet (in this case from 2004 onwards). Thus, the interest income series are estimated using aggregated monthly stocks and reference interest rates. Monthly stock data are derived from the annual IIP and cumulated monthly balance of payments transactions. After a year, the payment flows calculated in this way for 2004 are adjusted on the basis of the “back-calculation” method using data from interest payments of 2005. The same applies to the following years. For technical reasons, it has not yet been possible to record the offsetting entries in the financial account. The resulting discrepancies are recorded under errors and omissions.

#### *Estimation of reinvested earnings*

Bundesbank staff calculate reinvested earnings as a residual of the current operating profit and dividends distributed. For direct investment income, total annual earnings are derived from balance sheet information on assets and liabilities of direct investment enterprises in Germany and abroad (available with a lag of 15 to 18 months). Until the balance sheet data become available, the current operating performance profits are estimated for the current year and allocated on a prorated basis. The balance sheet data provide information on profits on an all-inclusive basis (current operating profits and extraordinary profits). Extraordinary profits and losses are estimated on a case-by-case basis (i.e., if very large profits or losses are reported) and excluded from the total surplus. For this purpose, publicly available balance sheet information is used, or reporting enterprises are contacted directly. However, reporting forms have been amended to provide separate information on current operating profits and extraordinary profits, and will be introduced in the 2005 survey round (enumerating 2004 data). Data on this basis will therefore become available in 2006.

#### *BIS data on German nonbank deposits with foreign banks*

BIS data are used as “counterpart” information to identify and estimate assets of resident nonbanks held with foreign banks (deposits), which are not reported directly by these nonbanks.

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

#### *3.4.1 Intermediate results are validated against other information where applicable.*

Several validations of intermediate data and statistical outputs are conducted as described in previous sections 3.1 to 3.3. In addition to the checks of microdata (DIKAP database) described in 3.2.1, more aggregated time series data contained in the ZABDB and ZEWI databases are assessed and investigated against secondary information.

Intermediate profiles for individual respondents, economic codes, economic regions, and more aggregated balance of payments time series are checked regularly. Exceptional developments or deviations over time and in the current period compared to previous periods are further investigated and checked with respondents.

After the microdata clears the first validation tests, the data are merged into a second database (ZABDB database), where details on individual transactions are no longer available. Here, figures are completed with information on foreign trade, information derived from the stocks statistics, figures for reserve assets, and also supplementary estimates. This database contains aggregated monthly data for single balance of payments items and country breakdowns dating back to 1971. The database allows flexibility in retrieving bilateral data on different levels of aggregation for analytical purposes. In addition, quarterly and annual data for the main balance of payments aggregates are available from 1949 to 1955. Monthly data are available from 1956, though less detailed than the data beginning in 1971. A third time series database (ZEWI database) stores all data disseminated in the Bundesbank publications and/or transmitted to international organizations. On a monthly basis, the three databases (DIKAP, ZABDB and ZEWI) are checked for consistency and completeness.

Regarding aggregated balance of payments time series, checks with other statistics are carried out to check plausibility and to evaluate possible gaps of the reporting system. Some of these independent sources are available with a lag and may therefore lead to revisions to the balance of payments at a later stage. The main checks are as follows:

- Portfolio investment data are verified with annual figures from custodian statistics. Portfolio investment data are also reconciled security-by-security with figures on securities' issues and redemptions.
- Financial account transactions of banks are verified with money and banking statistics data monthly (see 4.2.3).
- Stock and flow data are available for direct investment and can thus be matched for each individual reporting enterprise. For the direct investment stock data reported on an annual basis, a consistency check is carried out by comparing the stocks for year  $t$  with the theoretical stocks calculated as the sum of the stock for year  $t-1$  and the flows reported for year  $t$ . Significant differences may result in queries to the enterprises.
- Staff monitor the international press, industry journals, and research papers to detect possible reporting gaps or general deficiencies of the reporting system. The financial press is also monitored to detect in particular large-scale FDI, portfolio investment, and other transactions.

Additionally, the Bundesbank has attempted to assess the quality of German balance of payments data by performing several bilateral comparisons with other EU countries. In the context of the national accounts statistics, balance of payments data are subject to further

plausibility checks, as the results of balance of payments statistics should be consistent with data on the general economic situation.

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

The behavior of series is routinely assessed against related series, as follows.

A comparison of the stocks and flows from the IIP and the balance of payments transactions is performed whenever the IIP is compiled, that is, quarterly for IIP submissions to the ECB (contribution to the euro area aggregate) and annually for the publication of the national IIP. In the context of these reconciliation exercises for stocks and flows, the nontransaction-based changes are split into changes due to market prices, exchange rates, and other changes. These reconciliation exercises may identify “missing” balance of payments transactions, triggering further investigations and balance of payments revisions.

Travel-related transactions are assessed against FSO monthly accommodation statistics. Also partner country data are used to verify and supplement the travel data. For travel debits, the preliminary ARIMA estimates for the latest periods are assessed against reported data on travel-related transactions such as credit card transactions. The results from the household travel survey and the preliminary ARIMA estimates (used before the results of the survey become available) are cross-checked and analyzed with the reports on purchase and sale of foreign banknotes as well as with debit and credit card transactions.

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

Information about the errors and omissions is disseminated at least twice each month to all responsible staff in the Bundesbank’s Statistics Department well in advance of the publication of the data. In the first instance, staff is informed about the likely magnitude of the monthly errors and omissions item, and if it has an unexpected or unusual value, the underlying causes are thoroughly investigated. The second step relates the errors and omissions to selected entries in the financial account (in particular the net portfolio investments), and information is provided about the development of the errors and omissions over time, also on a cumulative basis. On a semiannual basis, the size and direction of the errors and omissions is also assessed when quality indicators are calculated.

In recent years, the Bundesbank has exerted considerable efforts in investigating the underlying causes of the positive bias that the errors and omissions had shown from mid-2001 until end-2004. As the errors and omissions in the euro area balance of payments also showed a positive bias at that time, the Bundesbank and the ECB combined their efforts. After various meetings and studies, both agencies concluded that gaps in reporting cross-border transactions in domestic fixed income securities for Germany were the most likely source for the observed balance of payments distortions. The Bundesbank adopted measures to remedy the identified problems. Internally, the introduction of security-by-security recording of reported securities transactions increased the opportunities for conducting

plausibility checks. In addition, the adjusted results are cross-checked with information from the banks' balance sheets and the custodian statistics of the Bundesbank. Bank audits also became more focused on investigating assumed reporting gaps and misreporting regarding specific financial and income transactions. Externally, the Bundesbank strengthened cooperation with important reporting agents in order to identify possible reporting problems.

Collectively, these measures have led to visible improvements, although supplementing reported data by estimates from other sources remains because some reporting gaps still need to be closed. In particular, there is still considerable difficulty in capturing portfolio investment, carried out directly by private households and enterprises via foreign banks.

