

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

This Report on the Observance of Standards and Codes on Data Module for **India** 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 information provided by Indian authorities and data users prior to and during a staff mission from **May 13–30, 2002** as well as publicly available information. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of **India** 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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INDIA

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

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ACRONYMS

<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
<i>1968 SNA</i>	<i>System of National Accounts 1968</i>
ADs	Authorized dealers
<i>BPM5</i>	<i>Balance of Payments Manual</i> , fifth edition
CAG	Comptroller and Auditor-General of India
c.i.f.	Cost, insurance and freight
C,S&M	Concepts, sources, and methods
CGA	Controller General of Accounts
CPI	Consumer price index
CPI-AL	Consumer price index for agricultural labourers
CPI-UNME	Consumer price index for urban non-manual employees
CPI-IW	Consumer price index for industrial workers
CPI-RL	Consumer price index for rural labourers
CSO	Central Statistical Organisation
DEA	Department of Economic Affairs
DSBB	Dissemination Standards Bulletin Board
DGCIS	Directorate General of Commercial Intelligence and Statistics
DQAF	Data Quality Assessment Framework
ECD	Exchange Control Department of the RBI
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>
<i>GFSM 1986</i>	<i>A Manual on Government Finance Statistics 1986</i>
IMF	International Monetary Fund
<i>ISIC</i>	<i>International Standard Classification of all Economic Activities</i>
ISWGNA	Intersecretariat Working Group on National Accounts
MOF	Ministry of Finance
MOS	Ministry of Statistics and Programme Implementation
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
NSC	National Statistical Commission
NSSO	National Sample Survey Organisation
RBI	Reserve Bank of India
ROSCs	Reports on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard
STA	IMF Statistics Department
TAC	Technical Advisory Committee on Cost of Living Index Numbers
WPI	Wholesale price index

EXECUTIVE SUMMARY

This Report on the Observance of Standards and Codes (ROSC) data module provides a review of India's data dissemination practices against the IMF's Special Data Dissemination Standard (SDDS), complemented by an in-depth assessment of the quality of the national accounts, consumer price index, wholesale price index, and government finance, monetary, and balance of payments statistics. The agencies that compile statistics assessed in this report are the Ministry of Statistics and Programme Implementation (MOS), Ministry of Labour, Ministry of Commerce and Industry, Ministry of Finance (MOF), Reserve Bank of India (RBI), and the Office of the Registrar General of India. The assessment was carried out by a mission from the IMF Statistics Department that visited New Delhi, Mumbai, and Chandigarh during May 13–30, 2002.

The mission reached the following main conclusions:

- **SDDS observance:** India is in observance of the SDDS. It meets the specifications for coverage, periodicity, and timeliness in all data categories, except for (1) the timeliness of data on general government operations, for which it takes a flexibility option, and (2) the periodicity and timeliness for the labor market, for which it takes “as relevant” flexibility options. It has not yet developed a single, comprehensive, National Summary Data Page containing all SDDS data categories, as called for by the SDDS.¹
- **Prerequisites of quality:** Indian statistical agencies demonstrate awareness of quality as the cornerstone of statistical work. In the main, they have an institutional framework that supports statistical quality. However, no single government unit has the authority and responsibility to compile, and disseminate nationally and internationally, an integrated comprehensive statement of government finance statistics, thereby complementing existing accounting and specialized reports. Also much of the basic data for the national accounts originate from a strongly decentralized administrative system comprising various ministries, state departments, and local agencies, and there are indications that the coordination between these units has deteriorated as the economy has liberalized. India's ongoing liberalization will require substantial modernization of the statistical system, and a strengthening of the legal foundations of data collection, along the lines of the recommendations of the 2001 *Report of the National Statistical Commission*.²

¹ Subsequent to the mission, India's National Summary Data Page was launched. See the Response by the Authorities of India.

² National Statistical Commission, *Report of the National Statistical Commission*, Volumes I and II, India, August 2001.

- **Integrity:** India's macroeconomic statisticians display a high degree of integrity. Agencies demonstrate professionalism and high ethical standards, and in the main have transparent policies and practices.
- **Methodological soundness:** India's macroeconomic statistics, on balance, follow international statistical recommendations, although there are deviations. Monetary statistics broadly conform with the guidelines set out in the IMF's *Monetary and Financial Statistics Manual (MFSM)*. National accounts and balance of payments statistics largely, but not entirely, follow the recommendations of the *System of National Accounts 1993 (1993 SNA)* and the IMF's *Balance of Payments Manual*, fifth edition (*BPM5*) respectively. Nationally-developed concepts for government finance statistics are only partially related to the IMF's *A Manual on Government Finance Statistics 1986 (GFSM 1986)* and many linkages are not transparent. No migration path has been considered for implementing over time the compilation of government finance statistics according to the IMF's *Government Finance Statistics Manual 2001 (GFSM 2001)* methodology. All official consumer price indexes compiled in India are for specific segments of the population and none represents a broad measure of general consumer price inflation.
- **Accuracy and reliability:** India's macroeconomic statistics are broadly accurate and reliable, although the national accounts are adversely affected by the absence of a good quality business register for the larger producing units, the lack of current sources on services production and private consumption expenditure, and the use of imperfect techniques to derive part of the constant-price data. The outdated weights cast doubt on the accuracy of the consumer price indexes. Source data for the wholesale price index could be usefully strengthened such as by expanding the sample of respondents and products.
- **Serviceability:** On the whole, India's macroeconomic statistics are frequent, timely and relevant, although there is scope to improve the timeliness of data on general government operations. Macroeconomic statistics appear broadly to meet users' needs, as indicated by the results of a user survey conducted by the mission, but users have various concerns and additional needs. They require, for example, more information on the emerging services sector. Several agencies could usefully conduct, on a regular, comprehensive basis, user surveys similar to that conducted by the mission.
- **Accessibility:** Most macroeconomic statistics and related metadata are widely available in various forms. There is some scope to improve access to national accounts and government finance data and metadata, to improve access to the metadata of the wholesale price index and balance of payments, and to improve the assistance provided to users of national accounts and government finance statistics.

I. INTRODUCTION

1. The data module of this Report on Observance of Standards and Codes (ROSC) provides a summary of India's dissemination practices relative to the Special Data Dissemination Standard (SDDS). It is complemented by an assessment of the quality of the national accounts, consumer and wholesale price indexes, and government finance, monetary, and balance of payments statistics using the Data Quality Assessment Framework (DQAF) developed by the IMF Statistics Department (STA). This report is based on information provided by Indian authorities and data users prior to and during a staff mission from May 13–30, 2002³ as well as publicly available information.
2. Section II provides the assessment of India's data dissemination practices against the SDDS. Section III presents a summary assessment of the quality of the principal macroeconomic datasets. Finally, Section IV sets out recommendations to achieve further improvements in India's statistics.

II. DATA DISSEMINATION PRACTICES AND THE SPECIAL DATA DISSEMINATION STANDARD

3. India subscribed to the SDDS on December 27, 1996 and started posting its metadata on the IMF's Dissemination Standards Bulletin Board (DSBB) on October 30, 1997. India is in observance of the SDDS, having met the specifications for the coverage, periodicity and timeliness of the data, and for the dissemination of advance release calendars on December 14, 2001. A Data Template on International Reserves and Foreign Currency Liquidity that meets the SDDS has been disseminated since December 31, 2001. India needs to disseminate the National Summary Data Page, currently under construction, in order to meet the SDDS requirement.⁴
4. The official institutions responsible for the compilation and dissemination of the SDDS prescribed data categories are the Ministry of Statistics and Programme Implementation (MOS), Ministry of Labour, Ministry of Commerce and Industry; Ministry of Finance (MOF), Reserve Bank of India (RBI), and the Office of the Registrar General of India. The MOS compiles and disseminates data on the national accounts, the production index, the consumer price index for urban non-manual employees (CPI-UNME) and the labor market, for which India uses "as relevant" flexibility. The Labour Bureau of the Ministry of Labour compiles and disseminates data on the consumer price indexes for industrial workers

³ The mission team was headed by Mr. Neil Patterson and included Mr. David Pritchett, Mr. Cornelis Gorter, Mr. Ulhas Gunjal, Mr. John Joice, (all STA), Mr. Carsten Boldsen Hansen (expert), and Mrs. Gloria Addison (STA—Administrative Assistant). Mr. P.R. Devi Prasad (Office of the IMF's Executive Director for India) assisted the mission.

