

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

This Report on the Observance of Standards and Codes on Data Module for Finland 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 October 24, 2005. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Finland or the Executive Board of the IMF.

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

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FINLAND

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

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Approved by Robert W. Edwards and Michael Deppler

October 24, 2005

The Report on the Observance of Standards and Codes (ROSC) data module provides an assessment of Finland'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 (DQAF). The DQAF lays out internationally accepted best 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, consumer and producer price indices, government finance, and balance of payments statistics. The agencies that compile these datasets are Statistics Finland (SF), the Bank of Finland (BOF), and the State Treasury.

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

SF's website (<http://www.stat.fi>)

BOF's website (<http://www.bof.fi>)

State Treasury's website (<http://www.statetresury.fi>)

This report is based on information provided prior to and during a staff mission from the IMF's Statistics Department that visited Helsinki during May 10–25, 2005 and publicly available information. The mission team was headed by Mr. Neil Patterson and included Messrs. Cornelis Gorter, John Motala, Mick Silver, and Jóhann Björgvinsson (Expert), and Ms. Marlene Pollard (Administrative Assistant).

Finland 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>
BOF	Bank of Finland
<i>BPM5</i>	<i>Balance of Payments Manual, fifth edition</i>
CPI	Consumer Price Index
<i>CPI Manual</i>	<i>Consumer Price Index Manual, 2004</i>
DQAF	Data Quality Assessment Framework, July 2003 version
DSBB	Dissemination Standards Bulletin Board (IMF)
<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
EVR	Business Income Tax Register
FISIM	Financial Intermediation Services Indirectly Measured
f.o.b.	Free on Board
GDP	Gross Domestic Product
GFS	Government Finance Statistics
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
HBS	Household Budget Survey
IMF	International Monetary Fund
MOF	Ministry of Finance
NSS	National Statistical Service
PPI	Producer Price Index
<i>PPI Manual</i>	<i>Producer Price Index Manual, 2004</i>
PRODCOM	List of Products of the European Communities
QNA	Quarterly National Accounts
ROSC	Report on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard
SF	Statistics Finland

## I. OVERALL ASSESSMENT

1. Finland subscribed to the IMF's Special Data Dissemination Standard (SDDS) on June 3, 1996. It is in observance of the SDDS, meeting the specifications for coverage, periodicity, timeliness (for all data categories except two), and dissemination of advance release calendars. For the exceptions—timeliness of data on both general government and central government operations—Finland uses the two flexibility options, to which it is entitled. It regularly maintains its advance release calendar for all data categories and promptly disseminates data according to this calendar. It regularly updates the metadata posted on the IMF's Dissemination Standards Bulletin Board (DSBB). While the metadata specify a plan to improve the timeliness of the general government data, no similar plan is specified for the data on central government operations. Appendix I provides an overview of Finland's dissemination practices compared to the SDDS.
2. The Report on the Observance of Standards and Codes (ROSC) data module contains the following main observations. Finland's macroeconomic statistics are of generally high quality. They are adequate to conduct effective surveillance. Finland's statistical managers are highly aware of all dimensions of quality. However, some shortcomings may detract from the accurate and timely analysis of economic and financial developments and the formulation of appropriate policy. They include deficiencies in the classification of government finance statistics for the purpose of fiscal analysis, in the timeliness of these statistics, and resource constraints in some critical areas. Scope remains to enhance certain data sources and statistical techniques in the light of changes in the economy and the importance of the high technology sector. 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.
3. In applying the IMF's Data Quality Assessment Framework, July 2003 (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.
4. **Prerequisites of quality.** Finland has an effective legal and institutional framework that supports the collection of good quality statistics. Several laws, such as the Statistics Act (280/2004) and the Act on the Bank of Finland (214/1998), supported by other Finnish and European regulations, establish an adequate legal mandate to require the necessary data and protect confidentiality. Effective procedures are in place to ensure the cooperation of respondents, as is evident from high survey response rates, and to prevent disclosure of individual data. Although responsibilities for compiling the various datasets are not specifically identified in the legislation, Statistics Finland (SF) has assumed responsibility for collecting, compiling, and disseminating the national accounts, consumer and producer price

indices, and government finance statistics,<sup>1</sup> while the Bank of Finland (BOF) has the lead on balance of payments statistics. This distribution of responsibilities is unchallenged. Effective data-sharing arrangements are in place. SF is involved in producing parts of the balance of payments, and this is underpinned by a service level agreement between the BOF and SF and renewed each year. Adhering to confidentiality provisions, SF cannot share individual enterprise data with the BOF, although by permitting consistency checks, such sharing would enhance the accuracy of balance of payments and financial accounts statistics. Staffing levels are broadly sufficient but tight, making it difficult to undertake research, especially in the quarterly national accounts and government finance areas. In all datasets, additional major development work would be extremely difficult without additional resources. The statistical agencies demonstrate awareness of quality as the cornerstone of their statistical work.

5. **Assurances of integrity.** The statistical 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.

6. **Methodological soundness.** The Finnish macroeconomic statistics follow internationally accepted standards and guidelines on concepts and definitions, scope, classification and sectorization, and basis for recording. The government finance statistics produced by SF follow the *European System of Accounts (ESA 95)*. Nonetheless, their presentation in a framework following the IMF's *Government Finance Statistics Manual 2001 (GFSM 2001)* would facilitate a more comprehensive fiscal analysis based on revenue and expense accounts. Plans to disseminate data in line with that manual have not been developed.<sup>2</sup> Stocks and flows are generally valued and recorded according to internationally accepted guidelines or good practices.

7. **Accuracy and reliability.** The macroeconomic statistics of Finland get high marks for accuracy and reliability. Source data and statistical techniques are generally sound and statistical outputs generally portray reality. In line with legislation and policy, extensive use is made of administrative data sources. These sources offer great advantages of coverage and efficiency, but they do not provide the entire detail necessary for the compilation of precise macroeconomic statistics: Although they are supplemented by survey sources, the surveys provide insufficient details of the composition of intermediate consumption of service activities, which have increased in importance in recent years. Also they do not provide adequate quarterly indicators relating to communications, machinery and equipment, and external trade in business services. With the evolution of the economy and the complexity of measurements associated with high technology activities, more frequent updating of the

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<sup>1</sup> Apart from the monthly data on central government operations and debt, which are produced and disseminated by the State Treasury.

<sup>2</sup> Subsequent to the mission, SF decided to also adopt the analytical framework of *GFSM 2001* for producing and presenting the fiscal data of Finland. The scheduled date for the first published data is early 2006.

weighting sources for the consumer and producer price indices, and an overhaul of the methods of handling quality change in the producer price index, appear to be necessary.

8. **Serviceability.** The Finnish statistics are available on a very timely basis and with good frequency, with two exceptions relating to government finance statistics. However, the long lag in the general government financing data is expected to be corrected by the end of 2005, and this is noted on the DSBB. Consistency across datasets is mostly adequate. Most datasets follow the international good practice of providing clear and transparent information about the revisions schedule and about the revisions, although there is scope for improvement for balance of payments statistics.

9. **Accessibility.** Overall, data and metadata are readily accessible, although it would help fiscal policy users if the links between major revenue and expenditure aggregates and balancing items in government finance statistics were clarified. It would be useful as well to improve the available metadata on quarterly national accounts and government finance statistics. Prompt and knowledgeable support is provided to users.

10. Finland's membership in the European Statistical System (ESS) shapes official statistical policies and practices.<sup>3</sup> Finland produces and disseminates a significant share of its data consistent with the legal requirements of the ESS. SF and BOF statisticians participate with colleagues from other member countries in working groups, committees, and other forums—leading to close cooperation on statistical matters, increasing opportunities for sharing good practices, and enhancing professionalism.

## II. ASSESSMENT BY AGENCY AND DATASET

11. Assessments of the quality of five macroeconomic datasets—national accounts, consumer and producer price indices, government finance 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–e.

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<sup>3</sup> For more details on the ESS, see the national accounts section of the volume of detailed assessments.



Table 1. Finland: Data Quality Assessment Framework July 2003—Summary Results

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

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

Table 2a. Finland: Assessment of Data Quality—Dimensions 0 and 1—Statistics Finland

0. Prerequisites of quality	1. Assurances of integrity
<p><b>Legal and institutional environment</b></p> <ul style="list-style-type: none"> <li>• Statistics Finland (SF) is the general authority within the National Statistical Service (NSS) under the terms of the Statistics Act (280/2004). The task of the NSS, which comprises about 20 central government agencies but excludes the Bank of Finland (BOF), is to produce official statistics describing social conditions and their development for general use.</li> <li>• In SF’s view, official statistics should be (i) uniform, (ii) of good quality, (iii) relevant, (iv) easy to use for customers, and (v) cost-efficient.</li> <li>• Finland’s membership in the European Union (EU) implies that European law applies to a large portion of the statistical program.</li> <li>• Individual data are required to be kept confidential according to both national and European law. SF has put procedures in place to prevent disclosure of such data.</li> <li>• SF has the legal mandate to require data from government agencies, enterprises, and individuals. It seeks to secure the cooperation of respondents by providing assistance, limiting the response burden to the extent possible, and testing questionnaires before they are sent out.</li> <li>• There are no indications that SF encounters major problems regarding data-sharing and coordination among data-producing agencies. Adhering to confidentiality provisions, SF cannot share individual enterprise data with the BOF, although by permitting consistency checks, such sharing would enhance the accuracy of balance of payments and financial accounts statistics.</li> </ul> <p><b>Resources</b></p> <ul style="list-style-type: none"> <li>• Staffing is broadly sufficient but tight, especially in the quarterly national accounts and government finance areas, making it difficult to undertake research on the data.</li> <li>• The qualifications and skills of staff are very good and are maintained/further developed by providing internal training, including for new staff, and participation in international seminars and conferences.</li> <li>• Computer resources are good and the on-site facilities are excellent.</li> <li>• Without additional funding, it will be difficult to undertake some important development work.</li> </ul> <p><b>Relevance</b></p> <ul style="list-style-type: none"> <li>• Data users are consulted; this includes several advisory groups, to help the national accounts meet user needs. General users are encouraged by SF to provide any comments they wish to make, and these comments are monitored closely.</li> <li>• Information on new and emerging requirements is obtained in meetings organized by Eurostat, the Organisation for Economic Co-operation and Development, the United Nations Economic Commission for Europe, the IMF, and the Nordic countries.</li> </ul> <p><b>Other quality management</b></p> <ul style="list-style-type: none"> <li>• SF management is highly sensitive to all dimensions of quality and published <i>Quality Guidelines for Official Statistics</i> in 2002.</li> <li>• Every division comprises at least one person responsible for total quality management issues.</li> <li>• Various processes are in place to monitor the quality of the statistical program including performance agreements with the Ministry of Finance (MOF).</li> </ul>	<p><b>Professionalism</b></p> <ul style="list-style-type: none"> <li>• SF reports to the MOF. Several provisions in national law support SF’s professional independence. The Director General manages the activities and finances of the SF and appoints staff.</li> <li>• EU law stipulates that Community statistics should be free from any political or other pressure, particularly as regards techniques, definitions, and methodologies.</li> <li>• Recruitment and promotion in the organization are based on relevant aptitude and expertise.</li> <li>• The Statistics Act contains provisions that require the choice of data sources, statistical techniques, and dissemination to be informed by statistical considerations.</li> <li>• SF’s <i>Quality Guidelines for Official Statistics</i> include sections that support professional and independent statistical processes.</li> <li>• SF has an active policy in place for reacting to erroneous use or misinterpretation of statistics.</li> </ul> <p><b>Transparency</b></p> <ul style="list-style-type: none"> <li>• Information on the terms and conditions for compiling statistics are available on SF’s website, but difficult to find on the English version.</li> <li>• Advance access of the MOF to national accounts data is advised on the IMF’s Dissemination Standards Bulletin Board.</li> <li>• Advance notice is given of major changes in methodology, source data, and statistical techniques.</li> </ul> <p><b>Ethical standards</b></p> <ul style="list-style-type: none"> <li>• Staff behavior is guided by the SF’s <i>Guidelines on Professional Ethics</i>, which is given to all employees and published on the SF’s website.</li> </ul>

Table 2b. Finland: Assessment of Data Quality—Dimensions 0 and 1—Bank of Finland

0. Prerequisites of quality	1. Assurances of integrity
<p><b>Legal and institutional environment</b></p> <ul style="list-style-type: none"> <li>• The Bank of Finland (BOF) collects, compiles, and disseminates Finland’s balance of payments statistics. While the Act on the Bank of Finland (No. 214/1998) states that the BOF shall provide for the compilation and publication of statistics as necessary for carrying out its tasks, it does not specifically identify balance of payments statistics in this regard. However, the legal authority for the BOF to collect information for the compilation of balance of payments statistics is set out in section 28 of the Act and in Council Regulation No. 2533/98. Although the Act does not explicitly state that individual data will be treated as confidential, the secrecy rules of the Act on Officials of the Bank of Finland (No. 1166, 1998) implicitly provide for such confidentiality, as does Regulation No. 2533/98. BOF staff having access to confidential information are subject to financial and other disclosure requirements.</li> <li>• Statistics Finland (SF) is involved in producing parts of the balance of payments statistics, specifically the current account items, excluding investment income, and the capital account. This arrangement is underpinned by a service level agreement between the BOF and SF, and renewed each year. Adhering to confidentiality provisions, SF cannot share individual enterprise data with the BOF, although by permitting consistency checks such sharing would enhance the accuracy of balance of payments statistics.</li> </ul> <p><b>Resources</b></p> <ul style="list-style-type: none"> <li>• The level of resources devoted to compile the balance of payments and other external sector statistics has been declining and is now on the margin of risk. In 2004, a new balance of payments compilation system was introduced, which provides staff with the tools to better manage the compilation process.</li> <li>• Without additional resources, it will be difficult to undertake any important developmental work.</li> </ul> <p><b>Relevance</b></p> <ul style="list-style-type: none"> <li>• The BOF’s participation in the Ministry of Finance-chaired advisory group and in the work program of the European Central Bank and Eurostat, as well as queries from users, help monitor the relevance and practical utility of existing statistics in meeting users’ needs.</li> </ul> <p><b>Other quality management</b></p> <ul style="list-style-type: none"> <li>• Processes to focus on quality include the trade-offs that must be made each year in the budget process, as well as regular assessment of survey coverage and the cause of revisions to the published statistics.</li> </ul>	<p><b>Professionalism</b></p> <ul style="list-style-type: none"> <li>• The BOF is an independent institution governed by public law. Although the BOF is not part of the National Statistical Service, it aims to act in conformity with best practices in statistics established at SF. Staff at the BOF maintain a high degree of professionalism. The Act on Officials of the Bank of Finland (No. 1166) sets out the obligations of the BOF and its officials with respect to the performance of duties. Professionalism is actively promoted and supported within the organization. New staff are given guidelines and training on expected behavior in the performance of duties.</li> </ul> <p><b>Transparency</b></p> <ul style="list-style-type: none"> <li>• The report forms and covering letters state the terms and conditions under which the statistics are collected. No officials outside the BOF have access to the data before their release to the public. Advance notice is given of major changes in methodology, source data, and statistical techniques.</li> </ul> <p><b>Ethical standards</b></p> <ul style="list-style-type: none"> <li>• The Act on Officials of the Bank of Finland (No. 1166) sets out a number of appropriate behavioral requirements expected of staff. The Statistics Unit of the BOF convenes meetings to inform staff of their obligations, including those with respect to the disclosure of information on business activities, shareholdings in companies and other significant assets, debts, guarantees and other liabilities, and secondary occupations.</li> </ul>

Table 3a. Finland: 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>Statistics Finland (SF) compiles the national accounts according to the conceptual framework of the <i>European System of Accounts 1995 (ESA 95)</i>.</li> </ul> <p><b>Scope</b></p> <ul style="list-style-type: none"> <li>SF compiles all tables and accounts recommended for the <i>System of National Accounts 1993 (1993 SNA)</i> implementation.</li> <li>The delimitation of the economy and production boundary are correct.</li> <li>Necessary improvements currently being addressed include financial intermediation services indirectly measured (FISIM), growth of forests, and valuables.</li> </ul> <p><b>Classification/sectorization</b></p> <ul style="list-style-type: none"> <li>SF 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>Market valuation is used, except for own-account output of machinery and equipment (which is not very significant).</li> <li>Merchandise imports and exports are valued correctly at f.o.b.</li> <li>Recording is on an accrual basis throughout, with very minor exceptions.</li> </ul>	<p><b>Source data</b></p> <ul style="list-style-type: none"> <li>Many sources are administrative, including the Business Register and the Business Income Tax Register (EVR).</li> <li>Surveys, including an addition to EVR, establishment and PRODCOM surveys provide details on production inputs.</li> <li>Data on inputs for several services and some public quasi-corporations are too summary.</li> <li>Household budget surveys are conducted every five years.</li> <li>Government's sources are sound.</li> <li>The dedicated price indices are broadly sound.</li> <li>There are many indicators for quarterly national accounts (QNA) compilation. Those for communication and machinery/equipment are less than satisfactory.</li> <li>Improvements are possible in the sources for external services.</li> <li>Commercial inventory valuation principles are not known.</li> <li>Source data 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>Estimates for the hidden economy are based on outdated studies.</li> <li>Double-deflation is seldom used, but work is underway to soon implement its appropriate use.</li> <li>QNA compilation techniques are sound.</li> </ul> <p><b>Assessment and validation of intermediate data and statistical outputs</b></p> <ul style="list-style-type: none"> <li>Statistical discrepancies are thoroughly checked.</li> <li>Remaining discrepancies are small.</li> <li>The final estimates at current prices show no discrepancies through balancing using supply and use tables. This will also be true soon for the constant price data.</li> </ul> <p><b>Revision studies</b></p> <ul style="list-style-type: none"> <li>The reliability of the statistics is periodically assessed by conducting revision studies.</li> </ul>	<p><b>Periodicity and timeliness</b></p> <ul style="list-style-type: none"> <li>Periodicity and timeliness meet the SDDS requirements.</li> </ul> <p><b>Consistency</b></p> <ul style="list-style-type: none"> <li>The statistics are internally consistent.</li> <li>There are minor differences between the sum of seasonally adjusted QNA and the annual data.</li> <li>Time series go back to 1975.</li> <li>There is a disparity, mainly due to deviating recommendations in international manuals, between SF and BOF data on external services.</li> <li>Databases do not indicate which data series are provisional estimates.</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>SF is conducting a series of major revisions as a result of the fairly recent adoption of <i>ESA 95</i>. Users are informed of these revisions in advance.</li> </ul>	<p><b>Data accessibility</b></p> <ul style="list-style-type: none"> <li>National accounts are published in a very clear manner.</li> <li>First publication is on the internet. Dissemination formats on the internet, in publications, and databases are adequate.</li> <li>The advance release calendar is strictly followed and data are made available to all users at the same time.</li> <li>Additional details are available on request, but this is not always publicized.</li> </ul> <p><b>Metadata accessibility</b></p> <ul style="list-style-type: none"> <li>A very comprehensive inventory of methods to measure annual GDP at current prices is available on the internet.</li> <li>Other metadata are sparse, particularly for the QNA.</li> <li>Hardly any metadata are as yet available for nonspecialist users.</li> </ul> <p><b>Assistance to users</b></p> <ul style="list-style-type: none"> <li>User support is excellent.</li> <li>Awareness of statistics is promoted by a Virtual School of Statistics, available free on the internet, and other means.</li> <li>User-satisfaction surveys are conducted regularly.</li> <li>Catalogs, including prices, are widely available. Assistance in placing orders is provided around the clock.</li> </ul>

Table 3b. Finland: Assessment of Data Quality—Dimensions 2 to 5—Consumer Price Index (CPI)

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>Statistics Finland (SF) compiles the CPI using concepts and definitions that are in broad accordance with the guidelines of the <i>European System of Accounts 1995 (ESA 95)</i> and the <i>Consumer Price Index Manual, 2004 (CPI Manual)</i>.</li> </ul> <p><b>Scope</b></p> <ul style="list-style-type: none"> <li>The scope of the CPI correctly covers all resident households and residents in institutions.</li> <li>The scope is not in accord with the <i>CPI Manual</i> regarding its exclusion of own-account consumption and illegal goods and services, and inclusion of expenditure by nonresidents.</li> </ul> <p><b>Classification/sectorization</b></p> <ul style="list-style-type: none"> <li><i>1995 ESA</i> is appropriately used to classify institutions and transactions.</li> <li>Household expenditure, and the CPI compilation, is appropriately classified by the Classification of Individual Consumption by Purpose.</li> </ul> <p><b>Basis for recording</b> The basis of recording follows the <i>CPI Manual</i>:</p> <ul style="list-style-type: none"> <li>Transactions are valued at purchaser's prices which include trade and transport margins.</li> <li>Net weights are used for cars, insurance, and lotteries.</li> </ul>	<p><b>Source data</b></p> <ul style="list-style-type: none"> <li>Weights are based on too infrequent Household Budget Surveys (HBSs), adjusted and updated by national accounts; the lag between the HBS and the utilization of the weights is too long.</li> <li>Appropriate use is made of price collection from outlets, and centralized and administrative sources.</li> <li>Prices are generally based on sound sample designs and good price collection systems.</li> </ul> <p><b>Assessment of source data</b></p> <ul style="list-style-type: none"> <li>Estimates are made of sampling errors for the weights.</li> <li>Good outlier detection and verification systems exist, as do good monthly summary quality reports.</li> <li>Electronic hand-held data capture devices are used to further improve quality and assessment.</li> </ul> <p><b>Statistical techniques</b> Statistical techniques are sound aside from:</p> <ul style="list-style-type: none"> <li>Seasonal items should not have their prices carried forward;</li> <li>More use of explicit quality adjustments is advised.</li> <li>The rebasing of the index is too infrequent.</li> </ul> <p><b>Assessment and validation of intermediate data and statistical outputs</b></p> <ul style="list-style-type: none"> <li>Good validation procedures are used for intermediate data and outputs.</li> </ul> <p><b>Revision studies</b></p> <ul style="list-style-type: none"> <li>The CPI is final when released.</li> <li>On rebasing, estimates are provided of its effect.</li> </ul>	<p><b>Periodicity and timeliness</b></p> <ul style="list-style-type: none"> <li>Periodicity and timeliness meet the SDDS requirements.</li> </ul> <p><b>Consistency</b></p> <ul style="list-style-type: none"> <li>The index is consistent in aggregation and over time.</li> </ul> <p><b>Revision policy and practice</b></p> <ul style="list-style-type: none"> <li>The CPI is final when released.</li> <li>Advance notice is given to users as to when the index is rebased. Details of the effect of the rebasing for the prior two years are published at the time of the rebasing.</li> </ul>	<p><b>Data accessibility</b></p> <ul style="list-style-type: none"> <li>Detailed data and lengthy series are posted on SF's website, more so in Finnish, and are available in spreadsheets.</li> <li>Well-produced hard copy bulletins are also available.</li> <li>More detailed, custom-made reports can be supplied at a fee.</li> <li>The website includes an advance release schedule which is strictly followed and data are made available to all users at the same time.</li> </ul> <p><b>Metadata accessibility</b> There is a good handbook except that:</p> <ul style="list-style-type: none"> <li>It was published in 2002 for the 2000=100 index.</li> <li>It is available in Finnish on the website, but not in English or Swedish.</li> </ul> <p><b>Assistance to users</b></p> <ul style="list-style-type: none"> <li>The website and all publications contain information on contacts.</li> <li>Requests are dealt with quickly by well-informed staff.</li> <li>There is good user consultation.</li> </ul>

Table 3c. Finland: Assessment of Data Quality—Dimensions 2 to 5—Producer Price Index (PPI)

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>Statistics Finland (SF) compiles the PPI using concepts and definitions in broad accordance with the guidelines of the <i>European System of Accounts 1995 (ESA 95)</i> and the <i>Producer Price Index Manual, 2004 (PPI Manual)</i>.</li> </ul> <p><b>Scope</b></p> <ul style="list-style-type: none"> <li>The PPI appropriately covers resident market enterprises in mining and quarrying, manufacturing, and electricity, gas and water.</li> <li>There is a commendable extension to experimental quarterly indices for 13 service sectors.</li> <li>Own-account production and illegal activities are excluded and this does not follow the <i>PPI Manual</i>.</li> </ul> <p><b>Classification/sectorization</b></p> <p>There is an appropriate classification of:</p> <ul style="list-style-type: none"> <li>Institutional units and transactions, following <i>ESA 95</i>.</li> <li>Products by the List of Products of the European Communities.</li> <li>Economic activities at the 4-digit level by a Finnish version (TOL 2002) of the Statistical Classification of Economic Activities in the European Communities Rev.1.</li> </ul> <p><b>Basis for recording</b></p> <p>The basis of recording follows the <i>PPI Manual</i>:</p> <ul style="list-style-type: none"> <li>PPI weights and prices are valued at basic prices.</li> <li>Exports are valued f.o.b.</li> </ul>	<p><b>Source data</b></p> <ul style="list-style-type: none"> <li>There is a reliable business register for enterprises.</li> <li>There are some problematic estimates of negative revenues from the domestic market.</li> <li>Prices are appropriately mainly collected from enterprises.</li> <li>Use is also made of Board of Customs and world commodity price data.</li> <li>Insufficient data are collected on the product specifications and terms of sale.</li> <li>The sampling methods are sound, but there is a relatively high number of late respondents and of enterprises which cease reporting over the five years (though the latter are replaced).</li> </ul> <p><b>Assessment of source data</b></p> <ul style="list-style-type: none"> <li>Prices are increasingly submitted electronically and good verification procedures are employed for outliers.</li> </ul> <p><b>Statistical techniques</b></p> <ul style="list-style-type: none"> <li>Internationally accepted aggregation formulas are used.</li> <li>Unit values are only used for homogeneous goods.</li> <li>Treatment of missing values, seasonal goods, and quality adjustment needs to be overhauled.</li> <li>Further research is required on methods for industries with rapid model turnover.</li> </ul> <p><b>Assessment and validation of intermediate data and statistical outputs</b></p> <ul style="list-style-type: none"> <li>The PPI is compared with the Export Price Index, Import Price Index, Basic Price Index for Domestic Supply, Wholesale Price Index, and CPI and validated, where possible, by commodity trade price indices.</li> </ul> <p><b>Revision studies</b></p> <ul style="list-style-type: none"> <li>The PPI is final when released.</li> <li>On rebasing estimates are provided of its effect.</li> </ul>	<p><b>Periodicity and timeliness</b></p> <ul style="list-style-type: none"> <li>Periodicity and timeliness meet the SDDS requirements.</li> </ul> <p><b>Consistency</b></p> <ul style="list-style-type: none"> <li>The index is consistent in aggregation. The availability of a family of index numbers allows the identification of the transmission of inflation through some of its stages and sources.</li> <li>Published linked indices go back to 1949=100.</li> </ul> <p><b>Revision policy and practice</b></p> <ul style="list-style-type: none"> <li>The PPI is final when released.</li> <li>Advance notice is given to users as to when the index is rebased. Details of the effect of the rebasing are published.</li> </ul>	<p><b>Data accessibility</b></p> <ul style="list-style-type: none"> <li>Detailed data and lengthy series are posted on SF's website, more so in Finnish, and are available in spreadsheets.</li> <li>Well-produced hard copy bulletins are also available.</li> <li>More detailed, custom-made reports can be supplied at a fee.</li> <li>The website includes an advance release schedule which is strictly followed and data are made available to all users at the same time.</li> </ul> <p><b>Metadata accessibility</b></p> <ul style="list-style-type: none"> <li>A handbook is available on the website.</li> </ul> <p><b>Assistance to users</b></p> <ul style="list-style-type: none"> <li>The website and all publications contain information on contacts.</li> <li>Requests are dealt with quickly by well-informed staff.</li> </ul>

Table 3d. Finland: Assessment of Data Quality—Dimensions 2 to 5—Government Finance Statistics (GFS)

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>Statistics Finland (SF) compiles and disseminates quarterly and annual general government statistics in the context of national accounts based on the <i>European System of Accounts 1995 (ESA 95)</i>.</li> <li>SF's statistics are not presented in a comprehensive fiscal analytical framework, and plans to follow the IMF's <i>Government Finance Statistics Manual 2001 (GFSM 2001)</i> framework (in national sources) have not been developed (but see footnote 2 on page 5).</li> </ul> <p><b>Scope</b></p> <ul style="list-style-type: none"> <li>Annual and quarterly general government statistics have full coverage of all government institutions at all levels.</li> <li>All material government activities are included in the statistics.</li> <li>For general government, SF publishes a balance sheet for financial assets and liabilities, but not for nonfinancial assets (due to tight staffing).</li> <li>Central government operations and debt data are disseminated by the State Treasury on monthly basis.</li> </ul> <p><b>Classification/sectorization</b></p> <ul style="list-style-type: none"> <li>SF's classification is in accordance with the national accounts, but not in conformity with the detailed revenue and expense classification of the <i>GFSM 2001</i> and EC regulation 1500/2000.</li> <li>The sectorization of the general government is consistent with the <i>ESA 95</i> and <i>GFSM 2001</i>.</li> </ul> <p><b>Basis for recording</b></p> <ul style="list-style-type: none"> <li>Generally, flows and stocks are valued at market prices.</li> <li>Transactions are recorded on a mixed cash and accrual basis and adjusted to accrual where necessary, e.g., for taxes and charges.</li> <li>Debt is recorded at nominal values.</li> <li>Gross/netting procedures are appropriate.</li> </ul>	<p><b>Source data</b></p> <ul style="list-style-type: none"> <li>The source data on general government reasonably approximate the scope, definitions, and the classifications required for GFS compilation.</li> <li>Source data are accounting data received from the State Treasury, the social security funds, and the local authorities.</li> <li>The data are adjusted and reclassified, where necessary, by SF to compile GFS in a national accounts context.</li> <li>The source data provide SF with all the necessary stock and flow data (except for some on the nonfinancial and financial accounts).</li> <li>The source data on financial accounts are not timely.</li> </ul> <p><b>Assessment of source data</b></p> <ul style="list-style-type: none"> <li>The final source data are based on audited accounts of all general government institutions.</li> </ul> <p><b>Statistical techniques</b></p> <ul style="list-style-type: none"> <li>Final source data require no estimation.</li> <li>SF makes estimates in compiling the quarterly data on the local government and the social security sectors, and in the preparation of the annual preliminary data for the general government sector. The techniques used 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 final GFS use audited data based on full coverage. All tables are checked for internal consistency.</li> </ul> <p><b>Revision studies</b></p> <p>The reliability of the statistics is periodically assessed by conducting revision studies.</p>	<p><b>Periodicity and timeliness</b></p> <ul style="list-style-type: none"> <li>Periodicity meets the SDDS requirements.</li> <li>Timeliness of general government operations data and central government debt meets the SDDS requirements.</li> <li>Timeliness of general government financing data and central government operations data do not meet the SDDS requirements.</li> </ul> <p><b>Consistency</b></p> <ul style="list-style-type: none"> <li>Statistics are internally consistent for most of the accounts, but some undue statistical discrepancies occur.</li> <li>The discrepancy between net lending/borrowing and financing is unduly large.</li> <li>For the government financial accounts, the differences between the opening and closing balance sheet for each asset and liability category, and the net transactions and other net economic flows are not fully reconciled, because of a lag in securing data on other economic flows.</li> <li>Reported transfers received do not always equal reported transfers paid between subsectors of the general government.</li> <li>Data are consistent with the national accounts, but not with the monetary 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>SF is conducting a series of major revisions as a result of the fairly recent adoption of <i>ESA 95</i>. Users are informed of these revisions in advance.</li> </ul>	<p><b>Data accessibility</b></p> <ul style="list-style-type: none"> <li>The government accounts data facilitate proper and meaningful interpretation within the national accounts framework.</li> <li>They are not presented in a way that allows major revenue and expenditure aggregates and balancing items to be identified and related to detailed underlying data, as is the case in the <i>GFSM 2001</i> framework.</li> </ul> <p><b>Metadata accessibility</b></p> <ul style="list-style-type: none"> <li>For the general government sector and its subsectors, metadata are provided on annual government operations, financing and debt in publications and on the internet.</li> <li>Metadata on sources and methods are sparse in quarterly releases (due to tight staffing).</li> </ul> <p><b>Assistance to users</b></p> <ul style="list-style-type: none"> <li>Contact points for each subject field and a list of publications are available on the websites of SF and State Treasury.</li> </ul>

Table 3e. Finland: 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 Bank of Finland (BOF) compiles the balance of payments statistics in broad conformity with the guidelines of the IMF's <i>Balance of Payments Manual</i>, fifth edition (<i>BPM5</i>). As a European Union Member State, Finland also follows guidelines from the European Central Bank and Eurostat.</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.</li> </ul> <p><b>Classification/sectorization</b></p> <ul style="list-style-type: none"> <li>Classification/sectorization systems are broadly in line with the <i>BPM5</i> guidelines.</li> <li>Cross-border construction activities of a long-term nature cannot be allocated to direct investment in the current collection system.</li> </ul> <p><b>Basis for recording</b></p> <p>Market prices are mostly used:</p> <ul style="list-style-type: none"> <li>Goods transactions are correctly valued at f.o.b.</li> <li>Transactions relating to reserve assets and household sector transactions in foreign securities derived from stock data include valuation changes.</li> </ul> <p>Recording is on an accrual basis, except for portfolio dividends and business services. There is some net recording:</p> <ul style="list-style-type: none"> <li>Security transactions are net of fees and commissions.</li> <li>International receipts and payments of dividends, interest, royalties, and technical fees are recorded net of withholding taxes deducted at source.</li> </ul>	<p><b>Source data</b></p> <ul style="list-style-type: none"> <li>The source data for balance of payments statistics are mostly obtained from comprehensive data programs. Data on business services and reinvested earnings are only collected annually; there is potential for double-counting of loans and repurchase agreements.</li> </ul> <p><b>Assessment of source data</b></p> <ul style="list-style-type: none"> <li>The compilers closely monitor the survey system to ensure that it functions as expected and strive to ensure that the survey coverage is adequate. Efforts are made to ensure that the largest enterprises are covered in surveys.</li> </ul> <p><b>Statistical techniques</b></p> <ul style="list-style-type: none"> <li>Balance of payments adjustments to trade are not updated.</li> </ul> <p><b>Assessment and validation of intermediate data and statistical outputs</b></p> <ul style="list-style-type: none"> <li>Intermediate results are validated against other information.</li> </ul> <p><b>Revision studies</b></p> <p>Since 1999, the causes of revisions have been documented in internal memoranda on a monthly basis and time series of the impact of revisions on the published data are stored to monitor long-term trends in the revision patterns.</p>	<p><b>Periodicity and timeliness</b></p> <ul style="list-style-type: none"> <li>Data meet the SDDS periodicity and timeliness requirements.</li> </ul> <p><b>Consistency</b></p> <ul style="list-style-type: none"> <li>Statistics are broadly consistent and reconcilable with those obtained from other frameworks. The errors and omissions item is large in some years. Construction activity is treated differently in the balance of payments and the national accounts, reflecting the usage of different internationally accepted guidelines in the BOF and SF.</li> </ul> <p><b>Revision policy and practice</b></p> <ul style="list-style-type: none"> <li>The revision policy, which follows European Central Bank guidelines, is not disclosed. Although the revisions are not measured, assessed, and explained in publications, the "Product Description and Quality Report" contains several useful charts and some analysis of revisions.</li> </ul>	<p><b>Data accessibility</b></p> <ul style="list-style-type: none"> <li>A range of data on Finland's balance of payments is readily available in different formats and presentations and without charge. The statistics are made available to all users at the same time.</li> </ul> <p><b>Metadata accessibility</b></p> <ul style="list-style-type: none"> <li>Several sources of metadata meet a range of users' needs. To assist users, the BOF has plans to identify, in publications and releases, the sources of these metadata.</li> </ul> <p><b>Assistance to users</b></p> <ul style="list-style-type: none"> <li>Prompt and knowledgeable service and support is available to users from the Statistics Desk Phone, which is posted in publications and releases (phone, facsimile, email). Other technical assistance is also available.</li> </ul>



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

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

#### **Cross-cutting Recommendations**

- Consider additional staffing for the quarterly national accounts and government finance statistics sections in SF. And, across all datasets, recognize that undertaking major new projects at current staffing levels is likely to have a detrimental effect on the existing statistics.
- Explore a solution regarding the exchange of confidential data concerning those statistics for which SF and the BOF share responsibility. (This could include examining how other EU Member States have addressed this issue.)

#### **National Accounts**

- Review the sources on external transactions, including those on processing trade.
- Consider surveys generating detailed information on the composition of intermediate consumption of service activities.
- Improve short-term indicators for communication and machinery/equipment.
- Conduct new studies on the influence of the hidden economy.
- Publish metadata on quarterly national accounts and in general provide more explanation to nonspecialist users.

#### **Consumer Price Index**

- Chain or update weights more frequently using more frequent household budget surveys with shorter compilation periods.
- Abandon the use of the carry-forward method for seasonal items.

#### **Producer Price Index**

- Collect more detailed information on terms of sales and product specification, along with prices.
- Overhaul methods for treating seasonal products, missing values, and quality adjustments.
- Chain or update weights more frequently.
- Undertake more research on methods for industries with high model turnover.

### **Government Finance Statistics**

- Compile and disseminate annual and quarterly general government statistics in line with the analytical framework set out in the *GFSM 2001*.
- Extend the compilation and dissemination of annual balance sheets for the general government sector and its subsectors to include nonfinancial assets.
- Pursue the timely provision of source data on monthly central government operations to meet the timeliness requirement of the SDDS and specify in the SDDS metadata a plan to achieve this.

### **Balance of Payments Statistics**

- Develop methodology to (1) adjust the portfolio securities transactions data on account of fees and commissions (and include in current account) and (2) take account of netting, from income and service distributions, of withholding taxes deducted at source (and include in current transfers).
- Introduce a quarterly survey of business services transactions of the most important enterprises.
- Adapt collections involving end-investors and custodians to ensure that no duplication occurs in the recording of loans and repurchase agreements.
- Develop a methodology to improve the valuation of foreign currency goods transactions in trade statistics; investigate the possibility of obtaining timely information on goods for processing (included in trade statistics) and investigate any recording problems; and determine the need for any other balance of payments adjustments to trade statistics.

**Finland: Practices Compared to the SDDS Coverage, Periodicity, and Timeliness of Data**

SDDS Data Category	Coverage (meets SDDS requirement)	Periodicity		Timeliness		Comments
		SDDS	Finland	SDDS	Finland	
<b>Real Sector</b>						
National accounts	Yes	Q	Q	1Q	70 days	
Production index/ indices	Yes	M	M	6W (1M encouraged)	30 days	
Employment	Yes	Q	M	1Q	2-3 W	
Unemployment	Yes	Q	M	1Q	2-3 W	
Wages/earnings	Yes	Q	Q	1Q	6-7 W	
Consumer price index	Yes	M	M	1M	2W	
Producer price index	Yes	M	M	1M	17 days	
<b>Fiscal Sector</b>						
General government operations	Yes	A	A	2Q	2M (revenue, expenditure, and the balance) 10M (financing)	Flexibility option utilized for timeliness of financing data.
Central government operations	Yes	M	M	1M	18-25 days (April through November)	Flexibility option utilized for timeliness because data for December are disseminated with a timeliness of up to 4 months, and data for January through March with a timeliness of between 2 and 4 months.
Central government debt	Yes	Q	M	1Q	1M	
<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 (1W encouraged)	2 working days	
Interest rates	Yes	D	D	...	1 day	
Stock market: share price index	Yes	D	D	...	1 day	

SDDS Data Category	Coverage (meets SDDS requirement)	Periodicity		Timeliness		Comments
		SDDS	Finland	SDDS	Finland	
<b>External Sector</b>						
Balance of payments	Yes	Q	M	1Q	NLT 6W	
International reserves and foreign currency liquidity	Yes	M (W recommended)	M	1W for official reserve assets 1M <i>(1W encouraged)</i> for the reserves template data	2 working days (official reserve assets in euros) NLT 1W (official reserve assets in U.S. dollars) NLT 1M (template data)	
Merchandise trade	Yes	M	M	8W <i>(4-6W encouraged)</i>	NLT 6W	
International investment position	Yes	A (Q recommended)	Q	3Q <i>(1Q encouraged)</i>	NLT 3M	
External debt	Yes	Q	Q	1Q	NLT 3M	
Exchange rates	Yes	D	D	<sup>1</sup>	1 day	
<b>Addendum: Population</b>	Yes	A	Q	...	5W	

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

Italics indicate encouraged categories.

<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

FINLAND

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

**Response by the Authorities**

October 24, 2005

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## I. LETTER FROM THE AUTHORITIES

October 3, 2005

Mr Robert W. Edwards  
Director  
Statistics Department  
International Monetary Fund  
Washington, D.C. 20431  
USA

Dear Mr Edwards,

On behalf of the Finnish authorities - the Bank of Finland, Statistics Finland, the National Board of Customs and the State Treasury - we are pleased to submit a joint response to the September 1, 2005 Report on the Observance of Standards and Codes (ROSC) - Data Module and the Detailed Assessments using the Data Quality Assessment Framework (DQAF).

The entire exercise, including the IMF preparation mission, proved to be most useful to both Statistics Finland and the Bank of Finland in our search for due compliance with international recommendations and greater efficiency in compiling macroeconomic statistics. The recommendations and assessments made by the IMF mission team will assist the statistical experts to further improve the analytical applicability of the Finnish economic statistics given timeliness requirements.

We are also pleased to inform you that all institutions involved approve publication of the whole ROSC- Data Module document, including the letter of response by the authorities with attachments, on the IMF's website.

The responses to the IMF staff's cross-cutting recommendations by the authorities include a joint response by Statistics Finland and the Bank of Finland, followed by responses to the recommendations by data set by the competent authority. The joint responses pertaining to the recommendations on the Balance of Payments statistics also include those presented by the Board of Customs, where applicable. Similarly, the responses on the Government Finance Statistics have been jointly prepared by Statistics Finland and the State Treasury.

Finally, we extend our appreciation to the staff of the IMF in this undertaking.

Sincerely yours,

Erkki Liikanen  
Governor  
Bank of Finland

Heli Jeskanen-Sundstöm  
Director General  
Statistics Finland



**Enclosures (4)**

- 1. Response by the Authorities to the cross-cutting recommendations of the IMF's ROSC-Data Module team**
- 2. Response by the Authorities (Statistics Finland) on National Accounts, CPI, PPI, and Government Finance Statistics and (Statistics Finland and the State Treasury) on Government Finance Statistics**
- 3. Response by the Authorities to the IMF staff's recommendations on Balance of Payments Statistics**
- 4. Response by the Authorities to the IMF staff's detailed recommendations on Balance of Payments Statistics**

cc:

**Mr Jon Solheim, Executive Director, IMF**  
**Mr Michael Deppler, Director, European Department, IMF**

## II. RESPONSE BY THE AUTHORITIES TO: THE CROSS-CUTTING RECOMMENDATIONS OF THE IMF'S ROSC-DATA MODULE TEAM

- Consider additional staffing for the quarterly national accounts and government finance statistics sections in SF. And, across all datasets, recognize that undertaking major new projects at current staffing levels is likely to have a detrimental effect on the existing statistics.
- Explore a solution regarding the exchange of confidential data concerning those statistics for which SF and the BOF share responsibility. (This could include examining how other EU Member States have addressed this issue.)

*Statistics Finland and the Bank of Finland share a long tradition of collaboration in order to meet statutory national and international statistical commitments while conserving resources. Both institutions are aware that rapidly growing information requirements, frequent statistical reforms and maintenance of quality of statistics in a changing world make heavy demands on resources. Both Statistics Finland and the Bank of Finland firmly believe that an addition to our statistics staff can be avoided by exploiting modern statistical techniques and IT technology and by improving professional skills as well as reallocating current resources within economic statistics.*

*When compiling Balance of Payments statistics, the Bank cooperates extensively with Statistics Finland even though the current national legislation does not permit Statistics Finland to hand over confidential data to the Bank. Compilation practices, however, function effectively in spite of this restriction. Both institutions actively seek modes of collaboration to maintain the quality of the statistics for which they share responsibility. A process to progressively amend EU statistical legislation has been launched to meet practical collaboration needs in compiling EU and euro area statistics.*



### III. RESPONSE BY THE AUTHORITIES: STATISTICS FINLAND

#### National Accounts

- Review the sources on external transactions, including those on processing trade.
- Consider surveys generating detailed information on the composition of intermediate consumption of service activities.
- Improve short-term indicators for communication and machinery/equipment.
- Conduct new studies on the influence of the hidden economy.
- Publish metadata on quarterly national accounts and in general provide more explanation to nonspecialist users.

*In order to review sources of external transactions, Statistics Finland will continue discussing this with the Bank of Finland. More frequent contacts than now are necessary between experts of the National Board of Customs and Statistics Finland to improve exchange of information on trade statistics for e.g. improved estimates for processing trade.*

*Regarding the recommendation concerning detailed information on the composition of intermediate consumption of service activities, Statistics Finland is planning to launch a survey of service products according to the EU Regulation. This would also improve data for the estimation of the composition of intermediate consumption. Other improvements to service statistics, including those on the demand of services, have been planned as well, and some pilot studies have been conducted recently. The need to improve short-term indicators for communication and machinery/equipment is recognised. One important task within the quarterly sector accounts development project launched this year is to explore new data sources for estimating investment in Finnish economy.*

*Statistics Finland conducted several studies into the hidden economy from the mid to the late 1990s. The results from the studies were incorporated in national accounts. However, the studies are already fairly old and new research should be made. Consideration will be given to the inclusion of hidden and illegal activities as a new topic of study in the work programme of Statistics Finland in the future years.*

*Statistics Finland has increased the volume of metadata on quarterly national accounts it publishes on its Internet site this year, but it is still insufficient. Statistics Finland agrees about the importance of provision of more metadata and explanations in general for non-specialist users.*

## **Consumer Price Index**

- Chain or update weights more frequently using more frequent household budget surveys with shorter compilation periods.
- Abandon the use of the carry-forward method for seasonal items.

## **Producer Price Index**

- Collect more detailed information on terms of sales and product specification, along with prices.
- Overhaul methods for treating seasonal products, missing values, and quality adjustments.
- Chain or update weights more frequently.
- Undertake more research on methods for industries with high model turnover.