Comprehensive bilateral data reconciliations have been conducted in the past with some EU countries. However, the national authorities indicate that such investigations have proved rather resource-intensive, and their results did not always lead to precise conclusions, especially owing to differences in collection systems and compilation methods.

Multilateral reconciliation exercises with EU partner countries have also been conducted for specific balance of payments items (e.g., for travel), which often lead to more visible results. In some areas, bilateral or multilateral exchange and data comparison are part of the regular compilation process. Intra-EMU and intra-EU asymmetries also continue to be monitored and discussed at the European level, as are bilateral asymmetries of the euro area and the EU with major partner countries.

The Bundesbank compares its data with counterpart data compiled by international organizations. BIS data are used as "counterpart" information to identify assets held by German residents with foreign banks (i.e., holdings abroad that were not reported directly by residents); and CPIS data are used to correct the geographical allocation of German portfolio investment liabilities in the IIP.

### **3.5 Revision studies**

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

Internally, revisions are documented in the time series database, the micro database, and the different units of the Balance of Payments Statistics Division responsible for compiling the balance of payments components. The documentation covers large-scale revisions/late reports and communication with reporting agents.

The Bundesbank studies trends in the revision pattern twice a year in the course of the calculation of the quantitative (and qualitative) indicators on data quality. The quantitative indicators allow for an assessment of the preliminary data against the revised data over time as regards to scale, direction, and magnitude. For this purpose, time series on the preliminary monthly balance of payments data are stored in the database. The analysis of revisions is used to enhance the compilation process, where appropriate. Measures may entail changes to

estimation and compilation procedures for the preliminary data, taking into account any systematic over- or underestimations revealed by the revision studies.

This has been the case for preliminary data on services and transfers, which had been systematically underestimated because of the late reporting of respondents. Although preliminary data already included an estimate for late reports based on reporting patterns of the previous period, large-scale late reports for the preceding reference month were excluded in the preliminary estimates for the current month. The reasoning at that time (up to 2002) was that these large-scale reports were considered as outliers and therefore should be considered as extraordinary developments. However, more detailed investigations later showed that the services and transfer items remained underestimated. Beginning in March 2003, appropriate action was taken to include these large-scale late reporting effects in the estimation process. Revisions have diminished in the areas of services and transfers.

The Bundesbank also uses findings from revision studies to refine preliminary data and data collection programs for subsequent periods. Findings of persistent misreporting from enterprises are routinely analyzed and are used internally as a quality control exercise. In general, and for securities transactions in particular, revisions of the previous years' data also inform the estimates of the current reporting period.

#### **4. Serviceability**

##### **4.1 *Periodicity and timeliness***

###### *4.1.1 Periodicity follows dissemination standards.*

The Bundesbank disseminates monthly balance of payments statistics, exceeding the quarterly periodicity requirements of the SDDS.

###### *4.1.2 Timeliness follows dissemination standards.*

Monthly balance of payments data are disseminated within five to six weeks after the end of the reference month. Quarterly balance of payments data are also released with the same lag. Germany exceeds the one quarter timeliness requirements of the SDDS.

##### **4.2 *Consistency***

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

Germany's quarterly and annual balance of payments data are derived by aggregating monthly data. Generally, the underlying concepts, definitions, and classifications are therefore identical across series of differing periodicity. One exception is the recording of imports of goods on a c.i.f. basis in the monthly data, while adjusting to an f.o.b. basis in the quarterly and annual series.

The net errors and omissions item has shown a positive bias in recent years (2001, 2003, and 2004). In earlier years, in particular up to 1998, errors and omissions were stable and relatively small over time. In 1999, errors and omissions showed a leap owing to statistical measurement problems related to the introduction of the euro. For annual results the item remained at somewhat higher levels than in earlier periods. Analysis of internal discrepancies remains an ongoing task. Planned improvements in data sources, including the collection of quarterly custodian statistics, could reduce the magnitude of the errors and omissions item over time.

As noted in 3.4.2, the Bundesbank reconciles stocks and flows whenever IIP data are compiled, that is, annually for the national IIP and quarterly for the data contribution to the euro area IIP submitted to the ECB.

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

Consistent time series are made available to the users as far backwards as possible, partly dating back to 1971 or earlier. Breaks in the time series have occurred, in some instances, when changes in source data, methodology, or statistical techniques could not be reconstructed backwards owing to the lack of data. This was the case, for example, when the directional principle for FDI was introduced in the German balance of payments in 1996. Series breaks were also caused by including intercompany short-term loans and trade credits in FDI.

Adjustments or estimates to maintain consistent time series and/or causes of any major breaks in the series are explained in methodological notes in the Bundesbank's *Monthly Report* and the *Statistical Supplement on Balance of Payments Statistics*.

Economic trends including unusual changes are analyzed monthly in the balance of payments press release and in the commentary of the Bundesbank's *Monthly Report*.

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

The Bundesbank reconciles between trade in goods and balance of payments data monthly and publishes them in the *Statistical Supplement to the Monthly Report No 3*. Original merchandise trade statistics are published together with the supplementary trade items that allow for the calculation of balance of payments-based goods estimates. In the context of work on the quality indicators, deviations between merchandise trade statistics and balance of payments-based goods are reconciled.

Balance of payments data are provided quarterly to the FSO for the compilation of national accounts. The balance of payments statistics are largely consistent with national accounts with the exception of a few remaining methodological differences and differences due to

differing revision timetables.<sup>73</sup> The differences are regularly assessed and documented. The joint Eurostat/ECB Task Force on Quarterly Sector Accounts issued a questionnaire on differences in the balance of payments and the rest of the world account in August 2004. Germany has completed this questionnaire, providing a numerical breakdown of the divergences. Within the framework of the joint Eurostat/ECB Task Force on European Accounts by Institutional Sector, remaining differences at the national and European level are also investigated and possibilities for further convergence of the two statistics are sought.

As balance of payments data are in part derived from money and banking statistics, the corresponding figures are generally consistent. Balance of payments-based short-term loans, deposits, and trade credits are derived from monthly data on the external assets and liabilities position of banks and nonbank corporations. Long-term loans of the banking sector are obtained from banks' monthly external stock statistics.

For balance of payments transactions of the banking sector, the Bundesbank checks with money and banking statistics monthly for transactions in assets and liabilities of other investment and for assets in bonds and notes as well as in direct investment and portfolio investment shares (see 3.4.1). This is done in advance of the publication of the data to solve and explain major discrepancies between the two datasets (currently, any differences exceeding EUR 2 billion are investigated). Balance of payments data transmitted to the ECB also undergo similar consistency checks with money and banking statistics at the ECB.

Conceptually data are consistent for external debt, IIP, and balance of payments data; in practice, differences may occur because of different data sources or revision practices.