⁴ See footnote 1.

(CPI-IW), rural labourers (CPI-RL), and agricultural labourers (CPI-AL). The Ministry of Commerce and Industry compiles and disseminates merchandise trade; the Office of the Economic Advisor of this Ministry compiles and disseminates the wholesale price index. The MOF compiles and disseminates data on central government operations and central government debt. The RBI has responsibility for the dissemination of the analytical accounts of the banking sector, the analytical accounts of the central bank, interest rates, share price index, balance of payments, the data template on international reserves and foreign currency liquidity, and international investment position data. General government operations data are compiled and disseminated by the RBI on the basis of input from the MOF; the MOF is the agency responsible for this SDDS category. The Office of the Registrar General of India has responsibility for population data.

5. India provides access to these data through a variety of publications and the following Internet websites:

- MOS (http://mospi.nic.in/stat/mos_stat.htm)
- Labour Bureau (<http://labourbureau.nic.in>)
- Ministry of Commerce and Industry (<http://commin.nic.in>)
- Office of the Economic Adviser (<http://www.eaindustry.nic.in>)
- MOF (<http://www.cga.nic.in/>, <http://www.cga.india.org>, and <http://www.finmin.nic.in/>)
- RBI (<http://www.rbi.org.in>)
- Office of the Registrar General of India (<http://www.censusindia.net>).

Data dimension: coverage, periodicity, and timeliness

6. India meets the SDDS specifications for the data dimension for all data categories, using a flexibility option for the timeliness of the data on general government operations and “as relevant” flexibility for labor market data (Table 1). Periodicity and timeliness exceed the requirements of the standard for several data categories. India plans to disseminate data on the international investment position, for the fiscal year that ends on March 31, 2002, by September 2002 as required by the SDDS.

Access dimension

7. India meets the requirements of the SDDS in terms of access to data by the public. Advance release calendars that meet the SDDS requirements are disseminated on the Internet websites of the data producing agencies. These advance release calendars are supplemented by a quarter-ahead presentation of release dates on the DSBB. Since IMF monitoring of the SDDS began, India has made progress in updating the advance release calendar.

8. Data are released simultaneously to all interested parties on the websites of the relevant agencies. However, India is the only SDDS subscriber that has not developed a single, comprehensive National Summary Data Page containing all SDDS data categories.

Table 1. India: Overview of Current Practices regarding Coverage, Periodicity, and Timeliness of Data Compared to the SDDS

SDDS Data Category	Coverage (meets SDDS requirement)	Periodicity		Timeliness		Comments
		SDDS	India	SDDS	India	
Real Sector						
National accounts	Yes	Q	Q	1Q	1Q	
Production index/indexes	Yes	M	M	6W (M encouraged)	6W	
Employment	Yes	Q	A	1Q	24M	
Unemployment	Yes	Q	A	1Q	24M	"as relevant" flexibility
Wages/earnings	Yes	Q	Every five years	1Q	24M	"as relevant" flexibility
Consumer price index	Yes	M	M	1M	1M	
Wholesale price index	Yes	M	W	1M	2W	Periodicity and timeliness exceed SDDS requirements.
Fiscal sector						
General government operations	Yes	A	A	2Q	9M	Flexibility option utilized for timeliness of the data.
Central government operations	Yes	M	M	1M	1M	Except the last month of the fiscal year (March), when the data are released within two months after the end of the reference month.
Central government debt	Yes	Q	Q	1Q	1Q	
Financial sector						
Analytical accounts of the banking sector	Yes	M	2W	1M	15D	Periodicity and timeliness exceed SDDS requirements.
Analytical accounts of the central bank	Yes	M (W recommended)	W	2W (W encouraged)	1W	Periodicity and timeliness exceed SDDS requirements.
Interest rates	Yes	D	D	1/	D	Daily, weekly, and monthly data are disseminated.
Stock market	Yes	D	D	1/	1W	Daily and weekly data are disseminated.
External Sector						
Balance of payments	Yes	Q	Q	1Q	1Q	
International reserves	Yes	M (W recommended)	W	1W	1W	Periodicity and timeliness exceed SDDS requirements.
Reserves template	Yes	M	M	1M	1M	
Merchandise trade	Yes	M	M	8W (4-6W encouraged)	5W	Timeliness exceeds SDDS requirements.
International investment position	Yes	A (Q recommended)	A	2Q (Q encouraged)	36M	Plan is to meet SDDS timeliness requirement after the transition period.

Table 1. India: Overview of Current Practices regarding Coverage, Periodicity, and Timeliness of Data Compared to the SDDS

SDDS Data Category	Coverage (meets SDDS requirement)	Periodicity		Timeliness		Comments
		SDDS	India	SDDS	India	
Exchange rates	Yes	D	D	^{1/}	D	
Addendum: population	Yes	A	A	...	12-18M	Intercensal population projections.

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; and (...) not applicable.

^{1/} Given that the data are broadly disseminated by private means, the timeliness with which official data are disseminated is not time critical. Although dissemination is recommended via recorded telephone messages or by fax, the dissemination of these data may form part of other dissemination mechanisms (preferably, high frequency).

Integrity dimension

9. The SDDS-required disclosure of information on terms and conditions that govern the collection, compilation, and dissemination of data, including the confidentiality of the data collected, is available to the public—in electronic and non-electronic formats—in English.

10. Procedures on internal access to the data prior to public release are mostly disseminated on the DSBB for the data categories to which they apply. For all data categories except analytical accounts of the banking sector, analytical accounts of the central bank, the wholesale price index, international reserves and foreign currency liquidity, and data on international investment position, there is no internal government access to the data prior to public release. For the wholesale price index, the press release is issued to the MOF and the RBI prior to public release of the data. For the other exceptions, prior to dissemination, the data are forwarded to senior officials within the MOF.

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

Quality dimension

12. Summary methodology statements for four data categories (national accounts, industrial production, the consumer price index, and the wholesale price index) have been provided for the DSBB. Statements have not been provided for any other SDDS data category. Methodological information disseminated by the Indian statistical agencies through regular publications and the Internet is, in some cases, less than adequate for explaining concepts, sources, and methods used, and identifying differences from internationally accepted conventions.

13. Indian statistical agencies generally disseminate component details and additional data series that make possible crosschecks and checks of reasonableness for all data categories as prescribed by the SDDS.

Monitoring of data

14. In accordance with the IMF Executive Board's Third Review of the SDDS, the IMF staff began monitoring India's performance under the SDDS beginning in July 2000. Monitoring is carried out against the release dates stated in the advance release calendars and the metadata, i.e., to verify not only that the data are released according to the calendars, but also that the data disseminated correspond to metadata on the DSBB. During July 2000–March 2002, India's dissemination practices were in observance of the SDDS; during the 12-month period April 2001–March 2002 there were only three instances of delays in disseminating data—all pertaining to the dissemination of data on central government debt.