## ***Prices***

*Statistics Finland considers the recommendations of the ROSC mission as relevant and, generally, will put the ROSC proposal forward as part of the standard quality improvement processes of price statistics.*

*Regarding the strongly seasonal goods in the CPI and PPI, Statistics Finland thinks that at the moment there is no theoretically superior method to cope with seasonal goods and, therefore, the carry forward method will continue to be used as an important option to deal with seasonality. The recommendation on more frequent updating of weights in the CPI and PPI is an important recommendation and will be considered seriously.*

*For the PPI, Statistics Finland plans to implement several of the recommendations in specific PPI quality improvement projects and in connection with the next base year revision project. The questionnaire will be redrafted by Statistics Finland's Survey Laboratory to make it as easy to answer as possible. More specific information about terms of sales and product-specific quality features will be included in the new questionnaire. The wider electronic data collection together with better sampling strategies are also expected to improve the response rates. The imputation will be improved according to the IMF recommendation by shifting from the long-term imputation to short-term imputation. Further research will be undertaken on high turnover industries with fast changing model varieties. The data collection that takes place less frequently than monthly will be monitored both in the CPI and PPI to ensure that they are capturing the price changes accurately and timely.*

*Statistics Finland will also be publishing increasing amounts of up-to-date metadata for CPI and PPI users on its website in English and Swedish during the year 2005.*

## Government Finance Statistics

- Compile and disseminate annual and quarterly general government statistics in line with the analytical framework set out in the *GFSM 2001*.
- Extend the compilation and dissemination of annual balance sheets for the general government sector and its subsectors to include nonfinancial assets.
- Pursue the timely provision of source data on monthly central government operations to meet the timeliness requirement of the SDDS and specify in the SDDS metadata a plan to achieve this.

### *Response by Statistics Finland and the State Treasury*

*Statistics Finland and the State Treasury regard the recommendations of the ROSC mission on Government Finance Statistics as relevant and to be reckoned with.*

*Finland is utilising two flexibility options of the SDDS for the timeliness of financial data on general government operations and for the timeliness and periodicity of data on central government operations. Statistics Finland intends to examine the possibility of withdrawing from the first flexibility option concerning the timeliness of financial data of general government operations by starting to publish quarterly financial accounts data as of the beginning of 2006. Starting from 2006, the State Treasury will publish the Funds Statements for Central Government Finances for January to March in the middle of April, so the information will be available one month earlier than now. Once the accounting of the State of Finland has been centralised into service centres by 2012 it will be possible to publish the Funds Statements even more quickly than this.*

*As to methodological soundness, Statistics Finland has developed plans to improve the presentation of GFS in a comprehensive fiscal analytical framework at the beginning of next year as part of its plan to improve the overall dissemination of data on government finances inclusive of metadata. The inclusion of nonfinancial assets in the balance sheet is under consideration.*

*At the same time, we see harmonising of the methods and the presentation of the data on government finances collected in different statistics (ESA95 transmission programme, ECB Guidelines on Government Finance Statistics, IMF Government Finance Statistics, EDP statistics, etc.) as most important. Statistics Finland welcomes Eurostat's plan to harmonise the data on government finances collected in different mechanisms by launching a regulation on GFS and presentation of a new database.*

#### **IV. RESPONSE BY THE AUTHORITIES TO: THE IMF STAFF'S RECOMMENDATIONS ON BALANCE OF PAYMENTS STATISTICS**

- Develop methodology to (1) adjust the portfolio securities transactions data on account of fees and commissions (and include in current account) and (2) take account of netting, from income and service distributions, of withholding taxes deducted at source (and include in current transfers).
- Introduce a quarterly survey of business services transactions of the most important enterprises.
- Adapt collections involving end-investors and custodians to ensure that no duplication occurs in the recording of loans and repurchase agreements.
- Develop a methodology to improve the valuation of foreign currency goods transactions in trade statistics; investigate the possibility of obtaining timely information on goods for processing (included in trade statistics) and investigate any recording problems; and determine the need for any other balance of payments adjustments to trade statistics.

*The Bank of Finland statistics agrees that portfolio investment transactions should be recorded exclusive of fees and commissions which are to be included in financial services as recommended by the BoP Manual and the Compilation Guide. This is the general principle being followed in the BoP surveys at the Bank of Finland, at the moment. In practice, however, securities transactions are complex and difficult to record. Moreover, the internationally accepted guidelines, the Manual and the Compilation Guide, are themselves virtually silent on practical compilation issues regarding the treatment of fees and commissions in connection with securities trade. (1) The Bank of Finland Balance of Payments Division will further clarify the survey instructions to make sure that fees and commissions will be treated and reported appropriately in all possible cases, based on the discussions with the IMF ROSC team. (2) Similarly, the survey respondents will be instructed that investment income, especially dividends and interest accrued, are to be recorded inclusive of withholding taxes, which in turn should be recorded by Statistics Finland in public sector transfers.*

*Statistics Finland will continue to discuss this issue with the Bank of Finland in order to solve how the quarterly data requirements of Eurostat, the ECB and the IMF could be met in the most cost effective manner.*

*The Bank of Finland updates the reporting instructions for the Balance of Payment Statistics surveys annually. The Bank of Finland BoP compilers recognize the risk of potential double-counting caused by inconsistencies in the survey instructions. The instructions will be adjusted in order to avoid this risk.*

*Foreign trade statistics compilers in the National Board of Customs and Balance of Payments statistics compilers at the Bank of Finland and Statistics Finland take note of the IMF mission findings in regard to the better adjustments of trade statistics for the BoP purposes. Compilers agree that in recording these items the conformity with BPM5 guidelines could be improved. It has been decided that an informal task force with representation from all three agencies (SF, BOF, NBOC) will consider recording improvements in the Current Account including trade account adjustment items, processing, repairs and transport as proposed by the IMF team. The task force will submit its proposals before mid 2006.*

*Additional comment on the report:*

*Referring to the table 3e on page 14 of the Report and the table 5 on page 166 of the Detailed Assessments, we would like to inform you that the current revision timetable of the Balance of Payments Statistics has been posted on the Bank of Finland website as a part of the updated Product Description and Quality Report since June 2005 and as a separate table since early July 2005.*

## V. RESPONSE BY THE AUTHORITIES TO: THE IMF STAFF'S DETAILED RECOMMENDATIONS ON BALANCE OF PAYMENTS STATISTICS

- BOF and SF should explore how other EU Member States have addressed the issue of sharing of individual enterprise data between the national statistical office and the central bank for balance of payments compilation (0.1.2).

*Bank of Finland and Statistics Finland agree that it is important to actively seek modes of collaboration to maintain the quality of the Balance of Payments statistics. Other EU Member States (Austria, Denmark, the Netherlands) which have adopted similar compilation sharing practices have made arrangements to facilitate sharing of confidential data between the compiling institutions for the quality maintenance purposes. The EU statistical legislation will be amended gradually to facilitate the exchange of confidential data if necessary in order to safeguard the quality of the EU or euro area statistics.*

- Arrange with the NBOC for the BOF to have access to individual Customs documentation for balance of payments compilation (0.1.2).

*The National Board of Customs and the Bank of Finland have agreed that the potential quality problems caused by individual transactions are solved in collaboration within current competences of the respective institutions. Statistics Finland already has customs declarations in its possession.*

- In collaboration with the NBOC, develop a methodology to adjust the valuation of goods denominated in foreign currencies (an administrative rate is currently used) to more closely conform with BPM5 guidelines (2.4.1).

*All parties involved, the National Board of Customs, Statistics Finland and the Bank of Finland have agreed that the Current Account task force will study the IMF staff recommendations concerning the various adjustment items between Trade statistics and the Balance of Payments statistics goods account as well as issues on goods for processing, repairs and transport. This task force will also consider how the exchange rates usage in valuation of goods could be brought more in conformity with the BPM5 guidelines in the most cost effective manner.*

- SF to indicate in its survey questionnaire on international trade in services the accrual principle and the treatment of the Nordic Investment Bank and other regional/international organizations (2.4.2).

*Statistics Finland is going to clarify the matter of the accrual principle in its questionnaire and instructions of the survey on international trade in services as well as give more instructions for the treatment of international organizations including the NIB.*

- Develop a methodology to (1) estimate the fees and commissions that are netted from portfolio investment transactions and adjust the flows accordingly and (2) incorporate the fees and commissions in financial services. Report forms would need to be modified to indicate how securities should be reported (2.4.3).

*(1) The Bank of Finland statistics agrees that portfolio investment transactions should be recorded exclusive of fees and commissions which are to be included in financial services as recommended by the BOP Manual and the BOP Compilation Guide. This is the general principle being followed in the BOP surveys at the Bank of Finland, at the moment. In practice, however, securities transactions are complex and difficult to record. Moreover, the internationally accepted guidelines, the Manual and the Compilation Guide, are themselves virtually silent on practical compilation issues regarding the treatment of fees and commissions in connection with securities trade. The Bank of Finland Balance of Payments Division will further clarify the survey instructions to make sure that fees and commissions will be treated and reported appropriately in all possible cases, based on the discussions with the IMF ROSC team.*

*(2) Statistics Finland is aware of problems related to financial services and all possibilities to improve the financial services data will be investigated.*

- Develop a methodology to (1) estimate the amount of withholding taxes on dividends, interest, royalties, and technical service fees received from abroad for inclusion in current transfers (data on withholding taxes on payments to nonresidents are available from the Finnish National Board of Taxes). The data on income and royalty payments from the latter source should be reconciled with the balance of payments accounts; and (2) gross up the relevant income and service items accordingly. Report forms would need to be modified to indicate how withholding taxes should be treated (2.4.3).

*Statistics Finland is going to clarify the treatment of withholding taxes in its instructions for the survey on international trade in services.*

- Adapt collections involving end investors and custodians to ensure no duplication in the recording of loans and repurchase agreements (3.1.2).

*The Bank of Finland updates the reporting instructions for the Balance of Payment Statistics surveys annually. The Bank of Finland BoP compilers recognize the risk of potential double-counting caused by inconsistencies in the survey instructions. The instructions will be adjusted in order to avoid this risk.*

- Introduce a quarterly survey of international business services to improve recording of the quarterly (and monthly) balance of payments (3.1.3).

*Statistics Finland will continue to discuss this issue with the Bank of Finland in order to solve how the quarterly data requirements of Eurostat, the ECB and the IMF could be met in the most cost effective manner.*

- Develop a methodology to estimate receipts of government services n.i.e. on the basis of partner country data in conjunction with indicators of size of foreign representations in Finland from the Ministry of Foreign Affairs (3.2.1).

*Statistics Finland is cognizant that the current recording of receipts of government services n.i.e. is not fully appropriate. Statistics Finland and the Current Account task force will consider necessary improvements and implementation time table.*

- Investigate, with the NBOC, the possibility of obtaining timely information on goods for processing (included in trade statistics), determine if there are any recording problems (see also national accounts 3.1.2), and determine the need for any other balance of payments adjustments to trade statistics (see also 2.4.1) (3.3.1).

*Statistics Finland, the Bank of Finland and the Board of Customs agree with the IMF recommendation. The Current Account task force will consider all trade adjustment items including recording problems of goods for processing.*

- Incorporate reporting on repairs on goods into existing surveys; consider a survey to gather data on expenditures for goods procured in ports in Finland by foreign carriers outside the EU (3.3.1).

*The question on repairs on goods is under discussion in Eurostat. The BoP compilers in Finland have recognized the recording problem and shall follow common European recommendations in this issue. The three authorities involved in compilation acknowledge the need for better data in order to record expenditures for goods procured in ports in Finland by foreign carriers. The task force will study these issues in detail.*

- As the f.o.b. value of Finnish imports would include any transportation services rendered by domestic carriers, develop a methodology to estimate an offsetting credit entry for these resident-resident transactions included in the balance of payments (similarly on the export side for the carriage of Finnish exports within Finland by nonresident carriers) (3.3.2).

*The task force will also study transport recording problems and propose a better methodology along the lines proposed by the IMF mission team. Currently, the compilers are confident that these issues do not pose a serious threat for the quality of the BoP statistics.*



- BOF and SF to participate in or review findings from bilateral comparisons of foreign trade statistics undertaken by the NBOC, with a view to assessing scope for adjusting balance of payments data on goods transactions (3.4.3).

*The National Board of Customs will inform the Bank of Finland and the Current Account task force on the findings from the bilateral comparison exercises in Foreign Trade statistics. The findings will be studied by the task force.*

INTERNATIONAL MONETARY FUND

FINLAND

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

Prepared by the Statistics Department

Approved by Robert W. Edwards and Michael Deppler

October 24, 2005

This document contains a detailed assessment by dataset of the elements and indicators that underlie the data quality dimensions discussed in Finland'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, and the results of a survey of users' views, which take into account questionnaire responses and discussions with users.

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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>
BOF	Bank of Finland
<i>BPM5</i>	<i>Balance of Payments Manual</i> , fifth edition
BR	Business Register
BS	Balanced Scorecards
c.i.f.	Cost, Insurance, Freight
CMFB	Committee on Monetary, Financial, and Balance of Payments Statistics (EU)
CN	Combined Nomenclature
COFOG	Classification of Functions of Government
COICOP	Classification of Individual Consumption by Purpose
CPA	Classification of Products by Activity
CPI	Consumer Price Index
<i>CPI Manual</i>	<i>Consumer Price Index Manual, 2004</i>
DG	Director-General
DQAF	Data Quality Assessment Framework, July 2003 version
DSBB	Dissemination Standards Bulletin Board (IMF)
EC	European Community
ECB	European Central Bank
EDP	Excess Deficit Procedure
EEA	European Economic Area
EFQM	European Foundation for Quality Management
EFTA	European Free Trade Area
EMS	European Monetary System
<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
EVR	Business Income Tax Register
FIFO	First In First Out
FISIM	Financial Intermediation Services Indirectly Measured
f.o.b.	Free on Board
GDDS	General Data Dissemination System (IMF)
GDP	Gross Domestic Product
GFS	Government Finance Statistics
GGO	General Government Operations
<i>GFSM 1986</i>	<i>A Manual on Government Finance Statistics, 1986</i>
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
HBS	Household Budget Survey
HFCE	Household Final Consumption Expenditure
HICP	Harmonised Index of Consumer Prices

HPI	House Price Index
IASB	International Accounting Standards Board
IIP	International Investment Position
ILO	International Labour Organisation
IMF	International Monetary Fund
ISA	Insurance Supervision Authority
ISO	International Organization for Standardization
IPSAS2	International Public Sector Accounting Standard 2
ISWGNA	Intersecretariat Working Group on National Accounts
ITRS	International Transactions Reporting System
LIFO	Last In First Out
MFI	Monetary Financial Institutions
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
MOF	Ministry of Finance
MOU	Memorandum of Understanding
NACE	Statistical Classification of Economic Activities in the European Communities
NBOC	National Board of Customs
NPI	Net Price Index
NSDP	National Summary Data Page
NSS	National Statistical Service
OECD	Organisation for Economic Co-operation and Development
Ottawa Group	International Working Group on Price Indices
OR	Own Resources
PPI	Producer Price Index
<i>PPI Manual</i>	<i>Producer Price Index Manual, 2004</i>
PPS	Probability proportionate to size
PRODCOM	List of Products of the European Communities
QNA	Quarterly National Accounts
ROSC	Report on the Observance of Standards and Codes
SBS	Structural Business Statistics
SDDS	Special Data Dissemination Standard
SF	Statistics Finland
SII	Social Insurance Institution of Finland
SKT	Suomen Kansantalouden Tilinpito (Finnish National Accounts)
SPC	Statistical Programme Committee (EU)
STAKES	National Research and Development Centre for Welfare and Health
SSF	Social Security Fund
SVT	Official Statistics of Finland (Suomen Virallinen Tilasto)
TELA	Finnish Pension Alliance
TILKES	Tilastoliitelomake Statistikbilageblankett (Annexed Statistical Form)
UN	United Nations
UNECE	United Nations Economic Commission for Europe

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

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

### **I. NATIONAL ACCOUNTS**

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

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

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

Under the terms of the Statistics Act (280/2004), Statistics Finland (SF)—one of nearly 20 agencies belonging to Finland's National Statistical Service (NSS)—is the general authority for collecting, processing, and disseminating the statistics. SF accounts for 77 percent of the NSS production, measured by expenditure. The NSS's task is to produce official statistics describing economic and social conditions and their development for general use. Outside the NSS, some 60 other agencies publish central government statistics. The Statistics Act does not attribute the responsibility for preparing individual statistics to specific agencies. However, SF has assumed responsibility for compiling the national accounts, and this status quo is not challenged by any other agency.

Legislation is mostly silent on the precise responsibilities of SF with respect to the NSS and the instruments it needs to comply with this task. The Statistics Finland Act (49/1992) merely states that SF shall provide for the general development of official statistics in collaboration with other central government authorities. In practice, it seems the SF achieves much of the coordination and development within the NSS through dialogue with the constituting agencies, founded on common interest and a willingness to cooperate.

SF has defined its objective as developing Finland's system of official statistics into a uniform, good quality, relevant, easy-to-use, and cost-efficient system. In addition, the system should be internationally recognized for its high-quality statistics, information services, and expert services.

SF furthers this objective by (1) maintaining a network of coordination with each administrative sector, (2) preparing a five-year development plan and an annual follow-up report for official statistics, (3) participating in development projects, (4) providing reports and opinions on request, (5) offering training in statistics, (6) defining common

classifications, (7) promoting a uniform electronic statistical service, and (8) coordinating and rationalizing data collections. SF directs a cooperation group for European Union (EU) matters appointed by the Ministry of Finance (MOF) and publishes a quarterly information bulletin entitled *What is New in Official Statistics*.

Of special importance also is the cooperation with register keepers. These include the National Board of Taxes and the Population Register Center, as the main authorities, and the Central Pension Security Institute, the Social Insurance Institution, and the National Board of Patents and Registration. The target here is to ensure that the registers serve as good basic sources for statistics compilation. The so-called register pool comprises, in addition to the main agencies mentioned above, the National Land Survey of Finland, the Ministry of Justice, the Association of Finnish Local and Regional Authorities, and the Helsinki City Information Office. The objectives of this pool are, among other things, to improve the quality of basic register services.

Of further importance is the coordination in data collection with the Bank of Finland (BOF). This coordination became more important when Finland joined the EU and the Economic and Monetary Union. The national division of labor more or less corresponds to the agreement between the European Central Bank and Eurostat on their partition of powers. The objectives here are to ensure the quality of reported data, cost-efficiency, and avoidance of overlapping work.

Finland's membership in the EU implies that European law applies to a large portion of the Finnish statistical program. In this respect, the Council Regulation (EC) No 322/97 is particularly important because it stipulates that national authorities shall be responsible for producing European Community statistics at the national level and that Community statistics shall be produced on the basis of uniform standards and, in specific duly justified cases, of harmonized standards. The production of national accounts statistics is subject not only to EU law but also to verification by the European Commission.<sup>1</sup>

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<sup>1</sup> The European Statistical System (ESS) comprises the Statistical Office of the European Communities (Eurostat) and the statistical offices, ministries, agencies, and central banks that collect official statistics in the European Union Member States, as well as Iceland, Liechtenstein, and Norway. The ESS functions as a network in which Eurostat's role is to lead the way in the harmonization of statistics in close cooperation with the national statistical authorities. The ESS's work concentrates on EU policy areas, but with the extension of EU policies, harmonization has consequently been extended to nearly all statistical fields.

The ESS also coordinates its work with international organizations such as the Organisation for Economic and Co-operation and Development (OECD), the United Nations (UN), the IMF, and the World Bank.

The System finds its legal basis in three major acts, all adopted in 1997. The constitutional basis derives from the Article 285 of the Treaty of Amsterdam, which stipulates that the Council of the European Union "...shall adopt measures for the production of statistics where necessary for the

(continued)

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

There are no indications that SF encounters major problems regarding data sharing and coordination among data-producing agencies. At least once a year, SF organizes meetings with main providers of source data for the national accounts, and the specialists regularly contact their counterparties in other agencies.

In a few cases, however, improvements are still possible, for instance, regarding the exchange of information between the National Board of Customs and SF. Also, users find it a nuisance that in some cases differences appear between the macroeconomic statistics published by SF and the BOF.<sup>2</sup> Specifically, the problem shows in the treatment of construction abroad and vice versa (see further section 4.2.3). The problem also shows in the quarterly financial accounts, prepared by the BOF, that do not add up to the annual financial accounts compiled by SF.

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performance of the activities of the Community.” In February 1997, the Council adopted a regulation defining the division of responsibilities between national and Community statistical authorities. This regulation also laid down the basic conditions, procedures, and general provisions governing official statistics at EU level. A Commission Decision of 1997 clarified the role of Eurostat. It also reaffirmed that Community statistics should be scientifically independent, transparent, impartial, reliable, pertinent, and cost-effective.

Numerous statistical committees and working parties and task forces are involved in the statistical cooperation process in the ESS. The Statistical Programme Committee (SPC) constitutes the most important of these. The SPC is chaired by the Director General of Eurostat and it convenes the heads of the Member States’ national statistical offices. The SPC discusses the five-year statistical program of the Community statistical institutions before it is submitted to the European Parliament and Council for approval, and it approves the detailed annual work program. The SPC discusses draft regulations on statistics before they are submitted to the European Parliament and Council and it has comitology power in much of the statistical legislation. Furthermore, the SPC functions as a forum for discussion of all matters related to the statistical cooperation in the EEA, such as development of common classifications, methodology and definitions, implementation of statistical surveys based on harmonized methods, and collection, analysis, and dissemination of statistical data for the EEA. The European statistical legislation comprises at present more than 150 regulations that are binding and directly applicable in all member states.

A main advisory body closely linked to the ESS is the Committee on Monetary, Financial, and Balance of Payments Statistics (CMFB). This Committee mainly deals with statistics that are necessary for the European Economic and Monetary Union. Its members are high-ranking statisticians from the central banks and statistical offices of each EEA member state.

<sup>2</sup> Studies show that the differences between data published by SF and the BOF are very low by European standards.



In addition, the SF feels it cannot provide individual data to the BOF as long as no laws guarantee that the European Central Bank will not use individual data for nonstatistical purposes. This has a negative effect on finding solutions for common problems like recording processing trade in the balance of payments. It should be noted that the BOF has the right to collect such data itself on the basis of its own legislation.

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

Several legal acts guarantee that individual data should be kept confidential. Under the Statistics Act, statistics shall be compiled so that reporters whom they concern are not directly or indirectly identifiable (unless the data are public by virtue of the Statistics Act). More generally, data obtained by statistical authorities may be released to other parties in two cases: either if permitted by legal provisions explicitly referring to the NSS, or upon express consent of the subject of the data. In addition, (only) statistical authorities have the right to *receive* such individual data if such is deemed necessary for the production of statistics. The Act allows a statistical authority to release confidential data for use in scientific research or statistical surveys if individuals and other statistical units cannot be identified.<sup>3</sup> Violation of the secrecy obligation is punishable under the Penal Code. At the EU level, similar assurances about the confidentiality of individual data are included in Council Regulation (EC) No. 322/97.

Details regarding the protection of information on private individuals are laid down in the Finnish Personal Data Act (523/1999). This Act also institutes a Data Protection Ombudsman. Finally, although the Finnish Constitution and the Act on the Openness of Government Activities (621/1999) grant the right of access to documents or recordings in the public domain, grounds for secrecy include sensitive information on persons, private financial interests, and personal privacy.

The Statistics Act obliges statistics-producing authorities to inform respondents in writing about the intended use of the data, the procedures to be used in producing the statistics, the principles governing whether the provision of data is obligatory or voluntary, the rights of the respondents, the arrangements for protecting the data, and the durations the data will be stored. SF practice is in conformity with these provisions.

SF has implemented procedures to prevent disclosure of individual reporters' data, once received from other agencies or directly collected. It has published guidelines on how to apply the Statistics Act and the Personal Data Act, as well as guidelines on the protection of tabulated enterprise and personal data. A section on data protection is included in the SF publication *Quality Guidelines for Official Statistics* (2002). Micro data, concerning individual persons, released to external agencies for scientific research are first treated to remove variables that would make it possible to directly or indirectly identify individual

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<sup>3</sup> One minor exception does not apply to data described in this report.

persons. Similar procedures are used with respect to sensitive information about units other than individuals.

In SF offices, access to individual data is restricted to staff who require the information in the performance of their statistical duties. Staff review all data prepared for dissemination for possible indirect disclosure of individual data. It should be noted, however, that most source data used by national accounts staff do not relate to individual units.

SF computers are password-protected. Staff offices are not locked, but access to the SF building and entrance to floors is secured by electronic passes.<sup>4</sup> Confidentiality of data during filing and destruction of records is in keeping with the National Archives Act and Statistics Finland's Archiving Guidelines.

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

The Statistics Act requires that the primary exploited sources for statistical purposes shall be the data accumulated in administering general government and the data produced as a consequence of the normal activities of employers, self-employed persons, corporations, and foundations. As indicated above, SF has the right to receive these data under the Statistics Act. In addition, all public and private entities in Finland are obliged to provide SF with data on their finances, products, and staff, as necessary for the production of statistics. Of course, SF has also the legal mandate to collect information directly<sup>5</sup> and, if deemed appropriate, to make the provision of data obligatory. The right of SF to collect data by virtue of the obligation does not extend, however, to data that are kept confidential for reasons of international relationships, public safety, the interest of national defense, or the safety of the state.

The Statistics Act stipulates that a person who willfully fails to provide obliged data or willfully provides false data shall be sentenced to a fine. Nevertheless, SF is allowed to refrain from bringing charges if the violation is regarded as minor, and in practice charges are never filed. It is difficult to say, therefore, whether the penalties included in the Statistics Act effectively deter violations.

The Statistics Act, backed up by actual practice, states that statistical data shall be collected economically and shall cause the respondents the least amount of inconvenience and cost.

Letters accompanying the questionnaires advise respondents that SF provides assistance in completing and submitting forms. The statistical questionnaires themselves mention the

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<sup>4</sup> It is, however, easy to move about in the elevators with other people, which raises the possibility of "tailgating."

<sup>5</sup> Only 5 percent of the information collected by SF is obtained directly (data for 2003).

telephone number, e-mail address, fax number, and postal address of a point of contact. It is clear that SF seeks to secure the cooperation of respondents by writing such letters, limiting the response burden to the extent possible, testing questionnaires before they are sent out, and other measures. However, the *Quality Guidelines for Official Statistics* do not explicitly mention the importance of securing goodwill with respondents.

## **0.2 Resources**

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

In person-years, 40 total staff were allocated to the national accounts division in 2004. Of these, 21 were allocated to the annual accounts, six the nonfinancial government accounts, six the financial accounts, four the regional accounts, and three the quarterly accounts and GDP indicator. It is not easy to assess whether these numbers are adequate. Overall, adequacy seems to be the case. However, the allocation to the quarterly accounts and GDP indicator should be considered too low. Tight staffing makes it difficult to undertake research on the data. The production of analytical publications and methodological papers by the national accounts unit may suffer as a result.

The qualifications of the staff are good. Staff skills are maintained and further developed through internal training,<sup>6</sup> a well-functioning internal consultation and feedback process, and, occasionally, external courses, such as those provided by Eurostat.<sup>7</sup>

A core of experienced staff is maintained, but staff turnover in the national accounts section is considerable: about half of the staff left the section in the last five years, mostly to accept positions elsewhere in central government. Exit discussions suggest that salary plays an important role in the decision to leave SF. SF as a whole has no problem attracting new persons, in view of the office's good image as an employer. The latter is corroborated by the results of the annual Staff Satisfaction Survey. Nevertheless, management is concerned about attracting staff with macroeconomics background. For this reason, among others, a trainee program has been put in place with the University of Helsinki.

Computer resources are good, and the available software is effective for compiling national accounts. Emergency backups, both internal and external, are in place. The office building, furniture, and other on-site facilities are excellent.

Funding for compiling the national accounts is secure in view of the good planning and cooperation between the MOF and SF. However, in view of the drying up of EU support for

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<sup>6</sup> Internal training covers individual statistics as well as the improvement of general skills such as foreign languages, data confidentiality, leadership, and dealing with the media.

<sup>7</sup> Possibilities also exist to follow post-graduate university courses or to take sabbatical leave.

national accounts projects, it seems very difficult to undertake some important development work, such as the compilation of sectoral balance sheets in combination with other changes in assets accounts.

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

A formal review of staff performance is conducted annually in discussions with individual staff members. A standard list of elements contributing to performance in the past period is used in these discussions; for management staff, target performance agreements have been drawn up. Informal feedback to staff is regularly provided, for instance during the weekly meetings of the subunits.

Seeking efficiencies, where possible, is a main concern of SF leadership. Outside expert assistance has been sought to evaluate statistical methodologies and compilation systems, although such outside expertise has not been called in to review the national accounts section.

The full cost of compiling statistics, including staff costs and computers used, is measured annually. This is done for organizational units rather than for individual statistics.

## **0.3 Relevance**

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

SF consults data users to ensure that the national accounts continue to meet user needs. The most important contact in this respect is the Suomen Kansantalouden Tilinpito (SKT) group, consisting of about 15 members, that convenes three times a year. Chaired by the director of the MOF's Economic Department, the group further comprises the BOF and four economic research institutes. Another group—which includes representatives of the MOF (Budget, Tax, and Economic Departments), the National Board of Customs, the Ministry of Agriculture and Forestry, the Board of Taxes, and SF—consults on issues related to the EU's own resources. Further feedback is received during user courses and seminars, when major revisions are planned. Generally, SF encourages users to provide any comments they wish to make, and these comments are monitored closely.

Information on new and emerging data requirements regarding the national accounts is also received during various meetings organized at Eurostat, the OECD, the United Nations Economic Commission for Europe (UNECE), the group of Nordic countries, and the International Association for Income and Wealth.

## **0.4 Other quality management**

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

SF management is highly sensitive to all dimensions of quality. Management thinking on this issue has been influenced by, among other things, the European Foundation for Quality Management (EFQM) excellence model, the International Organization for Standardization (the ISO 9000:2000 standard series for the development of a quality system), the United Nations' *Fundamental Principles of Official Statistics* and *Handbook of Statistical Organization*, as well as Eurostat's work on quality. The *Quality Guidelines for Official Statistics* published by SF in 2002 mention the following quality criteria for application in Finland's official statistics:

- (1) relevance of statistical information;
- (2) correctness and accuracy of data;
- (3) timeliness and promptness;
- (4) accessibility and transparency/clarity of the data;
- (5) comparability of statistics;
- (6) coherence and consistency/uniformity of data; and
- (7) documentation.

This list has to be supplemented with the element "costs," which are regarded more as a limitation on quality than a component of it.

Staff have received training on the various dimensions of quality, and every division includes at least one person focused on total quality management issues (there are 18 such persons in total). The organization's commitment to quality is apparent, among other things, from the abovementioned *Guidelines* and SF's *Annual Report*. In the pilot phase, 45 persons have made self-assessments in line with the EFQM model, and a repeat covering more staff is foreseen for 2006.

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

Processes are in place to monitor the quality of the statistical program. Partly, these processes are required by the performance agreements between the MOF and SF, and between SF's Director General and senior staff. SF uses balanced scorecards (BSs) to produce and implement strategic plans, and to communicate the plans.

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

Quality considerations influence the planning of the statistical program. Examples discussed in detail above are the annual performance agreements between the MOF and SF and the five-year development plan and the annual follow-up report that SF prepares for official statistics.

## **1. Assurances of integrity**

### **1.1 Professionalism**

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

SF reports to the MOF. The Statistics Act, the Statistics Finland Act, and the Council of State Decree on Statistics Finland (1063, 2002) do not formally state that the SF or the authorities belonging to the NSS are professionally independent. However, several legal provisions support SF's professional independence, and SF acts accordingly.

The provisions that support SF's professional independence include the following:

- section 3 of the Statistics Finland Act that stipulates that the organization and operational units of SF are decided upon in "working orders," but that these have to be confirmed by SF's Director General (DG);
- section 1 of the Council of State Decree on SF that gives the DG the right to manage the activities and finances of SF;
- section 5 of the said Decree that lays down that the DG shall be appointed by the Council of State. It also gives the DG the right to appoint the directors of the operating units as well as the other staff unless the working order has assigned the decision to some other official. The Minister of Finance shall appoint a deputy for the DG at the submission of the DG; and
- article 10 of Council Regulation (EC) No 322/97 that requires that Community statistics be governed by impartiality, which is defined as "an objective and independent manner of producing Community statistics, free from any pressure from political or other interest groups, particularly as regards the selection of techniques, definitions and methodologies best suited to the attainment of the objectives as set out."

The formal relationship between the SF and MOF largely focuses on multi-annual agreements, under which SF undertakes to fulfill targets within the budgetary limitations. The performance agreement for the year 2005 covered the following subjects:

- (1) main strategic goals for the next four years;
- (2) targets for operational effectiveness in 2005;
- (3) performance targets for 2005
  - outputs and quality management
  - operational efficiency
  - management and development of intellectual resources;
- (4) resources; and
- (5) validity and follow-up of the agreement.

Approximately 75 agreed performance indicators include, for instance, statistics production (databases and data collection), public image, number of international trips, number of publications, press releases, performance of chargeable services, operational efficiency, staff years, staff training, and staff job satisfaction.

Recruitment and promotion in the organization are based on relevant aptitude and expertise. Comparative exams are not part of the selection procedure. Potential staff are selected on the basis of interviews, papers they have written, and other evidence of aptitude. Choices are made on the basis of written assessments. Formal class-based and on-the-job training in the methodology and compilation methods is provided for staff. Annual personnel training expenditure per member of staff amounted to €971 in 2004.<sup>8</sup>

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

Under the Statistics Act, the choice of data sources, statistical techniques, and methods of dissemination is required to be informed by statistical considerations (sections 3, 10, 11, and 12). There are also responsibilities regarding cost-efficiency and the response burden of data collection (section 4). In particular, section 11 includes the requirement that statistics should be as reliable as possible, shall give a truthful picture, and make use, where possible, of uniform concepts, definitions, and classifications, as well as be timely. Similar provisions can be found in EU legislation.

As indicated above, SF has published a 132-page *Quality Guidelines for Official Statistics*. Its purpose is to set out SF's statistical production procedures and, in doing so, includes chapters on survey processes, estimation, presentation, documentation, and publication, including SF's commitment to quality. All chapters use statistical criteria, which are clearly laid out.

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

Although no specific regulation entitles SF to comment on erroneous interpretation and misuse of statistics, in actual practice SF has an active policy in this matter and its Information Service has issued guidelines on how to respond. A private agency (Esmerk) monitors 32 national and regional newspapers and summarizes references to SF. Other media are also watched. If erroneous interpretation or misuse of statistics is detected, contact is established to explain the issue. In serious cases, the DG may write a letter to the editor; this happens a few times a year.<sup>9</sup>

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<sup>8</sup> This figure excludes interviewer training. Figures taken from *Overview of Statistics Finland*, presentation by Heli Jeskanen-Sundström to IMF ROSC mission, May 12, 2005.

<sup>9</sup> In less serious cases, the person responsible for the task signs the reply.

## 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 legislation governing SF is available among other places on its website and in its library.

The relevant legislation and guidelines are difficult to find on SF's website, at least in the English version.<sup>10</sup> *Legislation* is not a heading in the site index. The key Statistics Act (280/2004) is not available on the site; instead there is a hyperlink to the repealed Statistics Act (62/1994). Unfortunately, this hyperlink takes the user to the Council Regulation (EC) 322/97, rather than the 1994 Act. The current and previous versions of SF's *Codes and Guidelines on Professional Ethics*, on the other hand, are in the English language version of the SF's website.<sup>11</sup>

Finland subscribes to the IMF's Special Data Dissemination Standard (SDDS). The IMF's Dissemination Standards Bulletin Board (DSBB) includes, under the heading of "Integrity," the terms and conditions under which SF's statistics are produced, including those relating to the confidentiality of individually identifiable information.

Statistical publications always include SF's general contact information, and many include references where more specific information can be found.

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

Once a year the MOF is given in advance access to the preliminary annual national accounts data for the preparation of its *Economic Survey* and for making forecasts relative to the Excessive Deficit Procedure notification that has to be provided to the EU in February. The Ministry receives these data about two weeks before their release, so they concern work-in-progress estimates. The advance access is mentioned in Finland's SDDS metadata published on the IMF's DSBB.

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

Official statistical publications carry not only SF's logo but also the mark *SVT*, explained on the back as indicating an official statistic of Finland. The logo also includes the name Statistics Finland alongside in Finnish, Swedish, and English. Publications include a statement that quoting is encouraged, provided SF is acknowledged as the source. SF's

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<sup>10</sup> The Swedish and English versions are being revised. The Finnish version of the site is more complete, even though reportedly still difficult to search.

<sup>11</sup> Available on <http://tilastokeskus.fi/tk/tt/laatuutilastoissa/guidelines.pdf>.



*Quality Guidelines* note the criteria for a publication to be an SVT, which includes production by an agency or institution on the list of SVT producers and assumption of responsibility by the publishing agency for its accuracy and content (p. 108). SVT publications cannot be published under the name of the author, thus distinguishing between, and allowing the flexibility of, research working papers.

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

Advance notice is given to the public when major changes are introduced in methodology, sources, and statistical techniques. If the changes are very large, briefings for the press may be prepared.

### **1.3 Ethical standards**

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

A culture of professionalism and independence is apparent from the code of professional ethics SF publishes as its *Guidelines on Professional Ethics*, Handbook 30b (Helsinki, 2002).<sup>12</sup> The Handbook is well-written, clear, and comprehensive on the ethical issues facing a statistical agency. It outlines SF's obligations to society (chapter 2), respondents (chapter 3), customers (chapter 4), and funders and employers (chapter 5). It also draws attention to possible conflicts between such obligations, such as resource constraints. The Handbook draws attention to conflicts between ethics and legislation and discusses how even strict abidance by the law may be unethical.

All employees are given a copy of this handbook on recruitment, and all employees were circulated a copy when it was published in 2002. It can also be found on SF's website.

## **2. Methodological soundness**

### **2.1 Concepts and definitions**

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

The SF follows the *European System of Accounts 1995 (ESA 95)* as the general framework for compiling the national accounts statistics. However, a few deviations from the *ESA 95* guidelines include the non-allocation of financial intermediation services indirectly measured

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<sup>12</sup> Available on SF's website [http://www.tilastokeskus.fi/tk/tp/tkesittely\\_etiikkaopas\\_en.pdf](http://www.tilastokeskus.fi/tk/tp/tkesittely_etiikkaopas_en.pdf). Preceding this was a *Code of Professional Ethics*, 1993. This was based upon the *Declaration on Professional Ethics* adopted by the International Statistical Institute (ISI) in 1985—also on SF's website: [http://www.tilastokeskus.fi/tk/tp/tkesittely\\_etiikkaopas\\_en.pdf](http://www.tilastokeskus.fi/tk/tp/tkesittely_etiikkaopas_en.pdf).

(FISIM) and the recording of growth in cultivated assets at the moment of harvest rather than at the moment of growth. This is particularly an issue for cultivated forests, because agricultural growth almost entirely takes place in the third quarter of the year and hardly gives rise to recording work in progress.<sup>13</sup> SF has made considerable progress in addressing these problems and will introduce the revised data during 2005.

## 2.2 *Scope*

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

SF compiles all the tables and accounts that the Intersecretariat Working Group on National Accounts (ISWGNA) determined as a minimum requirement for the implementation of the *System of National Accounts 1993 (1993 SNA)* on a regular basis. This concerns 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 (until net lending).

SF also regularly compiles 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; and
- annual supply and use tables.

Supply and use tables compiled in Finland refer only to the data for the most recent final year at current prices.

The Finnish national accounts do not yet include other changes in asset accounts or full balance sheets, although annual data on financial flows and stocks are published (in October) in accordance with the *ESA 95* and capital stock data are worked out. The national accounts division also prepares regional accounts, including regional input/output tables (the last such tables referred to 2002; a project is underway for 2005). In addition, SF prepares tourism

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<sup>13</sup> Until recently, SF considered the growth of forests as additions to uncultivated natural assets. According to the *1993 SNA*, such growth should not be recorded in output but rather as an other change in the volume of assets.

satellite accounts and, in cooperation with the National Consumers' Research Center, prepares a satellite for household production.

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
- workers who work part of the year abroad.

The Finnish national accounts also define the production boundary in accordance with current international recommendations. So, the following items are in the scope for output (even if the estimates may not achieve full coverage):

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

The asset boundary used in the Finnish national accounts is not entirely in accordance with the *1993 SNA*. Specifically:

- valuables are not recognized as such and historic monuments are not included; and
- as mentioned earlier, output does not include agricultural work-in-progress.

These deviations in scope are kept under review.

On the other hand, the following items are correctly included in the definition of intangible assets:

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

## **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*. Two additional subsectors are distinguished: housing corporations (the term used for units described in some other countries as condominiums) and employment pension schemes. The industrial classification used is based on the Statistical Classification of Economic Activities in the European Communities (NACE) Rev 1. and the national product classification derived from the Classification of Products by Activity (CPA) to classify products. In addition, the Classification of Individual Consumption by Purpose (COICOP) is used to break down household final consumption, and the Classification of the Functions of Government (COFOG) to classify functions of government.

## **2.4 Basis for recording**

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

In general, valuation for recording flows and stocks is in accordance with the *1993 SNA*. For instance, market output is valued at basic prices and intermediate consumption at purchasers' 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. The totals of merchandise imports and exports are valued at f.o.b., in the case of imports making use of coefficients for the margin between c.i.f. and f.o.b. determined by the National Board of Customs every five years. Transactions in foreign currency are converted using the midpoint exchange rate prevailing in the market at the moment they take place.

While most output for own final use (for instance, services of owner-occupied dwellings and own-account agricultural output) is correctly recorded at equivalent market prices, the own-account production of machinery and equipment is recorded at cost, however. This kind of production is not very significant in Finland. In addition, transfer pricing is not adjusted to market valuation if detected.

Pending decisions at the international level on the treatment of stock options granted by employers to staff, the value of employee stock options has not been recorded as part of compensation of employees. As a service to users, SF publishes memorandum items of amounts for employee stock options expressed in euros.

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

With relatively small exceptions, the Finnish national accounts follow the *1993 SNA* recommendations regarding timing. In central government, a few expenditures are still recorded on a cash basis, but they are an exception.

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

Transactions between establishments (local kind of activity units) within the same enterprise are recorded on a gross basis, as recommended in the international guidelines.

**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 available sources are broadly sufficient to prepare accurate and reliable national accounts statistics. In line with the Statistics Law and SF policy, SF extensively uses administrative data. Where necessary, the administrative sources are supplemented with information gathered through surveys.

Administrative sources have important advantages. One of these is good, often nearly complete, subject coverage. This makes it possible to SF to directly estimate the economic flows and stocks, rather than have to rely on extrapolations with indices or ratios derived from a benchmark survey. Other advantages, although not related to accuracy and reliability, are low response burden of data providers and low costs to the compiling agency.

The disadvantages of administrative statistics are that the source data may not provide the required detail and that the concepts used may not correspond to those used in macroeconomic analysis. For instance, it may be difficult to distinguish between intermediate consumption and gross fixed capital formation in source statistics. Also, the type of unit, valuations, and timing may not correspond to those sought by the statistician.

*Annual enterprise/establishment statistics*

• *Register*

For the production approach to estimating GDP, it is essential to have a complete and up-to-date business register. In Finland, the Business Register (BR) performs this function. The BR covers all enterprises, self-employed persons, and nonprofit institutions in their capacity of employers. Farms are not included, but they will be in 2006. Central and local government units are recorded in a separate register. The BR is fed from the Value Added Tax (VAT) Payment Register and the pay-as-you-earn Employee's Advance Tax Declaration Register. Updates with new units occur every quarter. The units registered are both enterprises and establishments.

- *Sources*

Many of the sources for the annual national accounts go under the name “Structural Business Statistics” (SBS), but actually they are a combination of at least three sources providing quite different types of information:

First, despite the suggestion in its name, the BR is a major source of data, in particular of turnover and number of employees, collected by means of an annual survey.

A second major source consists of data from the business income tax register (EVR), which collects profit and loss statements and balance sheet data. The data are edited and processed by SF. Omitted or erroneous data are imputed on the basis of similar enterprises. However useful, the administrative character of the EVR has two disadvantages, namely, (1) it refers to enterprises rather than the establishment-type units used for estimating GDP, and (2) the breakdown of turnover and costs by type of goods and services falls short of national accounts needs. SF adds some additional sheets (TILKES) to the EVR asking for further basic information, in particular details on income and expenditure, a breakdown of capital formation, and the number of employed persons. However, TILKES still falls short of providing sufficient details on the breakdown of intermediate consumption.

The third major source of basic data, direct surveys, corrects these disadvantages. Two statistics should be mentioned here. The first is SF’s “establishment statistics,” which are directed at producers active in mining and quarrying; manufacturing; electricity, gas, and water supply; and construction. The units surveyed are enterprises with 20 or more workers. At the level of the enterprise, profit and loss statements and balance sheet information are gathered; for constituting establishments, breakdowns of turnover and expenditure are collected. The second one is the so-called PRODCOM survey, also primarily gathering information about establishments in manufacturing enterprises. The cut-off here is establishments with 10 persons employed. The data gathered are output and raw material inputs in values and quantities according to the CPA (roughly 6,000 headings). This survey is conducted by force of the EU’s PRODCOM regulation. The data generated are particularly useful in balancing the supply and use tables. It would be useful if similar information as collected for manufacturing would be gathered for the service industries as well.

The surveys conducted by SF answer all requirements for sound information gathering.