### **4.3 Revision policy and practice**

#### *4.3.1 Revisions follow a regular and transparent schedule.*

The revision policy for the German balance of payments seeks to weigh the trade-off between timeliness and stability of the data and is described as follows.

- Revisions for the previous month are published together with the (provisional) data for the current month. The revisions regularly include new foreign trade data from the FSO, reporting agents' late and revised reports, as well as other information that becomes available only after the cut-off production date.
- Revised data for the past four years are published in March each year. In general, these annual revisions include new information from secondary data sources, and late

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<sup>73</sup> See Beatrice Timmermann, "Links between the Balance of Payments and the Compilation of the Rest-of-the-world Account." Paper presented to the 55<sup>th</sup> Session of the International Statistical Institute (ISI), Sydney, April 5–12, 2005.

reports from respondents. Provisional estimates are revised or replaced. Revisions arising from changes in methodology, data sources, or statistical techniques are usually implemented in March.

- Revisions to the data for the previous four years may also occur at the time of the July special publication No.11 *Balance of Payments by Region*. Revisions refer to changes in the geographical allocation and partly to new information from secondary data sources (i.e., data on foreign trade and travel expenditures for the previous year).
- Finally, balance of payments data for these periods may be revised again when the annual IIP data for the most recent year (and revisions for the preceding three years) are available at end September. In most cases, balance of payments revisions referring to earlier years are minor at this stage.

Apart from these regular revisions, exceptional revisions may occur (prior to the next regular revision date), resulting from detected reporting or processing errors that would affect the data analysis, or corrections to foreign trade statistics made by the FSO.

Information on the Bundesbank's revision policy and practice are found in most balance of payments publications; for example, the Statistical Supplement to the *Monthly Report*, the *Balance of Payments by Region*, and the Bundesbank website. The Bundesbank website also contains detailed information on annual revisions, which are implemented in March for the Bundesbank's *Annual Report*. Information on data sources, revision, and publication policy can also be found in the ECB publication *European Union Balance of Payments/ International Investment Position Statistical Methods (BOP Book)*. The Bundesbank's revision policy and practice is also identified in Germany's balance of payments metadata, which are posted on the IMF's DSBB.

Any exceptional revisions outside the regular revision cycle are flagged in the monthly press release, the *Monthly Report*, the Statistical Supplement to the *Monthly Report*, or the *Balance of Payments by Region* (all downloadable from the Bundesbank's website).

Overall, the revision cycle is predetermined and reasonably stable from year to year. Some adjustments to the revision cycle have been made in recent years to take into account the requirements of the ECB and Eurostat with regard to consistent data sets and the revision cycle for euro area and EU statistics.

#### 4.3.2 Preliminary and/or revised data are clearly identified.

At the time of the first publication of monthly data, users are informed of its preliminary status. Similarly, at the time of data dissemination, users are informed whenever data are revised. In the monthly press release, revised data are marked with an "r." The "r" mark is assigned to the reporting period in which the revisions occur.

In the Statistical Supplement to the *Monthly Report*, the introductory notes confirm that, as a matter of principle, the most recent figures are always regarded as provisional. In the *Monthly Report*, preliminary figures of the respective reporting month are marked with a “p.” Any data revisions to reference periods preceding the latest reference period are indicated with an “r.”

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

Documentation of methodological revisions and other large scale-revisions is provided to data users at the time of the annual major revision cycle conducted in March each year. Details on the causes of revisions and the size of these revisions are included in the documentation, posted on the Bundesbank’s website. Methodological revisions and adjustments of the data are also described in the Bundesbank’s *Monthly Report* and on the Bundesbank’s website. For example in the March 2005 edition of the *Monthly Report*, revisions resulting from the changeover to accrual-based estimations for interest on bonds and notes are presented on charts identifying the trends (2000-04) based on the previous and new methods.

The March edition of the *Monthly Report* also comments on emerging statistical developments. In March, a table showing revisions for the main balance of payments aggregates is also published on the Bundesbank’s website together with commentary on the reasons for these regular revisions. However, the database available on the website does not contain series on actual revisions in a downloadable format. Internal users as well as international organizations are provided with more details on revisions regularly.

The Bundesbank analyzes differences between first assessments and revised figures on a regular basis and more formally on a semiannual basis when quality indicators are calculated.<sup>74</sup>

## **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 press release on balance of payments statistics contains a table with major balance of payments aggregates accompanied by a short commentary on current-period

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<sup>74</sup> The Bundesbank plans to publish these assessments in an annual quality report, currently under preparation.

developments. Data (preliminary) for the current reporting month are compared with the data (revised) of the previous month.

The Bundesbank's *Monthly Report* consists of statistical and analytical sections; commentary in the latter addresses, among other things, developments in the external sector. The *Monthly Report* provides extensive tables on the external sector, including a table for aggregated balance of payments data of the EMU, and presents time series data (monthly, quarterly and annual) for the major aggregates.

More detailed commentary on external sector developments is published quarterly in the *Monthly Report* as part of a general analysis of the economic situation in Germany. Tables and charts accompany the text. The March edition of the *Monthly Report* also explains the data revisions (including those resulting from methodological changes) and focuses on annual trends, specific items (e.g., travel, direct investment, income), regional analyses, and statistical issues. For example, the March 2005 edition of the *Monthly Report* contains an article on the statistical effects of EU enlargement on external trade statistics.

With some exceptions, the tables presented in the *Monthly Report* and the *Balance of Payments Statistical Supplement* broadly use the *BPM5* standard presentation. In addition to the deviations from *BPM5* already noted in 2.3.1, the financial account includes (1) for direct investment, "credit transactions of German direct investors" and "credit transactions of foreign direct investors," in addition to the *BPM5* standard items (equity capital, reinvested earnings, and other capital);<sup>75</sup> and (2) in the overall structure of the financial account, a "credit transactions" category, in addition to the *BPM5* functional categories (direct investment, portfolio investment, other investment, and reserve assets).<sup>76</sup>

Additional series are disseminated to meet a range of users' needs with various levels of detail. In addition to the monthly *Balance of Payments Statistical Supplement*, the annual publication *Balance of Payments by Region* and the biennial publication on *Technological Services within the Balance of Payments* provide detailed series on Germany's balance of payments statistics. Additional series on foreign direct investment, with geographical and industrial sector breakdowns, are also published on the Internet.<sup>77</sup>

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<sup>75</sup> These "credit transactions" refer to the *BPM5*-defined other capital.

<sup>76</sup> These "credit transactions" refer to trade credits, loans, and currency and deposits. In *BPM5*, these instrument classifications are included under other investment. Thus, Germany's other investment classification refers only to the "other" component of *BPM5*-defined other investment.

<sup>77</sup> A new statistical publication on foreign direct investment, which would also include some background information on the methodology, is planned for 2006.