III. SUMMARY ASSESSMENT OF DATA QUALITY

15. An assessment of six macroeconomic datasets—national accounts, consumer price index, wholesale price index, government finance, monetary, and the balance of payments statistics—was conducted using the Data Quality Assessment Framework (DQAF).⁵ This framework provides a structure and a common language to assess data quality. It comprises a generic framework, and a set of dataset-specific frameworks. The frameworks cover five dimensions of data quality—integrity, methodological soundness, accuracy and reliability, serviceability, and accessibility—and a set of prerequisites.⁶ Information resulting from the application of this framework to the Indian Statistical System is presented below, following the structure of the DQAF. Conclusions are also presented in the form of standardized summary tables in which the assessment of data practices is made using a four-part scale (Table 2 and Tables 3.1–3.6 in the accompanying Detailed Assessments volume).

16. In summary, India's macroeconomic statistics are of generally good quality. They are adequate to conduct effective surveillance even though the IMF staff identified some shortcomings that may detract from the accurate and timely analysis of economic and financial developments and the formulation of appropriate policies. Unless addressed, these shortcomings have the potential to become more serious as economic liberalization continues.

⁵ The assessment of the consumer price index was conducted on the CPI-IW, which is the most widely used of the four CPIs mentioned in paragraph 4.

⁶ The generic framework is set out in Appendix II of the accompanying Detailed Assessments volume to this report.

Prerequisites of quality

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

17. The Government of India (Allocation of Business Rules), 1961⁷ stipulates that the **Central Statistical Organisation** (CSO) of the MOS is responsible for compiling the national accounts. The basic data for the accounts are collected partially by the MOS itself and partially by a strongly decentralized administrative system comprising ministries, state-level departments, and local agencies. There are indications that the coordination between the various units has deteriorated over the years as the Indian economy has liberalized. *The Report of the National Statistical Commission*, an in-depth evaluation of the Indian Statistical System published in August 2001, notes that in certain areas the system has almost collapsed. Even though the procedures to ensure the flow of source data for the national accounts to the CSO still appear to work more or less reasonably, India's ongoing economic liberalization will require modernization of the current statistical system and a strengthening of the legal foundations of data collection. Staff and other resources allocated to the national accounts compilation program are adequate. Managers and staff of the CSO alike are sensitive to the various dimensions of data quality as evidenced by the attention the CSO pays to guidance on improving the quality of statistics from the Advisory Committee on National Accounts Statistics and other advisory bodies.

18. The Allocation of Business Rules assigns the responsibility of compilation of the CPI-IW to the **Ministry of Labour**. The Labour Bureau of this Ministry is solely responsible for collecting and compiling the data. Respondents' data are kept confidential and used for statistical purposes only. Overall, adequate resources are allocated to the CPI-IW program. New staff undertake comprehensive training and officers regularly attend seminars and workshops; however, participation in international meetings is rare. Staff are sensitive to data quality and measures are in place to monitor quality in all stages of CPI-IW compilation. The CSO and the Technical Advisory Committee on Cost of Living Index Numbers (TAC) provide guidance on the quality of the statistical series.

19. The Allocation of Business Rules assigns the responsibility of compilation of the wholesale price index (WPI) to the **Ministry of Commerce and Industry**. The Ministry's Office of the Economic Adviser is solely responsible for the collection and compilation of the data. However, it does not have the legal authority to mandate price collection. The accuracy of the basic data is dependent upon the voluntary cooperation of business enterprises. Respondents' data are kept confidential and used for statistical purposes only. Overall,

⁷ This document is referred to herein as the Allocation of Business Rules.

adequate resources are allocated for the current WPI program. New staff undertake training courses and officers regularly attend seminars and workshops. However, participation in international meetings is rare. Managers and staff are aware of and sensitive to the broad aspects of data quality as evidenced by recent external consultations on the trade off between accuracy and response burden. The TAC provides guidance on the quality of the statistical series, and working groups representing users, respondents and experts are from time to time formed on selected issues.

20. Significant authority for compiling and disseminating data on accounting records of central and state governments exists. No single government unit exists, however, with the authority and responsibility to compile, and disseminate nationally and internationally, an integrated, comprehensive statement based on international government finance statistics guidelines. The **MOF** Controller General of Accounts (CGA) compiles accounting data on operations and debt of central government budgetary units, and the **MOF's** Department of Economic Affairs (DEA) and the **RBI** compile annual fiscal data on state government operations and combined operations of central and state governments. Data sharing and coordination among data producing agencies are adequate. Within the **MOF**, only a few professionals are assigned part time to compile and disseminate fiscal statistics. While computing facilities seem adequate, there is no automated mechanism for transforming accounting data to statistical data. While there are no international statistical or accounting standards used to monitor quality, processes are broadly in place to ensure an adequate awareness of quality.

21. Monetary and the balance of payments statistics are compiled, respectively, by the Division of Money and Banking and the Division of International Finance of the **RBI's** Department of Economic Analysis and Policy. While the monetary statistics are a by-product of the information collected for monitoring banks' cash reserve ratios, the balance of payments statistics are a by-product of the information obtained for foreign exchange management. Whereas the scheduled banks have a legal obligation to report data to the **RBI**, balance of payments transactions that do not involve banks or foreign exchange are provided on a voluntary basis. The absence of such legal authority has led to poor response rates in enterprise surveys. Coordination among data producing agencies is adequate. Respondents' data are kept confidential and used for statistical purposes only. Staff are well qualified and trained. Staff levels are adequate in both areas of statistics. Turnover is sufficient to ensure a balance between developing human capital at the **RBI** and maintaining core staff for the statistical activities. Computing equipment is adequate. Managers and staff are sensitive to data quality, as evidenced by the importance that is attached to preparing staff contributions to the **RBI's** professional journal.

Integrity

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

22. The professional independence of the **CSO** is not questioned by the umbrella ministry or any other agency. For instance, the first release of national accounts data is neither signed off nor seen by the minister before publication. Staff are hired on the basis of competence and are required to pass a competitive examination. Statistical officers are encouraged to explain in CSO publications, during seminars, etc., their data sources and statistical techniques. Although the CSO is allowed to comment on erroneous interpretation of its data, it rarely comments or requests rectification. The terms and conditions under which CSO statistics are compiled are available to the public. In practice, statistics for which the CSO is responsible are clearly identified, even though it does not request attribution. Traditional users of the CSO's statistics are made well aware of main changes in methodology; relative outsiders may not receive advance notice of such changes. CSO staff are instructed on the Central Civil Services (Conduct) Rules and other provisions that define the ethical standards expected of civil servants.

23. **The Labour Bureau** derives its professional independence in the compilation of the CPI-IW from the Allocation of Business Rules and the Minimum Wage Act, 1948. The Bureau has a longstanding tradition of impartiality and only statistical considerations enter the choice of statistical techniques. The Bureau makes use of its right to comment publicly on misinterpretations of the statistical series. The terms and conditions under which the index is compiled are laid down in the Allocation of Business Rules. There is no internal government access to the CPI-IW prior to release. All releases of the Bureau are clearly identified as such. Major changes in methodology, sources, and statistical techniques are introduced after extensive discussion in technical commissions in which the main users are represented. The general public may only become aware of such changes at the time when they take effect.

24. The professional independence and integrity of the Office of the Economic Adviser in the compilation of the WPI is ensured by the **Ministry of Commerce and Industry** under the Allocation of Business Rules. There is no interference from elsewhere in the Ministry or any other government organization and the compilation of WPI is done on an impartial basis and in a professional manner. The Office makes use of its right to comment on misinterpretations of the index series. The terms and conditions under which the index is compiled are available to the public. Prior to the release to the public, the WPI press release is given to the MOF and RBI under embargo; however, this is not publicly identified and not described in the IMF's DSBB. All releases of the Office are clearly identified as such. Advance notice of major changes in methodology, data sources or statistical techniques is given in the Office's press release; main users are also informed through various bodies.