Main Sources for the Annual Accounts (for the Final Estimates)

<b>Production approach</b>		
<b>NACE Rev 1. section</b>	<b>Main source for output</b>	<b>Main source for intermediate consumption</b>
Agriculture, hunting, and forestry	- Agriculture: Quantities and prices gathered by Ministry of Agriculture and Forestry Information Center - Forestry: Felled trees and prices by species from The Finnish Forest Research Institute	- Data from producers (e.g., of feed mix) or from agricultural enterprise and income statistics (sample) - EVR/TILKES
Fishing	- The Finnish Game and Fisheries Research Institute (professional, recreational fishing and fish farming output and prices)	- EVR/TILKES
Mining and quarrying	- Establishment/PRODCOM survey	- Establishment/PRODCOM survey, EVR/TILKES
Manufacturing	- Establishment/PRODCOM survey	- Establishment/PRODCOM survey, EVR/TILKES
Electricity, gas, and water supply	- Establishment/PRODCOM survey - Local government finance statistics	- Establishment/PRODCOM survey, EVR/TILKES
Construction	- Statistics Finland's construction of buildings statistics - Establishment/PRODCOM survey	- Establishment survey - Labor Force Survey - Cost price index
Wholesale and retail trade, repair of motor vehicles, and personal and household goods	- Establishment/PRODCOM survey - Sales statistics	- EVR/TILKES - Direct surveys
Hotels and restaurants	- Establishment/PRODCOM survey	- EVR/TILKES, the Finnish Hotel and Restaurant Association
Transport, storage, and communication	- BR - Financial statement of the Finnish Railways Company - Statistics of the Finnish Bus and Motor Coach Association - Reports of traffic companies in Helsinki, Tampere, Turku - Finland's gross freight statistics - Civil Aviation Administration - Telecommunication statistics of the Ministry of Transport and Communications	See sources for Output - EVR/TILKES (road transport) - Specifications received from communication agencies
Financial intermediation	- Credit institutions statistics and Investment fund statistics by Statistics Finland - BOF financial statements - Statistics of the Insurance Supervision Authority - Financial statements data of insurance units - Mutual fund statistics	See sources for Output - EVR/TILKES

<b>Production approach</b>		
Real estate, renting, and business activities	<ul style="list-style-type: none"> <li>- BR</li> <li>- Building construction statistics</li> <li>- Rent statistics</li> <li>- Building stock data</li> <li>- Household budget survey (holiday homes)</li> <li>- Association of Real Estate Agents</li> </ul>	- EVR/TILKES
Public administration and defense; compulsory social security	<ul style="list-style-type: none"> <li>- Central Government accounting data</li> <li>- Local government financial statistics</li> <li>- Social Insurance Institution</li> <li>- Insurance Supervision Authority</li> <li>- Insurance company statistics</li> </ul>	See sources for Output
Education/ Health and social work	<ul style="list-style-type: none"> <li>- BR (market production)</li> <li>- Central Government accounting data</li> <li>- Local government financial statistics</li> <li>- Social Insurance Institution</li> <li>- Insurance Supervision Authority</li> <li>- Insurance company statistics</li> </ul>	See sources for Output - EVR/TILKES
Other community, social, and personal service activities	<ul style="list-style-type: none"> <li>- BR</li> <li>- Financial statements Finnish Lottery Company and Finland's Slot Machine Association</li> <li>- Central Government accounting data</li> <li>- Local government financial statistics</li> <li>- Social Insurance Institution</li> <li>- Insurance Supervision Authority</li> <li>- Insurance company statistics</li> </ul>	See sources for Output - EVR/TILKES
Net taxes less subsidies on products	<ul style="list-style-type: none"> <li>- Central Government accounting data</li> </ul>	See sources for Output

<b>Expenditure approach</b>		
Household final consumption expenditure	<ul style="list-style-type: none"> <li>- Household budget survey</li> <li>- Sales statistics</li> <li>- Commodity flow method</li> </ul>	
Final consumption expenditure of nonprofit institutions serving households	<ul style="list-style-type: none"> <li>- Commodity flow method</li> <li>- Financial statements of Evangelical Lutheran Church, etc.</li> </ul>	
Government final consumption expenditure	See sources for Output	
Acquisitions less disposals of tangible fixed assets	<ul style="list-style-type: none"> <li>- SBS</li> <li>- Building construction statistics</li> <li>- Central Government accounting data</li> <li>- Local government financial statistics</li> <li>- Supplementary data from industries</li> </ul>	
Acquisitions less disposals of intangible fixed assets	<ul style="list-style-type: none"> <li>- Mineral exploration survey</li> <li>- Commodity flow, data by industries (software)</li> <li>- SBS</li> </ul>	
Additions to the value of non-produced non-financial assets	<ul style="list-style-type: none"> <li>- Agricultural and forestry statistics</li> </ul>	



<b>Expenditure approach</b>	
Changes in inventories	- Manufacturing and trade statistics of inventories - Information of public inventories and agriculture - SBS
Acquisitions less disposals of valuables	Not worked out
Exports and imports of goods	- Customs data, Intrastat data
Exports and imports of services	- International trade in services survey - Tourism statistics for Finnish households - Border interviews of foreign tourists - Transport statistics

### *Household surveys*

SF conducts a household budget survey (HBS) normally at five-year intervals. The HBS's target group is the entire population of households residing in Finland, excluding persons living in institutions. The population register is used as the sampling frame; the sample size has been between 7,000 and 9,000 households. Double-stage stratified sampling is used for the sample array. The survey collects data over a full period of 12 months, so seasonal expenditures are correctly reflected. The response rate is reasonable for this type of survey: in 2001, 37 percent of the households refused to participate, but only 7 percent dropped out during the two-week phase of bookkeeping. The HBS questionnaires, which included sections for each household member separately, as well as other aspects of the survey were based on sound design principles.

### *Government finance statistics*

Regarding sources on government transactions, a distinction must be made between central government and local government.

Statistics for central government are prepared by the State Treasury on the basis of accounting data received from so-called accounting offices. They include both budgetary units and extrabudgetary funds, so coverage is complete. Defense-related expenditure is included, as is information on capital formation. The financial statements and reports sometimes provide only summary information on intermediate consumption. The distinction between market and nonmarket activities also is not always easy to make. Most data are recorded on an accrual basis.

Statistics for the municipalities and joint municipal authorities are compiled by SF. Coverage is complete and also includes market activities carried out in quasi-corporations. Local authorities are to a large extent free in choosing their bookkeeping systems; SF is able to cope with this complication, however.

*Price statistics*

The price statistics available to the national accountants include the monthly consumer price index (CPI) as well as monthly producer price indices (PPIs) for domestic supply, wholesale trade, exports, imports, and recently also for services. The subindices are broadly consistent with the variables to be deflated, or inflated, in the national accounts. The methodological base of the price indices compiled by SF is sound.

*Sources for quarterly GDP*

In Finland, a large number of monthly and quarterly indices support the compilation of quarterly accounts. These indices are consistent with the annual account to the extent that no adaptations need to be made before they enter the quarterly accounts compilation process.

The indicators available for the production approach should nearly all be considered good. Some indicators for the expenditure approach are less than satisfactory, among which are the quarterly imports and exports of services, for which there are very few direct sources available.

**Main Sources for the Quarterly Accounts**

<b>Production approach</b>		
<b>NACE Rev 1. section</b>	<b>Main source</b>	<b>Assessment</b>
Agriculture, hunting, and forestry	- Annual estimate of production to EU Commission (third quarter crops) - Slaughter, milk, egg statistics - Elks hunted - Felling statistics - Producer price index - Price of wood	Good
Fishing	- Administrative records for quota of fish-catches - Producer price for fish	Good
Mining and quarrying	- The volume index of industrial production - Turnover index - Producer price index	Good
Manufacturing	- The volume index of industrial production - Turnover index - Producer price index	Good
Electricity, gas, and water supply	- The volume index of industrial production - Turnover index - Producer price index	Good

<b>Production approach</b>		
Construction	<ul style="list-style-type: none"> <li>- The volume index of new buildings</li> <li>- The volume index of maintenance and reconstruction</li> <li>- The volume index of civil engineering</li> <li>- Turnover index</li> <li>- Price index of construction</li> <li>- Price index of civil engineering</li> </ul>	Good
Wholesale and retail trade, repair of motor vehicles, and personal and household goods	<ul style="list-style-type: none"> <li>- Wholesale and retail trade statistics</li> </ul>	Good
Hotels and restaurants	<ul style="list-style-type: none"> <li>- Accommodation statistics</li> <li>- Sale statistics of licensed restaurants</li> <li>- Turnover index</li> <li>- Consumer price index</li> </ul>	Good
Transport, storage, and communication	<ul style="list-style-type: none"> <li>- Turnover index</li> <li>- Freight transportation statistics</li> <li>- Main road traffic statistics</li> <li>- Freight and passenger traffic on Railways</li> <li>- Flight-kilometers</li> <li>- Sea traffic statistics, passengers and freight</li> <li>- Cost index of truck transport</li> </ul>	Good  Less than satisfactory for communication
Financial intermediation	<ul style="list-style-type: none"> <li>- Quarterly bank statistics</li> <li>- Interim reports of banks</li> </ul>	Good
Real estate, renting, and business activities	<ul style="list-style-type: none"> <li>- Turnover index</li> <li>- Labor force survey (for checking and supplementation)</li> <li>- Producer price index</li> <li>- Index of billing costs (for checking and supplementation)</li> </ul>	Good
Public administration and defense; compulsory social security	<ul style="list-style-type: none"> <li>- Payroll data of public sector</li> <li>- Price index of wage and salary earnings</li> </ul>	Good
Education/ Health and social work	<ul style="list-style-type: none"> <li>- Payroll data</li> <li>- Labor force survey</li> <li>- Turnover index (market activities)</li> <li>- Price index of wage and salary earnings</li> </ul>	Good
Other community, social, and personal service activities	<ul style="list-style-type: none"> <li>- Payroll data</li> <li>- Labor force survey</li> <li>- Turnover index (market activities)</li> <li>- Price index of wage and salary earnings</li> </ul>	Good
Net taxes less subsidies on products	<ul style="list-style-type: none"> <li>- Volume indicators</li> <li>- Tax-tariff index</li> </ul>	Good

<b>Expenditure approach</b>		
<b>Expenditure category</b>	<b>Main source</b>	<b>Assessment of coverage</b>
Household final consumption expenditure	<ul style="list-style-type: none"> <li>- Wholesale and retail trade statistics</li> <li>- Quarterly production calculations</li> <li>- Car registration data</li> <li>- Sale of alcoholic beverages</li> <li>- Sale of gasoline and heating oil</li> <li>- Consumption of electricity</li> <li>- Consumer price index</li> </ul>	Good
Final consumption expenditure of nonprofit institutions serving households	<ul style="list-style-type: none"> <li>- Church payroll data</li> <li>- Turnover index<sup>14</sup></li> <li>- Wage and salary index</li> </ul>	Satisfactory
Government final consumption expenditure	<ul style="list-style-type: none"> <li>- Quarterly production calculations (first estimates)</li> <li>- Quarterly short term public finance statistics</li> </ul>	Good
Acquisitions less disposals of tangible fixed assets	<ul style="list-style-type: none"> <li>- Volume index of new buildings</li> <li>- Volume index of maintenance and reconstruction</li> <li>- Volume index of civil engineering</li> <li>- Price index of construction</li> <li>- Price index of civil engineering</li> <li>- Volume index of industrial production</li> <li>- Foreign trade statistics</li> <li>- Producer price index</li> <li>- Car registration data</li> </ul>	<p>Good</p> <p>Less than satisfactory for machinery and equipment</p>
Acquisitions less disposals of intangible fixed assets	<ul style="list-style-type: none"> <li>- Turnover index</li> <li>- Index of wage and salary earnings</li> </ul>	Satisfactory
Additions to the value of non-produced nonfinancial assets	Not worked out	
Changes in inventories	<ul style="list-style-type: none"> <li>- Inventory statistics of manufacturing industry</li> <li>- Producer price index for manufacturing</li> <li>- Inventory statistics for trade (sample)</li> <li>- Basic price index for domestic supply</li> <li>- Raw material inventories of oil companies etc.</li> <li>- Maintenance and Supply Center inventories (strategic inventories)</li> <li>- Data on Intervention Fund inventories (agriculture)</li> </ul>	Less than satisfactory
Acquisitions less disposals of valuables	Not worked out	
Exports and imports of goods	<ul style="list-style-type: none"> <li>- Balance of payments</li> <li>- Import and export price index</li> </ul>	Good
Exports and imports of services	<ul style="list-style-type: none"> <li>- Balance of payments</li> </ul>	Less than satisfactory

<sup>14</sup> The turnover index is compiled on the basis of VAT information.

*Ad hoc studies and versatility*

Special one-off surveys to supplement the regular sources of basic information are quite sparse. Case studies are made into the activities of nonprofit institutions, and studies into the hidden economy were conducted several years ago. Some surveys originally set up as ad hoc studies are now conducted periodically, for instance those on information technology and on research and development.

Periodic meetings to review the current source program and identify new developments are held both internally and with external representatives. Examples are the following:

- the cooperation group in SF: group between the national accounts unit and the most important source statistics;
- the working committee for statistical production, in which directors of units participate;
- the cooperation group with business organizations, chaired by the director of the Business Trends Department;
- the SKT group for national accounts, comprising important users of the statistics; and
- the Own Resources (OR) group reviewing requirements related to the own resources of the EU.

In view of the importance of the national accounts data for various transfers and policies in the EU, any changes in international standards, guidelines, and good practices are closely monitored.

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

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

Nevertheless, some issues should be mentioned:

- the administrative data on which much of the national accounts are based include enterprises that do not use the calendar year for fiscal reporting. It is not always possible to convert these data to calendar years.
- the valuation of inventories in business accounting data is different from what is required in the national accounts. No information is available on the valuation system businesses use (LIFO, FIFO, etc.) that would allow a better founded conversion to current market prices.
- except for the units covered by the establishment surveys, insufficient information is collected about the composition of intermediate consumption. This includes several quasi-corporations in the public sector.
- Sources for the government sector often do not allow making clear distinctions between transaction categories, such as between sales and taxes.

- The quality of some sources for transactions with the rest-of-the-world are rather weak. This is true for several services and income categories, especially for the quarterly data. It is advisable that a study be conducted into the consistent recording of processing trade. Any unrecorded or double-recorded processing flow will be, at least in principle, reflected for its full value in the estimate of GDP.

Two issues, expected to cause problems in source materials in the near future are the emergence of the European Company and changes in bookkeeping practices following new International Accounting Standards Board (IASB) recommendations.

The coverage of total economic activities in terms of value added by the data sources is good.

### *3.1.3 Source data are timely*

For the annual accounts, no particular problem arises with timeliness of the source data. Some of the quarterly account sources could further improve their timeliness, but overall the situation is quite good. If turnover data are late, compilers can often use two months of VAT data as an approximation.

## **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*

Sample survey data, insofar as used, are derived using scientifically sound methods. All source data are reviewed for mistakes and breaks in the time series before being used as an input. Checks conducted include for instance the review of annual changes, review of possible changes in bookkeeping practices, and comparison of certain ratios, like productivity, with similar establishments. Editing procedures include the detection and analysis of outliers; improbable values are confirmed with the providers. The review implies that some source data may be rejected, including those received from large companies.

At a more aggregate level, comparisons are made with the results of other statistics, such as the labor force survey.

Administrative data are edited just like information from other sources. In some cases, the SF lacks the capacity to review in detail detected problems, such as inconsistencies found in processing trade with the rest of the world or the methodology to quarterize imports and exports of services. Redressing such problems is left to the compiler of the basic statistics.

### 3.3 *Statistical techniques*

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

As a rule, source data are in the first instance treated by sectoral specialists, employing sound compilation practices. For instance, the specialists investigate outliers by checking with the source rather than simply adjusting them. Imputation for missing entities is very limited, because full or nearly full coverage is a positive aspect of relying on administrative data. Even for very small units, usually some fiscal information is available that forms a sound basis for grossing up information on larger units, thus indicating an estimate for the total. The sectoral specialists also compare the basic data with external information on the branches of industry on which they are working.

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

##### *Hidden economy*

Estimates for the hidden economy are made, but these are very small and based on probably outdated studies.

##### *Production approach procedures*

Output estimates are compiled at a satisfactory level of detail, namely 182 industries (the publication level is 70 industries). Intermediate consumption is compiled at the same level, which is sufficient. In the estimates for value added, both for the total and the level of the most important industrial groups, the reliance on fixed ratios is negligible.

The output of owner-occupied dwellings is valued as the estimated rentals that tenants would pay for similar accommodation. In fact, the full value of both real and imputed rents is computed uniformly on the basis of a considerable breakdown of the housing stock by quality characteristics and a specific survey to obtain letting prices. The output of holiday homes is calculated on the basis of cost elements.

Growth of cultivated plants and fish is not treated as work-in-progress. This procedure is not in agreement with 1993 SNA recommendations, but it should be noted that the growing season of crops nearly fully coincides with the third quarter of the year. Therefore, agricultural work-in-progress would be very small anyhow. SF is expected to soon include estimates for work-in-progress regarding forests as a response to observations made by Eurostat.

For national accounts purposes, adjustments need to be made to business statistics because these provide data on turnover rather than output. One of the required adjustments concerns changes in inventories. Although SF adjusts the opening and closing valuation of inventories towards average period prices, this procedure would only correctly remove holding gains for

changes in inventories if enterprises would value their inventories at current market prices, which they do not.

The consumption of fixed capital is in accordance with good practice calculated with the perpetual inventory method. Long series of capital formation by private enterprises, government units, and nonprofit institutions are available from SF.

Nearly all basic statistics use accrual accounting, so adjustments to cash-based data are not necessary. The very few central government expenditure data that are still recorded on a cash basis are not converted to accrual basis. Taxes on products are recorded on a time-adjusted cash basis, which is in accordance with Eurostat guidelines.

Double deflation as recommended by the *1993 SNA* is only used for agriculture and some services. This is a problem because SF presently presumes that prices of intermediate consumption change in parallel with the prices of output, which obviously is not necessarily the case. However, SF intends to publish all real value added calculated on the basis of double deflation in December 2005.

Volume measures of taxes and subsidies on products are correctly estimated by applying the base-year margin rates to the corresponding volume of sales. A similar procedure is used for calculating the output value of trade margins.

GDP volume change is not yet measured using annual chain indices, which is regarded by the *1993 SNA* as the superior method (introduction of chaining is equally foreseen for December 2005). Up until now, the base year for the constant price calculations is changed every five years, which is in accordance with good practice.

#### *Expenditure approach procedures*

None of the expenditure components are derived as residuals, including household final consumption expenditure, gross fixed capital formation, and changes in inventories. This method supports the accuracy of the national accounts given that the expenditure method can be used to validate and make adjustments if necessary to the production approach to estimate GDP (the latter is considered the most reliable in Finland). However, as is the case in other countries, some elements of expenditures are estimated using the commodity-flow method.

All expenditure categories are calculated at a sufficient level of detail. Fixed ratios are hardly used in the estimation of any of the main expenditure categories.

The following specific issues are properly addressed:

- government final expenditure excludes incidental sales; and
- expenses of residents abroad are included in household final consumption expenditure and in imports; conversely expenditures of nonresidents in the economy are excluded



from (domestic) household final consumption expenditure and included in exports. These data are derived from border or tourism surveys.

However, stores of wealth in the shape of valuables are not separately distinguished, and moreover the data may presently be incomplete. Separate estimates for net acquisitions of valuables are expected to be published in December 2005.

SF has dedicated price information at its disposition for deflation or inflation of expenditure categories at a fine classification level. The implicit deflator of household consumption is consistent with the CPI, taking into account definitional differences, such as the inclusion of nonmonetary transactions in the national accounts, the identification of insurance services within net premiums paid, etc. Government final consumption expenditure is correctly deflated by its cost components. If it is assumed that the calculation of changes in inventories at current prices would be done correctly, then the deflation of changes in inventories also is correct.

#### *Specific quarterly compilation techniques*

An appropriate benchmarking technique is used, namely the Bassie method, to combine annual estimates with the quarterly indicators.

The Finnish compilation system calculates, as the IMF's *Quarterly National Accounts Manual* recommends, the quarterly series from seasonally unadjusted source data, thus providing unadjusted quarterly series. Only once the unadjusted data have been derived, the series are deseasonalized. Use is made of the TRAMO/SEATS methodology, which is the method promoted by Eurostat.

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

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

The data compiled from the main sources by the sectoral specialists are checked against other independent sources.

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

Intermediate data—that is, the data before the balancing process takes place—are thoroughly checked by the sectoral specialists. In particular, attention is given to the following aspects:

- changes in value, volume, and price from the previous year;
- changes from the previous national accounts estimate for the same period;
- consistency between wages and salaries and information on employment;
- consistency between labor input and output, as well as other inputs;
- the development of real disposable income;

- the saving rate: relation of savings to disposable income for households and general government; and
- net lending levels.

As the data near completion, examination of the individual calculations takes place in small groups of three to six persons. The data discussed in these groups are accompanied by explanatory notes. If deemed appropriate, adjustments to the initial calculations are made.

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

Any statistical discrepancies are investigated and methods are sought to come to the most accurate description of reality. Nevertheless, some statistical discrepancy usually remains between the production and expenditure approaches. GDP is then taken to be most accurately measured following the production approach, and the remaining statistical discrepancy is included in the publications. In the annual accounts, the discrepancy should not be larger than 1 percent of GDP at current prices, and its contribution to the annual change of GDP equally not larger than 1 percent.

The use of supply and use tables for balancing the data at a detailed level has made it possible to remove the statistical discrepancies for the final estimates at current prices. SF intends to employ the supply and use framework also for balancing the final estimates at constant prices. These data are expected to be published in December 2005.

The national accounts estimates are not validated against unofficial estimates, because such estimates based on reliable methodologies simply are not made. However, studies are made on possible bias in the SF data itself. One such study, which related to the years 1982-93, seemed to indicate that prices for supply had an upward bias, and prices for expenditure a downward bias. This study contributed to the decision to start using the supply and use framework for the data at constant prices.

## **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 differences between the initial estimates and the revised or final estimates are reviewed in an effort to learn from the changes. SF provides a short explanation of the changes made in the current price estimates to Eurostat. However, SF hesitates to adjust its initial estimates for the annual data on the basis of historical trends. Rather it seeks improvements in sources or methodologies.

The revisions made to the quarterly accounts are tabulated and published from time to time (once or twice a year). The analysis focuses largely on revisions to the estimates for GDP. In the quarterly accounts, just like the annual accounts, first estimates are not adjusted for

possible systematic bias. Occasionally however, the indices used are adjusted for unlikely changes; this has happened, for instance, regarding price indices. It turns out that users do not appreciate such adjustments, possibly because they influence their own provisional estimates.

The SF maintains adequate documentation on revisions in the estimates.

## **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. A monthly estimate for total output is also made.

#### *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. SF publishes main quarterly aggregates in 70 days (58 for the fourth quarter).

A flash quarterly estimate of GDP is available in 43 days. The monthly indicator of GDP is published with a timeliness of about 50 days; quarterly government accounts are available in 90 days. The first annual accounts, partially based on the quarterly data, are published at the end of February following the reporting year  $t$ . At the same time, the first version of complete sector accounts is published. The preliminary version of the annual accounts is published in July of the year  $t+1$  (referred to as the “summer calculations”).

## **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 small;<sup>15</sup>
- 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, except that the seasonally adjusted quarterly accounts for all categories may not exactly add up to the annual totals, owing to the method used for deseasonalization.

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<sup>15</sup> The statistical differences between the production approach and the expenditure approach have been reduced to zero for the final annual estimates at current prices since 1995.

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

Fully consistent national accounts time series are available for a long period, namely from 1975 onward. In addition, historic data have been constructed back to the year 1860. Methodological notes identify and explain main breaks and discontinuities in time series and their causes, as well as adjustments made to maintain consistency over time. This is done in the hardcopy publications and on the Internet (major breaks may also be indicated in press releases).

Unusual changes in economic trends are explained in the analytical text included in the publication. However, these explanations are not provided in or with the database accessible to users.

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

The rest-of-the-world account is nearly fully consistent with the balance of payments compiled by the BOF in close cooperation with SF and the National Board of Customs. A disparity in the imports and exports of services is thought to have two origins. First, there is a difference between how the *ESA 95* treats construction activities abroad (always as production of the country where the work is done) and how the *1993 SNA* and the *Balance of Payments Manual*, fifth edition treat these activities (as services if the construction company is only temporarily active in the country where the work is done). Second, inconsistencies are suspected between the SF source for imports and exports of services and the BOF source for foreign direct investment. These inconsistencies cannot be investigated because SF is not permitted to provide individual data to the BOF, and conversely SF does not have enough capacity to analyze in detail data collected by BOF. As a result of the above, there is a difference between the current external balance and external net lending/borrowing publications between SF and BOF.

The national accounts data are consistent with government finance statistics data. SF has a main role in compiling and disseminating government finance statistics.

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

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

The periodic revisions of the data follow a regular and transparent schedule that is known to the public. Quarterly data are normally revised during the current year and are revised further after each publication of annual accounts to ensure consistency between the two sets.

The first annual accounts (which include sector accounts) on the year  $t$  are published in February of year  $t+1$ . They are followed by the preliminary accounts, which include functional breakdowns. These are published in July of the year  $t+1$  (referred to as the

“summer calculations”) and without modifications also in January of year  $t+2$ . The final version is published in January of year  $t+3$ . In the final version, the statistical difference between the production and expenditure approaches at current prices has been removed with help of the construction of supply and use tables. These tables were published one month earlier, namely in December of year  $t+2$ .

The timing of the February issue and summer calculations are set to accommodate in particular the MOF for the preparation of their *Economic Survey* and the budget.

Changes as a result of changes in concepts, major data sources, etc., do not follow a pre-set cycle. Over the last year, SF has introduced important changes resulting from the application of the *ESA 95* and related decisions of the EU. Not all changes have been implemented: for instance the EU decisions on FISIM have not yet been put into operation and major changes will be made in the constant price calculations. It is expected that Finland will implement major revisions in parallel with the other EU member states. In the meantime, users are made aware of methodological changes, among other things, by announcements in the publications.

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

Preliminary estimates are clearly indicated in all publications of the SF, but not in its databases available to users.

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

The nature and effects of major revisions are explained in the statistical publications. In updates according to the periodic schedule, such is not customary, except if the change is exceptionally large.

Analyses of the differences between the revised and preliminary annual data, which may give users an impression of the reliability of the data, have been published as incidental studies; the last one was published by the BOF in 2004. Otherwise, no such analyses are disseminated.

## **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 national accounts are published in a very clear manner. The news releases include a chart to facilitate the analysis of the data. However, only the data for the two most recent years are provided in the news release for the annual data, which are related to SF's wish to sell the

publication concerned. Similarly, the data on quarterly national accounts in the table produced for the SDDS refer only to observations for the last and the previous quarter, which is too little to come to a fruitful interpretation. However, the Finnish version of this table provides a link to ample data. This link is expected to be added to the English version shortly.

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

SF takes care that statistics are disseminated in ways that facilitate re-dissemination in the media.

SF has decided to release all its statistics first on the Internet. The annual and quarterly national accounts are also published in dedicated hard copy (payable) periodicals, while incidental publications are prepared to disseminate supply and use/input-output tables (free on the Internet), details on capital stock, and time series (both payable). Full national accounts series are also available on SF's FINSERIES (ASTIKA) database, sometimes for a fee. The data series are also made available in Excel. Supply and use tables are accessible on the Internet without cost to the user.

Summary national accounts information is, among other series, published in SF's *Statistical Yearbook of Finland* and in the pocket-size *Finland in Figures*.

#### *5.1.3 Statistics are released on a preannounced schedule*

SF publishes an advance release calendar and keeps strictly to the preannounced release dates and time (9:00 A.M.).

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

The advance release calendar is easily available to users. The release calendar published annually in December is updated continuously on the Internet. In addition, a weekly news calendar is published each Friday. It includes information on statistical releases, press releases, and other forthcoming events for the next week. The major users including the media, ministries, and other interested parties receive an e-mail when the weekly news calendar is published on the Internet. The DSBB has a link to the advance release calendar. The data are made available to all users at the same time. The national accounts belong to the statistics whose release may influence the operation of financial markets. For this reason, in accordance with legal provisions, the press cannot receive advance copies under embargo and even access to the data before public release is restricted to specially designated persons within SF. See section 1.2.2 with respect to the limited advance government access to the statistics.

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

Data in larger detail than is published are available from SF. Customized tabulations to meet specific needs can also be prepared at a fee that covers the cost of the additional work. The availability of additional statistics is generally known to frequent users, but it is not always indicated in the publications. For instance, the publications containing supply and use/input-output tables mention the possibility to receive further details, but not the publications of the annual data.

## **5.2 Metadata accessibility**

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

Very comprehensive methodological descriptions have been prepared to facilitate the validation by the European Commission of the gross national income data of the member states. This inventory is available on the Internet.

Other documentation on sources and methods is rather sparse. Extensive documents were published in the early 1980s, but this is obviously outdated. The hard-copy national accounts publications contain brief explanations of the central concepts and the compilation process, in addition to the classifications used. More general purpose publications, such as the *Statistical Yearbook of Finland*, do not include short explanations, and indications are that users require more documentation on sources and methods.

To a certain extent, users are accommodated by the courses that SF organizes for users. Still, more could be done, in particular with respect to the quarterly national accounts. Concerning the latter, the very tight staffing of the Economic Indicator Unit seems a major impediment for allocating time to preparing methodological documentation.

SF reviews and updates the SDDS metadata published on the IMF's DSBB regularly.

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

Metadata for the interested, but nonspecialist, public are hardly available. The materials used in SF's national accounts course are in principle available to external users, but this is not publicized.

More specialized-use information, such as background papers and working documents, are not available. As suggested earlier, the number of staff appears to be the main stumbling block for preparing documentation and research papers.

### **5.3 Assistance to users**

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

In accordance with MOF's 1998 decision to develop new kinds of service commitments to customers, SF has organized its support to users very well. Prompt and acknowledgeable service is always available during working hours. All statistical releases identify contact points for enquiries by mail, telephone, facsimile, and e-mail. In the absence of the normal contact staff, telephones are transferred and the indicated e-mail boxes are shared in order to ensure quick response. The Internet site and several publications invite users to provide feedback. SF has undertaken to respond to all requests for information within two working days.

Awareness of the use of statistics is, among other things, promoted in two magazines published by SF. Subscription is at a cost to the user. In addition, a highly appreciated Virtual School of Statistics for self-study of the basics of statistics is available free via the Internet. Online learning material to serve especially polytechnic education has been produced with support of the European Social Fund. SF also organizes courses for users at its headquarters. The Media and Communications Unit supports the media and other information users. Each year, 60 to 80 press releases are published and 10 to 15 press conferences are held. One is held to present the release of the first annual estimates.

Assistance provided to users is monitored and reviewed periodically. User satisfaction surveys are conducted regularly.

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

SF publishes a description of all statistics on its Internet site. Under the heading "Statmarket," the SF Internet site lists the various publications available to users at a cost. However, no information on paid services can be found there. Once a year, the Information Service prepares a catalog covering both publications and services. Both in the website and the catalog, prices are clearly disclosed and assistance in placing orders is provided even during nights and weekends.



Table 1. Finland: Data Quality Assessment Framework (July 2003): Summary of Results for National Accounts  
(Compiling Agency: Statistics Finland)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
<b>0. Prerequisites of quality</b>						
0.1 Legal and institutional environment		X				Staffing is tight in the quarterly national accounts section, making it difficult to undertake research on the data and compile metadata.
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				
<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			Too few details on the inputs of service activities and some public quasi-corporations. Measurement problems in imports and exports of services. Weak quarterly sources for communication and machinery/equipment. No information on the commercial valuation of inventories.  Double deflation is seldom used (this issue is being addressed). Imputations for the hidden economy are based on dated studies.
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				No extensive metadata are available on the QNA methodology. Metadata catering for nonspecialist users are scarce.
5.2 Metadata accessibility			X			
5.3 Assistance to users		X				

## Recommendations

- Explore a solution regarding the exchange of confidential data concerning those statistics for which SF and the BOF share responsibility. This could include examining how other EU Member States have addressed the issue (0.1.2, 4.2.3).
- Facilitate the exchange of information between the National Board of Customs and SF by arranging more frequent contacts between the specialists involved (0.1.2).
- Avoid, to the extent possible, differences between the data published by SF and the BOF (0.1.2).
- Consider easing staff tightness in the QNA section (0.2.1, 5.2.1).
- Consider preparing and publishing more research and methodological studies, for instance in an SF occasional paper series or scientific periodical (0.2.1, 5.3.2).
- Secure external financing for development work, such as the compilation of sectoral balance sheets (0.2.1).
- Improve the search facilities in SF's website (1.2.1).
- Record own-account output of machinery and equipment at market prices (2.4.1).
- Consider surveys generating detailed information on the composition of intermediate consumption of service activities (3.1.1).
- In collaboration with the State Treasury, improve source information on intermediate consumption as well as the distinction between market and nonmarket activities of central government agencies (3.1.1).
- Review the sources on external transactions, including those on processing trade. Develop, in consultation with the BOF, additional quarterly sources for external transactions (3.1.1).
- Improve short-term indicators for communication and machinery/equipment (3.1.1).
- Conduct new studies on the influence of the hidden economy (3.1.1, 3.3.2).
- Study possibilities of improving the estimates for changes in inventories (3.1.2, 3.3.2).
- Consider adding a small extension to the TRAMO/SEATS program to ensure that the published seasonally adjusted quarterly accounts data exactly add up to the annual totals (4.2.1).

- With the databases that are made available to the public, specify which data are provisional and explain main breaks in the series (4.2.2, 4.3.2).
- If more detailed data are available to users, always indicate such in the publications. The same is true for paid services offered by SF (5.1.5, 5.3.2).
- Publish metadata on QNA and provide more explanation to nonspecialist users. The latter can be done, for instance, by adding brief introductions to the chapters in SF's *Statistical Yearbook of Finland* or by publishing a short introduction to the national accounts (5.2.1).

## II. Price Statistics (Consumer Price Indices)

### 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*

Under the terms of the Statistics Act (280/2004), Statistics Finland (SF)—one of nearly 20 agencies belonging to Finland's National Statistical Service (NSS)—is the general authority for collecting, processing, and disseminating the statistics. SF accounts for 77 percent of the NSS production, measured by expenditure. The NSS's task is to produce official statistics describing economic and social conditions and their development for general use. Outside the NSS, some 60 other agencies publish central government statistics. The Statistics Act does not attribute the responsibility for preparing individual statistics to specific agencies. However, SF has assumed responsibility for compiling the consumer price index (CPI), and this status quo is not challenged by any other agency.

Legislation is mostly silent on the precise responsibilities of SF with respect to the NSS and the instruments it needs to comply with this task. The Statistics Finland Act (49/1992) merely states that SF shall provide for the general development of official statistics in collaboration with other central government authorities. In practice, it seems the SF achieves much of the coordination and development within the NSS through dialogue with the constituting agencies, founded on a common interest and a willingness to cooperate.

SF has defined its objective as developing Finland's system of official statistics into a uniform, good quality, relevant, easy-to-use, and cost-efficient system. In addition, the system should be internationally recognized for its high-quality statistics, information services, and expert services.

SF furthers this objective by (1) maintaining a network of coordination with each administrative sector, (2) preparing of five-year development plan and an annual follow-up report for official statistics, (3) participating in development projects, (4) providing reports and opinions on request, (5) offering training in statistics, (6) defining common classifications, (7) promoting a uniform electronic statistical service, and (8) coordinating and rationalizing data collections. SF directs a cooperation group for European Union (EU) matters appointed by the Ministry of Finance (MOF) and publishes a quarterly information bulletin entitled *What is New in Official Statistics*.

Finland's membership in the EU implies that European law applies to a large portion of the Finnish statistical program. In this respect, the Council Regulation (EC) No 322/97 is particularly important because it stipulates that national authorities shall be responsible for producing European Community statistics at the national level and that Community statistics

shall be produced on the basis of uniform standards and, in specific duly justified cases, of harmonized standards.

The Council Regulation (EC) No. 2494/95 required Harmonized Indices of Consumer Prices (HICPs) to be produced using common criteria, which have been subsequently developed in the context of the HICP framework.

The Finnish Parliament in 1987 ratified the International Labour Office's (ILO) Labour Statistics Convention, C160, 1985, which gave SF responsibility for compiling the CPI. These obligations included the adoption of the latest standards (article 2) and the requirements to consult on major methodological changes with employer and employee organizations (article 3) and to preserve confidentiality of individual responses (article 4). The Seventeenth International Conference of Labour Statisticians agreed on, in Resolution II, a major review of new methods and standards.

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

There are no indications that SF has any major problems regarding data sharing and coordination among data-producing agencies. Data collection, processing and compilation for the CPI is, however, mainly carried out within SF. Some agencies supply data for CPI compilation not covered by the Statistics Act. For example, special series are taken from administrative sources for health care to help estimate the cost of medical treatment, and from taxation authorities for the House Price Index (HPI) used in the CPI. Statisticians responsible for the CPI remain in regular contact with such agencies.

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

Several legal acts guarantee that individual data should be kept confidential. Under the Statistics Act, statistics shall be compiled so that reporters whom they concern are not directly or indirectly identifiable (unless the data are public by virtue of the Statistics Act). More generally, data obtained by statistical authorities may be released to other parties in two cases: either if permitted by legal provisions explicitly referring to the NSS, or upon express consent of the subject of the data. In addition, (only) the SF has the right to *receive* such individual data if such is deemed necessary for the production of statistics. The Act allows a statistical authority to release confidential data for use in scientific research or statistical surveys if individuals and other statistical units cannot be identified.<sup>16</sup> Violation of this secrecy obligation is punishable under the Penal Code. At the European Union level, similar assurances about the confidentiality of individual data are included in Council Regulation (EC) No 322/97.

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<sup>16</sup> One minor exception does not apply to data described in this report.

Details regarding the protection of information on private individuals are laid down in the Finnish Personal Data Act (523/1999). This Act also institutes a Data Protection Ombudsman. Finally, although the Finnish Constitution and the Act on the Openness of Government Activities (621/1999) grant the right of access to documents or recordings in the public domain, grounds for secrecy include sensitive information on persons, private financial interests, and personal privacy.

The Statistics Act obliges statistics-producing authorities to inform respondents in writing about the intended use of the data, the procedures to be used in producing the statistics, the principles governing whether the provision of data is obligatory or voluntary, the rights of the respondents, the arrangements for protecting the data, and the durations the data will be stored. SF's practice is in conformity with these provisions.

SF has implemented procedures to prevent disclosure of individual reporters' data, once received from other agencies or directly collected. It has published guidelines on how to apply the Statistics Act and the Personal Data Act, as well as guidelines on the protection of tabulated enterprise and personal data. A section on data protection is included in the SF publication *Quality Guidelines for Official Statistics* (2002). Micro data, concerning individual persons, released to external agencies for scientific research are first treated to remove variables that would make it possible to directly or indirectly identify individual persons. Similar procedures are used with respect to sensitive information about units other than individuals.

In SF offices, access to individual data is restricted to staff who require the information in the performance of their statistical duties. Staff review all data prepared for dissemination for possible indirect disclosure of individual data.

SF computers are password-protected. Staff offices are not locked, but access to the SF building and entrance between floors is secured by electronic passes.<sup>17</sup> Confidentiality of data during filing and destruction of records is in keeping with the National Archives Act and Statistics Finland's Archiving Guidelines.

Letters and brochures are sent to outlets collaborating in the collection of prices for the CPI, informing them of their rights under the Statistics Act. CPI data can be released for research purposes under the terms of the Statistics Act. In practice, when CPI data are released for research, the contents are restricted to only the price and class code to maintain confidentiality. Strict rules and procedures are followed in the design of tabulations to prevent disclosure.

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<sup>17</sup> It is, however, easy to move about in the elevators with other people, which raises the possibility of "tailgating."

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

The Statistics Act requires that the primary exploited sources for statistical purposes shall be the data accumulated in administering general government and the data produced as a consequence of the normal activities of employers, self-employed persons, corporations, and foundations. As indicated above, SF has the right to receive these data under the Statistics Act. In addition, all public and private entities in Finland are obliged to provide SF with data on their finances, products, and staff, as necessary for the production of statistics. Of course, SF has also the legal mandate to collect information directly and, if deemed appropriate, to make the provision of data obligatory. The right of SF to collect data by virtue of the obligation does not extend, however, to data that are kept confidential for reasons of international relationships, public safety, the interest of national defense, or the safety of the state.

The Statistics Act stipulates that a person who willfully fails to provide obliged data or willfully provides false data shall be sentenced to a fine. Nevertheless, SF is allowed to refrain from bringing charges if the violation is regarded as minor, and in practice charges are never filed. It is difficult to say, therefore, whether the penalties included in the Statistics Act effectively deter violations.

The Statistics Act, backed up by actual practice, states that statistical data shall be collected economically and shall cause the respondents the least amount of inconvenience and cost.

Letters accompanying questionnaires advise respondents that SF provides assistance in completing and submitting forms. The statistical questionnaires themselves mention the telephone number, e-mail address, fax number, and postal address of a point of contact. This holds for the collection of prices from centralized sources. It is clear that SF seeks to secure the cooperation of respondents by writing such letters, limiting the response burden to the extent possible, testing questionnaires before they are sent out, and other measures. However, the *Quality Guidelines for Official Statistics* do not explicitly mention the importance of securing goodwill with respondents. For the CPI, SF's legal services have not been used during the last decade, and negotiations have resulted in only one or two outlets being dropped each rebasing. Feedback data, Christmas cards, and well-promoted and friendly points of contacts are used to deter nonresponse in outlets. However, nonresponse is quite substantial for the Household Budget Survey, as discussed in section 3 below.

**0.2 Resources**

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

The CPI compilation and research tasks are carried out in the division of Prices and Wages Statistics, by the Consumer and House-Price Statistics Unit. The unit in turn is divided into the CPI and House-Price Statistics teams. Seven members compose the CPI team, of which

two have master's degrees or higher, one has a bachelors' degree, and four are vocationally trained. The House-Price Statistics' team (three master's degree holders and one bachelors' degree) serves the CPI team by compiling house price indices and rent surveys. Approximately one person-year of house-price resources is allocated to CPI-related tasks, as well as a significant part of the Unit Heads' working time.

Also, 21 price collectors collect prices once a month for one week for durable and semi-durable goods, and 50 collect prices once a month for one-and-a-half days for nondurable goods. Trained during recruitment, price collectors have class-based seminars and regular contact with the full-time staff on difficult issues. When not carrying out CPI tasks, price collectors carry out survey interviews for other SF statistics.

The Consumer and House-Price Statistics Unit carries out CPI-related research insofar as human resources and external funding permit. The Statistical Office of the European Communities (Eurostat) has been the main source of such funds. Recent funding was received for work on a project for the price measurement of owner-occupied housing. There are informal contacts with academic experts, in particular Professor Vartia from Helsinki University and his PhD students, who work on related issues. For senior staff there is high-level exposure at, and contributions to, cutting edge price index number methodology. The head of the CPI is a member of the UN Ottawa Group (International Working Group on Price Indices) and, along with senior staff, contributes papers to this and other international working parties and task forces on methodology. In 2004 SF hosted the Ottawa Group meeting and an IMF international seminar on the *Producer Price Index Manual (PPI Manual)*.

Yet any further calls on the group's time to improve the index may be at the cost of the standards and cutting-edge awareness that is the hallmark of the group. The annual rate of employees leaving the CPI unit (excluding maternity leave) is stated to be 10.3 percent, much higher than the SF average of 3.0 percent.

SF as a whole has no problem attracting new employees, in view of the office's good image as an employer. The latter is corroborated by the results of the annual Staff Satisfaction Survey. Nevertheless, management is concerned about attracting staff with macroeconomics background. For this reason, among others, a trainee program has been put in place with the University of Helsinki.

Computer resources are good, and the available software is effective for compiling price indices, though there have been some software glitches. Emergency backups, both internal and external, are in place. The office building, furniture, and other on-site facilities are excellent.

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

A formal review of staff performance is conducted annually in discussions with individual staff members. A standard list of elements contributing to performance in the past period is



used in these discussions; for management staff, target performance agreements have been drawn up. Informal feedback to staff is regularly provided, for instance during the weekly meetings of the units and teams.

The prices unit is active in promoting and adopting new technology, such as electronic, hand-held data-retrieval devices, to improve both efficiency and accuracy. The data reporting systems for summary statistics on key quality issues are excellent. The full cost of compiling statistics, including staff costs, computers used, etc., is measured annually at the division and unit level.

### **0.3    *Relevance***

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

The SF consults data users to ensure that the CPI continues to meet user needs. Organizational arrangements exist to generate such feedback as a part of the more general SF activities. An important contact in this respect is the Suomen Kansantalouden Tilinpito (SKT) group, consisting of about 15 members, that convenes three times a year. Chaired by the director of the MOF's Economic Department, the group further comprises the BOF and four economic research institutes. Another group—which includes representatives of the MOF (Budget, Tax, and Economic Departments), the National Board of Customs, the Ministry of Agriculture and Forestry, the Board of Taxes, and SF—consults on issues related to the EU's own resources. This group provides a forum where concerns can be brought up by such users, though this has rarely been adopted/necessary in practice. Further feedback is received during user courses and seminars, when major revisions are planned. Generally, SF encourages users to provide any comments they wish to make, and these comments are monitored closely.

Information on new and emerging data requirements regarding the CPI is also received during various meetings organized at Eurostat, the OECD, the United Nations Economic Commission for Europe (UNECE), the Nordic countries, and the International Association for Income and Wealth.

ILO Labour Convention 160 includes a formal stipulation to consult users. Users are consulted and/or kept informed on specific aspects of current CPI data (for example, its usefulness in terms of detail, periodicity, and timeliness, and when the index is rebasing and the effect of rebasing) through surveys, newsletters, or seminars, with their feedback actively sought (for example, e-mail address are provided). In particular, to comply with ILO's aforementioned Labour Statistics Convention, C160, 1985, on consultation, the "TUPOSETO" ("National Board For Income Policy Research") is consulted. This is the most important user group for the CPI. The MOF provides the chair and the membership is drawn from employers' and employees' central organizations. A representative of SF acts as a permanent expert member of the group.

## **0.4 Other quality management**

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

SF management is highly sensitive to all dimensions of quality. Management thinking on this issue has been influenced by, among other things, the European Foundation for Quality Management (EFQM) excellence model, the International Organization for Standardization (the ISO 9000:2000 standard series for the development of a quality system), the United Nations' *Fundamental Principles of Official Statistics* and *Handbook of Statistical Organization*, as well as Eurostat's work on quality. The *Quality Guidelines for Official Statistics* published by SF in 2002 mention the following quality criteria for application in Finland's official statistics:

- (1) relevance of statistical information;
- (2) correctness and accuracy of data;
- (3) timeliness and promptness;
- (4) accessibility and transparency/clarity of the data;
- (5) comparability of statistics;
- (6) coherence and consistency/uniformity of data; and
- (7) documentation.