The *Monthly Report* is translated into English. For the tables contained in the *Balance of Payments Statistical Supplement* and specialized statistical publications, English translations of table headers are provided to users. The balance of payments time series descriptions in the Internet-accessible database are currently provided in German only.

Seasonally adjusted data are available on a monthly basis for the current account balance, foreign trade, and the balance on services, on income and on current transfers.

#### *5.1.2 Dissemination media and format are adequate.*

The balance of payments data are disseminated in various media and formats. All publications containing balance of payments statistics are available in hard copy format and are also downloadable from the Bundesbank's website. The press release is published on the Internet and is also distributed to the media. On the same day as the press release, an excerpt of the main aggregates for the balance of payments—as published in the *Balance of Payments Statistical Supplement*—is released on the Bundesbank's website, under “Current data.”

Further, a time series database is accessible through the Internet (free of charge), and the range of series available through this medium is being continuously expanded as user demands are gauged. The time series are updated at the same time as the press release is issued. In June 2005, a new version of the Bundesbank's time series service was implemented, offering a number of improvements in response to user feedback.

A large number of subscribers to the balance of payments statistical publications receives hard copies of the publications free of charge. CD-ROMs, including balance of payments statistics, are also sent to regular users of the Bundesbank's statistics (e.g., to international organizations).

#### *5.1.3 Statistics are released on a preannounced schedule.*

As a subscriber to the SDDS, Germany is committed to announcing in advance the dates on which balance of payments data are released. Advance release dates are thus provided on the IMF's DSBB. The balance of payments advance release calendar is also directly accessible on the Bundesbank's website.

An advance release calendar that gives the approximate (“no later than”) monthly release dates for the coming year, and for January of the following year, is disseminated at the end of September each year on the Bundesbank's website. The precise release dates are announced on the Bundesbank's website by 11 a.m. CET on the last business day of the week prior to the release of the data.

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

The Bundesbank provides data on the current account to the Federal Ministry of Economy and Labor and the FSO one or two days before issuing its press release on the balance of payments. The FSO releases the major current account aggregates (ahead of the Bundesbank) in its press release on monthly foreign trade statistics.

The complete balance of payments data are released by the Bundesbank simultaneously to all interested parties by issuing a press release titled “Balance of Payments,” distributed to the media and posted on the Bundesbank’s website. Users can also sign up for a free e-mail notification service to alert them when the data are disseminated.

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

The Bundesbank’s Balance of Payments Statistics Division makes available, on request, customized tabulations and more detailed data subject to the confidentiality safeguards. In most cases, the data are provided free of charge. However, if the data are not readily extractable from the databases and require computer programming, a fee is charged. In such cases, users are informed in advance of the expected costs.

The availability of nonpublished, nonconfidential series on request and the procedures for obtaining them are made known through a notice in the statistical publications.

## **5.2 Metadata accessibility**

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

The statistical methods underpinning Germany’s data contribution to the EU aggregates are published in the ECB’s *Balance of Payments/International Investment Position Statistical Methods*, updated on an annual basis. Germany’s balance of payments summary methodology statement is posted on the DSBB, and a documentation of compilation practices is also included in the IMF’s *Balance of Payments Statistics Yearbook (BOPSY)*. Both are reviewed and updated by the Bundesbank as required by SDDS quarterly certification/*BOPSY* annual production procedures, respectively. Deviations from international or regional guidelines are generally annotated in the ECB and IMF publications.

Articles on methodological changes are usually published in the March edition of the *Monthly Report* and are also disseminated on the Bundesbank’s website, in a homepage dedicated to the balance of payments. This homepage also links to Germany’s SDDS metadata and to the ECB publication.

No contemporary, comprehensive Bundesbank publication exists on concepts, sources, and methods. The special statistical publication, the *German Balance of Payments and*

*International Investment Position Statistics*—last published by the Bundesbank in 1992—is currently under revision and is expected to be ready for publication by end-2005.<sup>78</sup>

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

The available documentation cited in 5.2.1 meets the needs of general users. A short summary on the German balance of payments contents, the relevant data sources, the legal basis, the revision practice, as well as on external sector stock statistics, is also published in the explanatory notes of the *Balance of Payments Statistical Supplement to the Monthly Report*.

However, in the absence of a contemporary and comprehensive publication on concepts, sources, and methods, users interested in additional details would find existing information incomplete or fragmented. Users could address queries to the Bundesbank's Balance of Payments Statistics Division.

Regarding the capital links statistics, an important information gap exists with regard to the use of these statistics for balance of payments and IIP compilation. These statistics are adapted for reporting FDI transactions and positions in the balance of payments and IIP, but documentation of these adaptations is not current—an article on the methodological adjustments in the IIP explaining the relationship between FDI and capital links data appeared in the March 1998 edition of the *Monthly Report*. Germany's metadata disseminated for the IMF's Survey of the Implementation of Methodological Standards for Direct Investment (SIMSDI) appear to be derived from capital link statistics. The SIMSDI 2003 metadata indicate the differences in data coverage between the inward position data showing industrial activity breakdowns in the national publications and reported to the OECD and Eurostat, and the aggregate inward position data reported to the IMF for publication. Users may find it difficult to interpret/reconcile data and metadata published as "capital link" statistics and those published in the balance of payments and IIP.

## 5.3 *Assistance to users*

### 5.3.1 *Contact points for each subject field are publicized.*

In the balance of payments division, a separate unit responds to users' requests for information on the German balance of payments and IIP statistics. The press office, which also maintains a central email account for queries addressed to the Bundesbank, forwards any balance of payments related questions to this unit.

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<sup>78</sup> The revised publication will document methodological principles, concepts, and definitions, data sources, and compilation practices, and deviations from the *BPM5*. It will also address issues specific to compiling balance of payments and IIP statistics for Germany's membership in the EMU.

In 2004, about 450 queries were received, primarily from researchers and universities (100), banks (50), and national organizations (74).

Assistance to users is actively monitored by a customer satisfaction survey that evaluates, among other things, the time span between enquiry and response and the clarity of the response to the statistical query.

Contact addresses are identified in the *Balance of Payments Statistical Supplement* and in the ECB's *BOP Book*, as well as on the Bundesbank's website and the IMF's DSBB.

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

The *Monthly Report* provides an overview of all Bundesbank publications. All relevant statistical publications containing data and methodological notes are also listed on the Bundesbank's balance of payments homepage. Publications and time-series downloads as well as email-based requests are free of charge. Orders for regular subscriptions can be placed with the Bundesbank's press service.