25. Statistical policies and practices regarding government finance statistics are guided by professional principles, and fiscal data are compiled on an impartial basis. Provisional central government data are based on provisional CGA accounting records. Final data on these operations of budgetary units are based on accounting records audited by the independent Comptroller and Auditor General of India (CAG) as well as the CGA. Laws and regulations governing the reporting of government accounting data are available to the public. While **MOF** and RBI releases are clearly identified as such, MOF reports do not generally identify other statistical reports or products as the source of fiscal data. While advance notice has not been given to major changes in methodology or source data, there has been only one significant change over recent years. While there is no code of conduct specific to statistical compilation, sanctions are applied when general codes of conduct are violated.

26. Monetary and balance of payments statistics are compiled on an impartial basis. The general staff conditions of employment in the **RBI** are set out in a code of conduct, and provide ethical guidelines for employees. The reports of technical groups, foreshadowing changes to methodology, source data and definitions, are posted to the RBI's website and are also mentioned in the *RBI Bulletin*. The choice of sources and statistical techniques are informed solely by statistical considerations. The monetary and balance of payments statistics are clearly identified as RBI products. The terms and conditions, under which the statistics are collected, processed and disseminated, are available to the public. The release of monetary statistics and balance of payments statistics is the sole responsibility of the RBI. While internal government access to monetary statistics is provided to senior officials of the MOF prior to release, this fact is identified on the IMF's DSBB; there is no internal government access to balance of payments statistics prior to release. The RBI is entitled to comment on misinterpretations of monetary and balance of payments statistics.

Methodological soundness

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

27. The **national accounts** largely follow the 1993 *SNA* as a general framework, but several concepts and definitions of the 1968 *SNA* are still used. The absence of data on imports and exports of goods and services at constant prices creates a serious gap in the range of national accounts data published by the CSO. The range of institutional accounts is incomplete. The public sector is taken as a major grouping of institutional units; general government is not identified as such. The National Industrial Classification 1987, which is broadly based on the *International Standard Classification of All Economic Activities (ISIC)* rev 2, is used to classify economic activity. The valuation rules are partially in accordance with the 1993 *SNA*. Market output is valued at factor cost instead of at basic (or producer's)

prices, and imports of goods are valued at cost, insurance and freight (c.i.f.) rather than free on board (f.o.b.) values. Most transactions are recorded on an accrual basis in accordance with 1993 *SNA* recommendations, but all government operations and nearly all external transactions are recorded on a cash basis.

28. The reference populations of the **CPI-IW** and all other official CPIs compiled in India are only specific segments of the total population; however, work has been initiated on a broad-based all-India CPI. None of the existing indexes, therefore, represents a broad measure of general consumer price inflation. Apart from this major disadvantage, the overall conceptual and definitional structure of the CPI-IW is in accordance with internationally accepted standards. Expenditure on goods and services is broken down by type according to a national rather than an international classification. In accordance with international guidelines, the prices collected are those actually paid by households (purchasers' prices). The basis of recording for weighting data for the CPI-IW is in accordance with good practice.

29. The purpose of the **WPI** is to meet Indian requirements. The concepts and definitions for both weights and prices are not consistent with those for a producer price index, which in general internationally is regarded as analytically more meaningful than a WPI. The scope of the WPI is broadly in accordance with international good practice, although adapted to Indian conditions. The classification under which total production is categorized by groups, subgroups, and detailed commodity groups follows the National Industry Classification of 1987. The basis of recording is satisfactory.

30. Regarding **government finance statistics** (GFS), nationally developed concepts are partly related to the *GFSM 1986*, although linkages to this international standard are not typically transparent. Specifically, reported aggregates, while useful for budget purposes, are often not the same as those in the *GFSM 1986* methodology. No bridge table for linking nationally reported aggregates and those in the *GFSM 1986* exists. Also, no migration path has been considered for implementing in nationally appropriate stages the compilation of fiscal statistics according to the *GFSM 2001* methodology, which calls for comprehensive and integrated data on government balances and flows, although existing data on all government financial holdings and contingent liabilities represent implicitly steps taken for such a migration path. Regarding coverage of general government, fiscal statistics are not available on local governments and extrabudgetary funds. The sectorization and classification systems for data on budgetary units permit the compilation of GFS for transactions and debt. The basis of recording is appropriate at this stage; market prices are used to value transactions and, consistent with the *GFSM 1986* methodology, transactions are recorded on a cash basis.

31. **Monetary statistics** are compiled in broad conformity with guidelines outlined in the IMF's *Monetary and Financial Statistics Manual*. Thus, the framework used for monetary statistics is characterized by a residency-based sectorization of account holders, the *MFSM* classification of financial instruments, and a market-based valuation of gold, securities and

foreign currency positions. The migration to the *MFSM* guidelines, however, has yet to be completed. The resident sector data do not provide sufficient information on the sectoral distribution of domestic credit. Furthermore, banks add accrued interest to their credit and deposit positions on a quarterly rather than continuous basis, and the RBI does not adjust the data to address the problem.

32. India's **balance of payments statistics** are compiled in broad conformity with the concepts and definitions of the fifth edition of the *Balance of Payments Manual* although the overall presentation structure does not follow *BPM5* closely. The scope of the Indian balance of payments conforms to *BPM5*. The classification system is largely in line with *BPM5*, but, for the most part, sectoral detail is not provided. Contrary to international recommendations, debt transactions between affiliated enterprises are not included in direct investment. With the exception of reinvested earnings, transactions are recorded at market prices. Transactions are largely recorded on a cash (or settlements) basis, rather than on an accrual basis. As is appropriate, transactions in the current account are largely recorded on a gross basis, while those in the financial account are recorded on a net basis, with transactions in assets recorded separately from transactions in liabilities. Data are prepared in both rupees and U.S. dollars and the period average rupee-U.S. dollar exchange rate for the month is used, as is appropriate.

Accuracy and reliability

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

33. The sources for the **national accounts** include a large number of data collected through the administrative system and from CSO or National Sample Survey Organisation (NSSO) sample surveys. The collection of statistics from producer units by way of sampling is handicapped by the unavailability of a single, reliable and broad based business register of the larger producing units. Both the annual accounts and the quarterly national accounts suffer from a lack of sources on the activities of the private services producing units. In addition, no current sources exist on final consumption expenditure of households, a reason why the quarterly accounts do not encompass expenditures on GDP. Except for agriculture and mining, single indicator methods are used to estimate value added data at constant prices; the 1993 *SNA* recommends double deflation. The way taxes are deflated (by the consumer or wholesale price indexes) is not according to accepted good practice. For lack of current basic data, there is a considerable reliance on fixed ratios in cases where the commodity flow method is applied. The allocation of harvests in time is inaccurate. The CSO assesses and validates satisfactorily the sources and its own estimates. It also investigates the direction and magnitude of revisions between preliminary and final data. However, it does not unilaterally adjust the results of a major source statistic if the investigation suggests a bias; instead agreement for the adjustment is sought from the data provider.

34. The source for the **CPI-IW** weights is a special survey carried out by the NSSO in 1981–82. Even though the weights were determined using sound techniques, they are too old to be representative of current consumption expenditure. The coverage of the prices collected, and the price collection techniques, on the other hand, are adequate. The price information is available in time to allow proper validation and compilation. In the main, internationally accepted statistical techniques are used to combine the prices and weights to compile the CPI-IW; however, newly-emerging products are not included in the index until the weights are updated and products that become permanently unavailable are not always replaced by new products. The problem posed by seasonal products has been solved by applying variable weights to the months. Price data are routinely assessed for errors and intermediate data are periodically compared with other price indexes. The CPI-IW is final when first published and not subject to revision. Revisions of weights are thoroughly examined by the Labour Bureau; the results of these analyses are communicated to oversight bodies.