This list has to be supplemented with the element "costs," which are regarded more as a limitation on quality than a component of it.

Staff have received training on the various dimensions of quality, and every division includes at least one person focused on total quality management issues (there are 18 such persons in total—one of whom works on the CPI). The organization's commitment to quality is apparent, among other things, from the abovementioned *Guidelines* and SF's *Annual Report*. In the pilot phase, 45 persons have made self-assessments in line with the EFQM model, and a repeat covering more staff is foreseen for 2006.

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

Processes are in place to monitor the quality of the statistical program. Partly, these processes are required by the performance agreements between the MOF and SF, and between SF's Director General and senior staff. SF uses balanced scorecards (BSs) to produce and implement strategic plans and to communicate the plans.

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

Quality considerations influence the planning of the statistical program. The summary reports on, for example, missing values each month, and the BSs influence the inputs of the Prices Unit into the strategic plans.

## **1. Assurances of integrity**

### **1.1 Professionalism**

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

SF reports to the MOF. The Statistics Act, the Statistics Finland Act, and the Council of State Decree on Statistics Finland (1063, 2002) do not formally state that the SF or the authorities belonging to the NSS are professionally independent. However, several legal provisions support SF's professional independence, and SF acts accordingly.

The provisions that support SF's professional independence include the following:

- section 3 of the Statistics Finland Act that stipulates that the organization and operational units of SF are decided upon in "working orders," but that these have to be confirmed by SF's Director-General (DG);
- section 1 of the Council of State Decree on SF that gives the DG the right to manage the activities and finances of SF;
- section 5 of the said Decree that lays down that the DG shall be appointed by the Council of State. It also gives the DG the right to appoint the directors of the operating units as well as the other staff unless the working order has assigned the decision to some other official. The Minister of Finance shall appoint a deputy for the DG at the submission of the DG; and
- article 10 of Council Regulation (EC) No 322/97 that requires that Community statistics be governed by impartiality, which is defined as "an objective and independent manner of producing Community statistics, free from any pressure from political or other interest groups, particularly as regards the selection of techniques, definitions and methodologies best suited to the attainment of the objectives as set out."

The formal relationship between the SF and MOF largely focuses on multi-annual agreements, under which SF undertakes to fulfill targets within the budgetary limitations. The performance agreement for the year 2005 covered the following subjects:

- (1) main strategic goals for the next four years;
- (2) targets for operational effectiveness in 2005;
- (3) performance targets for 2005
  - outputs and quality management
  - operational efficiency
  - management and development of intellectual resources;
- (4) resources; and
- (5) validity and follow-up of the agreement.

Approximately 75 agreed performance indicators include, for instance, statistics production (databases and data collection), public image, number of international trips, number of publications, press releases, performance of chargeable services, operational efficiency, staff years, staff training, and staff job satisfaction.

Recruitment and promotion in the organization are based on relevant aptitude and expertise. Comparative exams are not part of the selection procedure. Potential staff are selected on the basis of interviews, papers they have written, and other evidence of aptitude. Choices are made on the basis of written assessments. Notwithstanding this national and international legislative support for their independence, there is every evidence of an informed, highly professional staff, and an institute transparent in its undertakings, open to, and involved in, the development of new methods, and committed to high standards. Formal class-based and on-the-job training in the methodology and compilation methods is provided for the price unit's own employees. Annual personnel training expenditure per member of staff amounted to €971 in 2004, increasing from €871 in 2002.<sup>18</sup>

The DG and staff members participate in, and present research papers on, their practices in seminars, task forces, and working groups for such organizations as Eurostat, the Organisation for Economic Cooperation and Development (OECD), and UN working groups. In 2004 there were 612 official trips abroad, most of which were, in turn, European Union (EU)/European Free Trade Area (EFTA) meetings, international consulting, scientific training, UN or OECD meetings, and Nordic meetings. Staff in the prices unit act as consultants to international organizations, including the IMF, for technical assistance missions to other countries. In 2004 SF hosted a meeting of the Ottawa Group followed by an international seminar organized by the IMF on the *PPI Manual*. CPI statisticians are well-resourced with regard to access to the Web, technical materials, and international manuals; they are exposed to, and contribute to, developments in the field of economic statistics.

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

Under the Statistics Act, the choice of data sources, statistical techniques, and methods of dissemination is required to be informed by statistical considerations (sections 3, 10, 11, and 12). There are also responsibilities regarding the cost-efficiency and response burden of data collection (section 4). In particular, section 11 includes the requirement that statistics should be as reliable as possible, shall give a truthful picture, and make use, where possible, of uniform concepts, definitions, and classifications, as well as be timely. Similar provisions can be found in EU legislation.

Professional standards are also governed, as noted in 0.1.1 above, by the ILO's Labour Statistics Convention, C160, 1985 under which SF's responsibility includes the adoption of

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<sup>18</sup> Figures exclude interviewing training. Figures are taken from *Overview of Statistics Finland*, presentation by Heli Jeskanen-Sundström to IMF ROSC mission, May 12, 2005.

the latest standards (article 2). The Seventeenth International Conference of Labour Statisticians, agreed upon, in Resolution II, a major review of new methods and standards for the CPI.

SF publishes a 132-page *Quality Guidelines for Official Statistics Handbook*, 43b (Helsinki, 2002). Its purpose is to set out SF's statistical production procedures and, in doing so, includes chapters on survey processes, estimation, presentation, documentation, and publication, including SF's commitment to quality. All chapters use statistical criteria, which are clearly laid out.

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

Although no specific regulation entitles SF to comment on erroneous interpretation and misuse of statistics, in actual practice SF has an active policy in this matter, and its Information Service has issued guidelines on how to respond. A private agency (Esmerk) monitors 32 national and regional newspapers and summarizes references to SF. Other media are also watched. If erroneous interpretation or misuse of statistics is detected, contact is established to explain the issue. In serious cases, the DG may write a letter to the editor; this happens a few times a year.<sup>19</sup>

The prices and wages unit is proactive in preventing of erroneous information from being published. For example, when a tax on beverages was to be cut, special releases were put out to explain that deflation would not be taking place and that the fall was the result of the tax cut. A special article on the estimates of the effect was published.

## **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 legislation governing SF is available among other places on its website and in its library.

The relevant legislation and guidelines are difficult to find on SF's website, at least in the English version.<sup>20</sup> *Legislation* is not a heading in the site index. The key Statistics Act (280/2004) is not available on the site; instead there is a hyperlink to the repealed Statistics Act (62/1994). Unfortunately, this hyperlink takes the user to the Council Regulation (EC)

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<sup>19</sup> In less serious cases, the senior official responsible for the statistics signs the reply.

<sup>20</sup> The Swedish and English versions are in the process of being revised. The Finnish version of the site is more complete, even though reportedly still difficult to search.

322/97, rather than the 1994 Act. The current and previous versions of SF's *Codes and Guidelines on Professional Ethics*, on the other hand, are in the English language version of the SF's website.<sup>21</sup>

Finland subscribes to the IMF's Special Data Dissemination Standard (SDDS). The IMF's Dissemination Standards Bulletin Board (DSBB) includes, under the heading of "Integrity," the terms and conditions under which SF's statistics are produced, including those relating to the confidentiality of individually identifiable information. Statistical publications always include SF's general contact information, and many include references where more specific information can be found.

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

The SF policy requires that statistics must be accessible to all users at the same time. This policy is noted in the *Guidelines on Professional Ethics* (page 12). The Statistics Act prescribes that all statistics shall be published as soon as possible upon completion. It also prescribes that sensitive statistics must not be released prior to the official date of publication, but all users must receive the information at the same time. Government has no internal access to price statistics prior to their release to the public.

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

Official statistical publications carry not only SF's logo but also the mark *STV*, explained on the back as indicating an official statistic of Finland. The logo also includes the name Statistics Finland alongside in Finnish, Swedish, and English. Publications include a statement that quoting is encouraged, provided SF is acknowledged as the source. SF's *Quality Guidelines* note the criteria for a publication to be an SVT, which includes production by an agency or institution on the list of SVT producers and assumption of responsibility by the publishing agency for its accuracy and content (pages 108–10). SVT publications cannot be published under the name of the author, thus distinguishing between, and allowing the flexibility of, research working papers.

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

Advance notice is given to the public when major changes are introduced in methodology, sources, and statistical techniques. If the changes are very large, briefings for the press may be prepared.

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<sup>21</sup> Available on <http://tilastokeskus.fi/tk/tt/laatuutilastoissa/guidelines.pdf>.

### **1.3 Ethical standards**

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

A culture of professionalism and independence is apparent from the code of professional ethics SF publishes as its *Guidelines on Professional Ethics*, Handbook 30b (Helsinki, 2002).<sup>22</sup> The Handbook is well-written, clear, and comprehensive on ethical issues facing a statistical agency. It outlines SF's obligations to society (chapter 2), respondents (chapter 3), customers (chapter 4), and funders and employers (chapter 5). It also draws attention to possible conflicts between such obligations, such as resource constraints. The handbook draws attention to conflicts between ethics and legislation and discusses how even strict abidance by the law may be unethical.

All employees are given a copy of this handbook on recruitment, and all employees were circulated a copy when it was published in 2002. It can also be found on SF's website.

## **2. Methodological soundness**

*The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.*

The methodological soundness dimension is assessed against the guidelines outlined in the *System of National Accounts 1993 (1993 SNA)* or the *European System of Accounts 1995 (ESA 95)*, and the *Consumer Price Index Manual, 2004 (CPI Manual)*.<sup>23</sup> The concepts and definitions from the *1993 SNA* are used as guidelines with regard to coverage and valuation, and the methods and procedures from the *CPI Manual* are used as guidelines for compiling the CPI. The *1993 SNA* and *ESA 95* are viewed as interchangeable whenever reference is made in this document to the *1993 SNA*.

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<sup>22</sup> Available on SF's website [http://www.tilastokeskus.fi/tk/tp/tkesittely\\_etiikkaopas\\_en.pdf](http://www.tilastokeskus.fi/tk/tp/tkesittely_etiikkaopas_en.pdf). Preceding this was a *Code of Professional Ethics*, 1993. This was based upon the *Declaration on Professional Ethics* adopted by the International Statistical Institute (ISI) in 1985—also on SF's website *ibid*.

<sup>23</sup> ILO/IMF/OECD/UNECE/Eurostat/The World Bank (2004). *Consumer Price Index Manual: Theory and Practice*, Geneva, International Labour Office.

## **2.1 Concepts and definitions**

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

The concepts and definitions follow the principles outlined in the *CPI Manual* and *ESA 95/1993 SNA*. The main exception is the exclusion of illegal goods and services, though this follows HICP practice. Concepts that do not follow international standards are kept under review. For example, as of 2002 (CPI 2000=100), church taxes and labor union membership fees, previously included in consumption expenditure, were excluded, because they contained elements of income transfers, a point similarly taken up by the European Union's HICP legal framework.

The concepts for the prices collected follow the standards set out in the *CPI Manual*: transaction prices for matched, detailed product descriptions, recorded for goods and services at purchaser's prices.

The weights used every five years are national accounts estimates, which in turn are adjusted estimates from a household budget survey (HBS). Institutionalized residents (old people's homes, prisons, hospitals, etc.) are excluded from the HBS, but adjustments are rightfully made for their estimated expenditure for each product group. Own-account final consumption is excluded, though this is not advised by the *CPI Manual*. Its exclusion though is common practice. Expenditure by nonresidents is included, which follows HICP guidelines but is inappropriate for CPI compilation.

Expenditure weights are compiled at a sufficiently detailed 5-digit COICOP level. The 6-digit level COICOP classification is extended for product descriptions to a 9-digit level. This results in some 700 product subclasses, each of which in turn has estimated regional weights applied for six regions. For housing prices a more detailed classification is used. The key data sources for weights are national accounts that utilize the HBS, supplemented by many other sources. Benchmark HBSs were conducted in 1998 and 2001, though annual, smaller, HBSs in 1994–96 were discontinued as being unreliable.

Aggregation for items is at the 9-digit and 6-digit level of a detailed consistent COICOP-based classification. At this first stage, unweighted elementary indices are compiled in regional elementary product classes. Regional weights are then applied to bring the elementary aggregate indices up to national indices, and COICOP weights bring the national aggregates up to 4-, 3-, 2-digit COICOP levels and the overall index.



## **2.2 Scope**

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

The geographic scope of the HBS is not restricted to a particular geographic area. The units sampled for the HBS include all resident households randomly sampled across rural and urban Finland. Households of all sizes and incomes are included and selected within strata with probability proportionate to the number of adults (aged 15 and over) in each stratum. Adjustments are made, as noted above, for the consumption expenditure of residents in institutions.

Households whose major activity involves an unincorporated business are included, but there is no attempt to separate records on business and consumption purposes that may bias upwards, estimates for expenditure on such items as personal computers, though such effects are considered to be small. Households whose primary activities are hunting and fishing are included. No strict formal statement exists about the main purpose of the national CPI, but it is evident that the key use for the national CPI is escalation of social benefits and use in the contractual negotiations on wages and salaries, as opposed to an inflation, HICP, index. The CPI includes user-cost estimates of owner-occupied dwellings. However, as noted above, it excludes own-account production of goods and services for final consumption and purchases of illegal market goods and services, and includes expenditure by nonresidents, though such aberrations are not considered to lead to significant bias in the overall index.

## **2.3 Classification/sectorization**

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

Product specification is at the 7-digit COICOP level with some goods at the 9-digit level. Prices are collected within regions, aggregated using regional weights to the national level, and aggregated across items. In some instances, such as insurance, medical products, and package tours, separate regional price series are appropriately not constructed because prices do not vary over regions.

## **2.4 Basis for recording**

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

Consumption expenditure is valued at purchasers' prices. Own-produced consumption is excluded and thus raises no valuation problems. It is believed to constitute a negligible proportion of consumption. List prices are collected from outlets and centralized sources, as is standard practice, with appropriate guidelines so that they represent transactions prices.

SF compiles indices for analytical purposes. For example, the Net Price Index (NPI) excludes the effect of changes in indirect taxes and subsidies. The target of the NPI is to measure “market inflation” keeping the effect of government fiscal policies (product taxes and subsidies) fixed.

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

Prices from outlets are not recorded on the date on which the transactions occur but are recorded for the list prices during a few days mid-month. An exception is the collection of prices in December, which is earlier than mid-month to avoid the Christmas rush (see also 3.3.1). Some, mainly administered, prices are assumed to hold constant over more than one month and are collected at a lower frequency than monthly. Details are given in 3.1.2 below. With these caveats in mind, the recording of prices can be said to be within the month the transaction takes place. An exception is packaged holidays, which are often paid for in advance. However, for the practical reason of data availability, the prices are recorded when the services are consumed, when the holiday is taken. This pragmatic practice follows HICP guidelines.

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

The weights for cars, lotteries, and insurance are net weights in line with the *CPI Manual*. There is a problem of allocating insurance to its categories—life, housing etc.—due to the bundling of insurance products into one package. Imputations are used on the basis of other information. Gambling and insurance are on a net basis. COICOP advises that service charges for multi-risk insurance covering several risks should be classified on the basis of the cost of the principal risk if it is not possible to allocate the service charges to the various risks covered. These are excluded from the current 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*

### **Weights**

The CPI uses as weights national accounts private consumption expenditure estimates based on the HBSs. The 1985 and 1990 surveys’ effective (after nonrespondents were removed) sample sizes were 8,200 and 8,258 households respectively. In 1994, 1995, and 1996 there was a move to smaller annual surveys of effective sample sizes of 2,180, 2,313 and 2,250, whose results proved unreliable. The 1995 survey provided weights for nearly 500 categories of product at the 5-digit COICOP level. Subsequent surveys for 1998 and 2001-2002 had

effective sample sizes of 4,359 and 5,495 (response rates of 63.4 percent and 62.5 percent) respectively.

The published source for data on weights for the CPI is described in the SDDS and in the *CPI Handbook for Users* as “national accounts 2000 estimates.” The 2000=100 CPI used national accounts estimates for the weights, which in turn were based on the 1998 HBS because there was no survey in 1999. As such, estimates for 2000 were based on the 1998 HBS with data from other sources applied to update the figures to 2000. SF’s business register includes information on turnover by industry for the retail trade and service industries, which can be partitioned into product groups. The resulting turnover estimates were for 182 goods and services and were used to “update” the weights. Individual classes were split at the 6-digit COICOP level. A problem with the method is that retail turnover by industry is not recorded for individual products, and thus estimates have to be made to partition it accordingly. For example, the “retail sales of children’s clothing” has to be partitioned into “outdoor clothing,” “underwear,” and “hats, ties, and gloves, etc.”

Adjustments to the HBS estimates of expenditure also included those for bias, for example, in alcohol and tobacco consumption and for reconciliation with other sources. Included were estimates of expenditure by people living in various institutions, omitted from the HBS’s base population. Estimates were made, for each institution, by product on the basis of their income and consumption potential. Estimates of expenditure of nonresident visitors were included, following the HICP (a money index), rather than that of the *CPI Manual* (a consumption index), which should exclude it. As noted above, the usage of the Finnish CPI for escalation purposes is that of a consumption index.

The 2001-02 HBS is based on sound principles regarding both its sample design and its collection of data. The sample of households is drawn from the population register stratified by five areas, each divided into urban and rural municipalities, and Helsinki, Espoo, Kauniainen, and Vantaa as one area and Åland as another, making 12 areas in all. Selection of a household within a stratum was, with probability, proportionate to the number of members aged 15 and over. The response rate for this effective sample of 5,495 was 62.5 percent. Data collection was by way of a combination of diaries (two weeks), questionnaires, and interviews, whose periodicity depended on the products in question; for example consumption on food and non-durables was collected by diary.

The change in the weights is too infrequent by international standards, given the nature of the Finnish economy.<sup>24</sup> The 2001-02 HBS survey data behind the weights used for the 2005=100 index may, by rebasing in 2010, be more than seven years out of date, given the time required to collect and compile the data. SF is planning to move to chained annual weights beginning in January 2007. For January 2006 there will be a revision of weights and product

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<sup>24</sup> The *CPI Manual* advises that countries experiencing more rapid changes in consumption patterns should update their weights more frequently than every five years, say annually (paragraph 4.50).

samples. The weights used for the January 2006 index are proposed to be the national accounts weights for 2004. This would fall behind best practice in such procedures (for example, the UK Retail Prices Index has a compilation lag of six months).

However, concern remains over the source for the 2004 weights, which is national accounts data, that is, higher-level weights based on the 2001-02 HBS and auxiliary data. The need for an index that reflects changes in the consumption patterns is best met by reliable annual HBS or national accounts estimates used to supplement HBS estimates for inadequacies in coverage and response. They are not best met by benchmarked national accounts estimates extrapolated over what may be a period of more than five years. SF should consider a move to more frequent HBSs and a more frequent updating of weights using the commensurate updating of HBSs. SF should investigate why the compilation time for HBSs is so long. Should the weights derived in any “chained” index use national accounts “updated” estimates, and not be based on regular HBSs, SF should be clear in any publication that regular HBSs are not used and provide some account of the estimation principles involved.

The need for more frequent weight updating or chain linking is stressed, owing to its ability to better represent the basket of goods and services purchased. It leads to a reduction in spread between the Laspeyres and Paasche indices and thus is a better approximation to a cost-of-living index. It further allows the introduction of new product classes. Sample rotations each year within a fixed weight framework are of course possible, as are sample augmentations under existing categories to include new products.

As noted above for the national accounts adjustments, and in 2.2.1 above, the national accounts source data for weights include expenditure by nonresidents. This does not follow the *1993 SNA* with regard to the role of the CPI as a deflator for household consumption expenditure or *CPI Manual* guidelines in this respect, although it is advised for HICP. The inclusion is on resource grounds given their obligation to compile the HICP, but estimates of the effect of such inclusion have been stated to be negligible. An exception might be for clothing; the contribution of visitors’ expenditure to total expenditure was last estimated to be relatively high, at about 10 percent (of total expenditure on clothing). Part of the explanation may be inaccuracies in the HBS clothing estimate, which has an estimated 95 percent confidence interval of some +/- 6 percent. Expenditure by visitors should be excluded given the use of the national CPI as compensation index.

Additional source data are well used, for example for medical treatments, mobile phone services, and alcoholic beverages, to supplement traditional data sources and methods in these difficult areas. Such sources are reviewed annually. Data on the housing price index and rent price index are also used to supplement the core CPI data.

## **Prices**

Monthly prices are collected from a sample of 3,000 outlets selected on rebasing every five years. Very few outlets drop out of the sample over the five-year period. There is thus very limited opportunity for introducing new outlets into the sample as replacements and no

augmenting the sample, except on rebasing. A move to annual chained indices would facilitate this.

A sample of 200 outlets is selected for groceries. The sampling frame for groceries contains information on sales by 18 counties. Selection of counties is according to population size and then, within counties, sample allocation is with probability proportionate to size (sales figures). Adjustments are then made to the sample size estimates based on the coefficient of variation of the price change; smaller sample sizes are attributed to products with a smaller coefficient of variation.

For nongrocery items, sampling of outlets is from the 21 largest cities (with populations exceeding 50,000), which are divided into 14 larger and seven smaller ones. The exclusion of rural areas is argued on the basis that rural shoppers for nongrocery items buy in cities. Price collectors are asked to select, for the larger cities, the three most popular outlets and, within the outlet, three items—the expensive, middle, and low-priced—following broad item description. For the smaller cities the same judgmental sample is selected for two outlets and three items within each outlet. This would result in 168 item prices per product, though some variation exists with sampling for more products with a higher variance in relative price. In particular, for petrol, a much larger sample was taken, due to its price volatility.

Most prices are collected in outlets by price collectors provided with broad descriptions of the product. In the outlet, they choose the actual product to be priced on the basis of brand and other price-determining factor, and then monitor its price over time. A code is attached to designate the terms of sale—whether the item is on discount (buy-one-get-one-free, etc.). Prices are also collected centrally by phone, fax, and e-mail.

For new products, staff are appointed to observe specific product areas to monitor likely new products and price-related developments such as tax changes. They also react to market developments by identifying the source of unusual price changes. One example of this was contacting the Confederation of Breweries to identify packaging changes for beer (change to sales in larger packs).

New technologies are being implemented for data collection, including hand-held data capture devices, and the use of scanner data is being investigated.

Variance estimates are also used to identify whether a data point need only be collected less frequently than monthly. Some prices are collected centrally, including cigarettes, airfares, magazines.

For difficult areas CPI staff employ, and/or undertake research on, specialized methods and data sources such as the House Price Index or hedonic indices for mobile telephones and 'fridge-freezers.' There is a good awareness of developments in methodology by way of presence on, and contributions to, international groups such as Eurostat and the Ottawa Group.

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

In accordance with good practice, on grounds of efficiency and of reduction of response burden, some prices are not collected each month. Less frequent collections are for certain services where prices change infrequently, such as dry cleaning and shoe repairs, goods with infrequent price changes such as furniture, electrical appliances, and pharmaceutical products. CPI staff monitor special circumstances such as promotions and sales in which the planned price collection may miss major price changes and the change of ownership for the most part will not coincide with the price observation. The 1995=100 *CPI Handbook for Users* gives in Appendix 1 the periodicity of collection at 5-digit COICOP levels, and it is apparent that over half the pricing by weight is less frequent than monthly. For the 2000=100 index, the CPI team reviewed the collection frequencies and tested for bias using monthly data collection for a limited period. Such periodic reviews should be carried out to ensure that periodicity of price collection is commensurate with its stability.

In 3.3.1 above, concern was expressed over the reliance on auxiliary data to update weights. However, generally there is much to commend the source data on the price collection side.

In 2.4.2 above, concern was expressed over the early collection of December prices. Prices in December are collected earlier to avoid the holiday rush. For December, price collection is between December 8 and December 14, while for other months most collection starts on the 11<sup>th</sup> and finishes on the 17<sup>th</sup>. This practice is applied for the CPI core-data collection, which covers 51.1 percent of the index weight. For housing and all centrally collected prices the December collection period does not differ from other months. This practice has, of course, little effect on month-on-previous 12-month price comparisons but can affect November to December comparisons—for example, an increase of 0.1 percent would be biased downwards by 0.01 percent, a negligible amount in low inflation times. Indeed, the bias would be somewhat smaller given that some prices are collected centrally. The December to January comparison would be similarly biased upwards with comparisons over the period unbiased. Yet escalation payments may be paid within a year, and it remains important in such matters that there be no downwards bias.

### *3.1.3 Source data are timely*

Prices are collected mid-month in outlets, the staff of which are informed of the dates of the visits. Organizations providing centralized prices are informed of the required due-by dates for submission of data, and there is a standard follow-up practice, which works well for late suppliers. Source data for weights have a lengthy compilation period following the surveys.

### **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*

Standard errors for weights for COICOP divisions for the 2001-02 HBS are relatively small for food and nonalcoholic beverages: a 95 percent confidence interval of €3,305 to €3,430, and for housing and energy, €7,272 to €7,506. However, at worst, for education, the intervals were €40 to €51, and for clothing and footwear, €829 to €933. Such estimates will, of course, be subject to higher sampling errors for more detailed descriptions.

Nonresponse errors, for example, for cigarette and alcohol were considered by reconciling expenditure estimates with other sources. Estimates for durables rely on recall and again require reconciliation where possible. Nonresponse adjustments were made for each area and size of the household unit, though bias can still arise if the consumption patterns of households who do not respond, even for a given area/size, differ from those who do, as is the evidence in other countries.

Extrapolated weights estimated from an HBS in some prior period will have further errors than the ones considered above.

Monthly conservative estimates of standard errors (based on an assumption of simple random sampling) are made for grocery items at the 6-digit COICOP level. The analysis includes the minimum, maximum, and standard deviation of prices. The estimates are used for sample allocation and are monitored. Bootstrap variance estimates for the house price index also exist.

The price collectors have the previous month's data at the time of collection and can detect outliers in relative price changes. Outlier checks are also undertaken at "desk" level in SF. The handheld electronic data-entry system facilitates outlier checks in the field. There is a good policy of no automatic outlier deletion with the cause of the outlier always being followed up.

Summary monthly reports of quality indicators are produced by their computer system, at a detailed 6-digit COICOP level, which include the number of observations in the index and in the reference period, the number of missing prices on a temporary and permanent level, the number replaced, and so forth. For example, for March 2005 there were 51,736 observations of which 45,684 were observed both in February and March. The difference was due to 2,119 new prices and 3,933 missing prices requiring an imputation.

A substantial review of the sample takes place on rebasing which, at every five-yearly period, is too long.

The proportion of household final consumption expenditure for the economy that is not covered in regular CPI compilation is assessed and comprises less than 10 percent.

Accuracy of administrative data received such as the House Price index's price observations is routinely assessed having been compiled in the same prices unit.

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

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

If an item is missing the price collector marks it as “temporarily missing” for the first month if he/she expects that the product will be available again in the next month, and a class mean imputation is made by region and COICOP group. If the remaining sample size is considered too small for the imputation, it is made at a higher-level COICOP classification.

For groceries the imputation for seasonal goods is to carry forward the last price until the seasonal good re-enters the sample. This procedure is against international good practice, and SF is reconsidering the practice.

If a price is permanently unavailable, the “best-seller” replaces the missing price for nongrocery items. For durables and semi-durables, price collectors are instructed to select the best seller from the same price-quality class as to facilitate direct comparison between the disappeared and succeeding product. If this is not possible, the replacement is judged to be a noncomparable replacement. These judgments are initially made by price collectors and are checked by central office staff. For noncomparable replacements, class mean imputations are performed. For nondurables the process is basically the same with the exception that small changes in package size are quality-adjusted by compiling unit price for the contents. The thresholds for accepted package size boundaries are set centrally. For mobile phones, PCs and computer equipment, house prices, new and secondhand cars, and rents, compilers use special methods utilizing monthly sample replenishment and/or hedonic methods. Imputations are short-run (modified) ones—between the price reference period and the overlap period, before short-term linking-in the new price. This quality adjustment assumes, in the case that the products have been judged to be comparable, that no quality difference exists between the products. In the case where products are assessed to be too different to be directly comparable, an imputation method is applied that assumes the price of the disappeared product has moved at the same pace as other products in the same subgroup. More use should be made of explicit quality adjustments because the validity of this assumption can be called into question.

In the case of tariffs, the quality-mix-adjustment problem is dealt with by using stratified unit values to decompose the mean prices into homogeneous units for comparisons.

Radically new goods and services are introduced irregularly on rebasing, arguing for an increase in the frequency of rebasing.



Geometric means are appropriately used in the aggregation of elementary price indices. The aggregation of elementary indices to higher levels uses a Young formula—there is no price-updating of weights. The weights are rebased every five years as noted above. When new weights are introduced, the new index is linked to the old index using an internationally accepted technique. The elementary aggregate indices are first weighted by the major regional commodity weights to give commodity indices for the whole country, and the commodity indices are then weighted by commodity weights for the whole country through the COICOP four-, three-, and 2-digit levels. This allows regional indices to be calculated, though they are not published and there is little demand for them.

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

The price movements of rents for the CPI for rental dwellings are measured by an index of rents paid, produced as a part of the SF housing statistics. The index is calculated on a monthly sample of some 1,900 households derived from the Labor Force Survey. To reduce sampling variance, the data are pooled to three-month datasets before the index compilation. The procedure is equivalent to using three-month moving averages. To minimize errors from changes in the housing mix, stratification uses variables on area, number of rooms, and type of financing. Price-determining variables for hedonic regressions include postal code, age, type of building, and the time the data relate to. Geometric mean rents are first calculated according to classification categories and adjusted for mix change using the estimated regressions. Aggregation over categories uses the Laspeyres formula.

Owner-occupied housing is valued at user cost. The housing mix in the rental market is different in Finland from that of owner-occupied housing, and for some dwelling types there hardly exists any rental market. The rental market is, to a significant extent, made up of rent-subsidized/controlled dwellings and would be an inappropriate proxy for owner-occupied housing. User-cost valuations include rents and cost items, which affect the market rent, such as maintenance expenses, interest, and depreciation. It is assumed, as is apparent from past data, that the income from (cost of) own-capital follows the change in the price of dwellings, that is, the real income from own-capital is zero, which may or may not continue into the future. The estimate is thus of depreciation charges, interest from loans and maintenance, and repair costs. Depreciation is estimated relative to changes in the price of dwellings, that is, a house price index.

The quarterly house price index is compiled from tax authority records of transaction prices and data from estate agents. The index is compiled using a Laspeyres-type formula for stratified categories. Unweighted geometric means are used for aggregation within strata, with hedonic adjustments to the prices to account for the changes in the mix by location, type of building, number of rooms, construction year, floor area, and micro-level location. The index is published one month after compilation from over 70,000 house share transactions. Ninety-five percent standard errors for the House Price Index for the whole country are  $\pm 0.7$  percent.

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

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

Some comparisons are made with specific sectors but it is considered difficult to use the indices to validate each other. Specific examples of external verification include the use of world oil prices when examining the price of gasoline for private transport and of car prices from trade organizations. Estimates from external studies on the likely effect of a tax on alcohol were used when considering the validity of the calculated contribution to the index of the change in tax, but the scope for such validation checks is considered limited. Disaggregated components of the CPI are compared with estimates from other major price indices such as the PPI, export price indices, and import price indices, where applicable.

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

There is a working-down validation whereupon unusual changes are traced down the aggregation hierarchy to identify their source, which is then examined for errors. No such analysis is undertaken at the regional levels, nor is this deemed appropriate.

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

Aggregation is for elementary items by region and then across regionally-weighted elementary aggregates to provide national level indices. Notes on the estimates of sampling errors relating to the HBS estimates express some diminishing confidence in highly disaggregated weights for each product group at the 6-digit level, never mind by region at that level. Further, the response rates can be seen to vary substantially across regions in the HBS, and adjustments for nonresponse to regions may be misleading and, moreover, at varying levels by region. Given the large sampling errors in regional, detailed estimates of expenditure and possible biases in nonresponse adjustments across regions, it is worth reconsidering the current practice of regional aggregation unless undertaken at a higher level.

### **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)***

When weights are changed, data for the last two years are re-computed with the new weights. This thus provides a comparator series to help determine the effect of the weight change. Such comparisons provide hindsight into the effect of substitution bias.

## **4. Serviceability**

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

#### *4.1.1 Periodicity follows dissemination standards*

The CPI is compiled monthly in line with the SDDS.

#### *4.1.2 Timeliness follows dissemination standards*

The CPI is compiled on a monthly basis and is released 14 days after the end of the month of the last release. This is within the SDDS timeliness requirement of one month.

## **4.2 Consistency**

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

The CPI is consistent in aggregation across regions and items. It uses a fixed weight arithmetic mean of price relatives. However, the move to a chained index would yield an index that is not consistent in aggregation, although its advantages outweigh this lack of aggregation consistency.

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

Consistent time series data are available for an adequate period of time (at least five years). The comparisons over this period are not consistent in terms of the product varieties represented. However, as is the usual practice, it is considered more meaningful to have a run of index numbers that reflect the dynamic changes in consumption expenditure and the outlets, products, and product varieties priced, rather than a truly consistent one that is representative of out-of-date consumption patterns. A time series for the CPI is published from 1914 using the consistent reference period of 1914=100.

For a change in weights the index is backdated with the new weights for a similar basket for a run of two years for comparison.

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

The statistics are broadly consistent or reconcilable with other statistical frameworks. There is a need to ensure there is an explanation of the difference between the headline CPI and HICP whenever data on both series are published. The PPI, CPI, export, import, domestic sales, indices, and the Household Final Consumption Expenditure (HFCE) deflator provide a family of index numbers, the benefits of which are that they serve analytical purposes in understanding the transmission of inflation, as well as providing some indication of the validity of component indices.

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

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

The CPI is final when released.

A form of revision is the calculation of past indices over the last two years, when an index is rebased, using the new weights. Over this back period the “old” index rightfully remains the official index. The 1995=100 index for the two years January 2000 to December 2001 was calculated using 1995 weights and 2000 weights and compared. Longer series were not used because the composition of product varieties was deemed to have changed too much to make the comparisons viable. There was little change between the two indices over this period—1.6 percent for 1995 weights compared with 1.8 percent for 2000 weights—though there were substantial changes for individual months and product groups: for example, July and the product groups of clothing, housing heat and light, food and non-alcoholic beverages, and transport.

Information as to the forthcoming rebasing is given on the website one year or more in advance. Three months before revision, more detailed information is provided. Key employer and employee organizations and other users are informed (as required under ILO Convention 160). The ILO receives a report every three-four years as to how major users were informed of major changes.

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

There are no preliminary CPI data.

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

There are no preliminary CPI data and thus no revisions.

The House Price Index (HPI), used in the CPI for the user-cost estimates of shelter, is revisable, but the CPI is not revised, and this inconsistency is recognized by SF and considered pragmatic. The use of the CPI for escalation clauses requires that the CPI is not revised. The effect of the HPI revision on the CPI is at least currently minor, though studies should be undertaken and this effect acknowledged.

## **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 statistics published in the hardcopy “bulletins” are clearly presented with well laid-out tables and charts.

The hardcopy release and a web release contain similar information. A note exists on the website, though not in hardcopy, that more detailed data are available for free on request. Press releases are made via the Web. SF has course material on the CPI for teaching purposes available on the Web.

The policy on the publication of the methodological handbook is that it is now only available on the Web and only changed on rebasing.

The IMF's DSBB is updated regularly.

Unfortunately the website equivalent of published results, at the level of detail of the bulletin, is only available in Finnish and not in English.

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

The website is the main method for publishing CPI data. The number of visitors to SF's Internet site per week between 2000 and 2004 increased from about 12,000, to over 30,000, while the number of publications fell from 141 to 122, and the circulation from about 86,000 to about 48,000.<sup>25</sup> The production of statistics on the English language and Swedish websites is not as developed as the Finnish site, but the updating of these sites is in hand. Data on the websites can be downloaded as Excel files. The statistics in the hard copy bulletin are impressive including indices for the 12 COICOP divisions over the last two years and the current year on a monthly basis, as well as the annual cost-of-living index, which goes back to 1951. Twelve-monthly changes are also given for the CPI, as well as for the HICP by country.

Releases include an explanation of the contributions that different sectors make to the overall price change.

#### *5.1.3 Statistics are released on a preannounced schedule*

A clear detailed release schedule is available in all three languages on the website with times and dates well in advance of release. Releases have been issued punctually, that is, according to the preannounced schedule.

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

There is no advance briefing of the press. The statistics are made available to all interested users simultaneously. The release calendar, published annually in December, is updated continuously on the Internet. In addition, a weekly news calendar is published each Friday. It includes information on statistical releases, press releases, and other forthcoming events for the next week. The major users including the media, ministries, and other interested parties,

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<sup>25</sup> Taken from *Overview of Statistics Finland*, presentation by Heli Jeskanen-Sundström to IMF ROSC mission, May 12, 2005.

receive an e-mail when the weekly news calendar is published on the Internet. The DSBB has a link to the advance release calendar.

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

For a fee SF will release data at a more disaggregated level, where the request is reliable and commensurate with confidentiality requirements.

## **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 2002 version of the *CPI Handbook for Users* details the CPI methodology (for the 2000=100 base index), which replaced the earlier 1998 version (for 1995=100 index), was, unlike the previous version, only published on the website and in Finnish, and this remains so. This latest 2002 publication is of some importance because rebasing, every five years, introduces changes in methodology. Details of methodology are no longer planned to be published in hard copy, and web versions of the 2000=100 *CPI Handbook for Users* in Swedish and English are currently being proposed. The lack of a hard copy version is regrettable, is reflective of resource constraints, and was argued to be a reasonable response to the increased use of the Internet. However, as of now, an English language and Swedish language version of the handbook are unavailable, though planned. Resource constraints are the reason.

The SDDS metadata, SDDS summary methodologies, and related descriptions are reviewed and updated regularly on the DSBB.

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

The 1995=100 *CPI Handbook for Users* was well-written, with material useful for all levels of users. The 2000=100 version is apparently an extended version of this and thus likely to be most useful. Eye-catching, user-friendly articles are written for newspapers and brochures for schools.

## **5.3 Assistance to users**

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

Details are clearly given on hard copy and website releases of contacts by phone, fax, and e-mail of the specialists responsible for the relevant statistics. Responses to inquiries are within two working days, providing prompt and knowledgeable support. Contact with the media is supported by a Media and Communications Unit.

*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 listed on the website. CPI hardcopy bulletins provide a short advertisement for recent, related publications and the url to the website.

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

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
<b>0. 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				
<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			More frequent HBSs and shorter compilation periods are required. Adjustments should be made to exclude expenditure by nonresidents from the weights. December prices should be collected mid-month.  More frequent updating of weights/chaining advised. The carry-forward method for seasonal items should be abandoned.
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				The <i>CPI Handbook for Users</i> for the current index, 2000=100 is not available in English or Swedish.
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				



## Recommendations

- To avoid damage to current standards, fully resource new initiatives. Staff resources for price indices should be reviewed and expanded to meet new needs (0.2.1).
- Exclude estimates of expenditure by nonresidents from the weights (2.2.1 and 3.1.1).
- To enable a more frequent updating of weights, or annual chaining, develop more regular household budget surveys (HBSs) with shorter compilation periods. The lag between the HBS and the utilization of the weights is too long (3.1.1).
- Develop the judgmental selection of outlets for sampling the prices of nongrocery items to a more formal, probabilistic, or quasi-probabilistic sample selection design (3.1.1).
- Review regularly the periodicity of price collection (monthly, quarterly, etc.) to ensure that the periodicity is commensurate with price stability, given the collection of a substantial proportion of prices at a lower than monthly frequency (3.1.2).
- Adopt mid-month core price collection for December (3.1.2).
- Abandon the use of the carry-forward method for seasonal prices. Make more use of explicit quality adjustments (3.3.1).
- Appraise the use of regional weights for aggregation for product groups for which the standard errors of the regional HBS-based estimates are considered too large (3.4.3).
- Publish up-to-date metadata for users in English and Swedish (5.2.1).

### III. PRICE STATISTICS (PRODUCER PRICE INDICES)

#### 0. Prerequisites for quality

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

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

Under the terms of the Statistics Act (280/2004), Statistics Finland (SF)—one of nearly 20 agencies belonging to Finland’s National Statistical Service (NSS)—is the general authority for collecting, processing, and disseminating the statistics. SF accounts for 77 percent of the NSS production, measured by expenditure. The NSS’s task is to produce official statistics describing economic and social conditions and their development for general use. Outside the NSS, some 60 other agencies publish central government statistics. The Statistics Act does not attribute the responsibility for preparing of individual statistics to specific agencies. However, SF has assumed responsibility for compiling the producer price index (PPI) and this status quo is not challenged by any other agency.

Legislation is mostly silent on the precise responsibilities of SF with respect to the NSS and the instruments it needs to comply with this task. The Statistics Finland Act (49/1992) merely states that SF shall provide for the general development of official statistics in collaboration with other central government authorities. In practice, it seems the SF achieves much of the coordination and development within the NSS through dialogue with the constituting agencies, founded on common interest and a willingness to cooperate.

SF has defined its objective as developing Finland’s system of official statistics into a uniform, good quality, relevant, easy-to-use, and cost-effective system. In addition, the system should be internationally recognized for its high-quality statistics, information services, and expert services.

SF furthers this objective by (1) maintaining a network of coordination with each administrative sector, (2) preparing a five-year development plan and an annual follow-up report for official statistics, (3) participating in development projects, (4) providing reports and opinions on request, (5) offering training in statistics, (6) defining common classifications, (7) promoting a uniform electronic statistical service, and (8) coordinating and rationalizing data collections. SF directs a cooperation group for European Union (EU) matters appointed by the Ministry of Finance (MOF) and publishes a quarterly information bulletin entitled *What is New in Official Statistics*.

Finland’s membership in the EU implies that European law applies to a large portion of the Finnish statistical program. In this respect, the Council Regulation (EC) No 322/97 is particularly important because it stipulates that national authorities shall be responsible for producing European Community statistics at the national level and that Community statistics

shall be produced on the basis of uniform standards and, in specific duly justified cases, of harmonized standards.

SF is required to provide monthly data to the Statistical Office of the European Communities (Eurostat) under the short-term indicators regulation.

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

There are no indications that SF has any major problems regarding data sharing and coordination among data-producing agencies. The National Board of Customs is a main provider for the PPI of export unit values. At least once every two years, SF organizes meetings with the Board, but the specialists are in regular contact with their counterparties monthly. In a few cases, however, improvements are still possible, such as the transmission of detailed data information from the National Board of Customs. Such information would help solve the classification problems that contribute to problems with the estimates of revenue to the domestic market.

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

Several legal acts guarantee that individual data should be kept confidential. Under the Statistics Act, statistics shall be compiled so that reporters whom they concern are not directly or indirectly identifiable (unless the data are public by virtue of the Statistics Act). More generally, data obtained by statistical authorities may be released to other parties in two cases: either if permitted by legal provisions explicitly referring to the NSS, or upon express consent of the subject of the data. In addition, (only) the SF has the right to *receive* such individual data if such is deemed necessary for the production of statistics. The Act allows a statistical authority to release confidential data for use in scientific research or statistical surveys if individuals and other statistical units cannot be identified.<sup>26</sup> Violation of the secrecy obligation is punishable under the Penal Code. At the European Union level, similar assurances about the confidentiality of individual data are included in Council Regulation (EC) No 322/97.

Details regarding the protection of information on private individuals are laid down in the Finnish Personal Data Act (523/1999). This Act also institutes a Data Protection Ombudsman. Finally, although the Finnish Constitution and the Act on the Openness of Government Activities (621/1999) grant the right of access to documents or recordings in the public domain, grounds for secrecy include sensitive information on persons, private financial interests, and personal privacy.

The Statistics Act obliges statistics-producing authorities to inform respondents in writing about the intended use of the data, the procedures to be used in producing the statistics, the

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<sup>26</sup> One minor exception does not apply to data described in this report.

principles governing whether the provision of data is obligatory or voluntary, the rights of the respondents, the arrangements for protecting the data, and the duration the data will be stored. SF practice is in conformity with these provisions.

SF has implemented procedures to prevent disclosure of individual reporters' data, once received from other agencies or directly collected. It has published guidelines on how to apply the Statistics Act and the Personal Data Act, as well as guidelines on the protection of tabulated enterprise and personal data. A section on data protection is included in the SF publication *Quality Guidelines for Official Statistics* (2002). Micro data, concerning individual persons, released to external agencies for scientific research are first treated to remove variables that would make it possible to directly or indirectly identify individual persons. Similar procedures are used with respect to sensitive information about units other than individuals.

In SF offices, access to individual data is restricted to staff who require the information in the performance of their statistical duties. Staff review all data prepared for dissemination for possible indirect disclosure of individual data.

SF computers are password-protected. Staff offices are not locked, but access to the SF building and entrance to floors is secured by electronic passes.<sup>27</sup> Confidentiality of data during filing and destruction of records is in keeping with the National Archives Act and Statistics Finland's Archiving Guidelines.

Particular problems arise with the PPI with regard to maintaining the confidentiality of data for highly concentrated industries.

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

The Statistics Act requires that the primary exploited sources for statistical purposes shall be the data accumulated in administering general government and the data produced as a consequence of the normal activities of employers, self-employed persons, corporations, and foundations. As indicated above, SF has the right to receive these data under the Statistics Act. In addition, all public and private entities in Finland are obliged to provide SF with data on their finances, products, staff, etc., as necessary for the production of statistics. Of course, SF has also the legal mandate to collect information directly<sup>28</sup> and, if deemed appropriate, to make the provision of data obligatory. The right of SF to collect data by virtue of the obligation does not extend, however, to data that are kept confidential for reasons of international relationships, public safety, the interest of national defense, or the safety of the state.

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<sup>27</sup> It is, however, easy to move about in the elevators with other people, which raises the possibility of "tailgating."

<sup>28</sup> Only 5 percent of the information collected by SF is obtained directly (data for 2003).

The Statistics Act stipulates that a person who willfully fails to provide obliged data or willfully provides false data shall be sentenced to a fine. Nevertheless, SF is allowed to refrain from bringing charges if the violation is regarded as minor, and in practice charges are never filed. It is difficult to say, therefore, whether the penalties included in the Statistics Act are an effective deterrent. There is a natural and common problem of relatively low response rates of establishments, both in terms of agreement to take part at initiation, and then responds. The PPI staff put in a lot of effort to explain the importance to enterprises of their taking part, though they provide little by way of feedback, in part due to lack of interest.