Table 8. Germany: Data Quality Assessment Framework (July 2003): Summary of Results for Balance of Payments Statistics  
(Compiling Agency: Deutsche Bundesbank)

Element	NA	Assessment			Comments
		O	LO	LNO	
<b>0. Prerequisites of quality</b>					
0.1 Legal and institutional environment		X			
0.2 Resources		X			
0.3 Relevance		X			
0.4 Other quality management		X			
<b>1. Assurances of integrity</b>					
1.1 Professionalism		X	X		Advance notice of major changes in methodology, source data, and statistical techniques is not given; these changes are communicated to users when they are introduced.
1.2 Transparency					
1.3 Ethical standards		X			
<b>2. Methodological soundness</b>					
2.1 Concepts and definitions		X			Deviations from <i>BPM5</i> include the following: goods imports are not recorded on a c.i.f. basis in the national monthly balance of payments; there are no breakdowns for goods; personal and business travel credits are not distinguished; cross-border construction is largely classified as a service; other investment income does not include income on trade credits and the interest share of financial leasing; loans are not classified separately from currency and deposits in other investment; and fees and commissions related to the sale and purchase of securities are partly recorded in the financial account.
2.2 Scope		X			
2.3 Classification/sectorization					
2.4 Basis for recording		X			

Table 8. Germany: Data Quality Assessment Framework (July 2003): Summary of Results for Balance of Payments Statistics  
(Compiling Agency: Deutsche Bundesbank)

Element	NA	Assessment			Comments
		O	LO	LNO	
<b>3. Accuracy and reliability</b>					
3.1 Source data		X			
3.2 Assessment of source data		X			
3.3 Statistical techniques		X			
3.4 Assessment and validation of intermediate data and statistical outputs		X			
3.5 Revision studies		X			
<b>4. Serviceability</b>					
4.1 Periodicity and timeliness		X			
4.2 Consistency		X			
4.3 Revision policy and practice		X			
<b>5. Accessibility</b>					
5.1 Data accessibility		X	X		
5.2 Metadata accessibility					A contemporary and comprehensive concepts, sources and methods publication is not available—revisions to an earlier Bundesbank (1992) publication are underway. Documentation of the relationship between capital links statistics and FDI transactions data not current.
5.3 Assistance to users		X			

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

## Recommendations

- Document pre-embargo access arrangements on the Bundesbank's website to better inform domestic users of the arrangements (1.2.2).
- Adopt a policy of providing advance notice of significant changes in methodology, source data, and statistical techniques (1.2.4).
- For monthly national data on goods, consider (1) reporting imports on a f.o.b. basis; and (2) providing *BPM5*-based breakdowns of goods (2.3.1).
- With a view to bringing monthly presentation formats closer to the *BPM5* standard presentation, consider the development of sources and methods to (1) distinguish business and personal travel credits; (2) adjust the portfolio securities transactions data on account of fees and commissions (and include the latter in the current account); (3) include income on trade credits and the interest share of financial leasing under other investment income; and (4) distinguish loans from currency and deposits under other investment (2.3.1).
- Align the national presentation of the financial account with *BPM5*-based definitions for (1) other investment as a functional category; and (2) other capital under direct investment (5.1.1).
- In addition to publishing the comprehensive concepts, sources, and methods manual, update documentation on the relationship between capital links statistics and FDI statistics as an aid to users (5.2.1 and 5.2.2).

### **Summary of the Special Data Dissemination Standard (SDDS)**

The SDDS prescribes the following practices under each of the identified dimensions:

#### **Data dimension** (coverage, periodicity, and timeliness)

- the dissemination of 18 data categories, including component detail, covering the four main sectors (real, fiscal, financial, and external) of the economy, with prescribed periodicity and timeliness.

#### **Access dimension**

- the dissemination of advance release calendars providing at least 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.

The IMF staff is monitoring observance of the standard through NSDPs maintained on the Internet. Monitoring is limited to the coverage, periodicity, and timeliness of the data and to the dissemination of advance release calendars.

*Source:* <http://dsbb.imf.org>

**Data Quality Assessment Framework—Generic Framework  
(July 2003 Framework)**

<b>Quality Dimensions</b>	<b>Elements</b>	<b>Indicators</b>
0. Prerequisites of quality	<p>0.1 Legal and institutional environment—<i>The environment is supportive of statistics</i></p> <p>0.2 Resources—<i>Resources are commensurate with needs of statistical programs.</i></p> <p>0.3 Relevance—<i>Statistics cover relevant information on the subject field.</i></p> <p>0.4 Other quality management—<i>Quality is a cornerstone of statistical work.</i></p>	<p>0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified.</p> <p>0.1.2 Data sharing and coordination among data-producing agencies are adequate.</p> <p>0.1.3 Individual reporters' data are to be kept confidential and used for statistical purposes only.</p> <p>0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.</p> <p>0.2.1 Staff, facilities, computing resources, and financing are commensurate with statistical programs.</p> <p>0.2.2 Measures to ensure efficient use of resources are implemented.</p> <p>0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.</p> <p>0.4.1 Processes are in place to focus on quality.</p> <p>0.4.2 Processes are in place to monitor the quality of the statistical program.</p> <p>0.4.3 Processes are in place to deal with quality considerations in planning the statistical program.</p>
<p>1. Assurances of integrity</p> <p><i>The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.</i></p>	<p>1.1 Professionalism—<i>Statistical policies and practices are guided by professional principles.</i></p> <p>1.2 Transparency—<i>Statistical policies and practices are transparent.</i></p> <p>1.3 Ethical standards—<i>Policies and practices are guided by ethical standards.</i></p>	<p>1.1.1 Statistics are produced on an impartial basis.</p> <p>1.1.2 Choices of sources and statistical techniques as well as decisions about dissemination are informed solely by statistical considerations.</p> <p>1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.</p> <p>1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.</p> <p>1.2.2 Internal governmental access to statistics prior to their release is publicly identified.</p> <p>1.2.3 Products of statistical agencies/units are clearly identified as such.</p> <p>1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.</p> <p>1.3.1 Guidelines for staff behavior are in place and are well known to the staff.</p>