35. The weights of the **WPI** are derived from the national accounts, the Annual Survey of Industries, and agricultural statistics. In the absence of an up-to-date business register, the weights may be subject to considerable statistical uncertainty. In addition, less than 2000 prices are collected, which raises questions about the representativeness of the index. Most prices for primary products are recorded from wholesale markets while prices for manufactured products are obtained ex-factory or ex-warehouse or from other secondary markets or even retail markets. Thus, the WPI does not reflect consistently developments in either producer prices or wholesale market prices. Source data for prices are very timely. While, in the main, internationally accepted statistical techniques are used to combine the weights and prices to compile the index, the accuracy of the index is likely to be adversely affected by the exclusion of newly-emerging products from the index until the next weight update and by not including replacements for products that become permanently unavailable. Differences between preliminary and final data are investigated and the impact of weight revisions is analyzed.

36. Concerning **government finance statistics**, annual provisional aggregates of state government finances have been made available within three quarters, and annual and quarterly source data are available after one quarter. Audited comprehensive annual data on central government accounts are available after ten months and provisional monthly data are usually available after one month. Charts of accounts for budgetary units align adequately with GFS categories. Source data, including final audited data on budgetary units, are periodically assessed. Provisional accounts for budgetary units are reconciled monthly with RBI information. There are no documented studies or analysis of revisions that could be used to inform the compilers of provisional data, although experience indicates that revisions are not significant.

37. Source data for **monetary statistics** are derived from RBI accounting records and scheduled commercial banks and cooperative banks. The source data capture the full range of financial instruments and economic sectors. The data collection system allows timely

compilation of monetary statistics. Arrangements are in place within the RBI to ensure the smooth flow of information between the various departments involved: the department which prepares the central bank accounts; the departments which collect returns from scheduled banks and from cooperative banks, the department that tabulates final returns from banks, and the department that compiles and disseminates monetary statistics. The RBI verifies that data reporting practices followed by the banks are consistent with the regulations and that procedures are in place to ensure quality. The quality of the collection and processing is monitored through crosschecks. Although the provisional monetary data are subsequently revised, the extent of revision is usually limited. The RBI staff prepares studies on revisions, and the studies are occasionally published in internal or external publications.

38. The data sources for **balance of payments statistics** provide an adequate basis to compile the major items of the balance of payments. The data are, generally, in line with the internationally-recommended definitions, classifications, and scope, and, with the exception of data on reinvested earnings—which are several years late—the data are received in a timely fashion. Data on reinvested earnings are relatively weak as they are obtained from a voluntary survey of direct investment enterprises. There are no data for trade credit extended for less than 180 days. The RBI audits the authorized dealers (ADs) on a regular basis to ensure that the transactions in foreign exchange are classified correctly. Statistical techniques are generally sound, but imports are recorded on a cif basis and are not adjusted to the more appropriate fob basis. Data on merchandise exports and imports from customs sources are substantially different from those from the ADs, and studies have been undertaken to explain the differences. There have been no formal analyses of revisions to assess whether there are any statistical biases in the preliminary data; however, reasons for the main changes in the data are indicated in the RBI *Bulletin*.

Serviceability

Serviceability focuses on practical aspects of how well a dataset meets users' needs.

Elements refer to the extent to which data are relevant, produced, and disseminated in a timely fashion with appropriate periodicity, are consistent internally and with other datasets, and follow a predictable revisions policy.

39. The CSO consults users about their concerns on the **national accounts** through many channels, including the annual conference of the Indian Association for Research in National Income and Wealth and the Advisory Committee on National Accounts Statistics. Both the timeliness and the periodicity of the national accounts are in accordance with SDDS requirements. The statistics are internally consistent and long time series are available. The national accounts are fully consistent with the balance of payments and are thought to be close to the government finance statistics. However, the latest major revision slightly exceeded the normal 10-year schedule. The identification of preliminary estimates could be improved.

40. An established process of consultation monitors whether the **CPI-IW** continues to meet the requirements of main users in India, including governments as well as employers' and wage earners' organizations. The index meets both the timeliness and the periodicity requirements of the SDDS. The CPI-IW series are internally consistent. Time series from 1966 onward are available. The CPI-IW is considered final when first published. It has not been possible to revise the weights regularly.

41. An established process of consultation monitors whether the **WPI** continues to meet requirements of the main users. The periodicity and timeliness exceeds the SDDS requirements. The WPI is internally consistent in that component series are coherent with higher-level series and short-period data are coherent with long-period data. Preliminary indexes are clearly identified and are further adjusted according to a regular, transparent and well known schedule. Revisions of weights have normally been undertaken every ten years.

42. No feedback from users of fiscal data has been routinely sought although feedback is received. Timeliness of fiscal data does not fully conform with SDDS requirements. Details of revenue data of the central government fall short of analytical needs. The dissemination of annual operations data of general government (encompassing central and state government budgetary units and thus not including the relatively small local government units) occurs within three quarters (rather than the standard two quarters). Fiscal data are consistent within the dataset and, over time, are harmonized with other major datasets. Revisions follow a fairly regular procedure, and provisional and final data are clearly identified. The mission was provided with no studies or analyses of revisions of **government finance statistics** that have been made public.

43. To ensure that **monetary statistics** address issues of concern to users, the RBI undertakes regular consultations between data compiling and policymaking departments and has established working groups to ascertain users' needs. At the same time, no comprehensive user surveys are conducted to receive feedback from the user community, although each issue of the *RBI Bulletin* contains a questionnaire seeking feedback, although not specifically on monetary or balance of payments statistics. The periodicities and degrees of timeliness of data on central bank accounts and other depository corporations exceed the SDDS requirements. Main breaks and discontinuities in the time-series are explained in detail in attached notes/footnotes. Consistency checks with government records and with balance of payments statistics are carried out, with the result that intersectoral consistency has been broadly achieved. Weekly data on the central bank are final, whereas banks' two-week data are finalized and published on a quarterly basis. Revisions follow a predictable pattern in which statistics users are informed through various RBI publications.

44. Senior staff at the MOF, as well as at the RBI, oversee **balance of payments statistics**. These bodies review the data and ensure that they remain relevant. However, there have been no comprehensive user surveys to obtain feedback on quality issues. User requests for more detailed data on services have been met by occasional articles but not yet on a

quarterly basis. The statistics meet SDDS timeliness and periodicity requirements. The data are used directly in monetary statistics and flow of funds, and data on goods and services are provided to the CSO for inclusion in the national accounts. The sum of the quarterly data equals the annual data; the data are consistent for a reasonably long time series (about ten years). Revisions follow a well-established and transparent schedule, and revisions to data are indicated.

Accessibility

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

45. **National accounts** data are published in a clear manner and they are consistently accompanied by an analysis of the most recent developments. They are simultaneously released to the press and on the Internet according to a preannounced schedule. The press releases of quarterly accounts do not necessarily show all data that have been revised. However, the full series are posted on the Internet. The availability of additional information, such as long time series on diskette or unpublished detail, is not widely publicized. Extensive documentation on concepts and methods is published on occasion of base year changes, but these publications may be difficult to find after a number of years. Apart from what is available on the DSBB, there are no short metadata descriptions focusing on the need of the general public. Catalogues of publications including price information can be found in the *Monthly Abstract of Statistics* and on the Internet. User assistance could be improved by the identification of contact persons for each domain and by indicating telephone numbers, as well as postal or Internet addresses.

46. The **CPI-IW** is presented in a clear manner in publications and on the Labour Bureau's home page. The monthly CPI-IW is released according to a preannounced schedule and simultaneously made available to all users. Unpublished but nonconfidential data, such as specialized tabulations or detailed item-level indexes, are provided to users on request. Metadata on concepts, definitions, and methodology are available in publications. The monthly press release identifies contact information and prompt, easily accessible, and knowledgeable support is available to users of the CPI-IW. Catalogues of publications are widely available.