The Statistics Act, backed up by actual practice, states that statistical data shall be collected economically and shall cause the respondents the least amount of inconvenience and cost.

Letters accompanying the questionnaires advise respondents that SF provides assistance in completing and submitting forms. The statistical questionnaires themselves include the e-mail address and postal address of a point of contact. It is clear that SF seeks to secure the cooperation of respondents by writing such letters, limiting the response burden to the extent possible, testing questionnaires before they are sent out, and other measures. However, the *Quality Guidelines for Official Statistics* do not explicitly mention the importance of securing goodwill with respondents.

## **0.2 Resources**

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

Seven PPI staff also cover the expanding service sector. When advertisements for new senior staff have been posted, they have attracted a very large number of applicants. Staff constraints prevent work on quality adjustment and the collection of more prices. Tight staffing makes it difficult to undertake research on the data. The PPI relies on staff taking methodological initiatives and developing good quality monitoring systems. The staffing numbers are insufficient to adopt new methods without other areas of their work suffering as a result.

SF is very fortunate to have high-level staff responsible for the PPI who are active on methodological issues; they attend and give papers on methodology at international meetings on best practice. PPI staff also act as experts on TA missions for international organizations, which include the Fund. They have also hosted a Fund seminar on the *Producer Price Index Manual (PPI Manual)*.<sup>29</sup> Not only are international standards monitored for changes that need to be taken into the price index compilation system, but staff at SF help inform them.

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<sup>29</sup> ILO/IMF/OECD/UNECE/Eurostat/The World Bank (2004), *Producer Price Index Manual: Theory and Practice*, Washington D.C., International Monetary Fund. Available at: [www.imf.org](http://www.imf.org).

Their skills are maintained and further developed through internal training,<sup>30</sup> a well-functioning internal consultation and feedback process, and taskforces and workshops, such as those provided by Eurostat.

A core of experienced staff is maintained, but owing to the small numbers involved, critical staff can be lost to the detriment of the index. SF as a whole has no problem attracting new persons, in view of the office's good image as an employer. The latter is corroborated by the results of the annual Staff Satisfaction Survey and the number of applicants for posts when recently advertised. Nevertheless, management is concerned about attracting staff with macroeconomics background. For this reason, among others, a trainee program has been put in place with the University of Helsinki.

Computer resources are good, though senior staff responsible for the PPI consider more tailor-made systems to be desirable. Emergency backups, both internal and external, are in place. The office building, furniture, and other on-site facilities are excellent.

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

A formal review of staff performance is conducted annually in discussions with individual staff members. A standard list of elements contributing to performance in the past period is used in these discussions; for management staff, target performance agreements have been drawn up. Informal feedback to staff is regularly provided, for instance during the weekly meetings of the subunits.

The prices unit is active in promoting and adopting new technology and has instituted a program under which all enterprises will have tailor-made facilities to respond electronically, should they wish and, thus, to achieve efficiency along with increased accuracy. The full cost of compiling statistics, including staff costs, computers used, etc., is measured and monitored annually.

### **0.3 Relevance**

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

SF consults data users to ensure that the PPI continues to meet user needs. The most important contact in this respect is the Suomen Kansantalouden Tilinpito (SKT) group, consisting of about 15 members, that convenes three times a year. Chaired by the director of the MOF's Economic Department, the group further comprises the BOF and four economic research institutes. Another group—which includes representatives of the MOF (Budget,

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<sup>30</sup> Internal training encompasses individual statistics as well as the improvement of general skills such as foreign languages, data confidentiality, leadership, and dealing with the media.

Tax, and Economic Departments), the National Board of Customs, the Ministry of Agriculture and Forestry, the Board of Taxes, and SF—consults on issues related to the EU's own resources. Further feedback is received during user courses and seminars, when major revisions are planned. Generally, SF encourages users to provide any comments they wish to make, and these comments are monitored closely.

Information on new and emerging data requirements regarding the PPI is also received during various meetings organized by Eurostat, the IMF, the OECD, the United Nations Economic Commission for Europe (UNECE), the Nordic countries, and the International Association for Income and Wealth.

#### **0.4 Other quality management**

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

SF management is highly sensitive to all dimensions of quality. Management thinking on this issue has been influenced by, among other things, the European Foundation for Quality Management (EFQM) excellence model, the International Organization for Standardization (the ISO 9000:2000 standard series for the development of a quality system), the United Nations' *Fundamental Principles of Official Statistics* and *Handbook of Statistical Organization*, as well as Eurostat's work on quality. The *Quality Guidelines for Official Statistics* published by SF in 2002 mention the following quality criteria for application in Finland's official statistics:

- (1) relevance of statistical information;
- (2) correctness and accuracy of data;
- (3) timeliness and promptness;
- (4) accessibility and transparency/clarity of the data;
- (5) comparability of statistics;
- (6) coherence and consistency/uniformity of data; and
- (7) documentation.

This list has to be supplemented with the element "costs," which are regarded more as a limitation on quality than a component of it.

Staff have received training on the various dimensions of quality, and every division includes at least one person focused on total quality management issues (there are 18 such persons in total). Staff responsible for PPI compilation are members of the Prices and Wages Unit and benefit from addressing quality issues common to the PPI and CPI. The organization's commitment to quality is apparent, among other things, from the abovementioned *Guidelines* and SF's *Annual Report*. In the pilot phase, 45 persons have made self-assessments in line with the EFQM model, and a repeat covering more staff is foreseen for 2006.

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

Processes are in place to monitor the quality of the statistical program. Partly, these processes are required by the performance agreements between the MOF and SF, and between SF's Director-General (DG) and senior staff. SF uses balanced scorecards (BSs) to produce and implement strategic plans and to communicate the plans.

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

Quality considerations influence the planning of the statistical program. The summary reports on, for example, missing values each month, and the BSs influence the inputs of the Prices Unit into the strategic plan.

### **1. Assurances of integrity**

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

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

SF reports to the MOF. The Statistics Act, the Statistics Finland Act, and the Council of State Decree on Statistics Finland (1063, 2002) do not formally state that the SF or the authorities belonging to the NSS are professionally independent. However, several legal provisions support SF's professional independence, and SF acts accordingly.

The provisions that support SF's professional independence include the following:

- section 3 of the Statistics Finland Act that stipulates that the organization and operational units of SF are decided upon in "working orders," but that these have to be confirmed by SF's DG;
- section 1 of the Council of State Decree on SF that gives the DG the right to manage the activities and finances of SF;
- section 5 of the said Decree that lays down that the DG shall be appointed by the Council of State. It also gives the DG the right to appoint the directors of the operating units as well as the other staff unless the working order has assigned the decision to some other official. The Minister of Finance shall appoint a deputy for the DG at the submission of the DG; and
- article 10 of Council Regulation (EC) No 322/97 that requires that Community statistics be governed by impartiality, which is defined as "an objective and independent manner of producing Community statistics, free from any pressure from political or other interest groups, particularly as regards the selection of techniques, definitions and methodologies best suited to the attainment of the objectives as set out."



The formal relationship between the SF and MOF largely focuses on multi-annual agreements, under which SF undertakes to fulfill targets within the budgetary limitations. The performance agreement for the year 2005 covered the following subjects:

- (1) main strategic goals for the next four years;
- (2) targets for operational effectiveness in 2005;
- (3) performance targets for 2005
  - outputs and quality management
  - operational efficiency
  - management and development of intellectual resources;
- (4) resources; and
- (5) validity and follow-up of the agreement.

Approximately 75 agreed performance indicators include, for instance, statistics production (databases and data collection), public image, number of international trips, number of publications, press releases, performance of chargeable services, operational efficiency, staff years, staff training, and staff job satisfaction.

Recruitment and promotion in the organization are based on relevant aptitude and expertise. Comparative exams are not part of the selection procedure. Potential staff are selected on the basis of interviews, papers they have written, and other evidence of aptitude. Choices are made on the basis of written assessments. Formal class-based and on-the-job training in the methodology and compilation methods is provided for staff. Annual personnel training expenditure per member of staff amounted to €971 in 2004.<sup>31</sup>

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

Under the Statistics Act, the choice of data sources, statistical techniques, and methods of dissemination is required to be informed by statistical considerations (sections 3, 10, 11, and 12). There are also responsibilities regarding cost-efficiency and the response burden of data collection (section 4). In particular, section 11 includes the requirement that statistics should be as reliable as possible, shall give a truthful picture, and make use, where possible, of uniform concepts, definitions, and classifications, as well as be timely. Similar provisions can be found in EU legislation.

As indicated above, SF has published a 132-page *Quality Guidelines for Official Statistics*. Its purpose is to set out SF's statistical production procedures and, in doing so, includes chapters on survey processes, estimation, presentation, documentation, and publication, including SF's commitment to quality. All chapters use statistical criteria, which are clearly laid out.

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<sup>31</sup> This figure excludes interviewer training. Source: *Overview of Statistics Finland*, presentation by Heli Jeskanen-Sundström to IMF ROSC mission, May 12, 2005.

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

Although no specific regulation entitles SF to comment on erroneous interpretation and misuse of statistics, in actual practice SF has an active policy in this matter, and its Information Service has issued guidelines on how to respond. A private agency (Esmerk) monitors 32 national and regional newspapers and summarizes references to SF. Other media are also watched. If erroneous interpretation or misuse of statistics is detected, contact is established to explain the issue. This can be done by the Head of the PPI in the normal course of affairs. In serious cases, the DG may write a letter to the editor; this happens a few times a year.

## **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 legislation governing SF is available among other places on its website and in its library.

The relevant legislation and guidelines are difficult to find on SF's website, at least in the English version.<sup>32</sup> *Legislation* is not a heading in the site index. The key Statistics Act (280/2004) is not available on the site; instead there is a hyperlink to the repealed Statistics Act (62/1994). Unfortunately, this hyperlink takes the user to the Council Regulation (EC) 322/97, rather than the 1994 Act. The current and previous versions of SF's *Codes and Guidelines on Professional Ethics*, on the other hand, are in the English language version of the SF's website.<sup>33</sup>

Finland subscribes to the IMF's Special Data Dissemination Standard (SDDS). The IMF's Dissemination Standards Bulletin Board (DSBB) includes, under the heading of "Integrity," the terms and conditions under which SF's statistics are produced, including those relating to the confidentiality of individually identifiable information.

Statistical publications always include SF's general contact information, and many include references where more specific information can be found. Data used from other sources are referenced as such.

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<sup>32</sup> The Swedish and English versions are in the process of being revised. The Finnish version of the site is more complete, even though reportedly still difficult to search.

<sup>33</sup> Available on <http://tilastokeskus.fi/tk/tt/laatuutilastoissa/guidelines.pdf>.

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

The SF policy requires that statistics must be accessible to all users at the same time. This policy is noted in the *Guidelines on Professional Ethics* (page 12). The Statistics Act prescribes that all statistics shall be published as soon as possible upon completion. It also prescribes that sensitive statistics must not be released prior to the official date of publication, but all users must receive the information at the same time. Government has no internal access to price statistics prior to their release to the public.

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

Official statistical publications carry not only SF's logo but also the mark *STV*, explained on the back as indicating an official statistic of Finland. The logo also includes the name Statistics Finland alongside in Finnish, Swedish, and English. Publications include a statement that quoting is encouraged, provided SF is acknowledged as the source. SF's *Quality Guidelines* note the criteria for a publication to be an SVT, which includes production by an agency or institution on the list of SVT producers and assumption of responsibility by the publishing agency for its accuracy and content (pages 108–10). SVT publications cannot be published under the name of the author, thus distinguishing between, and allowing the flexibility of, research working papers.

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

Advance notice is given to the public when major changes are introduced in methodology, sources, and statistical techniques. If the changes are very large, briefings for the press may be prepared.

## **1.3 Ethical standards**

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

A culture of professionalism and independence is apparent from the code of professional ethics SF publishes as its *Guidelines on Professional Ethics*, Handbook 30b (Helsinki, 2002).<sup>34</sup> The Handbook is a well-written, clear and comprehensive on ethical issues facing a statistical agency. It outlines SF's obligations to society (chapter 2), respondents (chapter 3), customers (chapter 4) and funders and employers (chapter 5). It draws attention to possible conflicts between such obligations, such as resource constraints.

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<sup>34</sup> Available on SF's website [http://www.tilastokeskus.fi/tk/tp/tkesittely\\_etiikkaopas\\_en.pdf](http://www.tilastokeskus.fi/tk/tp/tkesittely_etiikkaopas_en.pdf). Preceding this was a *Code of Professional Ethics*, 1993. This was based upon the *Declaration on Professional Ethics* adopted by the International Statistical Institute (ISI) in 1985—also on SF's website: [http://www.tilastokeskus.fi/tk/tp/tkesittely\\_etiikkaopas\\_en.pdf](http://www.tilastokeskus.fi/tk/tp/tkesittely_etiikkaopas_en.pdf).

The Handbook draws attention to conflicts between ethics and legislation and discusses how even strict abidance by the law may be unethical.

All employees are given a copy of this handbook on recruitment, and all employees were circulated a copy when it was published in 2002. It can also be found on SF's website.

## **2. Methodological soundness**

The methodological soundness dimension is assessed against the guidelines outlined in the *System of National Accounts 1993 (1993 SNA)* or the *European System of Accounts 1995 (ESA 95)*, and the *PPI Manual*. The concepts and definitions from the *1993 SNA* are used as guidelines with regard to coverage and valuation, and the methods and procedures from the *PPI Manual* are used as guidelines for compiling the PPI.

The *1993 SNA* and *ESA 95* are viewed as interchangeable whenever reference is made in this document to the *1993 SNA*.

### **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 *1993 SNA* is broadly followed for the determination of the output weights for the PPI. Price measurement generally follows the principles given in the *PPI Manual* with domestically produced goods valued at basic prices. The sampling of headings, establishments, and varieties to be priced follows well-considered sample designs. The prices recorded are, by and large, transaction prices and are for matched varieties so that the prices of like are compared with like.

Output weights are derived from data from the industrial statistics of Finland and the foreign trade statistics of the National Board of Customs, supplemented by national accounts data. The focus on price surveys for the export trade price indices, as opposed to National Board of Customs unit values, except for homogeneous goods, is warranted. The weights are provided at the 6-digit (Finnish version of the) Classification of Products by Activity (CPA) classification. For some products, for example, to separate benzene from diesel, classification is at a more detailed 8-digit (List of Products of the European Community) PRODCOM-list level. Classification of economic activities is at the 4-digit level of (a Finnish version, TOL 2002) the Statistical Classification of Economic Activities in the European Community, Rev.1 (NACE Rev.1). Aggregation is through 4-, 3-, and 2- NACE Rev.1 levels. Publication is from, and including, the 3-digit level.

A particular problem lies with some highly concentrated industries and confidentiality requirements regarding aggregation.

The reporting unit is the enterprise as opposed to the (preferred) establishment. Output from the enterprise has to be apportioned to the CPA classifications concerned, or aggregation takes place at a higher level. The business register does contain listings by establishments, though not to the level of detail of that of enterprises. A review of the sampling of enterprises and establishments may be undertaken on an industry-by-industry basis in order to consider the trade-offs and establish if, and for what industries, it would be beneficial to sample at the establishment level.

## 2.2 Scope

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

The coverage of the PPI includes mining and quarrying; manufacturing; and electricity, gas, and water (NACE Rev.1 C to E), but for the export market, the coverage extends to agriculture, hunting, forestry; and fishing (A and B) as required for the harmonized series provided to Eurostat.<sup>35</sup> SF produces a family of price indices including the PPI, which covers output to the domestic and export markets, a cost of agriculture production index, the export price index, the import price index, a basic price index for domestic supply (which covers construction, NACE Rev.1 F), a wholesale price index, a net price index (which excludes indirect taxes and includes subsidies), the Harmonised Index of Consumer Prices (HICP), the CPI, and a measure of core inflation. Also produced are industry/sectoral indices for agriculture; bus and motor-coach; rail traffic; earth movers and forest machinery; and public expenditure. The production of such a family of indices allows further analytical insights.

Quarterly PPIs for services were started in 2000 and now extend to 13 (experimental)<sup>36</sup> indices including hotels; washing and dry-cleaning; investigation and security activities; labor recruitment and provision of personnel; market research and public opinion polling; taxi transportation; and freight transport by road. Plans are underway to expand the coverage from 13 to about 25 industries, and SF is to be applauded for its work in this difficult area.

Included in the weights and price surveys are, of course, market goods and services for sale, but excluded are changes in output inventories. Also excluded are own-account production of market goods and services for own final consumption and fixed capital formation and illegal market goods sold to willing buyers, which should all be included in principle, though such exclusions are common for PPIs.

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<sup>35</sup> This and other requirements for the harmonized PPI are given under Regulations (EC) 1165/98 and 588/2001 available on: [http://europa.eu.int/eur-lex/fin/search/search\\_lif.html](http://europa.eu.int/eur-lex/fin/search/search_lif.html).

<sup>36</sup> Defined as such as being subject to revisions, unlike the PPI.

It is understood that weights will in the future be derived from national accounts estimates, which may lead to further adjustments.

The 2000=100 *PPI Handbook for Users* makes it clear in a separate section 7 how the scope of the SF's PPI differs from the harmonized European Union (EU) PPI, though there is no reference to how it differs from *SNA 1993/ESA 95* and the *PPI Manual* concepts.

### **2.3 Classification/sectorization**

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

The weights are provided at the 6-digit level of the CPA classification. For some industries, as noted in 2.1.1, classification is at a more detailed 8-digit PRODCOM level, though this is fairly limited. Classification of economic activities is at the 4-digit level of a Finnish version (TOL 2002) of NACE Rev.1.

### **2.4 Basis for recording**

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

Both weights and transaction prices are for market output valued at basic prices. Exports are measured f.o.b. Foreign currency export prices are converted into euros, where necessary, at the average rate of the reference month. In principle, the conversion should be at the rate/day specified in any contractual arrangement, though this may not always be possible.

Prices are for specific product codes/models of the output of responding enterprises. In many cases, product specifications do not include transaction characteristics but include the bar-code or model number to identify the product and its price in a future period. Prices to different destinations (domestic and export) may differ, even if they are from the same enterprise. They are regarded as correct, in that export prices may represent strategic pricing-to-market decisions, hedges on currency fluctuations, or some other form of price discrimination. Prices are collected separately for domestic and nondomestic prices.

Transactions between establishments within the same enterprise are not covered. Transfer prices when exporting to "daughter" companies are used even if the enterprise explains that the prices are artificial. But this is only if no other price information is available (for example, when it is the only enterprise selling the commodity). The *PPI Manual* advises on the need to consider market price movements for the same product to represent market conditions. In some cases the Finnish enterprise is the only enterprise in the area. In such cases, the aim should still be to examine price movements of similar products to get better estimates of market price changes.

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

Ship manufacturing and the manufacture of large paper machines and gas bells can account for significant proportions of output. While the principle followed is one of accrual, there are often large time lags between invoicing and payment. Often the problem is with determining when payments were made and invoices raised.

More generally, the principle of accrual is not always followed. The time of payment requested is mid-month, the 15th day. What is requested is the price for delivery, invoicing, or payment on that date. It is considered more important to get the date right than the pricing principle, given that these may conflict. This follows standard practice where no alternative information is requested or available. However, where possible, accrual price recording should be followed up.

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

Stage of processing indices are not calculated, so netting is not undertaken in this respect. No grossing procedure is used for the missing estimates of changes in inventories.

### **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*

Three main selections to the PPI sampling are (1) “products” (CPA headings), to include in the basket, (2) enterprises for each selected product, and (3) representative commodities to be priced from each enterprise for each product.

The selection of headings was first, on a judgmental cut-off basis, to include large (more than €150 million) headings and representative commodities. After removal of these headings, further selection was by stratified sampling with selection by probability proportionate to size (PPS) with stratification by value at a 3-digit NACE Rev.1 level.

Data collected are sufficiently detailed, at the CPA 6- (and PRODCOM-list 8-digit) levels, to derive PPIs at the 3-digit industry level and 4-digit product level for covered sectors.

#### **Source data for output weights**

The selection of enterprises was by judgment and statistical considerations. In the first stage, systematic sampling with PPS was used to derive samples of enterprises for each heading. If one enterprise dominated the sample, it alone was chosen. In other cases, two enterprises were chosen, but these were supplemented using judgment, including that of the respondents.

The PPI index (domestic) is based on 512 headings with 637 data suppliers. For exports the respective numbers are 288 and 298. Export trade is often more concentrated than domestic production with usually only a single supplier in an industry to the export market, thus requiring fewer data suppliers per heading, 1.03 against 1.24. The division of observations between domestic, export, and import surveys was based on scientific sampling procedures using an optimization procedure by Bankier (1988).<sup>37</sup>

The sample of headings and enterprises for exports was taken from the National Board of Customs. Industrial statistics were used to derive the samples of headings and enterprises on industrial commodities. Production weights for the domestic market were estimated by subtracting the values of exports from production for each heading. In a significant number of cases (8.2 percent), the value of supply to the home market was negative. Such cases were excluded from the index first, on the grounds of misclassification error. Data from the National Board of Customs use the Combined Nomenclature (CN) classification, while SF uses the PRODCOM list. The actual subtraction is done at CPA level, because the Customs provides the link list of CN and CPA but not the link between CN and the PRODCOM list, and this is what may give rise to distortions. The matter merits further concern in case similar, less apparent, errors are cumulating. Some informed adjustment to such weights is also preferable to their exclusion.

The business register is the main source of industrial statistics, containing nearly 250,000 operating enterprises and about 275,000 operating establishments. Updated on a quarterly basis from taxation registrations, it includes the smallest of firms as they register for the “advance year registration practice,” in addition to legal units, which are registered as employers and those liable to pay value-added tax. It is almost a census of all businesses. It has recently benefited from a major program of improvements in the monitoring of company information and the quality of its data, which includes policies for regularly updating.<sup>38</sup> Ninety-eight percent of businesses on the register are classified by the PRODCOM list.

The business register includes data on the names and addresses, industry, location, size, and (for enterprises) importer or exporter. Sampling from the business register is of enterprises, and it benefits from the availability of sales data for sample design and selection. However, sampling of establishments is preferred in situations where the partitioning of the output of enterprises to product/activity levels may be problematic. There may be trade-offs for particular industries, which argues for the use of establishments, though care must be exercised to avoid double counting.

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<sup>37</sup> Michael Bankier, 1988, “Power Allocations: Determining Sample Size for Subnational Areas,” *The American Statistician*, August, 42, 3, 174-77.

<sup>38</sup> Tuula Viitaharju, 2005, Business Register Quality Improvement in Statistics Finland, 18<sup>th</sup> Roundtable on Business Survey Frames, National Bureau of Statistics of China, Beijing.



The weights are updated only every five years, constraining the representativity of the index. Indices for economies such as Finland's, whose output is concentrated around a small number of companies and industries, need to have their weights more frequently updated so that they can reflect (potential) substantial changes. It is noted that (1) SF is well aware of the problem of including new products as they enter the market; (2) SF pursues a policy of sample augmentation and replacement below the 4-digit NACE Rev.1 level, which facilitates the introduction of such products/varieties/enterprises; and (3) there are instances of 'new'/unique products, such as paper machines and gas bells for power stations, whose contracts are infrequent and have their own measurement problems, irrespective of weighting systems. However, the mission was concerned that the weights used may take over a year to compile and introduce, and then are in existence for five years. This may prove to not be representative, owing to shifts in production at the 4-digit level. What is required is more frequent weight updates or chaining at this level.

## Prices

The variants of the products for an enterprise within a heading were, on initiation, selected jointly in discussions with the responding enterprises. The grounds for the selection were that the variant be representative, significant, available monthly, and likely to be available for some time. No random selection methods were employed. Sales to the domestic market had 1,186 price quotes—1.86 per supplier on average. The export market had 448 price quotes, with on average fewer quotes, 1.56, per supplier, again reflecting the more specialized nature of exporter.

Details of the bar code or model number are recorded on initiation, and the prices are returned periodically for the same variant—the periodicity (monthly, bi-monthly, quarterly, annually) depending on the frequency of price changes. Questionnaires are tailor-made. For homogeneous products, such as grain and roundwood, unit values from the National Board of Customs are used with their better coverage, which accords with good practice. Other external sources include the Finnish Forest Research Institute and the London Metal Exchange. Only some product specifications are collected, making it difficult to undertake explicit quality changes. Data are not collected on the terms of sale.

Some estimates have been made of the sampling error of the index using a bootstrapped variance estimator, although the findings are stated as preliminary and are still being evaluated.

Nonresponse rates for *prices* of sampled enterprises remaining in the sample are monitored and have a monthly rate of 15–30 percent. When weighted by value weights, the response rates are much lower at about 5 to 8 percent. This still remains high, especially if there is a cumulative direction in particular industries. A need exists to investigate its effects and encourage response in such cases, rather than rely on imputations and flexibility in sample replacement and augmentation (below the 4-digit level). Missing data can also arise as respondents produce something quite different in different months, in which case the new products have to be linked to the existing price changes.

Nonresponse from *enterprises* may be because the enterprise has closed or refuses to continue providing prices. Some of the selected samples of headings and enterprises have to be replaced. The fall-out was relatively large: 25.4 percent of enterprises selected at initiation were replaced at rebasing, though the percentage in terms of weights is likely to be smaller. Yet such sample degradation remains severe, and a policy of sample replacement and augmentation is required and is planned for subsequent years. A new sampling strategy is to consider how the actual nonresponse can be handled in more sophisticated ways. The core idea is to select the enterprise groups from the same size category using PPS in a group and then select the actual reporting unit using simple random sampling. If there is nonresponse, the next enterprise in the group will be recruited. In some cases CPA headings were replaced, but this was always within the same industry at a meaningful level. The value of production and exports of small enterprises were omitted, and estimates were made for this.

In some industries, where there is a high model turnover, data are collected on the weights (which are subject to rapid change) of the varieties of a product, as well as their prices on a monthly basis. Because of this rapid turnover, alternative procedures are adopted. It is not possible to monitor the prices of varieties selected on initiation since, by the end of the year, many such varieties will not exist or account for limited sales. First, a chained, matched index is used. The matching takes place with paired comparisons *each month*, by way of a chained index, so that the index takes account of the dynamic path of expenditure shares and the model varieties that join and leave the market each month. Second, since weights (sales) are available in each period, a chained Fisher index is compiled, making symmetric use of base and current period weights. A Fisher index is the recommended index in the *PPI Manual* with support from economic theory (in that it includes substitution effects) and from axiomatic grounds.

Such work is to be commended in trying to deal with this difficult situation. Yet further research is advised, in particular with regard to two issues. The first is the chaining of a high-frequency sample with rapid changes in goods. This may replicate a bouncing, behavior, which gives rise to a form of bias as outlined in the *PPI Manual*. The second is that chaining ignores old models in the month they leave the sample and new ones in the month they join it. This may give rise to a bias, which hedonic indices can ameliorate. Again the *PPI Manual* explains such issues. Experimental hedonic mobile phone price indices have been calculated for SF, and further research might be justified along these lines.

Quite specific problems also arise with regard to preserving confidentiality in price collection of highly concentrated industries, and these need further consideration if volume and deflated value series are to be reconciled.

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

The scope of the weights differs from *1993 SNA* in three respects, though it is not unusual in PPI compilation. First, data on changes in inventories are not used in the derivation of

weights. Such data are only available for 51 headings out of the possible 2,901 headings. Second, own-account production and consumption of goods and services are excluded. Finally, no adjustments are made for illegal goods, which is especially relevant for cross-border trade.

### *3.1.3 Source data are timely*

The periodicity and timeliness of the price collection survey is adequate for disseminating the producer price statistics. Some price data are collected less frequently than monthly to help alleviate the burden on respondents and maintain efficiency. In some cases the production of enterprises may be sold 12 months ahead, or price changes may be known to hold for the calendar year. About 30 percent of the data are monthly, and 50 percent are every other month or quarterly. Provisions should be put into place to ensure that the pricing practices that led to such arrangements still hold.

Some unit value data are not timely, but since the PPI is not revised the late data are not used. There are no revision studies as to their effect.

## **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 procedures to identify outliers and other atypical differences in periodic responses by individual survey units do not include automatic deletion, and thus they accord with good practice. Price changes of over 10 percent are investigated, though the cut-off varies for industries found to have low price change dispersion. Extreme values are confirmed with respondents. Price changes at each CPA level are examined for outliers on 12-month and month-on-month bases. Contribution analysis is used at a higher level, working down to detect abnormal price change.

The main (and plans by 2006 for every respondent to have the opportunity) form of response is electronic, which will cut back on errors from transferring data. It also allows for the provision of more detailed data.

World commodity prices, for example, for pulp, oil, and diesel, are used to validate data. Similar methods are used for unit values from customs data, though unit values monitored are often for delivery to a specific country(ies) and can be validated where necessary by examining export unit values to other countries.

The existence of a family of price indices allows the transmission of inflation through some stages of production and sectors of the economy to be identified and to some extent validated.

The proportion of total output for the economy that is not covered in regular PPI compilation is low, with SF's price indices extending increasingly to services industries.

The ability exists to compile reports on response rates, number of missing values, imputations made, etc., to ascertain whether, for example, sample degradation through imputations is severe. The nonresponse list is produced and monitored monthly. This goes all the way to item level. The imputations are also monitored monthly, because each imputation has to be evaluated to determine whether it will be accepted or not in the imputation module. The number of the imputations made however is not recorded on the standard monthly report that can be reproduced "just by pushing a button."

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

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

The price surveys exclude details of the terms of sale, other than the valuation. Some information is obtained when the data provider gives the reason for the price change, but there is no systematic data collection on terms such as discounts for bulk purchases, warranties, delivery times, etc. In many commodities where price fluctuations are due to the bulk purchases, such as raw commodities, SF has adopted the view that it is just a form of price discrimination and so should be considered as a pure price change, not a quality change. Yet there would be no comparing of the prices of like-with-like. Including in the index, such price fluctuations arising from changes in the terms of the sales are not in accord with the *PPI Manual*.

Detailed characteristics are not collected as part of the routine initiation of the sample. The variety is often recognized by the bar-code or model number. This is insufficient. If a noncomparable replacement is made, no objective criteria help decide whether any judgmental quality adjustment by the respondent is reasonable. Further, no basis exists for the independent judging of whether a replacement item stated to be comparable, really is. Such decisions can be discussed with the respondent by phone. But such matters should be part of normal data collection where product specifications and terms of sale are detailed explicitly on initiation. The respondent would have to confirm whether specifications remain the same, or if not, how they change.

SF recommends the carry-forward method for dealing with missing prices, primarily temporary missing ones.<sup>39</sup> The old price is carried forward for three-to-six consecutive months, after which, if still missing, an imputed price (assumed class-based) is used until a price can be obtained. Or if not, it is dropped (an implicit overall imputation). The use of

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<sup>39</sup> According to the SF's 2000=100 *PPI Handbook for Users*, page 9, the carry-forward method is the recommended method for dealing with *quality change*. Discussions with SF have clarified that this is the case for temporary missing prices.

carry-forward prices for such cases falls short of international standards and induces an undue price stability into the index. Temporary missing prices are usually due to seasonal goods and services. An example is given in the 2000=100 *PPI Handbook for Users* of a “weakly seasonal good,” to use the *PPI Manual*’s terminology: the monitoring of electricity prices using a 12-month moving average for the price of electricity on the Nordic Power Exchange. This does not accord with good practice. The actual transaction prices should be used, which are available the whole year round. An imaginative approach to seasonal goods used in some instances is the substitution of similar goods, for example, hockey skates for rolling skates, ski polls for hiking polls, etc. However, there are limitations to this procedure and implicit assumptions as to quality valuation in the linking process.

For permanent missing prices due to a change in the data provider, class-mean imputations are used. Class-mean imputations used for the Finnish PPI are long-run, so that assumptions of price changes of the missing item being equal to the class average are required between the price reference period and the current period. The *PPI Manual* recommends the use of the short-term (modified) Laspeyres where the imputation is only between the preceding and current period, and use is thus made of actual data up to the preceding period. The imputation procedures can thus be improved.

For permanent missing prices due to a permanently missing product, a replacement is found and four alternative stances are taken. Either the price change is considered to be pure, the replacement has more or less the same technical features; or it is considered to be fully due to the quality change; the respondent makes a direct judgment as to the valuation of the change in quality; or an overlap is used, which implicitly assumes the difference in prices of the overlapping varieties are equivalent to their quality difference. The fourth stance is primarily used. The primary use of indirect adjustments is predicated on the absence of data on specifications to allow more reasonable decisions to be made.

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

Aggregation of prices below the 4-digit NACE Rev.1 is by recourse to the geometric mean (with exceptionally the chained Fisher as noted above). This is for products produced within an enterprise and across enterprises up to the 4-digit level. Establishments may be able to provide revenue data at this lower level of aggregation allowing some form of weights to be introduced as and when necessary.

Weights are updated every five years. A Laspeyres-type Young index is used for aggregation at the 4-digit NACE Rev.1 level.

Linked indices, using appropriate techniques, are published and go back to 1949=100 (and unpublished older ones to 1913).

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

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

The PPI is compared with comparable estimates from other sources such as the national accounts statistics, import price indices, export price indices, the basic price index for domestic supply, the wholesale price index, and the CPI. Validation is also against commodity price indices as appropriate.

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

Unusual movements in the index arising from large movements in particular sectors or from particular reporters are investigated and explained in descriptive documentation, including web and hardcopy releases, with due attention to disclosure requirements.

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

The hard copy bulletin and web releases include a discussion of the source of the overall price changes in terms of sectoral changes.

### **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 PPI is final; there are no revisions. The PPI in Finland is used as the basis for contracts and has to be final in this respect. No studies are conducted on the effect of “late” data. With the increased use of electronic reporting, this is not believed to be significant.

Periodic weight revisions are analyzed to determine the effects of substitution bias in the PPI. This extends backwards for a period of two years only, because data changes (replacement products/enterprises) may affect longer comparisons.

Some research studies, such as hedonic analysis for mobile phones, are conducted.

## **4. *Serviceability***

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

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

The PPI is compiled monthly in line with the SDDS requirements.

#### *4.1.2 Timeliness follows dissemination standards*

The monthly index is disseminated within 17 days after the end of reference month. This exceeds the SDDS requirements.

### **4.2 Consistency**

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

The statistical series is consistent in aggregation.

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

Consistent time series data are available for five years, although published linked indices go back to 1949=100 (and older unpublished ones to 1913). When changes in source data, methodology, and statistical techniques are introduced, historical series are reconstructed as far back as reasonably possible, which is two years to avoid undue changes in the sample structure. Unusual changes in economic trends are explained in the analytical text included in the publication and in the web releases accessible to users.

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

As considered in 3.4.1, the availability of a family of index numbers allows the identification of the transmission of inflation through some of its stages and sources, which is used by the Bank of Finland in their analysis.

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

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

Revisions are every five years and are preannounced. Changes in sample structures take place regularly below the 4-digit level, but this is good practice to help with the representativity of the sample. The revision cycle is predetermined and reasonably stable from year to year. However, users should be informed of sectors in which there are particularly high replacements.

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

The PPI is final on release.

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

As noted in 3.5.1, weight revisions are measured and assessed. They are explained in the statistical publication and in the database accessible by users.

## **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)*

Data are published very clearly in the hard copy bulletins providing information by sector and over time on a family of PPIs, including the import price indices, export price indices, the basic price index for domestic supply, and the wholesale price index. Charts and tables are disseminated with the data to facilitate the analysis.

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

Subject to confidentiality requirements, statistics are disseminated in formats to suit users' needs (for a fee). The website is the main method for publishing PPI data. The number of visitors to SF's Internet pages per week between 2000 and 2004 increased from about 12,000, to over 30,000, while the number of publications fell from 141,000 to 122,000 and the circulation from about 86,000 to about 48,000.<sup>40</sup> The production of statistics on the English and Swedish websites are not as developed as the Finnish site, but the updating of these sites is in hand. Data on the websites can be downloaded as Excel files.

#### *5.1.3 Statistics are released on a preannounced schedule*

A clear detailed release schedule is available in all three languages on the website with times and dates well in advance of release. Releases have been issued punctually, that is, according to the preannounced schedule. The release calendar, published annually in December, is updated continuously on the Internet. In addition, a weekly news calendar is published each Friday. It includes information on statistical releases, press releases, and other forthcoming events for the next week. The major users including the media, ministries, and other interested parties, receive an e-mail when the weekly news calendar is published on the Internet. The DSBB has a link to the advance release calendar.

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

There is neither advance briefing of the press nor advance access by government ministers. The statistics are made available to all interested users simultaneously.

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

For a fee, statistics are made available upon request, in addition to the statistics routinely disseminated, where reliable and commensurate with confidentiality requirements.

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<sup>40</sup> Taken from *Overview of Statistics Finland*, presentation by Heli Jeskanen-Sundström to IMF ROSC mission, May 12, 2005.



## **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 2000=100 *PPI Handbook for Users* includes information on concepts, definitions, classifications, data sources, compilation methods, statistical techniques, and other relevant methodological aspects and procedures. The Handbook is published on the website in Finnish, Swedish, and English, but there is no hard copy publication. Given the increased use of the website noted in 5.1.2, this is not considered to be a serious problem.

The SDDS/GDDS metadata, SDDS summary methodologies, and other related descriptions are reviewed and updated regularly on the DSBB.

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

The handbook on methodology is pitched at a level useful to introductory and experienced users. The SF website also has a teaching module on price indices. However, there is scope for a wider range of metadata to be available.

## **5.3 Assistance to users**

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

Details are clearly given on hard copy and website releases of contacts by phone, fax and e-mail. Responses to inquiries are within two working days. Prompt and knowledgeable service and support are available to users of statistics. The Media and Communications Unit supports the media and other users.

### *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 listed on the website, and CPI hardcopy bulletins provide a short advertisement for recent, related publications and the url to the website.

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

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria							
Element	NA	Assessment				Comments on Assessment	Plans for Improvement and Target Dates
		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					
<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				Detailed data on terms of sale and product specifications should be collected as appropriate. Attention should be directed to minimizing drop-out rates for enterprises, and late responses.  Weights should be updated more frequently. More research needed on methods for industries with high model turnover. Methods of seasonal adjustment, quality adjustment and missing values need to be overhauled.
3.2 Assessment of source data		X					
3.3 Statistical techniques			X				
3.4 Assessment and validation of inter-mediate 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**

- Give further consideration to the issues surrounding the collection and use of appropriate data for highly concentrated industries (0.1.3).
- To avoid damage to current standards, fully resource new initiatives. Staff resources for price indices should be reviewed and expanded to meet new needs (0.2.1).
- Estimate transactions to nonresident subsidiary companies, where possible, at market as opposed to transfer price (2.4.1 ).
- Consider the sampling of establishments, as opposed to enterprises, where it is likely to be efficient and to lead to an improved classification of output, without double counting (3.1.1). The balance of price collection away from customs data and towards price surveys is appropriate.
- Hold discussions with the National Board of Customs to reconcile issues that give rise to the problematic estimates of negative revenues from the domestic market (3.1.1).
- Introduce measures to ameliorate the relatively high number of late respondents and of enterprises which cease reporting over the five years. Sole reliance should not be placed on the, albeit useful, sampling strategies to improve the replacement of nonresponding enterprises (3.1.1).
- Collect more detailed data on price-determining product specifications and terms of sale, along with prices.
- Overhaul methods for treating seasonal products, temporarily missing values, and quality adjustments (3.3.1).
- Abandon the use of the carry forward method for temporarily missing items (3.3.1).
- Use short-term imputations as opposed to long-term ones (3.3.1).
- Collect data on sales as well as prices at the lowest enterprise level for large enterprises producing a variety of products with expected different price changes (3.1.1 and 3.3.1).
- Develop a program for the more frequent updating of weights or use of annual chaining (3.3.2).
- Undertake further research on methods for dealing with industries with high turnovers in model varieties (3.3.2).

- Review regularly the periodicity of price collection (monthly, quarterly, etc.) to ensure that the periodicity is commensurate with price stability, given the collection of a substantial proportion of prices is at a lower than monthly frequency (3.1.2).

#### IV. GOVERNMENT FINANCE 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*

Under the terms of the Statistics Act (280/2004), Statistics Finland (SF)—one of the nearly 20 agencies belonging to Finland’s National Statistical Service (NSS)—is the general authority for collecting, processing, and disseminating the statistics. SF accounts for 77 percent of the NSS production, measured by expenditure. The NSS’s task is to produce official statistics describing economic and social conditions and their development for general use. Outside the NSS, some 60 other agencies publish central government statistics. The Statistics Act does not attribute the responsibility for preparing individual statistics to specific agencies. However, SF has assumed responsibility for compiling the general government statistics (GFS) and this status quo is not challenged by any other agency.

Legislation is mostly silent on the precise responsibilities of SF with respect to the NSS and the instruments it needs to comply with this task. The Statistics Finland Act (49/1992) merely states that SF shall provide for the general development of official statistics in collaboration with other central government authorities. In practice, it seems the SF achieves much of the coordination and development within the NSS through dialogue with the constituting agencies, founded on common interest and a willingness to cooperate.

SF has defined its objective as developing Finland’s system of official statistics into a uniform, good quality, relevant, easy-to-use, and cost-effective system. In addition, the system should be internationally recognized for its high-quality statistics, information services, and expert services.

SF furthers this objective by (1) maintaining a network of coordination for each administrative sector, (2) preparing a five-year development plan and an annual follow-up report for official statistics, (3) participating in development projects, (4) providing reports and opinions on request, (5) offering training in statistics, (6) defining common classifications, (7) promoting a uniform electronic statistical service, and (8) coordinating and rationalizing data collections. SF directs a cooperation group for European Union (EU) matters appointed by the Ministry of Finance (MOF) and publishes a quarterly information bulletin entitled *What is New in Official Statistics*.

Finland’s membership in the EU implies that European law applies to a large portion of the Finnish statistical program. In this respect, the Council Regulation (EC) No 322/97 is particularly important because it stipulates that national authorities shall be responsible for producing European Community statistics at the national level and that Community statistics shall be produced on the basis of uniform standards and, in specific duly justified cases, of

harmonized standards The production of national accounts statistics, including government finance statistics, is not only subject to EU law but also to verification by the European Commission.<sup>41</sup>

As a part of the European Statistical System, SF produces and disseminates a significant share of its data according to the legal requirements mandated within this system. It collects information on central government operations (i.e., operations of the budgetary and extrabudgetary central governments) from the State Treasury, on local government operations from the local government units,<sup>42</sup> and on the operations of the Social Security Fund (SSF) directly from the SSF.<sup>43</sup>

The State Treasury, an agency under the MOF, compiles and publishes monthly data on central government operations on a cash basis and on modified cash basis and on the outstanding debt of the central government. These data are prepared by the State Treasury after compilation by the 117 accounting offices of the budgetary central government and the 11 extrabudgetary central government agencies. The State Treasury publishes the monthly Funds Statement for Central Government Finances, the State's Income and Expenses Statement, and the State Balance Sheet for the budgetary central government. The State Treasury operates under the Act No. 305, February 15, 1991 (Act on State Treasury Activities 15.2.1991/305), and the Act No. 621, May 21, 1999 (Act on the Openness of Government Activities 21.5.1999/621), which regulate the public administration and activities of public authorities (government agencies). The Act lays out among other things the ethical standard and the quality treatment of government information. The Acts are published in Finnish and Swedish on the FINLEX; the Act on the Openness of Government Activities is also published in English.

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<sup>41</sup> The European Statistical System (ESS) comprises the Statistical Office of the European Communities (Eurostat) and the statistical offices, ministries, agencies, and central banks that collect official statistics in the European Union Member States, as well as Iceland, Liechtenstein, and Norway. The ESS functions as a network in which Eurostat's role is to lead the way in the harmonization of statistics in close cooperation with the national statistical authorities. The ESS's work concentrates on EU policy areas, but with the extension of EU policies, harmonization has consequently been extended to nearly all statistical fields.

The ESS also coordinates its work with international organizations such as the Organisation for Economic Co-operation and Development (OECD), the United Nations (UN), the IMF, and the World Bank.

<sup>42</sup> That is from the municipalities, the joint municipal authorities, Åland Islands, Pension Fund of the government of Åland, Association of Finnish municipalities, and Local Authority Employers Finland.

<sup>43</sup> Mostly from the Social Insurance Institution of Finland and the Insurance Supervisory Authority.

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

There are no indications that SF has any major problems regarding data sharing and coordination among data-producing agencies. The data sharing and coordination among Finnish agencies as far as government finance statistics are concerned are very good, and the compilers of GFS in SF have frequent informal contact with colleagues in the data-providing agencies. The use of general government statistics in fiscal policy formulation, monitoring, forecasting, and preparation for the Excessive Deficit Procedure (EDP) is a special reason for the close liaison between SF and the MOF. SF supplies the MOF with national accounts data including the general government account as well as the accounts for all levels of government. The specialists regularly contact their counterparties in other agencies and other data providers.

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

Several legal acts guarantee that individual reporters' data should be kept confidential. Under the Statistics Act, statistics shall be compiled so that reporters whom they concern are not directly or indirectly identifiable (unless the data are public by virtue of the Act). More generally, data obtained by statistical authorities may be released to other parties in two cases: either if permitted by legal provisions explicitly referring to the NSS, or upon express consent of the subject of the data. In addition, (only) the SF has the right to *receive* such individual data if such is deemed necessary for the production of statistics. The Act allows a statistical authority to release confidential data for use in scientific research or statistical surveys if individuals and other statistical units cannot be identified.<sup>44</sup> Violation of the secrecy obligation is punishable under the Penal Code. At the European Union level, similar assurances about the confidentiality of individual data are included in Council Regulation (EC) No 322/97.

The Statistics Act obliges statistics-producing authorities to inform respondents in writing about the intended use of the data, the procedures to be used in producing the statistics, the principles governing whether the provision of data is obligatory or voluntary, the rights of the respondents, the arrangements for protecting the data, and the duration the data will be stored. SF practice is in conformity with these provisions.

SF has put procedures in place to prevent disclosure of individual reporters' data, once received from other agencies or directly collected. It has provided guidelines on how to apply the Statistics Act and the Personal Data Act, as well as guidelines on the protection of tabulated enterprise and personal data. A section on data protection is included in the SF publication *Quality Guidelines for Official Statistics* (2002). Micro data, concerning individual persons, released to external agencies for scientific research are first treated to remove variables that would make it possible to directly or indirectly identify individuals.