<b>Quality Dimensions</b>	<b>Elements</b>	<b>Indicators</b>
<p>2. Methodological soundness</p> <p><i>The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.</i></p>	<p>2.1 Concepts and definitions—<i>Concepts and definitions used are in accord with internationally accepted statistical frameworks.</i></p> <p>2.2 Scope—<i>The scope is in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p>2.3 Classification/sectorization—<i>Classification and sectorization systems are in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p>2.4 Basis for recording—<i>Flows and stocks are valued and recorded according to internationally accepted standards, guidelines, or good practices</i></p>	<p>2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.</p> <p>2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices.</p> <p>2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices.</p> <p>2.4.1 Market prices are used to value flows and stocks.</p> <p>2.4.2 Recording is done on an accrual basis.</p> <p>2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.</p>
<p>3. Accuracy and reliability</p> <p><i>Source data and statistical techniques are sound and statistical outputs sufficiently portray reality</i></p>	<p>3.1 Source data – <i>Source data available provide an adequate basis to compile statistics.</i></p> <p>3.2 Assessment of source data—<i>Source data are regularly assessed.</i></p> <p>3.3 Statistical techniques—<i>Statistical techniques employed conform to sound statistical procedures</i></p> <p>3.4 Assessment and validation of intermediate data and statistical outputs—<i>Intermediate results and statistical outputs are regularly assessed and validated.</i></p> <p>3.5 Revision studies—<i>Revisions, as a gauge of reliability, are tracked and mined for the information they may provide.</i></p>	<p>3.1.1 Source data are obtained from comprehensive data collection programs that take into account country-specific conditions.</p> <p>3.1.2 Source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required.</p> <p>3.1.3 Source data are timely.</p> <p>3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide statistical processes.</p> <p>3.3.1 Data compilation employs sound statistical techniques to deal with data sources.</p> <p>3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.</p> <p>3.4.1 Intermediate results are validated against other information where applicable.</p> <p>3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.</p> <p>3.4.3 Statistical discrepancies and other potential indicators or problems in statistical outputs are investigated.</p> <p>3.5.1 Studies and analyses of revisions are carried out routinely and used internally to inform statistical processes (see also 4.3.3).</p>

<b>Quality Dimensions</b>	<b>Elements</b>	<b>Indicators</b>
<p>4. Serviceability <i>Statistics, with adequate periodicity and timeliness, are consistent and follow a predictable revisions policy.</i></p>	<p>4.1 Periodicity and timeliness—<i>Periodicity and timeliness follow internationally accepted dissemination standards.</i></p> <p>4.2 Consistency—<i>Statistics are consistent within the dataset, over time, and with major datasets.</i></p> <p>4.3 Revision policy and practice—<i>Data revisions follow a regular and publicized procedure.</i></p>	<p>4.1.1 Periodicity follows dissemination standards. 4.1.2 Timeliness follows dissemination standards.</p> <p>4.2.1 Statistics are consistent within the dataset. 4.2.2 Statistics are consistent or reconcilable over a reasonable period of time. 4.2.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.</p> <p>4.3.1 Revisions follow a regular and transparent schedule. 4.3.2 Preliminary and/or revised data are clearly identified. 4.3.3 Studies and analyses of revisions are made public (see also 3.5.1).</p>
<p>5. Accessibility <i>Data and metadata are easily available and assistance to users is adequate.</i></p>	<p>5.1 Data accessibility—<i>Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.</i></p> <p>5.2 Metadata accessibility—<i>Up-to-date and pertinent metadata are made available.</i></p> <p>5.3 Assistance to users—<i>Prompt and knowledgeable support service is available.</i></p>	<p>5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts). 5.1.2 Dissemination media and format are adequate. 5.1.3 Statistics are released on a preannounced schedule. 5.1.4 Statistics are made available to all users at the same time. 5.1.5 Statistics not routinely disseminated are made available upon request.</p> <p>5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated. 5.2.2 Levels of detail are adapted to the needs of the intended audience.</p> <p>5.3.1 Contact points for each subject field are publicized. 5.3.2 Catalogs of publications, documents, and other services, including information on any charges, are widely available.</p>

### Summary of Users' Views of Germany's Macroeconomic Statistics

To gauge users' views on the quality of Germany's macroeconomic statistics, the mission examined the results of the users' surveys undertaken by the Federal Statistical Office (FSO)<sup>79</sup> and the Deutsche Bundesbank (Bundesbank).<sup>80</sup> It also held discussions with data users from business, academia, government, and international organizations. These discussions were held in Berlin, Frankfurt, and Wiesbaden. While selection of the target audience for both the surveys and meetings was not based on random sampling, major and informed users of FSO and Bundesbank databases were well-represented. The following is a summary of the users' views based on both the results of the users' surveys and the meetings.

Users rated the overall quality of German macroeconomic statistics as above average. There was wide recognition that Germany's statistical programs were driven by EU/ECB requirements and that Germany was in the forefront of meeting these requirements. The share of Germany's contribution to EU/euro area aggregates was also viewed as an important factor for producing quality macroeconomic statistics at the national level, and the majority of users viewed German macroeconomic statistics as better or of the same quality compared with those of other European countries. However, some users expressed concern that a focus on periodicity and timeliness and the sensitivity to respondent load by statistics-producing agencies could impact upon the accuracy and reliability of German macroeconomic statistics. They considered that national user needs were not given sufficient weight in the reporting burden debate within the community.

Such concerns were raised in particular reference to the quarterly national accounts statistics. Users noted that the national accounts statistics should continue to be based on robust data collection systems and that any push toward timeliness or reducing respondent burden should not lead to the substitution of survey-based source data with model-based estimates. These users indicated that in any decisions about further improvements in the timeliness of the quarterly national accounts, the FSO should be aware that users focus on the first estimates and thus it is important that the reliability of these estimates is assured by sound source data.

The level of detail across datasets is regarded as adequate by the majority of users. However, a few users saw scope for more disaggregated information on national accounts, and production and price indices. Regarding national accounts, some users also noted the

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<sup>79</sup> The FSO sent questionnaires to 323 users in Germany from public administration, the academic and research community, associations/trade unions, the media, and enterprises/banks. A total of 180 questionnaires were completed, representing a response rate of 56 percent.

<sup>80</sup> The Bundesbank sent questionnaires to 302 users from universities and research institutes, media, international organizations, trade unions, ministries, embassies, and enterprises/banks. A total of 109 questionnaires were completed, representing a response rate of 36 percent.

unavailability of balance-sheet information and institutional sector accounts. The paucity of price and volume data on services was also raised by some users. On government finance statistics, some users indicated that financial assets should be reflected more precisely, while others—in stressing the importance of local authorities’ data in influencing budgetary decisions—prefer more detailed tables on local government operations.

Users rated the accuracy and reliability of all datasets highly but saw room for enhancements in some areas. On national accounts, some users viewed the source data underlying the estimates of income-based GDP and inventory changes as weak. A disconnect was noted between available real sector indicators and the quarterly national accounts. The systematic bias of the errors and omissions in the balance of payments for some years was also raised by a few users. A few users also queried whether adjustments for quality changes were always reflected in the price indices.

For national accounts, most users were satisfied with the existing periodicity and timeliness. However, a few users thought it would be helpful to have the national accounts data published with a 30-day, instead of the current 45- (flash estimate) or 55-day (main aggregates) lag. Regarding price and balance of payments statistics, users were very satisfied with the periodicity and timeliness.

Users expressed confidence in the consistency of the major macroeconomic datasets, although they recognized that reporting and revision practices were among the factors explaining short-term deviations. In the opinion of some users it is difficult to reconcile flow and stock data, for instance in the balance of payments concerning direct investment and in the fiscal accounts.