47. The **WPI** is presented in a clear manner and on a preannounced schedule. A press release contains the latest provisional and final figures for the overall WPI and major subindexes. Current period developments are commented upon and revisions are indicated and explained. Detailed indexes back to 1994 are also available on the homepage of the Office of the Economic Adviser. The weekly WPI is released to the press each Friday under

strict embargo until the following Sunday when it is released to the general public; these procedures are announced on the DSBB. Nonpublished and nonconfidential data are made available to users on request. Broad information on scope, definitions and concepts are provided in *Revision of Index Numbers of Wholesale Prices In India*, but this information is not sufficient for users who require technical information, such as on the concept and sources of the weighting base, the treatment of missing prices, or deviations from international standards. A short summary methodology is provided on the DSBB. The weekly press release does not publicize a contact for user assistance

48. Fiscal data on operations and debt of budgetary units are presented in forms that usually facilitate interpretation. Nonetheless, the advance schedules for the release of data are not always current. The availability of more detailed data that are not published is not publicized. Nationally published data on fiscal records do not provide sufficient metadata for the various levels of users of **government finance statistics** although available information such as that in the DEA *Key to the Budget Documents* is helpful. No catalogues of MOF publications, or complete listing elsewhere, regarding fiscal data, are provided. Contact persons are identified in official websites.

49. **Monetary statistics** are disseminated through the RBI's *Weekly Statistical Statement*, as well as through other publications, all of which are placed on the RBI website. Long-term monetary data series are disseminated through the *Handbook of Statistics*, which is available in hardcopy and electronic format. Data are accompanied by text and charts in various RBI publications such as the *RBI Bulletin*, *Report on Currency and Finance*, and the *Annual Report*. An advance release calendar is disseminated on the RBI website under the heading "Statistics" and a regular notice to this effect is published in the monthly *RBI Bulletin*. The data are released simultaneously to all users on the RBI's website. A list of RBI publications, together with their prices, is published through the monthly *RBI Bulletin*. Unpublished subaggregates are not made available to the outsiders, although requests are rarely made because the data are published in considerable detail. Metadata on monetary statistics are disseminated on the RBI's Internet website. The RBI's website indicates a contact person, but not by subject area. The *RBI Bulletin* provides a catalogue of documents published by the RBI.

50. **Balance of payments statistics** are presented clearly on the RBI's website and the *RBI Bulletin*. Accompanying text and charts would improve interpretation of the data. The data are released in accordance with a previously published schedule, which is updated every quarter for the following four quarters. The data are released simultaneously to all users on the RBI's website. No unpublished, nonconfidential data are available. There is a 1993 concepts, sources and methods document; as it was written prior to *BPM5*, deviations from *BPM5* obviously are not noted. There is no such metadata document for the general reader.

IV. STAFF'S RECOMMENDATIONS

51. Based on the results of the data quality assessment, discussions with the Indian authorities in the respective statistics-compiling agencies, and responses from data users, the following measures are proposed to increase further India's adherence to international statistical standards.⁸

General Recommendations

High priority

- In view of the ongoing liberalization of the Indian economy, modernize the Indian Statistical System, including through strengthening the legal foundations of data collection, along the lines of the recommendations of the National Statistical Commission.

Other key recommendations

- Complete the construction of a single, comprehensive National Data Summary Page containing all SDDS data categories.
- Conduct regular comprehensive surveys of users to receive feedback on data quality.

National Accounts

High priority

- Improve the business register for the larger producing units.
- Improve the statistical sources on the production of private services both for the annual and quarterly accounts.
- Develop current statistics on private final consumption expenditure.
- Publish imports and exports of goods and services at constant prices.
- In the CSO press releases, provide the full set of quarterly national accounts data for which the estimates have been revised.
- Identify contact persons in press releases and publications who can answer inquiries about the data.

Other key recommendations

- Improve the methodology to calculate constant price estimates, among other things, by making more use of double deflation and applying the correct methodology to deflate taxes and subsidies.
- With the next change of the base year, implement more fully the *1993 SNA* recommendations with respect to, among other things, valuation, basis of recording, and terminology.
- Permit the National Accounts Division of the CSO to adjust the results of source statistics if such is likely to improve the national accounts estimates.

⁸ Several of these recommendations have been implemented subsequent to the mission. See the Response by the Authorities of India.

Consumer Price Index

High priority

- Develop and publish a broad-based all-India CPI compiled according to internationally accepted standards.
- Update the weights every five years and certainly no longer than every ten years.

Other key recommendations

- Implement internationally accepted measures for inclusion of new products that emerge on the market;
- Provide opportunities for the Labour Bureau staff to participate more frequently in international meetings on price index methodology and compilation practices.

Wholesale Price Index

High priority

- Update the weights every five years and certainly no longer than every ten years.
- Increase the number of respondents and products in the sample and undertake measures to ensure regular updating of the sample according to internationally accepted standards.
- Implement internationally accepted methods for inclusion of new products that emerge on the market and for replacement of products that become permanently unavailable.
- Strengthen the Office of the Economic Adviser's legal authority to collect price information.

Other key recommendations

- Undertake a feasibility study for compiling a producer price index for the services sector.
- Provide opportunities for the staff of the Office of the Economic Adviser to participate more frequently in international meetings on price index methodology and compilation practices.
- Develop and implement a producer price index according to internationally accepted standards.

Government Finance Statistics

High priority

- Assign one body the main responsibility and authority to compile, and disseminate nationally and internationally, an integrated, comprehensive set of government finance statistics. To retain the benefits of existing datasets and reporting for a variety of purposes, maintain existing agency responsibilities.
- Establish a migration path leading, over time, toward the compilation of comprehensive and integrated data on fiscal activities and balances, as outlined by the *GFSM 2001* methodology, to assist in macroeconomic policymaking and analysis.
- Expose officials who directly and indirectly contribute to the compilation of fiscal data to the benefits that other countries derive from compiling government finance statistics consistent with the *GFSM 2001*.

- Compile and report within one quarter major aggregates on quarterly provisional transaction and debt data on all state governments and consolidated data on central and state governments.
- Include, in domestic fiscal reports, data that conform to major concepts and definitions followed by international guidelines for GFS.

Other key recommendations

- Take timely steps to identify classification and reporting requirements for local governments, to help ensure the annual reporting by 2004–2005 of data on local governments and thus consolidated GFS on the wider general government.
- Document and publish bridge tables linking nationally reported fiscal aggregates with aggregates of international GFS methodology.
- Establish an automated system for transforming accounting data to statistical data.

Monetary Statistics

High priority

- Subdivide resident sector data to provide sufficient information on the sectoral distribution of domestic credit.

Other key recommendations

- Adjust monetary data to ensure that accrued interest is reflected evenly across months rather than at the end of each quarter.

Balance of Payments Statistics

High priority

- Implement appropriate legislative authority to collect statistics.
- Compile and disseminate the balance of payments according to the presentation recommended by *BPM5*, in order to clearly separate income from services, provide a separate capital account, and present the financial account with the functional categories that are internationally recommended.
- Increase quarterly detail on transactions in services.
- Obtain data on reinvested earnings on foreign direct investment on a more timely and comprehensive basis.

Other key recommendations

- Use analysis of revisions to more fully inform statistical process.
- Replace the outdated concepts, sources and methods publication with a new version and prepare a simpler document for the general user.
- Include direct investment debt transactions in “direct investment” flows, rather than in “other investment” (commercial loans).