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<sup>44</sup> One minor exception does not apply to data described in this report.

In SF offices, access to individual data is restricted to staff who require the information in the performance of their statistical duties. Staff review all data prepared for dissemination for possible indirect disclosure of individual data.

SF computers are password-protected. Staff offices are not locked, but access to the SF building and entrance between floors is secured by electronic passes.<sup>45</sup> Confidentiality of data during filing and destruction of records is in keeping with the National Archives Act and Statistics Finland's Archiving Guidelines.

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

The Statistics Act requires that the primary exploited sources for statistical purposes shall be the data accumulated in administering general government and the data produced as a consequence of the normal activities of employers, self-employed persons, corporations, and foundations. As indicated above, SF has the right to receive these data under the Statistics Act. In addition, all public and private entities in Finland are obliged to provide SF with data on their finances, products, staff, etc., as necessary for the production of statistics. Of course, SF has also the legal mandate to collect information directly<sup>46</sup> and, if deemed appropriate, to make the provision of data obligatory. The right of SF to collect data by virtue of the obligation does not extend, however, to data that are kept confidential for reasons of international relationships, public safety, the interest of national defense, or the safety of the state.

The Statistics Act stipulates that a person who willfully fails to provide obliged data or willfully provides false data shall be sentenced to a fine. Nevertheless, SF is allowed to refrain from bringing charges if the violation is regarded as minor, and in practice charges are never filed. It is difficult to say, therefore, whether the penalties included in the Statistics Act effectively deter violations.

The Statistics Act, backed up by actual practice, states that statistical data shall be collected economically and shall cause the respondents the least amount of inconvenience and cost.

Letters accompanying the questionnaires advise respondents that SF provides assistance in completing and submitting forms. The statistical questionnaires themselves include the telephone number, e-mail address, fax number, and postal address of a point of contact. It is clear that SF seeks to secure cooperation of respondents by writing such letters, limiting the response burden to the extent possible, testing questionnaires before they are sent out, and

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<sup>45</sup> It is, however, easy to move about in the elevators with other people, which raises the possibility of "tailgating."

<sup>46</sup> Only 5 percent of the information collected by SF is obtained directly (data for 2003).



other measures. However, the *Quality Guidelines for Official Statistics* do not explicitly mention the importance of securing goodwill with respondents.

For the State Treasury, a legal mandate ensures the reporting of data on the operations and debt of the central government. The State Treasury, which operates under the Act No. 305/1991 (see section 0.1.1), publishes monthly and annual *Funds Statement for Central Government Finances*.

## **0.2 Resources**

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

In May 2005, eight employees in the SF Financial Department are responsible for compiling government finance statistics nonfinancial and financial accounts, both on quarterly and annual bases. Tight staffing and high turnover have made it difficult to prepare adequate metadata on quarterly releases and to undertake research. At current staffing levels, undertaking new tasks such as broadening the *Classification of Functions of Government* (COFOG) table from the one digit to the 2-digit level, undertaking research on the GFS data, producing analytical publications and methodological papers, and meeting the future EU requirements, would have a detrimental effect on the existing statistics.

The qualifications of the staff are good. They have on average six years working experience in this area of statistics. Their skills are maintained and further developed by internal training,<sup>47</sup> a well-functioning internal consultation and feedback process, and occasionally external courses, such as those provided by Eurostat.<sup>48</sup>

A core of experienced staff is maintained, but staff turnover in the unit is considerable. Exit discussions suggest that salary considerations play an important role in the decision to leave SF. SF as a whole has no problem attracting new persons, in view of the office's good image as an employer. The latter is corroborated by the results of the annual Staff Satisfaction Survey. Nevertheless, management is concerned about attracting staff with macroeconomics as a background. For this reason, among other things, a trainee program has been put in place with the University of Helsinki, supported by SF. This initiative is believed to have improved the attraction of staff with this background.

Computer resources are good, and the available software is effective for collecting and processing GFS data, maintaining databases, receiving source data automatically, and

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<sup>47</sup> Internal training covers individual statistics as well as the improvement of general skills such as foreign languages, data confidentiality, leadership, and dealing with the media.

<sup>48</sup> Limited possibilities also exist to follow post-graduate university courses or to take sabbatical leave.

disseminating compiled statistics. The data system stores bridge and derivation tables that define the links between accounting source data and the GFS in national accounts context. These tables are stored in a form that facilitates accessing and updating. Emergency backups, both internal and external, are in place. The office building, furniture, and other on-site facilities are excellent.

Funding for compiling the national accounts, including the government account, is secure in view of the good planning and cooperation between the MOF and SF. However, in view of the drying up of EU support for national accounts and government account projects, it seems very difficult to undertake some important development work.

In the State Treasury, five staff members take care of evaluating and disseminating monthly statistics on central government operations and debt as a small part of their job description.

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

A formal review of staff performance is conducted annually in discussions with individual staff members. A standard list of elements contributing to performance in the past period is not used in these discussions; for management staff, target performance agreements have been drawn up. Informal feedback to staff is regularly provided, for instance during the weekly meetings of the subunits.

Seeking efficiencies, where possible, is a main concern of SF leadership, and outside expert assistance has been sought to evaluate statistical methodologies and compilations systems. The full cost of compiling individual statistics is measured annually.

### **0.3 Relevance**

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

The SF consults data users to ensure that the GFS in the national accounts context continue to meet user needs. The most important contact in this respect is the Suomen Kansantalouden Tilinpito (SKT) group, consisting of about 15 members, that convenes three times a year. Chaired by the director of the MOF's Economic Department, the group further comprises the BOF and four economic research institutes. Another group—which includes representatives of the MOF (Budget, Tax, and Economic Departments), the National Board of Customs, the Ministry of Agriculture and Forestry, the Board of Taxes, and SF—consults on issues related to the EU's own resources. Further feedback is received during user courses and seminars when major revisions are planned. More generally, SF encourages users to provide any comments they wish to make, and these comments are monitored closely.

Information on new and emerging data requirements regarding the government finance statistics is also received during various meetings organized at Eurostat and the OECD, the Nordic countries, and the International Association for Income and Wealth.

#### **0.4 Other quality management**

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

SF management is highly sensitive to all dimensions of quality. Management thinking on this issue has been influenced by, among other things, the European Foundation for Quality Management (EFQM) excellence model, the International Organization for Standardization (the ISO 9000:2000 standard series for the development of a quality system), the United Nations' *Fundamental Principles of Official Statistics* and *Handbook of Statistical Organization*, as well as Eurostat's work on quality. The *Quality Guidelines for Official Statistics* published by SF in 2002 mention the following quality criteria for application in Finland's official statistics:

- (1) relevance of statistical information;
- (2) correctness and accuracy of data;
- (3) timeliness and promptness;
- (4) accessibility and transparency/clarity of the data;
- (5) comparability of statistics;
- (6) coherence and consistency/uniformity of data; and
- (7) documentation.

This list has to be supplemented with the element "costs," which are regarded more as a limitation on quality than a component of it.

Staff have received training on the various dimensions of quality, and every unit includes at least one person focused on total quality management issues (there are 18 such persons in total). The organization's commitment to quality is apparent, among other things, from the abovementioned *Guidelines* and SF's *Annual Report*.

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

Processes are in place to monitor the quality of the statistical program. Partly, these processes are required by the performance agreements between the MOF and SF, and between SF's Director General and senior staff. SF uses balanced scorecards (BSs) to produce and implement strategic plans and to communicate the plans.

Checks of coverage, classification, missing or erroneous recordings, internal consistency, and the consistency between data coming from alternative or linked data sources (SF, the State Treasury, the SSF, and local governments) are regularly monitored. Final data on all levels of government are submitted to SF by the responsible agencies after being audited.

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

A trade-off among quality considerations (such as accuracy and timeliness) is recognized by SF in the area of GFS. This trade-off has been explicitly recognized for general government statistics produced in the context of the national accounts and in the context of local government data reported to SF. An example of this trade-off is the dissemination of preliminary general government accounts in February every year (t+1).

### **1. Assurances of integrity**

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

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

SF is an independent agency under the MOF. There is no formal statement in the Statistics Act, the Statistics Finland Act, or the Council of State Decree on Statistics Finland (1063, 2002) that the SF or the authorities belonging to the NSS are professionally independent. However, several legal provisions support SF's professional independence, and SF acts accordingly.

The formal relationship between the SF and MOF largely focuses on multi-annual agreements, under which SF undertakes to fulfill targets within the budgetary limitations. The performance agreement for the year 2005 covered the following subjects:

- (1) main strategic goals for the next four years;
- (2) targets for operational effectiveness in 2005;
- (3) performance targets for 2005
  - outputs and quality management
  - operational efficiency
  - management and development of intellectual resources;
- (4) resources; and
- (5) validity and follow-up of the agreement.

Approximately 75 agreed performance indicators include, for instance, statistics production (databases and data collection), public image, number of international trips, number of publications, press releases, performance of chargeable services, operational efficiency, staff years, staff training, and staff job satisfaction.

Recruitment and promotion in the organization are based on relevant aptitude and expertise. Comparative exams are not part of the selection procedure. Potential staff are selected on the basis of interviews, papers they have written, and other evidence of aptitude. Choices are made on the basis of written assessments. Formal class-based and on-the-job training in the

methodology and compilation methods is provided for staff. Annual personnel training expenditure per member of staff amounted to €971 in 2004.<sup>49</sup>

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

Under the Statistics Act, the choice of data sources, statistical techniques, and methods of dissemination is required to be informed by statistical considerations (sections 3, 10, 11, and 12). There are also responsibilities regarding cost-efficiency and the response burden of data collection (section 4). In particular, section 11 includes the requirement that statistics should be as reliable as possible, shall give a truthful picture, and make use, where possible, of uniform concepts, definitions, and classifications, as well as be timely. Similar provisions can be found in EU legislation.

As indicated above, SF has published a 132-page *Quality Guidelines for Official Statistics*. Its purpose is to set out SF's statistical production procedures and, in doing so, includes chapters on survey processes, estimation, presentation, documentation, and publication including SF's commitment to quality. All chapters use statistical criteria, which are clearly laid out.

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

Although no specific regulation entitles SF to comment on erroneous interpretation and misuse of statistics, in actual practice SF has an active policy in this matter, and its Information Service has issued guidelines on how to respond. A private agency (Esmerk) monitors 32 national and regional newspapers and summarizes references to SF. Other media are also watched. If erroneous interpretation or misuse of statistics is detected, contact is established to explain the issue. In serious cases, the DG may write a letter to the editor; this happens a few times a year.<sup>50</sup>

**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 legislation governing SF is available among other places on its website and in its library.

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<sup>49</sup> This figure excludes interviewing training. Source: *Overview of Statistics Finland*, presentation by Heli Jeskanen-Sundström to IMF ROSC mission, May 12, 2005.

<sup>50</sup> In less serious cases, the person responsible for the task signs the reply.

The relevant legislation and guidelines are difficult to find on SF's website, at least in the English version.<sup>51</sup> *Legislation* is not a heading in the site index. The key Statistics Act (280/2004) is not available on the site; instead there is a hyperlink to the repealed Statistics Act (62/1994). Unfortunately, this hyperlink takes the user to the Council Regulation (EC) 322/97, rather than the 1994 Act. On the other hand, the current and previous versions of SF's *Codes and Guidelines on Professional Ethics* are on the English language version of the SF's website.<sup>52</sup>

Finland subscribes to the IMF's Special Data Dissemination Standard (SDDS). The IMF's Dissemination Standards Bulletin Board (DSBB) includes, under the heading of "Integrity," the terms and conditions under which SF's statistics are produced, including those relating to the confidentiality of individually identifiable information.

Statistical publications always include SF's general contact information, and many include references where more specific information can be found.

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

Once a year, the MOF has advance access to the preliminary annual national accounts and government finance data for the preparation of its *Economic Survey* and for the preparation of the March Excessive Deficit Procedure notification. The Ministry receives these data about two weeks before their release, so they concern work-in-progress estimates. The advance access is mentioned in Finland's SDDS metadata published on the DSBB.

There is no internal government access to the monthly central government operations and debt data compiled by the State Treasury before these data are released by the State Treasury to the public.

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

Official statistical publications carry not only SF's logo (which includes the name Statistics Finland alongside in Finnish, Swedish, and English) but also the mark SVT, explained on the back as indicating an official statistic of Finland. Publications include a statement that quoting is encouraged, provided SF is acknowledged as the source. SF's *Quality Guidelines* note the criteria for a publication to be an SVT, which includes production by an agency or institution on the list of SVT producers and assumption of responsibility by the publishing agency for its accuracy and content (p. 108). SVT publications cannot be published under the name of the author, thus distinguishing between, and allowing the flexibility of, research working papers.

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<sup>51</sup> The Swedish and English versions are in the process of being revised. The Finnish version of the site is more complete, even though reportedly still difficult to search.

<sup>52</sup> Available on <http://tilastokeskus.fi/tk/tt/laatuutilastoissa/guidelines.pdf>.

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

Advance notice is given to the public when major changes are introduced in methodology, sources, and statistical techniques. If the changes are very large, briefings for the press may be prepared.

### **1.3 Ethical standards**

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

A culture of professionalism and independence is apparent from the code of professional ethics SF publishes as its *Guidelines on Professional Ethics*, Handbook 30b (Helsinki, 2002).<sup>53</sup> The Handbook is well-written, clear, and comprehensive on ethical issues facing a statistical agency. It outlines SF's obligations to society (chapter 2), respondents (chapter 3), customers (chapter 4) and funders and employers (chapter 5). It draws attention to possible conflicts between such obligations, such as resource constraints. The Handbook draws attention to conflicts between ethics and legislation and discusses how even strict abidance by the law may be unethical.

All employees are given a copy of this handbook on recruitment, and all employees were circulated a copy when it was published in 2002. It can also be found on SF's website.

## **2. Methodological soundness**

### **2.1 Concepts and definitions**

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

The overall structure of the Finnish government finance statistics in terms of concepts and definitions largely follows international standards and guidelines. SF compiles the annual and quarterly general government, central government, and local government statistics, on an accrual basis, in the context of the national accounts based on the *European System of Accounts 1995 (ESA 95)* and the *ESA 95 Manual on Government Deficit and Debt*. The overall structure of the Finnish GFS in terms of concepts and definitions therefore closely follows international standards and guidelines as recommended in the *ESA 95* and *ESA 95 Manual on Government Deficit and Debt*. These definitions and concepts are broadly similar

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<sup>53</sup> Available on SF's website [http://www.tilastokeskus.fi/tk/tp/tkesittely\\_etiikkaopas\\_en.pdf](http://www.tilastokeskus.fi/tk/tp/tkesittely_etiikkaopas_en.pdf). Preceding this was a *Code of Professional Ethics*, 1993. This was based upon the *Declaration on Professional Ethics* adopted by the International Statistical Institute (ISI) in 1985—also on SF's website: [http://www.tilastokeskus.fi/tk/tp/tkesittely\\_etiikkaopas\\_en.pdf](http://www.tilastokeskus.fi/tk/tp/tkesittely_etiikkaopas_en.pdf).

to those of the IMF's *Government Finance Statistics Manual, 2001 (GFSM 2001)*,<sup>54</sup> but the *GFSM 2001* as such is not used as an analytical framework for government finance statistics in national sources. However, the revenue and expenditure data by economic type and by function can be related to these international standards as described in the *GFSM 2001*. The same applies to the financial balance sheet figures classified by financial instrument.

Although the *GFSM 2001* framework is not used nationally, the SF has provided the IMF with fiscal accounts in a *GFSM 2001* format for publication in the IMF's *Government Finance Statistics Yearbook* since 1998. The staff of SF stated that there is now an opportunity to revise the SF's dissemination policy to better serve the users by disseminating the general government finance statistics also in a framework in a line with the *GFSM 2001*.

SF also collects and publishes local government annual data in format that resembles business accounting. The data are mainly collected (by use of electronic questionnaire) from the local governments' accounting systems, which conform to the General Accounting Act 1995 (No. 365 March 17) and resemble business accounting.<sup>55</sup> The accounts are divided into operational, capital, and balance sheet accounts, and are published by SF in a similar manner. Expenditure and revenue are classified by type and by function and the balance sheet by financial instruments. The statutory annual accounts provide much of the information required for the GFS in national accounts context and the financial sector balance sheets.

The State Treasury produces and publishes both monthly and annual cash data and modified cash data on central government revenue, expenditure, and financing. These data are broadly in line with the internationally accepted standards, such as the *International Public Sector Accounting Standard, 2 (IPSAS 2)* and *A Manual on Government Finance Statistics, 1986 (GFSM 1986)*.

Plans to follow the analytical framework of *GFSM 2001* have not yet been developed.<sup>56</sup> Such a framework would provide additional analytical tools and details to support fiscal analysis. SF is considering the compilation of data on integrated nonfinancial assets (i.e., stocks and flows) for government, as an extension of its current responsibility for compiling the general government sector of the national accounts. For the moment, because of tight resources, no

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<sup>54</sup> The *GFSM 2001* describes the differences with the *1993 SNA*, which also applies for *ESA 95*. Additional information regarding these differences can be found on the IMF's website under GFS companion material.

<sup>55</sup> The local government units report their accounts according to the Statistics Act 280/2004, which gives the SF the data collection rights.

<sup>56</sup> Subsequent to the mission, SF decided to also adopt the analytical framework of *GFSM 2001* for producing and presenting the fiscal data of Finland. The scheduled date for the first published data is early 2006.



statistics on the stocks of nonfinancial assets are compiled and disseminated by the SF on the general government sector and its subsectors.<sup>57</sup>

## 2.2 *Scope*

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

Annual and quarterly general government statistics, covering budgetary and extrabudgetary central government,<sup>58</sup> social security funds,<sup>59</sup> and local governments,<sup>60</sup> are compiled and disseminated by SF in the context of the national accounts. The scope is consistent with the principles, definitions, and concepts of the *ESA 95*. Both public corporations and quasi-corporations (financial or nonfinancial) are excluded when they are considered as market producers. The compulsory license fees collected by the TV and Radio Fund for the National Broadcasting Company are treated as payments for services in the corporate sector, outside the government sector. The following state-owned departmental corporations are also classified outside the general government: Senate Properties,<sup>61</sup> the National Board of Forestry, the National Road Corporation, and the Civil Aviation Administration.

All material general government activities are included in the general government statistics. No quasi-fiscal activities are carried out by public corporations. The data of the various levels of government are available, with the exception of few functional expenditure items from the local government accounts. As mentioned above, stocks data on nonfinancial assets for the general government sector and its subsectors are not compiled and disseminated by SF, but most of the source data on nonfinancial assets are available according to the book-keeping classifications and valuations. The basic sources of GFS are the central government fiscal accounts, the individual accounts for municipalities and joint municipal authorities, and the accounts of the individual social security funds. Preliminary GFS data are replaced by data based on full coverage as soon as possible.

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<sup>57</sup> Apart from sectoral stock data included in the SF capital stock model.

<sup>58</sup> The budgetary central government consists of 117 accounting agencies (parliament, ministries, and agencies) and the extrabudgetary central government units of 11 agencies. Only the administrative cost of the TV and Radio Fund is included in the subsector of the extrabudgetary central government.

<sup>59</sup> The Social Security Funds consist of two subsectors, i.e., (1) Employee Pension Institution, which comprises several units managing obligatory pension schemes, and (2) other compulsory social security, which is further broken down into six fund categories.

<sup>60</sup> The local government covers the following units: 446 municipalities, 239 joint municipalities, Åland Islands, Pension Fund of the government of Åland, Association of Finnish Municipalities, and Local Authority Employers Finland.

<sup>61</sup> Previously known as the State Real Property Agency.

Monthly data on central government operations, covering budgetary and extrabudgetary central government, are produced and published by the State Treasury. The scope of data is broadly in line with the internationally accepted standards.

The GFS, as presented by SF in the context of national accounts, covers all transactions of units within its scope as presented in the Statement of Government Operations (Table 4.1 in *GFSM 2001*). Adequate information on Other Economic Flows of all financial assets and liabilities (Table 4.3 in *GFSM 2001*) and on Sources and Uses of Cash (Table 4.2 in *GFSM 2001*) is not available. However, stock data for the general government's financial assets and liabilities, based on the international guidelines for financial accounts (*ESA 95*), are published annually, and the data are available in comparable time series over a long period. Consolidated financial balance sheets are not published domestically. Quarterly data for general government's financial assets and liabilities are available and provided to Eurostat according to EU requirements, but are not yet published domestically.<sup>62</sup>

### **2.3 Classification/sectorization**

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

SF compiles the general government statistics in the context of national accounts (*1993 SNA and ESA 95*). Consequently, the institutional sector of the general government is fully consistent with the *ESA 95*. The GFS statistics are provided separately for the consolidated general government, the central government (budgetary and extrabudgetary central governments),<sup>63</sup> the social security funds, and local governments.

The revenue and expenditure are classified by SF in accordance with the national accounts, which means that the classification of these statistics is not in conformity with the guidelines outlined in the *GFSM 2001* and EC regulation 1500/2000.<sup>64</sup> In other words, neither detailed revenue nor expense accounts exist for the general government finances in line with the *GFSM 2001* framework.<sup>65</sup> On the other hand, since the classification of flows and stocks (both financial and nonfinancial) are largely the same for *ESA 95* and *GFSM 2001*, the available breakdown of these statistics broadly conforms with *GFSM 2001* guidelines.

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<sup>62</sup> These data are planned to be published at the end of 2005.

<sup>63</sup> This sectorization deviates from the *GFSM 2001*, which recommends consolidation of the budgetary and extrabudgetary central governments and the social security funds into one subsector called central government subsector.

<sup>64</sup> The regulation provides a definition of general government expenditure and revenue to supplement classifications of transactions in goods and services and of distribution transactions and to amend the transmission program of national accounts data.

<sup>65</sup> The relevant framework is shown in Table 5.1 on Classification of Revenue and Table 6.1 on Economic Classification of Expense of the *GFSM 2001*.

Financial data distinguish between domestic and foreign financing, and between bank and nonbank financing for domestic financing.

General government consolidated expenditure (outlays) are classified according to the 1999 Classification of Functions of Government (COFOG) back to 1990, and for all subsectors. Transactions on nonfinancial assets, classified in line with *ESA 95*, are disseminated domestically in the government sectoral accounts, and prepared for Eurostat as required. The main financial balances such as saving and net lending/borrowing are disseminated. SF does not compile accounting data on the consolidated public sector, i.e., the consolidated general government sector and public corporate sector (the public financial and nonfinancial corporations). Data on public financial and nonfinancial corporations are published by SF together with data on private enterprises in its publication on the corporate sector (Sectoral Accounts).

The central government debt data are disseminated by the State Treasury, and distinguish between domestic and foreign debt. These data further distinguish between short- and long-term debt. The central government operations data, also disseminated by the Treasury, are classified in line with business accounting (IPSAS 2), where revenue and expenditure are broken down further into detailed categories.<sup>66</sup> The revenue balance (the difference between total revenue and total expenditure) is disseminated, as well as categories on financing and the change in liquid assets. Detailed stock data on both financial and nonfinancial assets and liabilities are also disseminated by the Treasury.

## **2.4 Basis for recording**

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

Generally, flows and stocks are valued at market prices. Transactions expressed in monetary values are usually at current market prices, and values of other flows and stocks are estimated using the closest market information available. In Finland, transactions in foreign currency are converted into euros at the mean rate between the buying and selling rates on the day of the transaction. Similarly, foreign currency stocks are valued at the mean exchange rate in force at the end of the period. Quoted shares, bonds, and mutual funds shares are mainly valued at market prices, while money market instruments are valued at purchase prices; accrued interest is capitalized to the debt instrument. Unquoted shares and equity are valued at own funds at book value, in compliance with the requirements of Eurostat.<sup>67</sup> In accordance with EU recommendations, the outstanding government debt (so-called EMU-debt) is recorded at nominal value.<sup>68</sup>

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<sup>66</sup> The classification of these categories also resembles the *GFSM 1986* classification.

<sup>67</sup> Revised annually.

<sup>68</sup> Note that Finland uses two valuation principles: (1) market value for *ESA 95* statistics and (2) nominal value for the EDP statistics.

As stated in 2.1.1 and 2.2.1 above, the general government statistics disseminated by SF do not include stocks of nonfinancial assets but only stock figures on financial assets and liabilities.

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

Stocks and flows in the general government account are recorded on accrual basis in line with *ESA 95* and the *ESA 95 Manual on Government Deficit and Debt*. Generally, central government taxes and charges are estimated by using techniques that time-adjust the cash data. In doing that, SF takes account of the different timing characteristics of the cash flows for the different types of taxes.<sup>69</sup> Other central government revenues, like interest and sales, are largely available on an accrual basis from the accounting records. Similarly, most transactions from the extrabudgetary central government, the social security funds, and the local governments are available on an accrual basis. The budgetary central government expenditure is mostly on an accrual basis, with the exception of transfers, which are on a cash basis.<sup>70</sup> Accrual adjustments are also made to some interest items and subsidies paid. Consumption of fixed capital is estimated using a perpetual inventory model based on a very long time series of asset holdings (on a capital stock model).

The State Treasury prepares the central government (budgetary and extrabudgetary) operations data in form of a Cash Flow Statement.<sup>71</sup> It also prepares the State's Income and Expenses Statement and the State Balance Sheet for the budgetary central government. These statements are prepared on a modified cash basis.

The Finnish government has no plan to fully implement an accrual basis, consistent with GFS standards, to accounting or budgeting.

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

Government transactions are compiled on a gross basis for revenue, expenditure, and financing for all sectors of the general government. Financing is recorded on a net basis (e.g., loans minus repayments, purchase of shares minus sales). These procedures are consistent with *ESA 95* and *GFSM 2001* guidelines. The same principles apply to the stocks of financial assets and liabilities. Acquisitions and disposal of nonfinancial assets are in most cases presented net in the national accounts. Both SF and State Treasury correct transactions

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<sup>69</sup> This time-adjustment is in accordance with the EU Regulation 2516/2000 and is based on provisions of the Finnish tax legislation for taxes on income, products, and other current taxes.

<sup>70</sup> Transfers are both recognized on commitment basis and payment basis.

<sup>71</sup> The Statement is prepared substantially on a cash basis, i.e., for example, changes in receivables and liabilities connected with revenue and expenditure are allocated, as far as possible, on the basis of accounting information, to those items that they have generated when entered on an accrual basis.

by netting against the original transactions, for instance, if refunds of taxation or of overpaid expenses are corrected.

### **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*

SF prepares a preliminary annual general government account for the national accounts, in February of each following year. The statistics are based on the accounting data received from the State Treasury and the enquiries to the most important accounting offices, the accounts of the social security funds, and a survey<sup>72</sup> conducted by SF on local governments. These source data are adjusted and reclassified where necessary by SF to compile statistics that are consistent with the *ESA 95*.<sup>73</sup> Revised preliminary data on annual general government account are disseminated in July of each following year. Final data are disseminated 25 months after the end of the reference year. The above data sources provide SF with most of the necessary stocks and flow data, except for some detailed local government data on expenditure classified by functions, and some flow data on nonfinancial and financial assets.

For the budgetary and extrabudgetary central government, the source data are the administrative records in the State Treasury. The central government revised its accounting system for budgetary and extrabudgetary accounts, business accounts, and balance sheets in 1998. SF, consequently, reconstructed its data system for the central government finances for national accounts purposes. The system includes also quarterly data, and in principle it is possible to process short-term data in more or less the same way as annual data for national accounts purpose, with some reclassification and adjustments. The coverage of the central government data is almost complete.

The main data sources used for the social security funds are the annual reports and the financial statements of the social security funds as well as separate surveys. The Social Insurance Institution of Finland (SII) and the Insurance Supervisory Authority (ISA)<sup>74</sup> mainly provide required data for national accounts purposes. The data are reported on an accrual and annual basis. For the Social Insurance Institution and the Unemployment Funds

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<sup>72</sup> Called Financial Accounts Approximation and Budget Approximation.

<sup>73</sup> For central government finances, the accounting system provides 11 months bookkeeping data. E-mail inquiries to important accounting offices and extrabudgetary funds and the estimated 12 months cash report by the Ministry of Finance are used to prepare the preliminary annual figures.

<sup>74</sup> ISA is an institution subordinate to the Ministry of Social Affairs and Health but with independent decision-making power.

supervised by ISA, data are also available on monthly and quarterly bases. For employment pension institutes, quarterly data are received from ISA and the Finnish Pension Association. For other funds, which are a relatively small part of this sector, data are only provided on an annual basis. Consequently, for the production of quarterly government finance statistics in the context of national accounts, estimates are needed for these smaller funds.

For collecting annual accounting data from local governments, SF uses a standardized questionnaire (the Financial Statistics Questionnaire) that applies to all local government units. The local governments submit their accounts mainly through administrative records (bookkeeping data and financial statements), mostly on an electronic basis. SF collects data on both flows and stocks from these records for the national accounts.<sup>75</sup> To decrease the data collection burden of local governments, the different state authorities collaborate with each other and use the same data. SF receives, for example, the local government tax data directly from the National Board of Taxes, and as well certain special health care data from the National Research and Development Center for Welfare and Health (STAKES). These data categories are therefore excluded from the questionnaire. Data on compensation of employees by local governments are also monitored against the Social Insurance Institution's wage bill sum.

The main data sources on financial data are the same as for the operational data. The financial data on central government are the budgetary and extrabudgetary central government's financial statements, debt data, and the balance sheets. Similarly, the source data on the local governments are mainly based on the statistics compiled from their financial accounts. Financial statistics on social security funds are mainly based on data collected with SF's own inquiry from the SII and ISA, and/or investment monitoring data collected by the Finnish Pension Alliance (TELA).<sup>76</sup>

SF does also collect quarterly data from local governments based on a sample survey, which includes 50 municipalities (about 54 percent of total local governments' expenses).<sup>77</sup> The data collected comprise revenue and expenditure, gross fixed capital formation, financial

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<sup>75</sup> The initial annual statistical survey (collected via the Internet) by SF in beginning of January (year t+1) includes among other things (1) Profit and loss account, (2) Investments, and (3) Cash reserve, loans payable and receivable. The main financial statistics survey (Part I) has to be returned to SF by April 10 (via the Internet), and includes (1) Profit and loss statement, (2) Statement of sources and application of funds, and (3) Balance sheet.

<sup>76</sup> Other important data sources on financing are the SF's own inquiry of financial balance sheets, central government debt reports, balance of payments, outstanding credit statistics of SF, and inquiry of financial investments of employment pension institutions collected by Finnish Association of Employment Pension Institute. Apart from the SF's own inquiry, these data are also available on a quarterly basis.

<sup>77</sup> These 50 municipalities include the 19 biggest cities and 31 other municipalities (changed every fifth year).

investments, and financial assets and liabilities. The data are gathered via Internet with a time lag of two months. The fourth quarter collection is combined with the Inquiry for the Financial Statement Estimates<sup>78</sup> and covers all local government units. SF uses the data for the quarterly national accounts and for the quarterly statistics on general government financial accounts, presented in the context of the national accounts.<sup>79</sup> The source data are transported to and maintained in the Sybase system, which is highly automated. The weaknesses in the collection of the preliminary data on local government lie in categories like salaries (which need to be estimated from a survey), dividends, and shares.

GFS codes are not embedded in the chart of accounts, but appropriate bridge tables have been constructed, to facilitate the compilation of GFS in a national accounts context from the underlying accounting data. Data sources are kept under regular review to ensure that the data collection remains comprehensive. New data categories are regularly added to the local government data questionnaire, and when reviewing the data collection system, international guidelines are usually monitoring the review and changes. A comprehensive register of individual public sector units is available and is maintained and updated by the SF.

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

The accounting system used by the State Treasury for covering the central government operations (budgetary and extrabudgetary) is sufficiently detailed for government statistical purposes (in a national accounts context). The structure of the statements is similar to business accounting and the IPSAS 2 (even *GFSM 1986*), and the scope, definitions, and classifications are a reasonable approximation of what is required. The data are available on both a cash basis and a modified cash basis, where the taxes and charges are mostly on cash basis. The State Treasury makes an effort to value some of the financial assets and liabilities for the SF statistical purposes.

Similarly, the accounting systems for the local governments and the social security funds provide sufficiently detailed data for government statistical purposes. The source data allow the SF to compile relatively detailed data on revenue, expenditure, transactions in nonfinancial assets, and transactions in financial assets and liabilities.

The local government report forms are reviewed periodically to take account of changed circumstances and needs. In this revision the local authorities are consulted. Similarly,

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<sup>78</sup> A short electronic questionnaire on local government finances, which is sent to all local government units in the beginning of January every year, and gives a short summary of the first estimate of the local governments' Financial Statement (annual basis). The reply time is the beginning of February and all local government units reply.

<sup>79</sup> The data are also used for analyzing the performance of the local government sector on quarterly basis.

qualitative information on data sources is collected to monitor their adequacy. This applies particularly to the social security funds, such as the Social Insurance Institution. GFS classifications are not incorporated into the coding system of the chart of accounts.<sup>80</sup> It is difficult, therefore, to generate the statistics without extensive clerical intervention. However, bridge tables have been constructed, to facilitate the compilation of the statistics (in the national accounts context) from the underlying accounting information.

### *3.1.3 Source data are timely*

Data for budgetary and extrabudgetary central government operations are available for every month of the year, with an 18–25 day lag for April to November, a two-to-four month lag for January to March, and up to a four-month lag for December. The source data are submitted by 117 accounting offices and 11 extrabudgetary agencies to the State Treasury. The FTP data line transfers the required data from the State Treasury to SF, which uses an SAS software system to store and analyze the data.<sup>81</sup> Data on financial assets and liabilities of budgetary and extrabudgetary central government are also available in a timely manner for quarterly dissemination. The final data for the central government units are provided with a three-month lag after the end of the reference year.

Preliminary data for local government operations data are obtained through a quarterly sample survey within two months from the end of the reference period, and cover about 54 percent of the total expenses of the municipalities. Similarly, the annual source data from the local government units (a full coverage) are timely for use by the SF in its preparation of the annual GFS in a national accounts context (see section 3.1.1). The final data for the local government units are provided with an 11-month lag after the end of the reference year.

The source data for financing and debt data are available one to ten months after the reference period, depending on the government sector to which they refer and the type of assets and liabilities. Difficulties exist in getting the local government financing data on time.

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<sup>80</sup> This issue of incorporating the GFS coding system into the central government accounting system has though been discussed by the relevant authorities, and is in progress.

<sup>81</sup> The accounting data from the State Treasury have three types of codes: budget-code, agency-code, and financial-code. The SF adds to these codes, codes for transactions type, industry type, and COFOG. Most of codes for GFS in a national accounts context are added by using SAS programming. Exceptions are if the budget or financial accounts are not accurate enough or if the definitions in the accounting system are not the same as in the national accounts. The following data categories are examples of data used in national accounts, but not received direct from the accounting system: (1) time-adjusted taxes and subsidies, (2) difference between the issue value and redemption value of security which is treated as interest, (3) consumption of fixed capital which is distinguished from the depreciation shown in business accounting, (4) gross fixed capital formation of software, (5) net payments on swap and forward rate agreements not treated as interests, and (6) employment 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*

No material gaps exist in the coverage of the general government sector. The final source data are based on audited accounts of all the general government units. The trade-off between timeliness and accuracy is well recognized and balanced. The most accurate government data are based on audited data, but the reporting cannot be delayed until audited data have become available. The strategy adopted is to compile and publish preliminary data as soon as reasonably complete and accurate data become available, and replace the preliminary data by revised data or final data after audited accounts have been produced. The status of the data and any major quality reservations that compilers have about the data are identified when the data are published or disseminated.

Preliminary data obtained for the central government and social security funds are assessed against the final data, and large changes are noted and investigated. The preliminary data obtained from the survey on local governments are also assessed against the final data, and large changes are investigated to adjust the survey, if there is a change in the size and importance of a local authority. The changes in financing data are regularly reconciled with the changes in financial assets and liabilities. Both SF and the State Treasury have developed a procedure for using check and error lists, and compilers address questions concerning the accuracy of source data through direct contact with the reporting agencies. As described in section 3.1.1, automated procedures are used to facilitate the monitoring of the accuracy of data reported by the State Treasury.

### **3.3 Statistical techniques**

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

The final data for annual central government operations, the social security funds, and local governments are collected from administrative records and do not require any estimation. However, as in the national accounts, the perpetual inventory method is used to estimate the written-down replacement costs of fixed assets, including infrastructure assets, to calculate the consumption of fixed capital. The value of the stocks is based on acquisitions and disposals that have been accumulated and revalued over a very long period. The value of the assets is the original acquisition value adjusted by an allowance for price changes (assumptions are made regarding the remaining service life of each asset) and written down for the accumulated consumption of fixed capital.

The fourth quarter data for the central government operations (budgetary and extrabudgetary central government) are mostly collected from the State Treasury administrative records, but estimation is needed for December. E-mail inquiries to the most materially significant

accounting offices (out of 117) and the extrabudgetary funds are used as well as the MOF's estimated 12 months Cash Report. The use of statistical techniques is sound, and material differences in preliminary data and revised/final data are studied for further improvements. A similar procedure is used for the quarterly estimates of the operations of the social security funds. Administrative records are available for the largest funds, and additional information is needed for the last part of the year for estimating their annual figures. The quarterly data for the smaller funds are estimated with a sound statistical technique.

The quarterly data for local governments are compiled from a sample survey, based on 50 municipalities. The so-called PPS-sampling technique (probability proportional to size) is used, which is seen as one of the most efficient survey methods, for processing the data. Beside this method, additional data are compiled from other sources (see section 3.1.1) to reduce the collection burden on local authorities. If units fail to report within the requested time, they are reminded by experienced staff via direct contact or e-mail.

For the general government as a whole, procedures are in place to estimate missing data and to minimize the processing errors. These procedures are based on accepted statistical processes. Preliminary data are replaced by revised data or final data, and data are corrected with more accurate data when available, if there are material differences. Staff identify discrepancies between flows and stocks, like in the financial accounts (*other economic flows*) or between the net lending/borrowing approached from the real and financial sides.

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

The use of other statistical procedures is rarely necessary. However, SF adjusts taxes and charges, and some subsidies and interest, to record them on an accrual basis (see section 2.4). As described in section 3.1.1, a particular automatic technique is used to make these time adjustments, based on the provisions of the Finnish tax legislation concerning the collection of these taxes. And as described in section 3.1.1, appropriate bridge tables have been developed between the State Treasury accounting system and the SF's databases. The SF seeks to use appropriate techniques when adjusting or transforming data.

Quarterly data for local governments are obtained by means of a sample survey that covers more than half of local governments' revenue and expenditure. The results of the survey are then adjusted for full coverage.

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

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

Internal checks for consistency are made prior to the production of reports or publications of the GFS in a national accounts context. Comparisons are made between net lending/borrowing (derived from the nonfinancial accounts) and changes in net financial

assets/liabilities (derived from the financial accounts). In case of major deviations, an attempt is made to explain the differences. This is done for every subsector, both on an annual and quarterly basis.<sup>82</sup> The GFS balancing items are also checked for internal consistency, and as well the reported data on transfers between general government sectors.

The State Treasury surplus/deficit for the period is compared with corresponding balances made by SF. Similar comparisons are made for other subsectors. Significant discrepancies may indicate errors in the compilation process, unless they are well accounted for. The consistency with other related data sources is checked, for example, with banking statistics and balance of payments statistics.

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

Since stocks of nonfinancial assets are not compiled by SF, the reported flows on these assets are not compared for horizontal consistency (i.e., the opening and closing balance, and the transactions and other economic flows). On the other hand, the stocks and flows on financial assets and liabilities are checked horizontally, but just some of the asset categories are reconciled since the data on other economic flows are only partly available. Automatic procedures are in place to check transactions like transfers and interest payments between government sectors for consolidation purposes (e.g., when transfers from the central government to the local governments, according to one of the sources, are not supported by counterpart information). When the statistical difference is significant, further investigations of the reconciliation items are done to bring the statistical difference to an acceptable level. At all levels of government, any unexpected values are investigated.

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

External public debt stocks and related transactions are compared with corresponding creditor information from other countries. Such comparison is done manually. In collaboration with, for example, Eurostat and ECB, differences in concepts and compilation methods are identified and taken into account in the data comparisons. Substantial differences between financing data of the GFS in national accounts context and the corresponding monetary data are identified.

### **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 revision practice of general government statistics is the same as that adopted for the national accounts. The differences between the initial estimates and the revised or final

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<sup>82</sup> Particularly for the data sent to Eurostat.

estimates are reviewed in an effort to learn from the changes. The changes in the government account are usually minimized, owing to the extensive use of accounting records. The statistics are regularly archived and can easily be retrieved for revision studies. The revisions mainly result from the routine replacement of preliminary data by revised or final audited data. The revisions made to the quarterly accounts are tabulated and published from time to time (once or twice a year).

The introduction of *ESA 95* had major impact on a wide range of macroeconomic statistics, including the general government. Revisions have been made to the SF government account back to 1975.

#### **4. Serviceability**

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

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

Finland meets the periodicity standard of the SDDS, as follows:

- Central government operations data, on a cash and modified cash basis, are published monthly.
- Central government debt data are published quarterly, are distinguished between foreign and domestic debt, and are broken down by type of debt instrument.
- General government operations data are published annually and meet the SDDS requirement. They are published quarterly as well.

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

For general government operations, annual preliminary data for each financial year are published in February of the following year, which is well within the SDDS timeliness requirement of two quarters. But the general government financing data are only available with a 10-month lag after the reference period. Finland therefore uses a flexibility option to which it is entitled. The timeliness of the financing data will be brought into line with the timeliness requirement of the SDDS by the end of the year 2005.

Central government operations (i.e., budgetary and extrabudgetary central governments) data do not meet for every month of the year the timeliness requirement of the SDDS of one month after the reference period, which means that Finland has to avail itself of a second flexibility option to which it is also entitled. For December, the data are disseminated with up to four months lag, for January to March with a timeliness of between two to four months,

and for other months of the year about 18–25 days after the end of the reference month. Special laws and regulations contribute to the lags in these statistics.<sup>83 84</sup>

Quarterly central government debt data (with the same institutional coverage as for the central government operations data) are published within one quarter as required by the SDDS. Finland disseminates monthly debt data within one month after the reference date. The data are classified by domestic and foreign currencies, by type of instrument, and by length of maturity.

## 4.2 Consistency

### 4.2.1 Statistics are consistent within the dataset

The Finnish GFS data follow the standards of the *ESA 95* and are internally consistent for most of the accounts. For revenue and expenditure, the aggregates are consistent with their components, and the balances are consistent with these aggregates. The sum of the transaction data for subsectors is consistent with data on the general government.<sup>85</sup> The sum of quarterly statistics equals the annual statistics for the subsectors and the general government.

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<sup>83</sup> The budgetary central government comprises the Parliament, the ministries, and several agencies. All ministries and most of the agencies have their own accounting system and make their own financial statements. There are about 117 so-called accounting offices at this budgetary level. The State Treasury receives summary accounting files from these accounting offices and from the 11 extrabudgetary central governments. The time lag is due to delay in the finalization of the annual financial statements of the accounting offices. In process is a plan to centralize the accounting systems of the 117 accounting offices, which will speed up the timeliness of the central government operations data. The realization of this centralization is expected to be 2010 to 2012.

<sup>84</sup> Following the Fifth Review of the IMF Data Standards Initiatives, related to the SDDS requirements for the fiscal sector, the standards will take account of how the methodology of the *GFSM 2001* affects the SDDS reporting requirements for the central government operations (CGO) and the general government operations (GGO) data. The intention is to achieve the quality improvements that are facilitated by accrual reporting, under the *GFSM 2001* or *ESA 95* standards, while improving timeliness of reporting. Under the new arrangement, if a subscriber disseminates, with one quarter lag, quarterly GGO data in line with the *GFSM 2001* or equivalent standard, a targeted timeliness flexibility option would be allowed for monthly CGO data (on cash, accrual, or modified cash/accrual basis, consistent with current SDDS requirements). Compiling accrual data is significantly more resource intensive than preparing information solely on a cash basis. The delays involved are most severe at the turn of the fiscal year.

<sup>85</sup> Note that the general government data in national accounts are not consolidated in the Finnish statistics.

For the government financial accounts, the difference between the opening and closing balance sheet for each asset and liability category, and the net transactions and net other economic flows (divided into net holding gains and losses and other changes in volume of assets), are not fully reconciled because of the lag in securing data on other economic flows. Stock data on nonfinancial assets are not compiled in the GFS and the national accounts context.<sup>86</sup>

Over long period, statistical discrepancies have existed between the net lending/borrowing<sup>87</sup> from the real accounts (revenue-expenditure accounts) and the net lending/borrowing from the financial accounts. These discrepancies are mainly due dissimilarities<sup>88</sup> in the statistical sources and to factors like timing in the data. These discrepancies have decreased during the years. Reported transfers received do not always equal reported transfers paid between central and local governments. SF observes and closely monitors differences in these transactions. The main reason for this inconsistency lies in differences in timing and classification.

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

For general government statistics in the context of national accounts, changes arising from major methodological improvements or changes in the statistical system, concepts, etc. are explained and the time series are revised, such as, for instance, when carrying out revisions. An example is the 1999 revision of the accounting system for the general government and the implementation of *ESA 95* where all the main aggregates were calculated backwards to 1975.

Breaks in series due to methodological changes or changes to the statistical system are clearly identified and explained in the publications. Breaks in series in historical tables will also be clearly identified for instance by symbols in the tables or in the text. Unusual changes in economic trends are explained in the commentary included in the publication and in the database accessible by users.

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

Since the general government account is derived within the national accounts, it is consistent with their results. That ensures consistency with related national accounts aggregates such as

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<sup>86</sup> Apart from stocks included in the SF capital stock model.

<sup>87</sup> Net lending/borrowing derived from revenue minus total expenditure equals transactions in financial assets and liabilities (financing).

<sup>88</sup> The data on general government operations are derived from two different systems: the Finnish National Accounts and the Financial (Flow-of-Funds) Accounts.

saving, net lending/borrowing, government consumption, gross fixed capital formation, and consumption of fixed capital.

The general government financial balance sheets/financing data and government financial assets and liabilities held by other sectors are not fully consistent with annual monetary and banking statistics, owing to differences in both coverage and valuation.