Most users of FSO’s statistical products were aware of the revision policies and practices followed by the FSO. In contrast, balance of payments users were less aware of the Bundesbank’s revision policies and practices; this appears to be rooted in users’ primary interest in the first results. Some users indicated that the revisions history for Germany’s annual national accounts compared well relative to other industrialized countries. However, the view that statistics-producing agencies should “get it right the first time” prevailed strongly in the mission’s user meetings, suggesting a national user perspective that is less accommodating of the role of revisions in data quality.

The majority of users were satisfied with the accessibility of both FSO’s and Bundesbank’s statistical products. While a number of users viewed the FSO’s GENESIS-Online database favorably, some users indicated that the system was not user-friendly, and they noted a number of issues including complicated data extraction procedures. The compartmentalized preparation of statistics in Germany was mentioned as a factor complicating the accessibility of data.

Users were also largely satisfied with the metadata dissemination arrangements across data categories and with the comprehensiveness of the available statistical information. Positive comments were made about the quality of the FSO’s GENESIS metadata. Most users of the balance of payments statistics found the Bundesbank’s descriptions of sources and methods

sufficient, while a few users noted that the documentation on direct investment compilation practices could be enhanced. Some users indicated that they also use the ECB's "*BOP Book*" as a source for statistical information.

The use of advance release calendars (ARCs) by the FSO and Bundesbank appears to be not well-known among the domestic user community. This could be attributed to (1) the use of ARCs only in the context of the SDDS and low visibility on the agencies' German-language web pages; and (2) the continuance of reliance by a high number of users on hard copy statistical publications, for which the release dates are well known. However, users familiar with ARCs expressed the view that data releases were generally on time.

## Relationship Between the Various Sets of Government Finance Statistics

### Introduction

General government in Germany comprises the central government (the federal government budget, the German share of EU-operations and special funds), the Länder governments, local governments and social securities funds including the Federal Labor Agency. The delineation of general government differs slightly between cash statistics and national accounts based on the *European System of Accounts 1995 (ESA 95)*. For instance, the German share of EU-operations is covered by cash statistics but is excluded from national accounts general government transactions. Inversely, public enterprises are not included in cash statistics' general government, but some are included in national accounts.

The Federal Ministry of Finance (FMOF) compiles monthly cash-based statistics on the operations of the federal budget. The Federal Statistics Office (FSO) compiles two broad sets of statistics on general government and its subsectors:<sup>81</sup> (1) cash-based quarterly and annual statistics broadly according to the recommendations of the *GFSM 1986*, and (2) in cooperation with the Bundesbank, quarterly and annual accrual statistics according to the definitions and principles of *ESA 95* national accounts methodology. The cash statistics (referred to as *Finanzstatistik*), which are prepared on the basis of accounting records received from the reporting entities, are used as the main data sources for the compilation of the accrual statistics. In addition to compiling flow data on government operations, the FMOF and the FSO compile statistics on the outstanding debt of the central and general government, respectively. The FSO debt data are subsequently modified by the Bundesbank to compile debt data according to the Maastricht definition.

### Cash statistics

The official cash statistics constitute the primary standard used in fiscal reporting on general government in the federal budget documents and in reports prepared by the FMOF and the FSO. They are used for disseminating German fiscal sector data under the Special Data Dissemination Standard (SDDS). These statistics are the outcome of an elaborated reporting system by the various entities comprising general government.

The FMOF cash-based statistics cover the operations of the federal government budget (*Bund*) only and exclude the operations of the special funds. The FSO quarterly and annual cash-based data cover consolidated central government, the operations of the Länder, local governments, and social security funds. The FSO statistics on the operations of the **federal government** are based on reports from the FMOF, which, in addition to the operations of the

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<sup>81</sup> As general government statistics compiled by the FSO are generally broken down among the government's various subsectors, references to general government in what follows will be understood to apply to its subsectors as well.

federal budget, cover the share of the European Union's operations in Germany and the operations of the special funds (*Sondervermögen*). The special funds comprise:

- the Equalization of Burdens Fund (*Lastenausgleichsfonds*), founded in 1952, which provides World-War II-related assistance to refugees, displaced persons, as well as other war types of compensation payments; it ends in 2005;
- the European Recovery Program Special Fund (*Europäische Wiederaufbauprogramm Sondervermögen*). This fund, associated with the Marshall Plan, was founded in 1950 to provide revolving credits to support the German economy after World War II;
- the German Unity Fund (*Fonds "Deutsche Einheit"*) created in 1990. The purpose of this Fund was to raise, in a short-time period, the living conditions in the new Länder to the same level as in the former Federal Republic of Germany;
- the Federal Railway Fund (*Bundeseisenbahnvermögen, BEV*), established in 1994 as a result of the railroad privatization process to cover specific social obligations toward railroad workers;
- the Inheritance Burden Sinking Fund (*Erblastentilgungsfonds*), which took over in 1995 the debt of the *Kreditabwicklungsfonds*, which, in turn, had assumed in 1994 the debt that arose in the context of the German monetary union in 1990. Furthermore, Inheritance Burden Sinking Fund liabilities include also the old obligations of the housing construction industry in the former German Democratic Republic, and include the liabilities of the *Treuhandanstalt* dissolved in 1994;
- the Compensation Fund (*Entschädigungsfonds*), founded in 1994 to provide compensation for post-reunification property claims that could not be settled by a return of the property itself, as well as to provide compensation to the victims of the Nazi regime;
- the Federal Civil Service Reserve Fund (*Versorgungsrücklage des Bundes*), founded in 1998, which guarantees certain assistance payments to federal workers; and
- the Floods Fund (*Aufbauhilfe*), a solidarity fund established following the 2003 floods in Eastern Germany.

Statistics on **Länder governments** cover the 16 Länder, including the City-Länder of Berlin, Bremen, and Hamburg.

**Local governments** cover approximately 15,000 municipalities (*Gemeinden*) and municipal associations (*Gemeindeverbände*), as well as, in the annual statistics, 3,500 local special-purpose service providers (*Zweckverbände*).<sup>82</sup>

The **social security subsector** comprises about 600 statutory social security funds, covering old-age, health, and long-term care, the Federal Labor Agency, statutory accident insurance, and old-age assistance for farmers.

Nonmarket producers, such as universities and hospitals, that use commercial accounting practices are included in the coverage of the cash statistics starting in 2005.

The main difference between quarterly and annual data concerns the data sources and coverage. The sources for the quarterly statistics consist of quarterly-cash accounting records, while the sources for the annual statistics consist of the entities' final accounts. As a result, the annual data differ somewhat from the sum of the four quarters.<sup>83</sup> The coverage of the annual data is somewhat more comprehensive than the coverage of quarterly data because the former cover the operations of the special purpose providers.