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

Element	National Accounts	Consumer Price Index	Wholesale Price Index	Government Finance Statistics	Monetary Statistics	Balance of Payments Statistics	Comments
0. Prerequisites of quality							
0.1 Legal and institutional environment	LO	O	LO	LNO	O	LO	See paragraphs 17, 19, 20, and 21
0.2 Resources	O	O	O	LO	O	O	See paragraph 20
0.3 Quality awareness	O	O	O	O	O	O	
1. Integrity							
1.1 Professionalism	O	O	O	O	O	O	
1.2 Transparency	O	O	LO	LO	O	O	See paragraphs 24 and 25
1.3 Ethical standards	O	O	O	O	O	O	
2. Methodological soundness							
2.1 Concepts and definitions	LO	O	LO	LNO	O	LO	See paragraphs 27, 29, 30, and 32
2.2 Scope	LNO	LNO	O	LO	O	O	See paragraphs 27, 28, and 30
2.3 Classification/sectorization	LO	O	O	O	LO	LO	See paragraphs 27, 31, and 32
2.4 Basis for recording	LO	O	O	O	LO	O	See paragraphs 27 and 31
3. Accuracy and Reliability							
3.1 Source data	LNO	LNO	LNO	O	O	LO	See paragraphs 33, 34, 35, and 38
3.2 Statistical techniques	LNO	LO	LO	O	O	O	See paragraphs 33, 34, and 35
3.3 Assessment and validation of source data	O	O	O	O	O	O	
3.4 Assessment and validation of intermediate data and statistical outputs	O	O	O	O	O	O	
3.5 Revision studies	LO	O	O	LO	O	LO	See paragraphs 33, 36, and 38
4. Serviceability							
4.1 Relevance	O	O	O	LO	LO	LO	See paragraphs 42, 43, and 44
4.2 Timeliness and periodicity	O	O	O	LO	O	O	See paragraph 42
4.3 Consistency	O	O	O	O	O	O	
4.4 Revision policy and practice	LO	LO	O	LO	O	O	See paragraphs 39, 40, and 42
5. Accessibility							
5.1 Data accessibility	LO	O	O	LO	O	O	See paragraphs 45 and 48
5.2 Metadata accessibility	LO	O	LO	LNO	O	LO	See paragraphs 45, 47, 48, and 50
5.3 Assistance to users	LO	O	LO	LO	O	O	See paragraphs 45, 47, and 48

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

INTERNATIONAL MONETARY FUND

INDIA

Report on the Observance of Standards and Codes (ROSC)-Data Module
Response by the Authorities

January 15, 2004

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India-Report on the Observance of Standards and Codes —Data Module Response by the Authorities

A Staff Mission which was in India in May 2002, has sent the revised draft Report on the Observance of Standards and Codes—Data Module (the Report) for response by the authorities. Based on the comments from the Central Statistical Organization (CSO), the Labour Bureau (LB), the Office of the Economic Advisor (EA) in the Ministry of Commerce and Industry, the Controller General of Accounts (CGA), Ministry of Finance, the Comptroller and Auditor General of India (CAG), and the Reserve Bank of India (RBI) and reflecting the developments subsequent to the Mission visit the Response as below:

2. The Indian Statistical System (ISS) was established in the pre-independence regime and subsequently brought under the jurisdiction of an independent ministry. The ISS is fully autonomous and in the course of time evolved to capture a wide variety of data of very large and decentralized economy, which served the needs efficiently. However, in the recent past, the system suffered in operational efficiency, particularly in regard to data about industrial production following the reform driven delicensing of procedures. Under such circumstances, considering the growing statistical requirement of an expanding and changing economy the government felt the need for revamping ISS to create a strong co coordinating mechanism to generate and disseminate adequate data of high quality, reliability, and credibility in a timely manner. Thus, the National Statistical Commission (NSC) was constituted to examine ISS comprehensively. The NSC has submitted its report in August 2001.
3. The need for improving reliability, credibility, adequacy and timeliness of statistical system of the country to strengthen the information base for policy formation and planning has been stressed in the report of the NSC. A number of measures including the construction and maintenance of a business register, improvement of services sector statistics, infrastructure sector statistics, strengthening of Central and State Statistical Systems etc., were recommended by the Commission for improving the statistical system in the country. An important recommendation of the Commission is to achieve systematic improvement in the statistical system through establishment of Statutory Statistical Commission to act as an effective mechanism for determining statistical priorities, standardization of concepts and definitions and for ensuring credibility of core statistics. The required legislative process for the implementation of the recommendations has started.
4. The Commission has made 623 recommendations which have to be implemented by various central ministries/departments and the states. There has been steady progress in the implementation of these recommendations and about 140 of these have already been implemented. The remaining are being pursued by the Ministry of Statistics and Program Implementation for expeditious implementation.
5. The ROSC—Data Module in its independent investigation also makes suggestions in the direction of the NSC recommendations.

6. The Department of Economic Affairs (DEA) has developed the National Summary Data Page (NSDP) which is hyperlinked with the IMF Dissemination Standards Bulletin Board. http://www.finmin.nic.in/stats_data/nsdp_sdds/index.html . Copy of the Press Note issued at the launch of the NSDP is at Annex - A.

7. National Accounts:

The national accounts of India are compiled following a mix of SNA 1968 and SNA 1993 and these are publicly accessible at the website http://www.mospi.nic.in/national_account_main.htm with details on sources and methods, and contact points for clarifications. The estimates of National/State domestic product and related aggregates are derived from data generated by public administration system as well as those collected through official surveys and periodic censuses. Due to limitations in the availability of data and, keeping in view the caution sounded in SNA on the unilateral usage of double deflation method, particularly in the manufacturing sectors, where value added is a small percentage of the output, the single indicator method is used for industry and service sectors (India has been publishing the trade data and the expenditure aggregates at constant prices since July 2002. With this, the annual data on expenditures of GDP is now available at constant prices). Further, to raise consistency between the quarterly and annual estimates, use of various techniques are being adopted to avoid the 'step' problem.

Issues relating to agricultural sector: In the Indian national accounts, since the compilation of national accounts started in the early 1950s, it has been assumed that crop production during agriculture year (July to June) is deemed to have accrued during the financial year (April to March). This assumption has been adopted on account of the reasons that (a) crop production data is not available according to financial years, (b) bulk of the Rabi (winter crop season) farm operations are generally completed by March and only part of the harvesting remains for completion in April or beginning of May, and (c) the difference in the crop harvest during April to June between two successive years is marginal. This assumption, although involves some deviation from the concepts of SNA, is not considered a major problem area, as agricultural crops account for about 16 per cent of the total GDP of the country, and for the reasons mentioned at (b) and (c) above.

Issues relating to constant price estimate: India adopts double deflation procedure for the primary sectors, and largely adopts single indicator methods for industry and services sectors to estimate GDP at constant prices. The use of single indicator methods has been on account of (a) paucity of price data on item-wise inputs and outputs, particularly on those relating to services and (b) low proportion of value added to the total output, particularly in manufacturing sector. While adopting single indicator methods in the GDP estimates at constant prices, India has taken into account the SNA concerns on the unilateral usage of double deflation methods.

Further, it has not been possible to estimate the taxes on products at constant prices using the base year tax rates and current year's quantities of products, in the absence of availability of such data. It is felt that this is a minor issue in the whole system of national accounts compilation and is limited only to the constant price data.

The non-availability of a broad-based consumer price index and non-inclusion of services in the wholesale price index are the main concerns in the estimation of expenditures on GDP at constant prices for certain specific items.

Other Issues and plans of improvement

The classification system followed for economic activities in the national accounts statistics is presently the NIC 1987, which is broadly based on the versions prior to ISIC Rev.III. The CSO has plans to introduce NIC 1998 (which is based on ISIC Rev.III) for classifying economic activities, in the new series of national accounts, which is scheduled for introduction in 2005.

The CSO will present separate accounts in respect of the institutional sectors general government, public financial corporations and public non-financial corporations in the new series of national accounts. Also planned for inclusion in the new series are the estimates at basic/producers prices and the gross national income (GNI).

Action has been initiated to improve quality and coverage of source data that is used in the compilation of National accounts through the measures listed below. The ongoing actions spelt in paras 3 and 4 above are, *inter alia*, aimed at these and the improvements in the coverage of price indices. As the contemplated actions require improvements in the present statistical system, it may not be possible to indicate a precise time schedule for their implementation as at present.