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

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

The publication of general government data follows a regular and well-known time table, the same as the national accounts, whereby initial data are preliminary and are subsequently replaced by final data. The ordinary revision schedule is predetermined and reasonably stable from year to year. The preliminary data are, for instance, revised in July and December each year (the data of the December revision are published in January). The revision cycle and policy are not stated on the SF website, but they are described in publications where the reasons underlying the cycle are also explained. Revisions are adequately documented in statistical publications and in the database accessible to users, and all revisions outside the regular cycle are made known to the public.

The timing of the February issue and summer calculations is set to accommodate in particular the MOF for the preparation of their *Economic Survey*, the preparation of the March *Excessive Deficit Notification*, and the budget.

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

Preliminary data are clearly identified with symbols in the publications. Revised data are disseminated with the same level of detail as preliminary data. However, revised data are not annotated in the publications. At the time of data dissemination, users are informed whenever data are revised.

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

No specific studies or analyses of routine revisions are made public, but if major revisions are undertaken, their results (analyses and descriptions) are made public. An example is the 1999 revision of the accounting system for the general government and the implementation of *ESA 95* where all the main aggregates were calculated back to 1975.

## **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 government accounts in a context of national accounts are presented in a way that broadly allows major aggregates/balancing items to be identified and related to detailed underlying data. The fact that figures published are compiled in accordance with the *ESA 95* standard makes the annual and the quarterly data on the general government sector somewhat suitable for use in the budget development and monitoring process. SF regularly publishes the EDP notification tables comparing the net financial requirement of the state budget/local government annual balance with the net borrowing in *ESA 95*. However, since the government finance statistics in Finland are not presented according to the standard components of the *GFSM 2001* framework, a clear link between balances, such as the net operating balance and the net lending/borrowing balance, and the revenue and expenditure accounts are missing.

Monthly data disseminated by the State Treasury for central government operations are on both cash and modified bases. These data are useful for fiscal policy and are used widely, for example, by the MOF to compare with the anticipated monthly expenditure of central government ministries and agencies. These aggregated fiscal data are also published by the SF and the BOF in their publications on a monthly basis. These data are available back to 1998. As described in 3.1.2, these data are presented according to the format of business accounting, with revenue and expense accounts, and resemble the classifications of the GFS manuals.<sup>89</sup>

The statistics are disseminated in a clear manner with tables and charts to facilitate analysis and with some commentaries on the current-period development. Disaggregated data series are also disseminated if needed, for example, data on the social assistance benefits and taxes.

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

Both the SF and the State Treasury use news releases for disseminating their statistics on government finances in ways that facilitate re-dissemination of the statistics in the media. They also make the GFS data available to the public in Finnish, Swedish, and English on their website free of charge, and in hardcopies—in the State Treasury free of charge and in the SF for a fee. SF does also make more detailed statistics and longer time series available through electronic formats (free of charge or for a fee). SF has decided to release all its statistics first on the Internet. The annual and quarterly GFS in national accounts context are

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<sup>89</sup> That is the *GFSM 2001* and the *GFSM 1986*.



also published in dedicated hard copy (payable) periodicals. Full government account series are also available on SF's FINSERIES (ASTIKA) database, sometimes for a fee.

### 5.1.3 *Statistics are released on a preannounced schedule*

The SF and State Treasury<sup>90</sup> release statistics according to an advance release calendar that covers the coming year. The release calendar is published on the first of January, each year, and is updated in May and September.<sup>91</sup> During the last part of the calendar year, SF uses the DSBB to disseminate the one-quarter ahead notice of approximate release dates required by the SDDS.<sup>92</sup> In the release calendar, the coming statistics are listed by date or by subject. A principal release policy is to keep the actual date of publications in accordance with the preannounced date. SF regards it to be very important that the release of the statistics is neither before nor after the preannounced date.

For the central government debt figures, the State Treasury releases an advance release calendar that gives the precise release dates for one quarter ahead. This release schedule is disseminated on the DSBB. The State Treasury does not publish on its website the release calendar on the central government debt information.

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

Statistics of both SF and State Treasury are made available to users simultaneously on a preannounced date and time,<sup>93</sup> and the Internet is the main channel for the dissemination of statistics.<sup>94</sup> Embargoes are imposed, if the press is briefed in advance, to prevent early public disclosure. The release calendar, published annually in December, is updated weekly on Fridays for any unforeseen changes. The updated version is available from SF's Internet site, while major users including the media, ministries, and other interested parties receive the updated version by e-mail as part of the *Weekly News Calendar*. The DSBB has a link to the advance release calendar.

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<sup>90</sup> For State Treasury, this release practice concerns the statistics on central government operations.

<sup>91</sup> This calendar is available on SF's website: <http://www.tilastokeskus.fi>.

<sup>92</sup> A notice to this effect is given in the *Financial Markets Statistical Review* published by BOF.

<sup>93</sup> Once a year the MOF has an advance access to the annually preliminary data (see section 1.2.2.).

<sup>94</sup> Press releases are posted on SF's website ([www.stat.fi/index\\_en.html](http://www.stat.fi/index_en.html)) and on State Treasury website ([www.statetresury.fi/finance](http://www.statetresury.fi/finance)). The national accounts data are made available by issuing the SF's press release *Statistical News: Preliminary National Accounts*, and the financial accounts by publishing the *Financial Accounts* and posting the data on SF's database ASTIKA FinSeries (also on SF's StatFin database).

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

Statistics not routinely disseminated are made available upon request, for instance, statistics on social benefits. If the request is for a few simple data, the data are made available free, but if the request is more complicated and time-consuming, the data are made available for a fee. The availability of additional statistics is generally known to frequent users, but it is not always indicated in the publications. On request, SF also makes special compilations.

## **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*

Very comprehensive methodological descriptions have been prepared to facilitate the validation by the European Commission of the gross national income data of the member states. This inventory is available on the Internet. Also available is the EU *Manual on Quarterly Nonfinancial Accounts for General Government* for Finland, the “*Klassificeringar för statistik över ekonomi och verksamhet 2004*” for the local governments, the methodology part for the *EDP* on the SF website, and the methodological descriptions in the annual *Financial Accounts* publications. EDP inventories prepared for Eurostat are not published nationally but on web pages of Eurostat’s Interest Group (Circa).

Other documentation on sources and methods is rather sparse. The hard-copy publications on the government accounts in national accounts context briefly explain the central concepts and the compilation process, in addition to the classifications used. More general purpose publications, such as the *Statistical Yearbook of Finland*, do not include short explanations, and indications are that users require more documentation on sources and methods.

To a certain extent, users are accommodated by the courses that SF organizes for users. Still, more could be done, in particular with respect to the quarterly GFS in national accounts context. Concerning the latter, the very tight staffing seems a major impediment for allocating time to preparing methodological documentation.

SF reviews and updates the SDDS metadata published on the IMF’s Data Dissemination Bulletin Board regularly.

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

Metadata for the interested, but nonspecialist, public are hardly available. The materials used in SF’s national accounts course are in principle available to external users, but this is not publicized.

More specialized-use information, such as background papers and working documents, are not available. As suggested earlier, the number of staff appears to be the main stumbling block for preparing documentation and research papers.

### **5.3 Assistance to users**

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

In accordance with MOF's 1998 decision to develop new kinds of service commitments to customers, SF has organized its support to users very well. Prompt and acknowledgeable service is always available during working hours. All statistical releases identify contact points for inquiries by mail, telephone, facsimile, and e-mail. In the absence of the normal contact staff, telephones are transferred and the indicated e-mail boxes are shared in order to ensure quick response. The Internet site and several publications invite users to provide feedback. SF has undertaken to respond to all requests for information within 24 hours.

Awareness of the use of statistics is, among other things, promoted in two magazines published by SF. Subscription is at a cost to the user. In addition, a highly appreciated Virtual School of Statistics for self-study of the basics of statistics is available free via the Internet. Online learning material to serve especially polytechnic education has been produced with support of the European Social Fund. SF also organizes courses for users at its headquarters. The Public Relations Unit provides support directed at the media. About 10 to 15 press conferences are held annually. Among them is one to present the main release of the national accounts, including the government account.

Assistance provided to users is monitored and reviewed periodically. User satisfaction surveys are conducted regularly.

The State Treasury does not identify contact persons for inquiries in their statistical releases on its website or in its publications.

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

SF publishes a *Guide to Statistics*. Under the heading "Statmarket," the SF Internet site lists the various publications available to users at a cost. However, no information on paid services can be found there. Once a year, the Information Service prepares a catalog covering both publications and services. Both on the website and in the catalog, prices are clearly disclosed, and assistance in placing orders is provided even during nights and weekends.

Table 4. Finland: Data Quality Assessment Framework (July 2003): Summary of Results for Government Finance Statistics  
(Compiling Agency: Statistics Finland)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
<b>0. Prerequisites of quality</b>						
0.1 Legal and institutional environment		X				Staffing is tight making it difficult to undertake research on the data and compile metadata.
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				
<b>2. Methodological soundness</b>						
2.1 Concepts and definitions			X			Statistics are not presented in a comprehensive fiscal analytical framework and plans to follow <i>GFSM 2001</i> have not been developed (but see footnote 52 on page 110). The balance sheet excludes nonfinancial assets. Revenue and expense accounts in line with <i>GFSM 2001</i> and the EC regulation 1500/2000 are not produced.
2.2 Scope			X			
2.3 Classification/sectorization				X		
2.4 Basis for recording		X				
<b>3. Accuracy and reliability</b>						
3.1 Source data			X			Source data on financial and nonfinancial accounts are not complete and financial accounts are not timely.
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		Financial data on the general government sector are disseminated with 10 months lag. Monthly data on the central government sector not available within one month for December through March. Inadequate reconciliation of data on net/lending borrowing and financing.
4.2 Consistency			X			
4.3 Revision policy and practice		X				
<b>5. Accessibility</b>						
5.1 Data accessibility			X			Clear links between net lending/borrowing and revenue and expense accounts are missing. No extensive metadata available on the quarterly GFS methodology. Metadata catering for non-specialist users are scarce.
5.2 Metadata accessibility			X			
5.3 Assistance to users		X				

## Recommendations

- Compile and disseminate annual and quarterly general government statistics in line with the analytical framework set out in the *GFSM 2001* (2.1, 2.3, 5.1).
- Extend the compilation and dissemination of annual balance sheets for the general government sector and its subsectors to include nonfinancial assets (2.2).
- Pursue timely provision of source data on monthly central government operations in order to meet the timeliness requirement of the SDDS and specify in the SDDS metadata a plan to achieve this.
- Consider a plan to fully implement accrual accounting, consistent with GFS standards, in budgetary central government (2.4).

## V. BALANCE OF PAYMENTS STATISTICS

### 0. Prerequisites of quality

#### 0.1 *Legal and institutional environment*

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

The compilation of the balance of payments statistics has traditionally been regarded as being the responsibility of the Bank of Finland (BOF), which is currently carried out by the Balance of Payments Division of the Statistics Unit. In addition to compiling monthly balance of payments statistics, the BOF also collects, compiles, and disseminates statistics on external debt, international investment position (IIP), and the reserves and foreign currency liquidity template.

The BOP collects the source data for compiling the balance of payments in collaboration with Statistics Finland (SF) and the National Board of Customs (NBOC). The BOF focuses its statistical activities on the statistics compiled for the European Central Bank (ECB), collecting and compiling data for the financial account and investment income. The SF is responsible for collecting and compiling data for the current account items, except investment income. It also compiles the capital account. The objective of this arrangement was to ensure the quality of statistics, cost-efficiency, and avoidance of overlapping work. However, as SF compiles the balance of payments-related items on a quarterly or annual basis, the BOF is responsible for estimating much of the services and transfers data in the monthly/quarterly statistics. Both the BOF and SF use the official foreign trade statistics produced by the NBOC in the balance of payments but adjust these statistics for balance of payments purposes.

Section 1 of the Act on the Bank of Finland (No 214/1998) states that in performing tasks of the European System of Central Banks (ESCB), the BOF shall act in accordance with the guidelines and instructions of the ECB, which includes the reporting of balance of payments statistics by the BOF to the ECB. Specifically, Community Regulation 2533/98 identifies statistics on the balance of payments as being necessary to enable the ESCB to fulfill its tasks in an independent manner. This issue is also addressed in a memorandum of understanding (MOU) on Economic and Financial Statistics between the ECB and Eurostat dated March 10, 2003, in which the responsibility for balance of payments statistics is shared between the ECB and the Eurostat. With regard to the conceptual work, the ECB has primary responsibility for issues concerning the financial account and investment income, whereas Eurostat has prime responsibility in issues concerning other parts of the current account and the capital account. The BOF also has formal responsibility for transmitting balance of payments statistics to the IMF.

Section 3 of the Act on the Bank of Finland provides “for the compilation and publication of statistics as necessary for carrying out its tasks.” A service level agreement or a memorandum of understanding (MOU) with SF assigns responsibility for balance of payments compilation to the BOF, with certain collection functions to be undertaken by SF. Working arrangements are consistent with this assignment of responsibility. In their sharing of responsibilities for the compilation of external sector statistics, the BOF and SF endeavor to harmonize classifications and other methodological issues. This is mostly achieved (see 4.2.3).

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

SF agreed to undertake selected balance of payments collection functions in 1999, partly for resource/efficiency reasons. Data sharing and coordination between the BOF and SF is set out each year in a MOU, an arrangement begun in 2004. Prior to 2004, an informal arrangement existed, which was known and accepted by the management of the two institutions. The MOU covers five areas: financial accounts, balance of payments accounts, registers, the Special Data Dissemination Standard (SDDS), and the exchange of general economic statistics. The section relating to the balance of payments defines the compilation responsibilities of each institution, data sets exchanged (and timetable), the technical specifications of the data exchange, and contact and other practical information.

In addition to the MOU, a high-level meeting is held with SF each year, and there are more frequent meetings at the middle-management level. The BOF also holds twice-yearly meetings with the NBOC on data-related issues.

The sharing of individual enterprise information between the BOF and SF is asymmetric. BOF guidelines permit it to share individual enterprise information with SF, but the Statistics Act (280/2004) does not permit the sharing of individual enterprise information with the BOF for balance of payments compilation, as it is not part of the National Statistical Service. Notwithstanding the reporting instructions in the questionnaires each institution employs, the potential exists for biases to occur across direct investment, income, and services. In addition, the BOF could bring its expertise in the recording of certain services, such as financial services. However, with the present resource situation, the compilers would not be able to undertake any substantive work in the data areas falling under SF’s responsibility. According to the compilers, several of the EU countries have changed their legislation to permit the sharing of enterprise information between the central bank and the central statistical office for balance of payments compilation.

The BOF has access to annual data on goods transactions by individual enterprises from the NBOC, which it uses for frame management. It does not have access to the declarations and report forms of individual enterprises.

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

The instructions in the BOF's balance of payments collection forms and the covering letters state that the collected "data are used for balance of payments compilation for Finland and for the Economic and Monetary Union (EMU)." The cover letter states that the data reported will only be used for compiling statistics and will not be used for any other purposes.

Community Regulation 2533/98 (Article 18) states that "confidential statistical information which the ECB and the national central banks must obtain for the performance of the tasks of the ESCB must be protected in order to gain and maintain the confidence of the reporting agents."

The BOF staff have signed a confidentiality pledge to not reveal data on individuals or individual firms. Also, chapter 2, section 6 (12 December 2004/1231) of the Act on Officials of the Bank of Finland (No 1166, 1998) stipulates that a person appointed to a position where he or she has other than occasional access to confidential information concerning monetary policy, financial markets, economic statistics, financial position of a private organization, or business secrets is required to report on his or her business activities; shareholdings in companies and other significant assets; debt, guarantees and other liabilities; and secondary occupations.

Access to the work space of the Statistics Unit is restricted to the staff of the Statistics Unit. There are also user rights to the IT system, and access to data must be approved by certain designated staff. Office doors are lockable; visitors are not permitted without an escort; and special procedures are followed for destruction of confidential trash.

Reporters are requested to send completed report forms as encrypted XML files to the BOF, and efforts are made to encourage electronic reporting in this form.

Special aggregation rules (automated in 2004) exist to prevent residual disclosure when survey data are disseminated. The rules take into account the number of reporters and their contribution to the aggregates. The aggregation rules are in conformity with ECB guidelines. Staff also review the data for publication. The ECB and Eurostat have aggregation rules for dissemination of confidential data reported by Member States. Although permitted by the legislation, unit records (with names protected), such as in requests for direct investment data, have so far not been made available for research purposes.

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

Section 28 of the Act on the Bank of Finland (214/1998) specifies the BOF's right to obtain information for the compilation of balance of payments statistics.



“For the purpose of compiling balance of payments statistics, any [resident] entity shall be obliged to provide the Bank of Finland with the following information on its financial transactions, in accordance with the Bank’s instructions:

- (1) payments to and from nonresident entities;
- (2) claims of a resident entity on nonresident entities, other assets located abroad and liabilities to nonresident entities; and
- (3) other financial transactions that change or may change the claims of a resident entity on nonresident entities or the liabilities of a resident entity to nonresident entities.”

The BOF’s authority to collect balance of payments statistics is set out in the questionnaires, and the BOF may oblige any [resident] entity to supply it with the required information under penalty of fine. The BOF shall decide on the imposition of such a fine.

The BOF’s authority to collect information is also based on Community Regulation No 2533/98 concerning the collection of statistical information by the ECB.

SF and the NBOC apply their statistical legislation to collect the source data under their responsibility. SF applies the Statistics Act 280/2004, while Finnish foreign trade statistics are based on the legislation of the EC and the national Customs Act of Finland (1466/94). The EC legislation consists of two parts—internal trade and external trade. The basic regulation on internal trade statistics (EC) No 638/2004 creates the methodological basis for Intrastat (trade in goods among EC Member States), and its implementation is enacted by the Commission Regulation (EC) No 1982/2004, as amended. Extrastat (trade in goods between the EC/Member States and third countries) was enacted by Commission Regulation (EC) No 1172/95, and its implementation was issued in Commission Regulation No 1917/2000, as amended.

The BOF (and SF) undertake follow-up efforts to ensure acceptable response rates to surveys. Assistance is available to reporters in completing reports—an e-mail address is identified in the survey form/instructions. Assistance is also available for electronic reporting. The compilers are mindful of the issue of response burden (see 0.2.2).

## **0.2 Resources**

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

The Balance of Payments Division is comprised of a staff of 17 (another four-five staff at SF, across different directorates, are involved in compiling the current account data [excluding investment income] and the capital account). Staff resources have been declining, owing to the BOF’s cost-efficiency strategy, and are now on the margin of risk. Considerable reliance is placed on SF to fulfill its reporting obligations for balance of payments compilation. Without additional resources, it will be difficult to undertake any important developmental

work. Also, an Advisor within the Statistics Unit undertakes a considerable amount of the work in general planning and methodological issues.

The collection and processing of the monthly asset and liability forms involves—in addition to the Head of the Division—two economists, three statistical assistants, and two other staff; the annual direct investment surveys and the mergers and acquisitions surveys involve two economists and three statistical assistants; and the aggregation and dissemination of the balance of payments statistics involves two economists and two statistical assistants. Economists rotate from time to time to work on specific methodological projects, such as the current project on collecting security-by-security information on portfolio investment. The Statistical Systems Division of the Statistics Unit provides IT and methodological support, as required. IT support is also available from the IT Unit.

The staff have considerable experience. Three staff have attended the IMF course on balance of payments methodology, and all have received specialized in-house training. A core staff with adequate training is maintained, and salary levels are competitive with public administration conditions in the country.

In February 2004, after a comprehensive acceptance test, a new computing system—BOP Corner—was deployed, which involved the data warehouse approach. The compilation process consists of three main steps to (1) extract heterogeneous data from different source systems to a staging area; (2) transform standardized data into statistics using manifold methods; and (3) load data into a multidimensional data warehouse and in some cases into an analytical data store as well. At the end of the compilation process, data are offered to compilers in a multidimensional and hierarchical format with on-line analytical processing to find the most valuable information. Emergency backup and recovery systems exist.

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

Periodic reviews of staff performance are conducted. A work plan is developed for the Statistics Unit, and performance is evaluated and discussed with staff twice yearly. Surveys are reviewed each year as well the associated response burden. The new compilation system—BOP Corner—provided staff with the tools to better manage the balance of payments compilation process and to make full use of modern technologies.

## **0.3 Relevance**

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

The BOF participates in the Ministry of Finance-chaired Suomen Kansantalouden Tilinpito (SKT) Group, which reviews emerging needs for statistics. Also, relevance in meeting users' needs is an important element of the work program of the ECB and Eurostat in connection with meeting the needs for statistics of the Eurosystem. The BOF and SF regularly participate in statistical meetings of the ECB and Eurostat.

The Balance of Payments Division also participates in the OECD Workshop on International Investment Statistics, which is a forum for promoting best practices in the compilation of direct investment statistics, and is currently involved in the revision of the international statistical guidelines for these statistics; the BIS-led Irving Fisher Committee on Central-Bank Statistics; and in annual meetings with other Nordic central banks on monetary and balance of payments statistics. The staff are also encouraged to contribute working papers and other studies for the BOF's publication program.

#### **0.4 Other quality management**

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

Quality is emphasized in the Statistics Unit's mission statement, which notes that the Financial Markets and Statistics Department has two missions, one relating to stability of financial markets and the other to the compilation of statistics. Statistics are necessary for conducting monetary policy, the functioning of financial markets, and for monitoring financial stability. Statistical production in the BOF is guided by the guidelines adopted by the ECB Council. These guidelines define the concepts and definitions of the statistics and are in line with generally accepted quality standards. Furthermore, statistics are to be compiled in a cost-effective manner.

The BOF attaches great importance to the monitoring of the survey system. Each year, an assessment of survey coverage is made to inform the management of the Statistics Unit. The causes of revisions are also examined. From time to time, staff present, in various national and international forums, papers on quality and methodological issues relating to statistics.

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

In addition to publishing the metadata in the ECB's *European Union Balance of Payments/International Investment Position Statistical Methods*, the BOF prepares and disseminates a quality report—*Product Description and Quality Report*—on the Finnish balance of payments and international investment position statistics. The report describes the methodologies and evaluates the impact of revisions and the trend in the errors and omissions item. An Advisor in the Statistics Unit also works closely with the staff to improve data.

Response rates are closely monitored, and revision studies are prepared each month (see 3.5.1).

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

Trade-offs are discussed in the budget process, in consultation with data suppliers, and in connection with BOF's involvement in international forums, such as the ECB's Statistics Committee that advises the ECB Council on guidelines for statistical production. An example

of the consideration of quality trade-offs comes from work with the Statistics Committee to improve the accuracy of data of “other financial intermediaries,” including custodians and end investors. With the assistance of the Association of Investment Funds, the Statistics Unit is consulting with data suppliers to assess the merits and costs of adopting security-by-security reporting in place of the current reporting of aggregate data.

## **1. Assurances of integrity**

### **1.1 Professionalism**

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

The BOF is an independent institution governed by public law. In performing tasks of the ESCB, the BOF is required to act in accordance with the guidelines and instructions of the ECB (Section 1 of the Act on the Bank of Finland). Even though the BOF is not part of the National Statistical Service, it aims to act in conformity with best practices in statistics established by SF.

The Act on Officials of the Bank of Finland (No 1166, 1998) sets out the general obligations of the BOF and officials with respect to performance of duties. New staff are given guidelines and training/coaching on expected behavior in performance of duties. In recruiting new staff, the BOF pays attention to communication and technical skills in addition to competence in economics and statistics. Internal training is provided.

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

The BOF, where necessary in collaboration with SF and NBOC, decides on the data sources and statistical techniques employed. Decisions about national dissemination are informed solely by statistical considerations, which include ECB guidelines.

Staff are encouraged to attend lectures/conferences abroad and conduct and prepare reports for dissemination in the Bank of Finland Studies, *Bank of Finland Bulletin*, and Bank of Finland Discussion and Working Papers. A recent working paper dealt with the new balance of payments compilation system.

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

Although a formal policy does not exist, the Statistics Unit is entitled to and does comment on significant misinterpretations or misuses of its statistics, although there has not been a need to do so in the recent past. The BOF’s Communications Unit monitors the local and international press on references to the BOF and its products, and it circulates copies of press clippings to staff daily. The staff in the Balance of Payments Division also monitor the financial press for information on cross-border transactions.

## **1.2 Transparency**

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

The report forms/instructions and the accompanying letter to respondents state that the reported information will be used for balance of payments compilation for Finland and the Economic and Monetary Union. The letter also states that individual reporters' data will not be disclosed. Publications such as the *Bank of Finland Bulletin* and releases on the BOF's website do not make this information known. The Act on the Bank of Finland is available on the website at [http://www.bof.fi/eng/1\\_suomen\\_pankki/1.2\\_esittely/index.stm](http://www.bof.fi/eng/1_suomen_pankki/1.2_esittely/index.stm).

The Act on Officials of the Bank of Finland (No 1166, 1998) highlights the confidential nature of data collected for economic statistics, thus making staff subject to reporting obligations on their own assets and liabilities. The IMF's Dissemination Standards Bulletin Board (DSBB) indicates that the staff of the BOF is subject to insider trading laws.

The BOF uses the *Studia Monetaria* lectures for the general public to inform the public about the terms and conditions under which it operates.

The BOF disseminates balance of payments statistics as a service to the public.

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

No officials outside the BOF have access to the data before their release to the public. This is stated on the DSBB.

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

The BOF's publications clearly identify them as a product of the BOF, and they display the Bank's logo. Tables and charts on the Internet site note copyright by BOF. Attribution is requested when its statistics are used or reproduced.

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

Advance notice is given of major changes in methodology, source data, and statistical techniques (for example, the introduction of the survey system in the financial account in 1991 and the abolishment of the settlements system in 1998).

### **1.3 Ethical standards**

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

The Act on Officials of the Bank of Finland (No 1166, 1998) sets out a number of appropriate behavioral requirements for employees of the BOF. The Statistics Unit convenes meetings to inform staff of their obligations, including with respect to the disclosure each year of information on business activities; shareholdings in companies and other significant assets; debts, guarantees and other liabilities; and secondary occupations.

## **2. Methodological soundness**

### **2.1 Concepts and definitions**

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

The balance of payments statistics are compiled in broad conformity with the guidelines of the IMF's *Balance of Payments Manual*, fifth edition (*BPM5*), which the BOF implemented in 1994. In addition, guidance from the ECB (financial account), Eurostat (current account), and the OECD (direct investment) is also taken into consideration. Deviations from international guidelines are partly related to source data, for instance, treatment of long-term construction projects.

Current, capital, and financial transactions are separately identified, with the latter distinguishing assets and liabilities. A 10 percent equity ownership criteria is used to define a direct investment relationship, and transactions (and positions) are recorded on a directional basis. Financial leases are recorded in the financial account and valued at the market value of the leased goods (the value of the good is included in imports). Goods transactions are recorded on an f.o.b. basis. Debt forgiven by the government is correctly recorded as transactions in the financial and capital accounts. Trade credit is covered.

The one-year rule is used to define residency.

### **2.2 Scope**

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

In principle, all resident-nonresident transactions are recorded in the balance of payments. The compiled data are intended to cover the economic territory of Finland. The Åland Islands are part of the Finnish territory. Although the concept of "center of economic interest" is not referred to in the report forms, the collection of data on the resident-nonresident breakdowns is intended to be consistent with this concept. The Nordic Investment Bank, European Community institutions such as the European Investment Bank, and international

organizations are regarded as nonresidents and have been provided separate country codes in BOF surveys. However, the treatment of international organizations is not stated in SF's survey of International Trade in Services.

Goods for processing are included in goods transactions but are not identified separately in source data on a timely basis. Reinvested earnings on direct investment are included in investment income (with an offset in financial account). In the recording of investment income, reinvested earnings exclude capital gains and losses. A small estimate is made to imports for smuggling.

### **2.3 Classification/sectorization**

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

The classification of institutional sectors is broadly consistent with the *BPM5* guidelines: general government includes central and local government and social security; the monetary authority comprises the BOF; monetary financial institutions (MFIs) include banks, money market funds, and other credit institutions, for example, Municipality Finance (the full list of Finnish MFIs is available on the ECB's website); and other sectors includes private and government enterprises, insurance companies and other financial institutions, nonprofit institutions, and the household sector.

Short- and long-term transactions in the financial account are correctly registered on the basis of original maturity (assets and liabilities with original maturities of more than 12 months are classified as long term).

The 10 percent ownership principle is applied for the direct or indirect ownership of the equity of an enterprise as the criterion for recording direct investment. So-called Special Purpose Entities are defined as direct investment enterprises. Cross-border real estate transactions of individuals are also included. Direct investment transactions are recorded on a directional basis in the balance of payments and IIP. Within the other capital component of direct investment, intercompany trade credit has been recorded in direct investment from the beginning of 1999 (earlier it was recorded under the functional category of other investment). Construction activities of a long-term nature cannot be allocated to direct investment under the current collection system, and such transactions are covered under the services account, which is compiled by SF.

Loans include repurchase agreements (repos) and financial leasing arrangements.

## **2.4 Basis for recording**

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

Transactions are valued at market prices. In BOF's report forms, securities transactions are to be valued at the purchase or sale price on the transaction date, as are other transactions.

The balance of payments is compiled in euros. In the BOF's monthly and annual surveys, respondents are instructed to convert non-euro transactions into euros using the ECB's middle rate quoted on the transaction date. SF's survey of International Trade in Services does not provide guidance on how foreign currency transactions should be converted to euros. In the Border Interview survey of foreign travelers to Finland, any foreign currency reporting is later converted into euros using the midpoint exchange rate of the month the interview was done.

Goods exports and imports are valued on an f.o.b. and c.i.f. basis, respectively, in the merchandise trade statistics. The BOF adjusts the import valuations to an f.o.b. basis using freight and insurance factors of 4.9 percent and 0.2 percent, respectively. The factors are based on a study that was conducted by the NBOC in 2002-03.

In the merchandise trade statistics compiled by the NBOC, non-euro transactions are converted to euros based on the selling rates of the foreign currencies recorded on the second last Wednesday of the calendar month preceding the date of Customs clearance. The same exchange rates are used for imports and exports. In intra-Community trade, declarants may choose between the above-mentioned exchange rates and the rates applied for value-added taxation on internal trade. The latter are either based on the date of the movement of the goods or on the invoice date.

The financial flows of the banking sector are derived from stock data and are adjusted to remove valuation changes (see 3.1.2). Transactions in reserve assets are also derived from stock data, but no adjustments are currently made to exclude valuation changes from the derived transactions estimates. It is expected that data on reserve transactions based on accounting records and that exclude valuation changes will become available towards the end of 2005. Lastly, transactions associated with foreign securities held by the household sector are derived from outstanding positions reported by custodian banks and the derived transactions estimates also include valuation changes. A project is also underway to derive an adjustment procedure to exclude valuation changes from the latter portfolio flows.

In the BOF's monthly and annual surveys, respondents are instructed to convert positions denominated in non-euro currencies into euros using the middle rates quoted by the ECB on the last day of the reporting period. In the IIP, direct investment equity is valued at book values; portfolio securities are at market values, as are securities held as reserve assets; and monetary gold is valued at market prices based on the p.m. fixing in the London bullion market.



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

In principle, the Finnish balance of payments data adopt the accruals basis for the time of recording. In monthly and annual surveys, respondents are requested to report interest on an accruals basis, with offsetting entries to be recorded in the financial account. There is no recording of arrears.

Accrued interest on nonresident holdings of domestically issued government bonds (liabilities) is computed from stock data (on a security by security basis) reported by domestic custodians and the application of current yields (so-called creditor approach). Empirical evidence, as well as the practicality of the method, provided strong arguments in favor of adopting this approach for Finnish balance of payments purposes. Thus accrual interest is computed using the debtor and creditor approaches.

Intragroup dividends (direct investment) are also reported on an accruals basis; portfolio investment dividends are reported on a cash basis, that is, as they are paid to investors. Data on reinvested earnings are collected only on an annual basis and the transactions apportioned equally over the months/quarters.

In trade with the non-EU countries (Extrastat), the data are recorded according to the time of clearance by Customs.

In the annual survey on International Trade in Services, enterprises are not instructed to report on an accrual basis. In the Border Interview Survey to collect information to measure travel receipts, the expenditures are allocated to the period when the interview took place regardless of the length of stay, while the travel expenditures abroad category from the Finnish Travel Survey collects information on trips that ended in the preceding month (before the interview). Adjustments for these practices are made in the compilation process. Advance payments and later payments (credit cards) also confuse the accuracy of recording.

Transfers from the European Community (credits) are recorded on a cash basis in the monthly statistics but are later superseded by the annual statistics compiled by SF that are on an accruals basis.

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

Grossing/netting procedures are broadly consistent with the *BPM5*. Current and capital account transactions are mostly recorded on a gross basis. Financial transactions are recorded on a net basis, separately for asset and liability components. Direct investment is recorded on a directional basis. Respondents are not able to report transactions in financial derivatives separately for assets and liabilities; these are recorded on a net basis.

In the current account, international receipts and payments of dividends, interest, royalties, and technical service fees are recorded net of withholding taxes deducted at source. Communications and postal services are recorded on a gross basis. As the treatment of withholding taxes is not addressed in the report forms, there is likely to be a mixture of gross and net reporting at present. The value of withholding taxes on income and service payments to nonresidents during 2003 totaled €353 million,<sup>95</sup> more than 80 percent of which pertained to dividend distributions.

In the financial account, intermediated trades in securities issued by residents are believed to be net of fees and commissions. Some net reporting was also found to take place in reporting on the issuance of international bonds (issuance less underwriting fees/other expenses). In some cases, the recording treatment adopted may be related to taxation rules in Finland. During 2004, resident banks and securities brokers traded €63 billion of domestic equities (sales and repurchases) with nonresidents and €25 billion of debt securities (excludes new issuance in foreign and international markets).

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

#### **3.1 Source data**

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

The source data for the balance of payments are obtained from comprehensive data programs. The balance of payments compilation system at the BOF is based mainly on monthly and annual surveys. The emphasis is on the end investor or institutional units that affect investment decisions. Reporting by general government has also been fully integrated into the survey system. For most of the financial surveys, data on transactions, stocks, and income are collected at the same time. The monthly stock data serves as an important quality control tool for the recording of financial flows. Data on most of the balance of payments components are collected on a monthly basis, for instance, goods transactions (from customs and Intrastat documents), investment income data, and financial account data. The BOF also compiles a monthly IIP, which includes a reconciliation of the opening and closing positions. In the case of financial derivatives, the net positions are reconciled.

Data on services transactions, current transfers, and the capital account are collected on a quarterly or an annual basis by SF. SF also compiles annual data on compensation of employees (a component of income) from administrative information. In some cases, some of the balance of payments series are estimated by national accounts experts. The BOF has therefore had to develop a number of estimation methods to compile monthly and quarterly forecasts for the items where high-frequency data are not available (see 3.1.2).

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<sup>95</sup> Source: Finnish National Board of Taxes.

The BOF and SF employ different survey methods in selecting survey respondents. The BOF's financial surveys are of the cut-off type while SF employs a stratified sample survey for collecting data on international business services. The monthly trade data compiled by the NBOC are based on customs declarations (Extrastat) and Intrastat.

#### *Current and capital accounts*

Foreign trade statistics cover the commodity trade between Finland and other Member States (Intrastat) of the European Union and between Finland and third countries (Extrastat). Foreign trade statistics are compiled in accordance with the statistical value concept—exports (third countries)/deliveries (internal) are on an f.o.b. valuation and imports (third countries/deliveries (internal) are on a c.i.f. basis. The BOF adjusts import data to an f.o.b. basis, and SF makes a number of other adjustments to the customs data (see 3.3.1).

Imports of military goods are recorded in the merchandise trade data; goods for processing are included in the trade data but are not identified separately, at least easily; and repairs to goods are not included in the trade statistics. Among data not included in the trade statistics are emergency aid given to disaster areas; goods involving no business transactions, including dowry, removal goods, and inherited objects; products of Finnish fishing vessels sold abroad; and imports and exports valued below €1,000 (in line with Commission Regulation 1669/2001). Other missing trade would include smuggling activities and shuttle trade.

Data on transportation are based on surveys and other sources. SF collects, on a quarterly basis, gross income data from domestic shipping carriers involved in foreign transport. The income data are collected for each vessel and trip. Expenditure items, for each vessel, include fuel expenses. Adjustments are made by the BOF to remove domestic transactions included in this data source. Because of nonresponse in the quarterly data, the preliminary data are calculated by means of percentage changes, employing the so-called panel method. Information is also gathered from other sources such as resident airlines, the National Board of Aviation, and the railways. Road transport receipts and expenditure are expert estimates based on information from the Finnish truckers association. Information on freight expenditures are based on the c.i.f./f.o.b. adjustment to imports, adjusted to remove the earnings of resident carriers.

The estimates on the travel account are based on sample surveys—Border Interview Survey for travel receipts and the Finnish Travel Survey for expenditures abroad. Both surveys are comprehensive in their scope. However, a number of other sources are used to close gaps, such as administrative information to estimate nonresident expenditures in the Åland Islands and trips abroad of persons under 15 and over 74. Although partially covered in the compiled estimates, undercoverage of seasonal and border workers is a concern to the compilers. Expenditures of crews are not covered at present, but these are not believed to be important. The Border Interview Survey does not cover daily local traffic between Finland and Sweden or Finland and Norway.

The largest component of services transactions relates to business services, discussed below under survey operations. These data are collected on an annual basis only. Data on insurance services are obtained from a separate survey administered by the Insurance Supervisory Authority. Data on government expenditures abroad n.i.e. are obtained annually from the Central Government Financial Statement, and any capital expenditures related to embassies abroad are separately identified and included in the capital account. The data on government receipts are an estimate that has remained unchanged for a number of years.

Data on investment income are sourced from monthly and annual financial surveys conducted by the BOF. For the most part the data are reported by the end investors or debtors. An important exception is made in connection with interest payments on foreign holdings of government securities, which are estimated based on stock and yield data (see 2.4.2). For the banking sector, once a loan has been booked as nonperforming (interest/principle in arrears for three months), income is not recorded for the financial year unless the claim is on a public sector entity or a public sector entity that has issued a commitment as security for the claim.

Receipts of compensation of employees from short-term employment abroad are based on annual information obtained from the Finnish Tax Administration taxable on income from abroad during a period of less than or equal to six months in a single calendar year. These earnings are grossed up by a factor of 1.5 to cover earnings that extend from seven to 12 months in a calendar year. As the earnings cover taxable income, they may include social security and other benefits from abroad in addition to wages and salaries. On the debit side, the estimates are based on a model that takes into account information on work permits, average length of stay, and other factors such as the short-term employment situation in the agricultural sector.

The largest components of current transfers pertain to transactions with the EU institutions. Although SF is responsible for the final annual data, the BOF records the data on a monthly basis using information from official sources. In finalizing the series, the revisions are typically small. The data on private transfers between the rest of the world and Finnish households, including workers' remittances, are based on data from the former bank reporting system, data for which were last available in June 1998. Transfers by nonprofit institutions serving households are estimated separately and households treated as a residual. The methodology is currently being reviewed. Data on debt forgiveness are based on data from official sources and recorded in the capital account.

### *Financial account*

The direct investment and other BOF financial surveys are of the "cut-off" type, which have fewer respondents and are less costly than the former stratified sample surveys. This is an important consideration in view of the present resource situation. Where respondents elect to report on a consolidated basis, they are required to identify the enterprises covered by the consolidated report. The surveys conducted by the BOF and SF are discussed later in this section.

Data on direct investment abroad and in Finland are collected from monthly and annual surveys of direct investors/direct investment enterprises. The annual questionnaires include basic information about the enterprises, basic profit and loss and balance sheet information, intracompany assets, and intracompany liabilities. Data on direct investment equity positions are only collected annually; data on share capital transactions are collected monthly (and annually). Expenditures related to natural resource exploration may not be recorded in the surveys (as equity investment). The data for other assets and liabilities (intracompany claims) include reporting on transactions, opening and closing positions, a reconciliation of changes in positions, and accrued interest. The monthly surveys are supplemented by two specialized surveys used to gather additional information on merger and acquisition activity in Finland and abroad (involving Finnish companies).

Data on portfolio investment assets are collected from monthly and annual surveys of end investors (excluding households), who also report on their other foreign assets (loans, leasing credits, trade credit, deposits, and other assets) except those related to direct investment abroad. The securities are broken down into shares, mutual fund shares, bonds, and money market paper, and respondents reconcile changes between the opening and closing positions into transactions (net change), exchange rate changes, and other valuation changes. A similar reconciliation is required for the other instruments, including reporting of accrued interest. Information on household holdings of foreign securities is reported by resident custodian banks and securities brokers and the stock data used to derive transactions estimates. Security holdings of the household sector with nonresident asset managers are believed not to be significant.

Estimates of transactions in portfolio investment liabilities are sourced from monthly and annual surveys of enterprises and from reporting by domestic custodians. The former provides information on debt securities issued abroad (and other debt liabilities, except for intragroup/direct investment liabilities). There is a separate report form for any resident take-up of these securities from abroad. As on the asset side, respondents report a reconciliation of the opening and closing balances of their external debt liabilities. Information reported by domestic custodians/securities broker firms on intermediated trades (sales and purchases) in securities issued by residents is used to record transactions in domestically issued debt securities as well as in shares of domestic companies (data on domestic mutual funds are obtained from SF). It is assumed that there is no overlap between the loan liabilities and the recording of securities in respect of repurchase agreements and sell/buy back transactions in custodian surveys (see 3.1.2). Stock data on foreign holdings of securities are also reported by custodians.

For the banking sector, which covers monetary financial institutions (MFIs), the transactions data are derived from monthly stock data that are reported by country, instrument, and maturity. Like the other surveys conducted by the BOF, only the most important banks report monthly. Adjustments are later made to the monthly stock data for banks based on the results of the annual survey. Currently, the “tail” (discussed below) is not included in the monthly statistics, but plans are to include it in the position data by the end of 2005. A separate report form exists for the recording of transactions and positions in financial derivatives.

Data on reserve transactions are based on information from BOF's Accounting Department.

### *Survey operations*

In its survey operations, the BOF undertakes multifrequency (mostly monthly) surveys for foreign assets and liabilities and annual direct investment surveys based on enterprise balance sheets. These are census collections where the most important respondents report monthly (a few quarterly) and most of the reporting population annually. The cut-off system was introduced in 1991 for monthly surveys but only in 2003 for the annual direct investment surveys. In the direct investment cut-off census system, the data for small enterprises exempted from reporting are estimated on the basis of balance sheet information obtained from the Finnish Tax Administration. There is also a monthly securities broker/custodian survey of cross-border trade in domestic securities, an indirect collection.

The BOF purchases the official register of enterprises and establishments from SF on an annual basis, which contains information on nearly 250,000 operating enterprises. In addition to names and identification codes, the register identifies foreign ownership of domestic enterprises and domestic enterprises with affiliates abroad; no individual enterprise data are made available to the BOF. The ownership information is especially useful in designing the direct investment surveys.

The frames targeted for various BOF surveys are structured on the basis of multiple sources, including balance sheet information on the 15,000 largest enterprises in Finland from the Finnish Tax Administration. The BOF also keeps the frame current by monitoring mergers and acquisitions activity and other direct investment transactions reported in the financial press. The Financial Supervision Authority maintains the register of financial institutions.

In the cut-off approach, frame and measurement error are important concerns to the BOF because the respondent population is difficult to define and the balance of payments variables problematic to measure. This approach facilitates the flexible use of consolidated (with enterprises identified) or individual enterprise reporting. Sampling error is virtually nonexistent, although this may be an issue for SF, which conducts the annual International Trade in Services survey employing a stratified sample survey (discussed below).

Table 1 shows the sectoral coverage in the monthly and annual financial surveys employed by the BOF. The memorandum item shows the number of enterprises surveyed and the size of the frames. The frame for the monthly foreign asset and liability survey (portfolio investment, other investment, and direct investment loans)<sup>96</sup> is checked annually by employing a frame survey in which enterprises are ranked by relevant balance sheet items,

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<sup>96</sup> Direct investment equity positions in book values are based on the financial statements of the direct investment enterprises and are available only on an annual basis; however the monthly survey collects transactions data relating to share capital.

that is, loans, including intragroup loans, portfolio securities. These data have been found to approximate the ranking seen in the IIP statistics.

Table 1. Sectoral Coverage and Total Value of Stock at the end of 2004  
(In percent and millions of euros)

Sector	Monthly	Annual	Tail	Total	Total stock
Monetary Financial Institutions	98	0	2	100%	113,731
Other Financial Institutions	98	2	0	100%	42,551
Non Financial Enterprises					
FDI Outward <sup>1/</sup>					
Assets	96	4	0	100%	34,934
Liabilities	95	5	0	100%	9,675
FDI Inward <sup>1</sup>					
Assets	33	47	20	100%	3,913
Liabilities	29	54	17	100%	12,643
Other Investment <sup>2/</sup>					
Assets	56	44	0	100%	1,979
Liabilities	83	17	0	100%	24,473
Central Government	100	0	0	100%	71,216
Social Security Funds	95	5	0	100%	49,669
Municipalities	94	6	0	100%	2,013
<i>Memorandum:</i>					
Number of respondents					
in 2004/2005 (consolidated or					
individual enterprise reporting)					
Nonfinancial Enterprises					
FDI					
Assets	57	372			
Liabilities	57	559			
Other Claims <sup>3/</sup>	57	367			

1/ At end 2003, without inward and outward equity stock.

2/ Portfolio and other investment, excluding trade credits.

3/ Portfolio and other investments.

In the annual frame surveys for foreign assets and liabilities (excluding direct investment and trade credit) it has been found that the enterprises below the largest 500 do not in practice report any balance of payments variables. Thus, if the frame has been properly defined, coverage should be comprehensive. Approximately 60 consolidated enterprises are selected for detailed monthly reporting on their foreign assets and liabilities, including transactions, stocks, and investment income. The response rates for the monthly surveys are close to 100 percent. Rigorous follow-up procedures are conducted. Given the high coverage and

response rates, no grossing up is undertaken on the monthly balance of payments data, with the exception of trade credits.

The register information acquired from SF identifies enterprises with foreign ownership and Finnish enterprises with affiliates abroad, used to define the frames for the annual direct investment surveys. These total 2,800 enterprises in Finland that have foreign ownership (inward direct investment) and around 1,000 enterprises that have affiliates abroad (outward direct investment). The response rates for the annual direct investment surveys are also high, 93 percent for both the inward and outward surveys in 2003.