The main data sources are prepared and sent electronically to the FSO by the FMOF for federal government operations, by the Länder ministries of finance for Länder government operations, and by the LSOs for local government operations. The source data for social security entities are forwarded to the FSO, either directly by these entities or indirectly through the Federal Ministry of Health and Social Security. The statistics for the statutory accident insurance, which are not obliged to report their data quarterly, are estimated by the FSO.

In addition to these data on government operations, data on outstanding debt and on guaranteed debt are also compiled by the FMOF and the FSO. The FMOF compiles monthly debt data for all liabilities related to the federal budget, as well as quarterly data on debt guarantees. The FSO compiles total quarterly and detailed annual debt data for general government and its subsectors. The data comprise the liabilities of the same institutional units as covered by the flow data, with the exception of the—in total rather small—liabilities of the social security entities, excluded from the debt data.<sup>84</sup> These general government debt data are compiled on the basis of the debt data reported by the FMOF and on debt questionnaires sent to Länder ministries of finance and local authorities.

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<sup>82</sup> The operations of the municipal special service providers are not included in the quarterly statistics.

<sup>83</sup> The FSO publishes a table covering central and Länder governments in which a “fifth” quarter is added to show year-end accounting and complementary period operations.

<sup>84</sup> Under recently amended statistical legislation, these liabilities will be included in overall debt data starting with 2005.

### **Dissemination of fiscal sector data under the SDDS**

The monthly FMOF data constitute the data on central government operations disseminated under the SDDS. These data are published in the FMOF monthly bulletin (*Monatsbericht*) available also on the FMOF's website.

The FSO quarterly data constitute the data on general government operations disseminated under the SDDS.<sup>85</sup> These data are first published in a press release also available on the FSO's website (under the title *Oeffentliche Finanzen*, Financial Situation of the General Government on the English pages). The press release contains only the main components required by the SDDS, and the statistics are sometimes based on estimates for nonreporting units. The final detailed data are published six weeks later in German only in the specialized series publication *Fachserie 14, Reihe 2, Vierteljährliche Kassenergebnisse des öffentlichen Gesamthaushalts* (Quarterly Results of the Public Overall Budgets). The data are published both according to the official budgetary presentation and according to the presentation of the *GFSM 1986* (in Table 2.1 of the publication, in which all transactions in financial assets and liabilities for liquidity purposes, that is, other than lending minus repayments, are reclassified under financing).

The monthly debt data compiled by the FMOF constitute the debt data disseminated by Germany under the SDDS.<sup>86</sup> These data are published in the FMOF monthly bulletin. The data on debt guarantees are published every quarter in the FMOF monthly bulletin.

Annual FSO data on general government operations and on debt are disseminated outside the SDDS context. The press release for general government is issued in February under the title *Schulden der Oeffentlichen Haushalte* (Indebtness of the General Government on the English pages). The detailed presentation of these data is shown in two specialized publications in German only in *Fachserie 14, Reihe 3.1, Rechnungsergebnisse des öffentlichen Gesamthaushalts* (Accounting Results of the Overall Budgets) and *Fachserie 14, Reihe 5, Schulden der öffentlichen Haushalte* (Indebtness of the Public Budgets), respectively.

### **ESA 95—general government sector statistics**

Germany also compiles national accounts statistics for the general government sector according to *ESA 95*, which are reported to the European Commission under various

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<sup>85</sup> Therefore, Germany exceeds the periodicity prescribed by the SDDS for general government operations data, which is annual. The annual general government statistics, which are final and differ somewhat from the sum of the quarterly statistics, are disseminated outside the context of the SDDS, as explained below.

<sup>86</sup> The SDDS requires quarterly debt data.

reporting arrangements, including the Growth and Stability Pact.<sup>87</sup> The FSO compiles the nonfinancial accounts, including revenue and expenditure as defined by the EU, and the Bundesbank compiles the financial accounts (financing) as well as the outstanding debt according to the Maastricht definition.

The above-mentioned cash statistics constitute the main data source for *ESA 95* statistics. Quarterly cash statistics are used to compile the quarterly *ESA 95*-based statistics, and the annual cash statistics are used to compile the annual *ESA 95*-based statistics. The correspondence between the cash and *ESA 95* statistical categories is quite straightforward—in great part because of the similarity of the classification systems used in the two databases and the high degree of detail of the cash statistics. The cash statistics must, however, be adjusted for coverage, analytical framework, nonmonetary transactions, and time of recording. Notably:

- Nonmarket producers, such as universities, that use commercial accounting practices are added to the institutional coverage of the *ESA 95*-based data.
- Transactions in financial assets and liabilities that are included in lending minus repayments in the cash statistics are reclassified with other transactions in financial assets and liabilities and treated as “financing.”
- Under property income, the capital gains portion of the Bundesbank profits, included in the cash statistics, is treated as another economic flow.
- With the introduction of the concept of financial intermediation services indirectly measured (FISIM), actual interests are no longer presented, but interests are presented at the reference rate (no impact on net lending/borrowing of general government).
- Nonmonetary transactions, not included in the cash statistics, are identified and added to the *ESA 95*-based statistics. This includes, for example, debt cancellation and debt assumption transactions. Imputed social security contributions are estimated and added to total social contributions.
- Adjustments are made to the time of recording in order to take into account the fact that *ESA 95* statistics must be on an accruals basis:
  - total cash construction expenditure is replaced by acquisition of nonfinancial assets; to that end, output in the construction sector is used to estimate work in progress;

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<sup>87</sup> Formally, the deficit and debt statistics compiled in the context of the Growth and Stability Pact are reported by the FMOF.

- time adjustments are made to cash-tax receipts and social security contributions to approximate accrual-based payments; and
- cash-interest payments reported by the FMOF and other entities are adjusted to estimate interest payments on an accruals basis.

The first annual calculations of net borrowing/lending are preliminary because they are based on the quarterly cash statistics, including cash estimates for the last quarter of the reference year. The data are subsequently compiled on the basis of the final annual cash data.

Debt data according to the Maastricht definition are compiled by the Bundesbank. These data, based on the FSO debt statistics, cover the entire general government, including the social security liabilities.

ESA 95-based data on general government are published with the overall annual national accounts in a specialized series publication, National Accounts (*Fachserie 18, Volkswirtschaftliche Gesamtrechnungen*). Data on the Maastricht deficit are published in press releases in February and August,<sup>88</sup> available on the FSO's website under the title *Maastricht Defizit Quote* (Maastricht Deficit Ratio in the English version of the Website). The Bundesbank publishes data on the general government financial accounts (financing), as well as statistics on the Maastricht definition of the general government debt in its monthly bulletin (*Monatsbericht*) available on its website. Quarterly statistics are not yet published.

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<sup>88</sup> An exceptional press release issued on April 28, 2005 showed the impact of the major revision 2005 in national accounts on net lending/borrowing of general government.