The cut-off exercise is carried out each year using balance sheet information obtained from the Finnish Tax Administration. The balance sheets contain, by definition, information for foreign equity and intragroup claims. For inward direct investment, it has been found that equity is typically close to 100 percent foreign-owned for the small firms. This also applies, to a lesser degree, to equity for direct investment abroad. Similarly, a strong relationship has been verified between intragroup claims (intercompany loans and trade credit) reported in the balance sheets and in the direct investment returns of the smaller enterprises. Therefore, a consistent list of enterprises according to the size of direct investment can be built, and a cut-off procedure is carried out at the 90 percent cumulative coverage in the two direct investment variables—equity and intragroup claims. The total value of direct investment is calculated for the “tail” employing these scaled balance sheet variables. The detailed direct investment data collected at the annual level are grossed up to the frame level each year, across industrial sectors and country breakdowns employing the data collected for the small enterprises. Exporting and importing enterprises are surveyed every five years for information on trade credits, employing a stratified sample survey (see also 3.2.1).

For trade in international services, SF has used a stratified sample survey since the reference year 1999. The survey frame is based on the register of enterprises and establishments. The 2003 survey contained some 8,400 enterprises and took into account the previous survey and enterprises included in the foreign affiliates trade statistics survey. The frame is divided into three subframes: (1) total survey enterprises, (2) small- and medium-sized enterprises, and (3) small enterprises (primarily service enterprises) employing fewer than 20 persons. The subframe of the total survey included enterprises that had reported international services transactions in 2002, employed at least 100 persons, or had foreign ownership, or owned affiliates abroad and employed at least 80 persons. Using these criteria, the group of the total survey comprised 1,925 enterprises, all covered in the survey. For the small- and medium-sized enterprises, stratified sampling was used to draw 16.5 percent of the frame and 9.8 percent of the small enterprise frame in the final sample. Because a response rate of 94 percent was attained for the 2003 survey, the impact of nonresponse was small (97 percent for the total survey and 86 percent for the other two frames). The level of nonresponse has been declining each year.



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

As SF compiles several of the balance of payments items only on an annual basis, such as trade in business services, current transfers, and compensation of employees, the BOF makes monthly forecasts on the basis of time series analysis and modeling procedures. In general, the data are co-integrated with exports and imports of goods. A multivariate model is applied to estimate figures simultaneously for goods and services. The monthly/quarterly values for business services are estimated on the basis of their historical share in total foreign trade and several indicators are also used as explanatory variables in the system modeling, for instance, GDP of exporting countries. The monthly/quarterly data on compensation of employees are estimated at the same value as the previous year, as are current transfers except for transactions with the EU, which are based on official data on a cash basis. Data are revised in two stages. The first revisions are made when the quarterly data become available. The preliminary estimates relating to transportation and travel services are replaced by the actual data, and estimates concerning data on other services are revised as needed. The other revision occurs in September, when the annual data on business services become available.

The annual results of the direct investment surveys are spread evenly into months. The figures related to the results for the previous year are considered to be a proxy for the results in the current year. As noted in 3.1.1, mergers and acquisitions and other significant direct investment transactions are monitored throughout the year. Distributed monthly dividends (from survey) are deducted from total estimated monthly profits based on proposed dividend distribution from the annual direct investment questionnaire of the previous year. With regard to dividends on foreign direct investment in Finland, the monthly survey suffers from undercoverage. Therefore, the data for May and June, the traditional months in which dividends are distributed, are supplemented with estimates based on the new survey results of the annual survey for the previous year. Since the data from the annual surveys for the previous year become available in September, the estimates for the first six months of the current year are based on the annual survey information of two years earlier, which are then revised in September based on information for the previous year.

The compilers scrutinize the financial press for announcements of mergers and acquisitions and other direct investment transactions. They also monitor large share transactions (including delistings) involving listed domestic enterprises, which the companies disclose in press releases. To the extent that nonresident holdings in a listed enterprise reach the 10 percent threshold, there exists the possibility that a double counting may occur between inward direct investment (calculated from survey information) and portfolio investment equities (calculated from custodian records). Both the flows and stocks could be affected. Since June 2004, the BOF has received enterprise level holdings on a monthly basis from the Finnish Central Securities Depository, and crosschecks are made with the custodian data on a regular basis. The survey data received from custodians (including Finnish Central Securities Depository) and security brokers include all the information on flows and holdings related to the equities in the book-entry account system (both listed and unlisted). Using

the direct investment data on equities in the book-entry account system, the BOF deducts any direct investment entries reported by custodians to arrive at the final portfolio investment figures. The adjustments were also made prior to June 2004. The compilers believe that the movement to a security-by-security reporting system in the near future may further improve the current adjustment procedure.

Security repurchase agreements (repos) are treated as collateralized loans, which direct reporters would include in their monthly foreign liabilities reports (excluding intragroup liabilities). Data on transactions in domestic securities, which may be used in repos, are collected from reports filed by securities brokers/custodians on their intermediated trades with nonresidents in securities issued by residents. As the direct reporters do not identify repos or sell/buy backs in their monthly liabilities reports, there exists the potential for double counting with the portfolio investment flows compiled from the broker reports. This would not apply in the case of the household sector, which is not covered in the liabilities reports and also would typically not engage in repo transactions. According to the compilers, cross-border repos are believed to be very small, unlike in the past.

The banking sector flows derived from stock data are adjusted to remove valuation changes, including exchange rate fluctuations, price changes, and classification changes. The adjustments are carried down to the level of each bank, country, and instrument (the methodology for this procedure is documented in a 65-page note). Loan loss provisions are recorded among valuation changes. The banks are also required to report, at the same level, the stock of interest accrued since the last payment date as well as for the current month. Yield analysis is conducted at the global level by instrument, but there are plans to carry such an analysis down to the country level, at least for the larger countries.

Information on the portfolio investment transactions of the household sectors is derived from stock data reported by domestic custodian banks and brokers. The derived data include valuation changes. A project is underway to derive an adjustment procedure to exclude valuation changes from the flow measures.

Transactions in reserve assets are derived from stock data, and the resultant data are not adjusted to remove the effect of valuation changes. A system to compile transactions data from accounting information is expected to come into operation by the end of 2005.

### *3.1.3 Source data are timely*

Most of the source data are monthly in order to meet ECB requirements for monthly balance of payments statistics. Respondents are asked to submit reports to the BOF no later than the 15<sup>th</sup> business day following the reference month. Response rates are 100 percent although there may be occasional late reporting. Follow-ups are made by phone to ensure adequate coverage, especially with respect to the largest reporters. Where the primary source data come from quarterly and/or annual collections, such as for services transactions, the BOF employs estimation techniques to derive the monthly/quarterly estimates.

Several series are only collected on an annual basis, the most important of which are business services, reinvested earnings, and compensation of employees. Regarding business services, a small number of enterprises account for a very large share of the reported survey results.

### **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*

Thresholds have been established for the compilation of data on intra-EU trade in goods (Intrastat), to reduce respondent burden. In Finland, enterprises with annual transactions below 100,000 euros (assimilation threshold) do not need to report. An obligation to report arises in the month when the threshold is exceeded. Also, the reporting of information on the statistical value is voluntary for enterprises within the threshold of 8.6 million euros (acquisitions) and 26.0 million euros (deliveries). These thresholds were set in 2004. Enterprises that do not exceed these limits may report their acquisitions and deliveries according to the invoice value.

The Statistics Unit of the NBOC makes estimates for the share of trade that falls short of the threshold values and adds them to the registered statistical figures. The data on statistical values are assessed by using chapter/country specific coefficients, which have been calculated on the basis of data where both statistical value and invoice value are indicated.

The share of nonresponses has been insignificant in Finland, and the NBOC believes no estimates are necessary. However, there are late reporters and the NBOC is working to improve the situation. Moreover, the problem of nonresponse also does not exist within the compilation of statistics on external trade (Extrastat), which are based on customs declarations.

The balance of payments compilers closely monitor the survey system to ensure that it functions as expected and strive to ensure that survey coverage is adequate. The compilers endeavor to ensure that the largest enterprises are covered in the surveys. As an indicator of their significance, the five largest respondents accounted for some 65 percent of the totals in the enterprise sector stocks of some items in the early 2000s. Because of the size of some groups of the multinationals domiciled in Finland in comparison to the size of the Finnish economy, Finnish statistics are especially sensitive to measurement errors, such as when respondents misinterpret the reporting instructions. Bilateral contacts are maintained with respondents, and the BOP Corner flags unusual reporting patterns for investigation.

The BOF maintains three different frames for financial account surveys for the corporate sector. These are for the surveys for direct investment abroad, direct investment in Finland, and the monthly/annual surveys on all foreign assets and liabilities. The availability of

balance sheet information (see 3.1.1) enables an appropriate auxiliary variable analysis. In addition, the estimation of the total population from the registers is now feasible. Moreover, the frame maintenance involves a continuous monitoring of changes in enterprise structures.

The BOF regularly reviews the survey frames and the accuracy of the register data employed in order to maintain and improve the quality of the balance of payments statistics, including the regular monitoring of the financial press for high-value transactions such as mergers and acquisitions. It also cooperates with SF to keep the targeted direct investment registers up to date in both institutions.

A major overhaul of the compilation system was undertaken in 2004 (see 0.2.1), which facilitates a more comprehensive quality control over the survey operations and the balance of payments compilation exercise. Tables are generated assessing, for example, valuation items in relation to the size of the stock, investment income relationships, and relative and absolute changes in relation to the previous report. Such checks are undertaken at the respondent and the compiled aggregates.

Revisions are closely monitored to inform statistical practices (see 3.5.1). In the financial account, no systematic revisions have thus far been found, unlike in the trade statistics where systematic upward revisions to Intrastat imports were identified. The issue was discussed with the NBOC.

Transactions in real estate (foreign liabilities and assets) are rough estimates based on the earlier settlements-based reporting system that was discontinued in 1999. These transactions are believed to be insignificant. The same applies to government receipts.

The BOF intends to undertake a benchmark survey on cross-border trade credit assets and liabilities during 2005, an update to the survey conducted in 2001. It is recognized that updates are required at intervals of a few years to check the outstanding positions. The current exercise will entail a stratified sample survey involving 8,000 exporters and 17,000 importers and will collect information on the levels of short-term trade outstanding at the end of 2004. Trade credit has the weakest coverage in the monthly/annual surveys, and unlike the other survey components of the financial account the data are grossed up, quite considerably, to the population level. With integration and globalization, trade credit may become a problematic item in the system.

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

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

The NBOC applies two kinds of error checks on the compiled trade statistics: validity and reliability checks. Invalid data are always corrected (e.g., missing commodity code, country classification, value, etc.). Reliability errors relate to data issues where the incorrectness is not known with certainty, such as when values deviate from or conflict with data corresponding to earlier periods. The reliability checks are based on statistical methods (e.g.,

regression analysis). Checks are also made with secondary data, such as comparing internal trade with VAT data. The latter are also used in the estimation of internal trade of the enterprises that fall under the thresholds for reporting purposes (see 3.2.1). In connection with Intrastat, some of the large importers do not submit timely reports, and this has given rise to sizable revisions at times. No coverage adjustments are made in the balance of payments in this respect.

Several adjustments made to trade statistics by SF for balance of payments compilation appear to be outdated, with the same figures being carried forward for an extended number of years. In adjusting goods exports to align with the recommendations of the *BPM5*, the adjustments for coverage, classification, valuation, and timing have remained virtually unchanged. On imports, the adjustments for coverage and valuation were mostly unchanged (the c.i.f.-f.o.b. adjustment based on the results of the NBOC survey is variable). Source data are not being used. A small reasonable adjustment to imports is also made for smuggling.

Some adjustments involve reclassifications to other components of goods transactions, such as goods for processing and nonmonetary gold. The latter are based on monthly customs data. Goods for processing are included in the compiled trade statistics, but data are not readily available. Each year, the NBOC specially tabulates goods for processing and publishes the data in its annual *Foreign Trade Statistics Yearbook, Part 2*. However, this is only with a considerable lag; for example, the 2005 *Yearbook* will contain data for 2002. The valuation adjustments are intended to improve upon the Customs-based conversions into euros of foreign currency denominated trade flows (Extrastat), which are based on the selling rates recorded on the second last Wednesday of the calendar month preceding the date of Customs clearance (see 2.3.1). However, the adjustment does not track changes in exchange rates. The NBOC database has information on the currency denomination of trade, which could be used to develop a model to estimate a correction to the trade values on account of conversion.

No entries under goods relate to repairs on goods, a *BPM5* component. Repairs on goods have been collected and reported to the EU but have not been included in the trade data used to compile the balance of payments. The data are on a gross basis, that is, the value of the goods plus the value of the repairs. These data have also been published in *Foreign Trade Statistics Yearbook, Part 2*. As of January 2005 they are no longer being collected for intra-EU trade.

With regard to the goods item “goods procured in ports by carriers,” information on the debit side is collected by SF from a quarterly survey of shipping companies and an annual survey of domestic airlines. On the credit side, the figure is an estimate carried forward each year. In January 2005, “goods delivered to vessels and aircraft” are included in intra-EU trade statistics, providing a timely data source for an important component of this series.

The survey operations at the BOF have been fully automated, and all of the basic edits and any required changes to the reported data are performed online. A number of basic logic checks are first performed on the reported survey data in the reporting workbooks before the

data are entered into BOP Corner, the processing system. Another series of checks is performed within BOP Corner, and unusual entries are flagged for review by staff. A range of tools is available to the staff to further evaluate the quality of the reported data for each enterprise, including comparisons with previous reports and various other consistency checks. If an issue cannot be satisfactorily resolved, the respondent is contacted by phone, and where a timely report is not received, the stocks from the previous month are carried forward. The annual estimates are spread evenly into the monthly series.

Recognizing that enterprises may have difficulty in distinguishing residency in connection with the reporting of syndicated loans, respondents are requested to report drawings on such agreements in full, even when one or more banks resident in Finland participate in the syndicated loan. A separate report form is used to gather information from domestic banks on syndicated loans to residents to eliminate resident-to-resident transactions and positions. The BOF intends to undertake an inquiry to determine whether enterprises would be in a position to correctly identify borrowings from nonresident banks in syndicated loans.

In processing its international trade in services survey, SF also performs validity checks at the enterprise level, including comparisons with turnover information. Enterprises are contacted when large entries are recorded under the miscellaneous services category. The staff maintain a list of “frequently asked questions” to assist reporters. Work is proceeding to encourage electronic reporting.

No discrepancy exists between the sum of the monthly data and the annual surveys, which are integrated into the monthly series by equal apportionment or by other procedures. Data on reinvested earnings are collected only on an annual basis, and the data for the most current year are carried forward and apportioned equally over the 12 months.

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

The BOF converts the trade data to an f.o.b. basis using factors based on the results of a survey carried out by the NBOC in 2002-03. The survey is carried out every five years, and the factors remain unchanged between surveys. To estimate imports f.o.b., factors of 4.9 percent and 0.2 percent are used for freight and insurance, respectively, and the same factors are used for Intrastat and Extrastat.

The adjusted imports f.o.b. would include, correctly, the value of inland transport services provided by Finnish trucks. To the extent that Finnish carriers were involved in the transport of imports within the foreign country of export, an overstatement of debits would occur in the overall balance of payments. No adjustments are made on this account in the balance of payments. The survey carried out by the NBOC splits transport charges between Finnish and foreign carriers.

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

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

A comparison is made of the accrued interest on nonresident holdings of domestically issued government bonds computed using current yields compared with data on coupon payments paid to nonresidents on these securities by custodians.

The data reported by brokers and banks on their sales to and repurchases from nonresidents of domestic securities (equities and debt securities) are compared with changes in the stocks of these securities reported by custodians. Similarly, the overall valuation changes reported in the portfolio investment surveys are compared with movements in stock prices and interest rates. The BOF also conducts a rough check of the data on foreign holdings of domestic mutual funds reported by SF using independent statistics from the Helsinki Stock Exchange. Information on securities issued by residents of Finland published in *International Financial Review* is compared with reporting in the monthly survey of foreign liabilities (excluding intragroup liabilities).

The financial press and press releases issued by listed enterprises on large share purchases are monitored for merger and acquisition activity and other direct investment transactions. Where takeover transactions are identified, a special survey form is sent to obtain information on the transaction.

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

The data on investment income and associated stocks reported in monthly returns are assessed each year at the global level for each instrument. The implied yields are generally appropriate. Also, with respect to income, the estimated accrued interest on foreign holdings of government bonds is compared with the coupon payments reported by custodians.

As balance of payments and national accounts compilation are integrated in Finland, there is a reconciliation with other data on the supply and demand of goods and services each year at a detailed product level.

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

Errors and omissions as an indicator of problems in statistical outputs are monitored. The *Product Description and Quality Report*, to be released in 2005, provides a short analysis of errors and omissions, including charts. The first quality report, made available in 2003 in Finnish only, contained similar information. Studies have also been conducted in earlier periods, including in the 1996 *Compilation Methods, Sources of Information and the Time*

*Series for 1975-1992* (Bank of Finland Studies) and the 1995 *Analysis on the Errors and Omissions in the Finnish Balance of Payments: Restless Capital Movements, Floating Exchange Rate and Errors Since 1991* (Bank of Finland Discussion Papers).

The BOF compares the data on the stock of portfolio investment liabilities with the annual results of the IMF's Coordinated Portfolio Investment Survey, which contains partner country information on holdings of Finnish securities. Although not used currently, the BOF is familiar with the BIS' international securities statistics and intends to employ these data in connection with the development of a new system for recording portfolio investment stocks and flows on a security-by-security basis. The BOF has discussed bilateral direct investment data (mirror studies) with counterparts in several Nordic countries. The NBOC has also undertaken mirror studies in cooperation with the authorities in Sweden and the Russian Federation, the latter on an annual basis. The international travel data are validated against indicators on tourist flows, accommodation statistics, and international passenger traffic. Bilateral comparisons with Sweden and other EU countries are also undertaken on a regular basis.

In connection with the monitoring of revisions (see 3.5.1), the BOF also monitors the impact on the errors and omissions.

### **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)*

Revision studies have been routinely conducted since the 1980s to inform statistical processes. In recent years, special attention has been paid to the impact that the results of annual surveys have on the compiled monthly data, which may necessitate modifications to estimation methods for the following 12-month period in order to improve accuracy.

Different vintages of time series are stored to facilitate revision analysis. Four vintages of key variables are available: first preliminary observations, data revised next month, data revised six months (nine months as from 2003) after the end of the reference year, and the current final data.

Since 1999, the causes of revisions have been documented in internal memoranda monthly, and time series of the impact of revisions on the published data are stored to monitor long-term trends in the revision patterns. Several charts are published in *Product Description and Quality Report*.

The current revision cycle is based on the timetable prepared by the ECB, and it adequately takes account of the availability of information from annual surveys (see also 4.3.1).



## **4. Serviceability**

### **4.1 Periodicity and timeliness**

#### *4.1.1 Periodicity follows dissemination standards*

The balance of payments statistics are compiled and disseminated monthly, which exceeds the quarterly periodicity prescribed in the SDDS. Monthly balance of payments statistics are required to be reported to the ECB, albeit with less component detail than in quarterly submissions. The quarterly data are derived by summing the monthly data.

#### *4.1.2 Timeliness follows dissemination standards*

The monthly balance of payments statistics are disseminated within six weeks after the reference month, which exceeds the one quarter lag prescribed in the SDDS. Monthly balance of payments statistics are required to be reported to the ECB with a lag of 30 working days. The quarterly balance of payments data are disseminated within three months.

### **4.2 Consistency**

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

The concepts, definitions, and classifications for producing the monthly, quarterly, and annual balance of payments statistics are the same. The quarterly data are derived by summing the monthly information, and the annual by summing the four quarters. In some years, the quarterly errors and omissions item has been very large (30 percent of current receipts as presented in charts to be included in the *Product Description and Quality Report* to be released in 2005). In most years, it was within the 10 percent range.

Financial transactions are reconcilable with changes in the external debt and IIP statistics, because most of the source data are collected in a form that requires respondents to provide a reconciliation of changes in outstanding stocks between two periods (mostly monthly and annual). A table showing the reconciliation for the most recent year is published in *Finland's Balance of Payments*. Data are shown by sector and functional category/instrument for transactions, exchange rate and valuation changes, and total change in stocks.

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

The annual *Finland's Balance of Payments* contains annual data back to 1995. Longer time series are available upon request or from data vendors (see 5.1.2).

When changes in source data, methodology, or techniques are introduced, historical data are reconstructed as far back as reasonably possible. For example, when the *BPM5* was introduced in 1994, data were revised back to 1975.

When the BOF discontinued its bank reporting system in 1999, SF introduced tourism surveys to collect information on international tourism receipts and payments. In this connection, the travel data were revised for 1998, and the data for 1995-97 were also reconstructed. The revision of the geographical breakdown was partly extended back to 1992.

The notes to the monthly *Financial Markets Statistical Review* contain some information on breaks in series and other clarifications of the published data. In addition, footnotes are used in other releases to highlight significant changes. A brief commentary on developments in Finland's balance of payments is provided in the monthly *Statistical Bulletin*. The annual *Direct Investment in Finland's Balance of Payments* and the *Stock of Portfolio Investment by Country* contain more extensive commentary.

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

The balance of payments data on goods transactions are based on the foreign trade statistics, and coverage and classification adjustments are made for balance of payments purposes by the BOF and SF (see 3.3.1).

The balance of payments data are broadly comparable with the data on the rest of the world account in the national accounts. The one difference pertains to the recording of cross-border construction activity, where the BOF and SF have adopted the different recommended treatments set out in the *BPM5* and the *ESA 95*, respectively.

In 2004, the monetary and financial institutions (MFI) balance sheet and the balance of payments data collections were unified. In earlier periods, the two sets of data were monitored and were broadly comparable. The balance of payments transactions relating to external debt and reserve assets are also comparable with the corresponding stock data for these two data sets.

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

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

The revision cycle is based on the timetable prepared by the ECB and Eurostat. The monthly balance of payments data are preliminary when first released. The first month of a quarter is revised with the release of data for the second month. With the release of data for a quarter, the data for the previous quarter are revised. With the release, in September, of data for the June quarter, the monthly/quarterly data for the two previous years are revised. These are the most comprehensive revisions, which incorporate the results from annual surveys. With the release in December of third quarter data, the data for the current year are revised and again with the release in March of fourth quarter data. The data are considered final 20 months after the end of the year in question and are thereafter not routinely revised. This revision

practice is new and not known to the public, although it was referred to in the 2003 *Product Description and Quality Report*.

Because Eurostat and the ECB have different revision policies for the national accounts and the balance of payments statistics, the rest of the world account in the national accounts does not align with the balance of payments statistics for a period of time (see also 4.2.3 for other differences). The annual revision of the national accounts takes place in June/July while the balance of payments statistics are updated in the September, as noted above. To facilitate the revision process, the BOF endeavors to make available to SF some revisions of the external sector statistics earlier. However, certain important items, such as reinvested earnings, are not available in time.

The compilers intend to introduce a timetable showing the revision schedule in detail on the BOF's website and in the 2005 *Product Description and Quality Report*.

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

The data are preliminary when first released and are denoted as such with an asterisk in some of the releases. Revised data are not separately identified. Some information on revisions is disclosed in footnotes in publications and releases.

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

Apart from some footnotes, revisions are not explained in publications and releases. However, an analysis of revisions in the form of several charts, including plots of the current data minus the first preliminary data and the second preliminary data minus the first preliminary data as percentages of current receipts, is made available in the *Product Description and Quality Report* (the first report in this series contained the same material) The 2005 version will be available in Finnish, Swedish, and English. The revision comparisons are made for the main categories of the current and financial accounts.

## **5. Accessibility**

### **5.1 Data accessibility**

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

The balance of payments statistics are disseminated according to the standard components of the *BPM5*, and with time series. The full range of data collected in surveys is made available, including geographical detail (subject to confidentiality constraints). The data are available in the various publications and releases listed in the BOF's main webpage (Statistics). The list includes the following:

Finland's balance of payments:

- (1) Finland's balance of payments monthly—Statistical Bulletin (net version only);
- (2) Balance of payments and international investment position (net version only);
- (3) Gross external debt (net version only);
- (4) *Finland's Balance of Payments*, annually;
- (5) *Direct Investment in Finland's Balance of Payments* (annually); and
- (6) Balance of payments statistics to include breakdowns of counterparty countries.

Financial markets:

- (1) *Financial Markets Statistical Review*, monthly; and
- (2) *Financial Market Report*, monthly.

Other:

Stock of portfolio investment by country (pdf).

The monthly *Statistical Bulletin* contains a short commentary on current-period developments in Finland's balance of payments. The annual *Direct Investment in Finland's Balance of Payments* and the *Stock of Portfolio Investment by Country* also contain commentary.

Monthly data and charts are presented on the BOF's website, showing the current account, balances on goods, services, and income, and the series on the net flows on direct investment in Finland and abroad on a 12-month moving total basis. The same release also provides similar information on portfolio investment in Finnish securities—net flows and net international investment positions for selected items.

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

The balance of payments statistics are disseminated in print form and are available on the BOF's website. At present, the Internet version series cannot be downloaded. Longer time series can be made available upon request or purchased from data vendors such as SF's ASTIKA ([http://tilastokeskus.fi/tk/tp\\_db/astika.html](http://tilastokeskus.fi/tk/tp_db/astika.html)) or Etlatieto Ltd. databank (Research Institute of the Finnish Economy) (<http://www.etla.fi/Databases.html>).

#### *5.1.3 Statistics are released on a preannounced schedule*

The release calendar for the coming year, specifying precise dates of release of BOF statistics, is disseminated on the BOF's website for the coming year by the first of January (see [http://www.bof.fi/eng/5\\_tilastot/5.3\\_Julkistamiskalalenterit/julkaEN.stm](http://www.bof.fi/eng/5_tilastot/5.3_Julkistamiskalalenterit/julkaEN.stm)). During the last part of the calendar year, the BOF uses the DSBB to disseminate the one quarter ahead notice of approximate release dates, as required by the SDDS. A notice to this effect is given

in the *Financial Markets Statistical Review*. The date of the next publication is also available in each issue of the *Statistical Bulletin*, while approximate release dates are given for the annual publications.

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

The balance of payments statistics are released to all interested parties simultaneously in the BOF press release *Finland's Balance of Payments* at 9:00 am (local time) on the BOF's website. No officials outside the BOF have access to the data before their release to the public.

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

Requests for data not routinely disseminated are considered case-by-case and are dependent on resources required to comply with the request.

A prepared set of tables containing detailed annual data on inward and outward direct investment capital flows and stocks (by country and by economic activity) back to 1985 is available to users of statistics upon request. The availability of these data is not disclosed in any of the publications and releases.

## **5.2 Metadata accessibility**

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

Documentation on balance of payments sources and methods can be found in the following:

- (1) The *European Union Balance of Payments/International Investment Position Statistical Methods*, produced each year by the ECB, contains detailed information on various aspects of the compilation systems of each of the EU Member States (see [www.ecb.int](http://www.ecb.int));
- (2) The BOF's monthly *Financial Markets Statistical Review* contains a few short notes on selected data series;
- (3) Documentation on the Finnish balance of payments and international investment position—*Product Description and Quality Report*—was released on the BOF's website in Finnish in 2003. A similar report will be made available in 2005 in Finnish, Swedish, and English;
- (4) Documentation on earlier data sources and methods is available in Jarmo Kariluoto: *Finland's Balance of Payments—Compilation Methods, Sources of Information and Time Series for 1975-1992* (Bank of Finland Studies in Economics, 1996, Series A:98);
- (5) Information on the BOF's new balance of payments compilation system is available in the Bank of Finland Working Paper, prepared by Marko Myller and Miika Syrjänen, *Balance of Payments Compilation System*; and

(6) The BOF participates in the IMF's annual Coordinated Portfolio Investment Survey and also in the Survey of Implementation of Methodological Standards for Direct Investment. Detailed methodological information on these initiatives is available on the IMF's website. A Summary Methodology for balance of payments statistics can also be found on the DSBB (see <http://dsbb.imf.org>) and in the IMF's *Balance of Payments Statistics Yearbook* (Part 3).

With regard to trade in international services, SF posts on its Internet site a product description of its statistics on international trade in services, which sets out the relevance of the statistics, a methodological description of the survey, and a short discussion of the correctness of the compiled data, including response rates for the past four years. Similar information is also provided in SF's annual *Internationalization of Enterprises*, which also defines the sampling frame and sample.

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

The metadata identified above, together with other assistance that is available, aid users of statistics in better understanding Finnish external sector statistics. More specialized information is also disseminated, such as the release in 2004 of a BOF working paper on the introduction of a new balance of payments compilation system—*Balance of Payments Statistics Compilation System*, Marko Myller and Miika Syrjänen. There are plans to identify in publications and releases available metadata to assist users.

### **5.3 Assistance to users**

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

Prompt and knowledgeable service and support is available from the Statistics Desk Phone, which is posted on publications and releases (phone, facsimile, e-mail). The annual *Direct Investment in Finland's Balance of Payments* and the *Stock of Portfolio Investment by Country* also identify subject matter contacts. All statistical bulletins are published in three languages—Finnish, Swedish, and English.

At SF, information on assistance provided to users via e-mail is stored to assist staff on future requests for information and to identify user interests.

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

On the BOF's main webpage (Statistics), information (and links) related to BOF statistics are presented in one easy-to-view format. There are also links to reporting instructions for the reporting institutions. The publications and releases are available on the website or may be obtained by free subscription from the BOF. Assistance is available at the Statistics Desk Phone, which is posted on releases.

Table 5. Data Quality Assessment Framework (July 2003): Summary of Results for Balance of Payments Statistics  
(Compiling Agency: Bank of Finland)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
<b>0. 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				
<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			Reserve transactions and some portfolio flows include valuation changes; interest accruals based on two different approaches; portfolio dividends and business services are not recorded on an accrual basis; portfolio securities are recorded net of fees and commissions; and income and service distributions are recorded net of withholding taxes deducted at source.
<b>3. Accuracy and reliability</b>						
3.1 Source data			X			Data for business services and reinvested earnings are only collected on an annual basis; and potential for double counting exists in the recording of transactions in repurchase agreements.
3.2 Assessment of source data		X				
3.3 Statistical techniques			X			Balance of payments adjustments to trade are not updated.
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			Revision policy is not disclosed to the public.
<b>5. Accessibility</b>						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

## Recommendations

- BOF and SF should explore how other EU Member States have addressed the issue of sharing of individual enterprise data between the national statistical office and the central bank for balance of payments compilation (0.1.2).
- Arrange with the NBOC for the BOF to have access to individual Customs documentation for balance of payments compilation (0.1.2).
- In collaboration with the NBOC, develop a methodology to adjust the valuation of goods denominated in foreign currencies (an administrative rate is currently used) to more closely conform with *BPM5* guidelines (2.4.1).
- SF to indicate in its survey questionnaire on international trade in services the accrual principle and the treatment of the Nordic Investment Bank and other regional/international organizations (2.4.2).
- Develop a methodology to (1) estimate the fees and commissions that are netted from portfolio investment transactions and adjust the flows accordingly and (2) incorporate the fees and commissions in financial services. Report forms would need to be modified to indicate how securities should be reported (2.4.3).
- Develop a methodology to (1) estimate the amount of withholding taxes on dividends, interest, royalties, and technical service fees received from abroad for inclusion in current transfers (data on withholding taxes on payments to nonresidents are available from the Finnish National Board of Taxes). The data on income and royalty payments from the latter source should be reconciled with the balance of payments accounts; and (2) gross up the relevant income and service items accordingly. Report forms would need to be modified to indicate how withholding taxes should be treated (2.4.3).
- Adapt collections involving end investors and custodians to ensure no duplication in the recording of loans and repurchase agreements (3.1.2).
- Introduce a quarterly survey of international business services to improve recording of the quarterly (and monthly) balance of payments (3.1.3).
- Develop a methodology to estimate receipts of government services n.i.e. on the basis of partner country data in conjunction with indicators of size of foreign representations in Finland from the Ministry of Foreign Affairs (3.2.1).
- Investigate, with the NBOC, the possibility of obtaining timely information on goods for processing (included in trade statistics), determine if there are any recording problems (see also national accounts 3.1.2), and determine the need for any other balance of payments adjustments to trade statistics (see also 2.4.1) (3.3.1).



- Incorporate reporting on repairs on goods into existing surveys; consider a survey to gather data on expenditures for goods procured in ports in Finland by foreign carriers outside the EU (3.3.1).
- As the f.o.b. value of Finnish imports would include any transportation services rendered by domestic carriers, develop a methodology to estimate an offsetting credit entry for these resident-resident transactions included in the balance of payments (similarly on the export side for the carriage of Finnish exports within Finland by nonresident carriers) (3.3.2).
- BOF and SF to participate in or review findings from bilateral comparisons of foreign trade statistics undertaken by the NBOC, with a view to assessing scope for adjusting balance of payments data on goods transactions (3.4.3).

## **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)**

Quality Dimensions	Elements	Indicators
<p><b>0. Prerequisites of quality</b></p>	<p><b>0.1 Legal and institutional environment</b>—<i>The environment is supportive of statistics</i></p> <p><b>0.2 Resources</b>—<i>Resources are commensurate with needs of statistical programs.</i></p> <p><b>0.3 Relevance</b>—<i>Statistics cover relevant information on the subject field.</i></p> <p><b>0.4 Other quality management</b>—<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><b>1. Assurances of integrity</b></p> <p><i>The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.</i></p>	<p><b>1.1 Professionalism</b>—<i>Statistical policies and practices are guided by professional principles.</i></p> <p><b>1.2 Transparency</b>—<i>Statistical policies and practices are transparent.</i></p> <p><b>1.3 Ethical standards</b>—<i>Policies and practices are guided by ethical standards.</i></p>	<p>1.1.1 Statistics are produced on an impartial basis.</p> <p>1.1.2 Choices of sources and statistical techniques as well as decisions about dissemination are informed solely by statistical considerations.</p> <p>1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.</p> <p>1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.</p> <p>1.2.2 Internal governmental access to statistics prior to their release is publicly identified.</p> <p>1.2.3 Products of statistical agencies/units are clearly identified as such.</p> <p>1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.</p> <p>1.3.1 Guidelines for staff behavior are in place and are well known to the staff.</p>

Quality Dimensions	Elements	Indicators
<p><b>2. Methodological soundness</b></p> <p><i>The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.</i></p>	<p><b>2.1 Concepts and definitions</b>—<i>Concepts and definitions used are in accord with internationally accepted statistical frameworks.</i></p> <p><b>2.2 Scope</b>—<i>The scope is in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p><b>2.3 Classification/sectorization</b>—<i>Classification and sectorization systems are in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p><b>2.4 Basis for recording</b>—<i>Flows and stocks are valued and recorded according to internationally accepted standards, guidelines, or good practices</i></p>	<p>2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.</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><b>3. Accuracy and reliability</b></p> <p><i>Source data and statistical techniques are sound and statistical outputs sufficiently portray reality</i></p>	<p><b>3.1 Source data</b> – <i>Source data available provide an adequate basis to compile statistics.</i></p> <p><b>3.2 Assessment of source data</b>—<i>Source data are regularly assessed.</i></p> <p><b>3.3 Statistical techniques</b>—<i>Statistical techniques employed conform to sound statistical procedures</i></p> <p><b>3.4 Assessment and validation of intermediate data and statistical outputs</b>—<i>Intermediate results and statistical outputs are regularly assessed and validated.</i></p> <p><b>3.5 Revision studies</b>—<i>Revisions, as a gauge of reliability, are tracked and mined for the information they may provide.</i></p>	<p>3.1.1 Source data are obtained from comprehensive data collection programs that take into account country-specific conditions.</p> <p>3.1.2 Source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required.</p> <p>3.1.3 Source data are timely.</p> <p>3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide statistical processes.</p> <p>3.3.1 Data compilation employs sound statistical techniques to deal with data sources.</p> <p>3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.</p> <p>3.4.1 Intermediate results are validated against other information where applicable.</p> <p>3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.</p> <p>3.4.3 Statistical discrepancies and other potential indicators or problems in statistical outputs are investigated.</p> <p>3.5.1 Studies and analyses of revisions are carried out routinely and used internally to inform statistical processes (see also 4.3.3).</p>

Quality Dimensions	Elements	Indicators
<p><b>4. Serviceability</b>  <i>Statistics, with adequate periodicity and timeliness, are consistent and follow a predictable revisions policy.</i></p>	<p><b>4.1 Periodicity and timeliness</b>— <i>Periodicity and timeliness follow internationally accepted dissemination standards.</i></p> <p><b>4.2 Consistency</b>— <i>Statistics are consistent within the dataset, over time, and with major datasets.</i></p> <p><b>4.3 Revision policy and practice</b>—<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><b>5. Accessibility</b>  <i>Data and metadata are easily available and assistance to users is adequate.</i></p>	<p><b>5.1 Data accessibility</b>— <i>Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.</i></p> <p><b>5.2 Metadata accessibility</b>— <i>Up-to-date and pertinent metadata are made available.</i></p> <p><b>5.3 Assistance to users</b>— <i>Prompt and knowledgeable support service is available.</i></p>	<p>5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts).                      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>

### Finland: Survey of Users of Macroeconomic Statistics

With the assistance of the Bank of Finland and to complement the IMF staff's assessment of the quality of macroeconomic statistics produced by Finland, the mission conducted an informal survey of key users of these statistics. Users were asked to evaluate the coverage, detail, periodicity, timeliness, dissemination practices, accessibility, and overall quality of the official statistics. They were asked, as well, to provide some general information about their use of the statistics. Questionnaires (160) were dispatched, and 46 responses received, in April 2005, from a broad range of users, including official agencies, banks, media, other enterprises, employer and employee associations, universities, and research institutes (Table 1). Follow-up discussions were held with a selection of users.

Table 6. Finland: Questionnaire Responses by Type of User  
April 2005

Type of Respondent	Number of Responses Received
Official agencies	20
Banks	4
Media	2
Other enterprises, and employer and employee associations	4
Universities and research institutions	4
Not specified	12
Total	46

The respondents most frequently used national accounts and price statistics, as well as labor market statistics and production indices (question 1 in Table 2). Balance of payments and government finance statistics, while still well used, were used less frequently. Users obtained the statistics from a range of public, private, and international sources but most often from official national sources (question 2). They accessed the statistics in both electronic and hard copy but most often in electronic form from official websites (question 8.4). The statistics were used for a wide range of purposes (question 4).

Respondents were generally very satisfied with the **overall quality** of statistics produced by Finland. On a 5-point scale (5 meaning excellent and 1 meaning poor), respondents' average ratings for the categories of statistics assessed in detail on this mission were as follows: price statistics 4.3, national accounts 4.1, government finance statistics 4.0, and balance of payments statistics 3.9 (question 9.4 in Table 2). Of those respondents expressing opinions

on these matters, the overwhelming majority considered that the underlying methodologies were sound and appropriate and that the statistics were unbiased and accurate (questions 9.1 and 9.2). All who commented assessed the statistics as being at least comparable in quality with those of other countries in the region, and many regarded them (especially national accounts and price statistics) as being better (question 9.3). Several respondents noted the long tradition of good statistics production in Finland and that this production deserved respect.

A few respondents expressed concern about the **accuracy** in recent years of some initially published national accounts items, relating to investment in machinery and to consumption. They claimed that the data had provided a misleading picture of the business cycle that was revealed when more complete data became available. Several raised concerns about price measurements and deflation methods in complex areas, noting difficulties in reconciling export and production volumes for some important commodities, such as electronics and basic metals.

Regarding **serviceability**, respondents were overwhelmingly satisfied with the coverage and detail of the statistics (questions 5.1 and 5.2 in Table 2). A request was made for more detail on house prices. Several users would like more detail in quarterly accounts on exports and imports (balance of payments), by activity sector (national accounts), and on services. Several users stressed the importance of obtaining more detailed data on the distribution of taxes. Another user expressed concern about inconsistencies over time and between definitions for related government finance series, making it difficult to compare government debt levels and corresponding debt service data.

Respondents were almost universally satisfied with the periodicity (frequency of compilation) of official statistics (question 6.1 in Table 2), and a clear majority was satisfied with their timeliness (question 6.2). One user commented that the timeliness compared favorably with other countries in the region. Another noted that shorter time lags would be preferable, but not at the expense of accuracy. Another called for more timely data on retail sales, the household sector, and local governments. Another requested more timely breakdowns of services data.

Most respondents were aware of the availability of publicly disseminated advance release calendars (question 7.1 in Table 2). All who answered observed that the official statistics were released on the preannounced dates (question 7.2).

Although most respondents were satisfied that enough information was published about revisions to satisfy their needs, a significant minority disagreed, especially in the responses on national accounts and balance of payments statistics (question 7.3). Some users observed that explanatory notes or comments were seldom provided when national accounts and balance of payments statistics were routinely revised, even when some large revisions had been made in recent periods. One user noted that staff provided additional information when asked.



Regarding other **accessibility**, respondents almost universally said they could easily obtain the official statistics (question 8.1 in Table 2). Several commented favorably about recent increases in the amount of information provided free of charge on the Internet, but others felt that it was still insufficient. Several were dissatisfied with the fees charged by Statistics Finland and the National Board of Customs for detailed national accounts and merchandise trade data.

While most respondents were satisfied with access to information (explanatory notes, methodological descriptions, etc.) pertaining to statistics, a significant minority said they could not easily access the information (question 8.2). Most said the above information on methodology was sufficiently clear and of an adequate level of detail to be useful (question 8.3). Several users who undertake detailed analysis of the data said that the explanatory notes were insufficiently detailed to meet their needs. Several other users with time-critical but basic data needs requested that the data be accompanied by some simple standardized ratios and rates of change.

Table 7: Finland: Results of User Survey  
 April 2005  
 (Number of Responses in Each Category)

<b>Section A: General Information About Uses of Finland's Macroeconomic Statistics</b>	
1. Which official statistics do you use regularly?	
1.1 National accounts (NA)	42
1.2 Prices	38
1.3 Government finance statistics (GFS)	16
1.4 Monetary and financial statistics (Monetary)	17
1.5 Balance of payments (BOP)	20
1.6 Other: Production indices	26
Labor market	27
Merchandise trade	18
International reserves and foreign currency liquidity	7
External debt	10
International investment position	10
Other	5
2. Where do you obtain the national official statistics?	
2.1 Official press releases and publications on macroeconomic statistics	34
2.2 Private sector summaries and analyses	9
2.3 Official policy papers	16
2.4 Publications from international organizations	15
2.5 Other sources	10
3. Do you refer to official descriptions of the sources and methods that were used to compile the official statistics?	
Yes	26
No	8
4. For what purposes do you use the official statistics?	
4.1 Analysis of current developments for short-term decision making	25
4.2 Analysis of trends for longer-term policy formulation	23
4.3 Econometric model building and forecasting	16
4.4 Economic research	21
4.5 Comparison with economic developments in other countries	27
4.6 General economic background	34
4.7 Other	6

<b>Section B: Views Relating to the Quality of Finland's Macroeconomic Statistics</b>						
	NA	Prices	GFS	Monetary	BOP	Other
<b>5. Coverage and detail</b>						
5.1 In general, are you satisfied with the coverage of official statistics?						
Yes	35	35	11	18	21	10
No	2	1	0	1	1	0
5.2 In general, are you satisfied with the official statistics in terms of their level of detail?						
Yes	36	33	12	18	20	10
No	2	2	0	1	2	1
<b>6. Periodicity and timeliness</b>						
6.1 Are you satisfied with the frequency of compilation of the official statistics (e.g., weekly, monthly, quarterly, annual)?						
Yes	39	36	11	19	21	10
No	0	1	1	0	0	1
6.2 In general, do you consider that the official statistics are disseminated with the appropriate timeliness (the time lag after the period to which they pertain, e.g., 60 days after the reference period)?						
Yes	35	36	10	19	20	10
No	4	1	2	0	1	1
<b>7. Other dissemination practices</b>						
7.1 Do you know if there is a publicly disseminated calendar that announces in advance the dates on which the various official statistics will be disseminated?						
Yes	33	32	8	13	17	9
No	3	2	2	5	5	0
7.2 In your experience, are the official statistics released on the dates announced?						
Yes	33	32	10	14	18	9
No	0	0	0	0	0	0
7.3 Is there enough information about revisions to official statistics to satisfy your needs?						
Yes	29	30	9	11	13	9
No	7	3	1	4	4	0
<b>8. Accessibility</b>						
8.1 Can you easily access the following official statistics?						
Yes	38	36	13	18	20	10
No	1	1	1	1	1	0
8.2 Can you easily access information pertaining to official statistics you use (explanatory notes, methodological descriptions, references concerning concepts, classifications, statistical practice)?						
Yes	29	30	9	15	19	10
No	7	4	2	2	2	0

<b>Section B: Views Relating to the Quality of Finland's Macroeconomic Statistics (concluded)</b>						
	All series					
8.3 Is the above information on methodology sufficiently clear and at an adequate level of detail to be useful to you?						
Yes	31					
No	2					
No opinion	7					
8.4 How do you get access to official statistics?						
Hard copy:						
Official releases	27					
Hard copy publications	26					
Data specifically requested	20					
Electronic form:						
Official website	40					
E-mail requests	22					
Other	12					
<b>Section C: Overall Assessment of the Quality of Finland's Macroeconomic Statistics</b>						
	NA	Prices	GFS	Monetary	BOP	Other
<b>9. Overall assessment</b>						
9.1 In your opinion, is the underlying methodology of official statistics sound and appropriate?						
Yes	31	32	9	14	16	6
No	4	1	0	2	3	0
9.2 In general, do you consider the official statistics to be unbiased and accurate?						
Yes	33	33	12	17	18	8
No	3	3	0	1	2	0
9.3 How would you compare the quality of official statistics of Finland with those of other countries in the region?						
Better	15	15	2	4	4	4
Same	20	19	11	12	16	3
Worse	0	0	0	0	0	0
9.4 How do you assess the overall quality of the official statistics (on a scale of 1 to 5 with 1 as poor and 5 as excellent)?						
Average ratings	4.1	4.3	4.0	4.0	3.9	4.0
(No. of responses)	(39)	(36)	(13)	(19)	(21)	(9)