- o Quarterly and annual enterprise survey
- o Introduction of business registers

The CSO has the following targets aimed at improving the national accounts for completion and dissemination by March, 2007:

- o Implementing the major features of 1993 SNA
- o Introducing the latest industrial and purpose classifications
- o Compiling the annual supply-use tables
- o Introducing quarterly expenditures of GDP
- o Reducing substantially the present time-lag in the release of data on expenditure aggregates.

Statistical Techniques

Element No.3.2 in Table 2 of Summary Presentation of Results in the ROSC Data Module refers to the statistical techniques in the compilation of national accounts. The grading given to India under this element, which is LNO, gives an impression to the users that India largely does not observe statistical techniques. This, however, is not a correct reflection of Indian national accounts. What India has not been able to follow are the SNA procedures' in few areas, rather than the application of 'Statistical Techniques'. These few areas listed in the ROSC Data Module and DQAF, where India is not able to follow the SNA recommended procedures due to paucity of data, are not considered large enough in the overall system of national accounting to warrant the grading of LNO. The term "statistical techniques" has a broader connotation and "SNA procedures" may have been a better title for this Element.

8. Consumer Price Index:

The Labor Bureau brings out consumer price index numbers. The choice of source data and statistical techniques for sampling, processing and validation is based solely on internationally accepted statistical techniques. The summary methodology is available on Bureau's web-site <http://labourbureau.nic.in/>. The CPI-IW is designed to measure the rate of change in prices of fixed basket of goods and services over a period of time consumed by the industrial workers with a view to compensate the rise in their cost of living. Therefore, the target group being the industrial workers, the scope of CPI-IW is confined to the population of industrial worker families only, rather than the whole population of resident households, such as recommended in 1993 SNA. The scope of consumption expenditure of CPI-IW broadly follows the 1993 SNA. Thus, the CPI-IW being a target oriented index, there is no chance of the scope of the same being expanded as per SNA 1993. However, the Indian Government is in the process of compiling an All-India CPI covering whole population of the country mainly for the purpose of measuring the inflation in the country.

Similarly, the source data for both prices and weights broadly approximate the internationally accepted statistical techniques. The weights are based on source data from 1981-82 survey. However, a new set of weights have already been derived on the basis of a special survey known as Working Class Family Income and Expenditure Survey carried out during 1999-2000. The compilation of revised CPI-IW on new weights is in process and is likely to be ready for release by 2003 while simultaneous efforts are being made to revise the base at an interval of 10. years.

9. Wholesale Price Index:

The Office of Economic Advisor (EA) in the Ministry of Commerce and Industry brings Out the widely used weekly wholesale price index (WPI) which can be accessed from the website at <http://eaindustry.nic.in/>. The internationally accepted statistical technique are largely observed within the given constraints of source, time and user needs. However,

inline with the speed of changes in the economy to enlarge coverage of the commodities and to strengthen WPI, various measures are being considered to improve the techniques, expand the scope, shift the base year and revise the weights as well as to raise institutional capacity.

A Manual on the wholesale price indices has already been prepared with information on methodological issues. The Manual will be soon available on the website. Further, in order to ensure uniformity in collection of price data as per the recommendations of the NSC, a Technical Advisory Committee has been constituted and its proposals are under consideration. Meanwhile, whole sale price data collection work has already been outsourced. The data so collected would be used for the revised WPI series. Further, a Working Group has been constituted for revision of base year to 1999-2000 and the quality issues of WPI. Technical assistance is also being sought from the World Bank, which would cover (i) switch over from the wholesale price based indices to producer price based indices; (ii) development of Stage of Processing framework and (iii) development of services sector price indices.

10. Government Finance Statistics:

Government Finance statistics involve compilation of budgetary accounting data from the centre and state governments and it is done by the CGA, the CAG and the DEA in their respective fields. The first two entities have legal/constitutional obligations to perform while the DEA has functional data needs to be met especially pertaining to debt and other fiscal statistics. The RBI compiles and disseminates summary data on general government Finance under the requirement of SDDS. These data are compiled from Central and State government budget documents and disseminated after capturing the information from the budgets presented by all state governments, sometimes stretching two-three months beyond February.

The suggestion for integration and disseminating government finance statistics is a commendable one. However, if consolidation of General Government finances (which includes all 3 tiers including local Governments) is to be done to cover all levels of Government, it will require tremendous efforts—institutional, accounting and IT and to expect integrated accounts for General Government even within next 5 years would be at the very least an extremely optimistic view. The CAG, has constituted the Government Accounting Standards Advisory Board (GASAB) in August 2002. It is deliberating on the various Accounting Standards which are presently based on the IFAC Standards. The Board would also deliberate on the GFSM 2001 methodology, during the course of this exercise. The need for a single body to integrate and disseminate GFS is appropriate. Such a body could be located in Department of Economic Affairs. Currently there is a debate on transiting from cash based system towards accrual accounting system of the Government and the advantages and disadvantages of cash and accrual based system for a meaningful synthesis. The GASAB would no doubt consider this important issue during the course of its deliberations and is likely to encourage a study of this issue in depth so that there was greater clarity in the matter.

11. Monetary Statistics:

The Monetary statistics are extensively captured at the Reserve Bank of India (RBI) and disseminated to all users at the same time. The NSC observed that data released by the RBI on monetary aggregates compare favorably with international standards. The commission observed that data in respect of commercial banks are reliable, adequate, and timely. The Commission, however, had suggested a few measures towards further improvement of the quality of the monetary statistics. In pursuance of the NSC recommendation, data on cumulative cash balances of the scheduled commercial banks with the Reserve Bank on a daily basis are being published in the Weekly Statistical Supplement to the RBI Bulletins. Furthermore, the NSC had observed that since there are differing perceptions on the concepts of monetary aggregates, RBI should publish a time series on components of money at a disaggregated level so as to enable analysts to construct their own series. Accordingly, the Reserve Bank is publishing time series data (since 1970-71) for reserve money, narrow money, broad money and all the major components and sources of the monetary aggregates in the Handbook of Statistics on the Indian Economy. Moreover, information on new monetary aggregates compiled inter alia, based on the residency criterion and consistent with the requirement of the IMF's Manual for Monetary and Financial Statistics (MMFS) are also being disseminated.

12. BOP Statistics:

In respect of BOP Statistics, the staff assessment shows that India is either fully “observed” or largely observed. Quarterly external debt data will be disseminated in the public domain with a lag of one quarter starting from September 2003 in line with the SDDS requirement. Some major following achievement in the external sector statistics since May 2002 in the context of DQAF are also notable.

- The Report of the Technical Group on Statistics on International Trade in Services has been placed at the RBI website at <http://www.rbi.org.in/index.d11/32170?OpenStory?fromdate=03/01/02&todate=3/1/02&s1secid=0&2secid=0&secid=21/0/0&archivemode=0>
- The FDI Compilation Report and the first Action Taken Report of the TMG have been placed in RBI and DIPP websites (<http://www.rbi.org.in/> and <http://www.dipp.nic.in/>). The details on proposed coverage of FDI to India, FDI by India and revised FDI data (after inclusion of reinvested earnings and other capital: for the year 2002-03 are available at <http://www.rbi.org.in/index.d11/37393?OpenStory?fromdate=06/30/03&todate=06/30/03&s1secid=1001&s2secid=1001&secid=4/23/0&archivemode=0>

- Revised BoP data for 2000-01 and 2001-02 taking into account changes in the compilation practices for FDI (which take into account 'equity capital of unincorporated entities' 'reinvested earnings' and 'other capital' in addition to equity capital of FDI companies), have been made available in the RBI website at <http://www.rbi.org.in/index.dll/37395?OpenStory?fromdate=06/30/03&todate=06/30/03&s1secid=1001&s2secid=1001secid=4/0/0&archivemode=0>
- Data on International Investment Position (IIP) have been posted in the RBI website from September 30, 2002 at <http://www.rbi.org.in/index.d1124?OpenSectionTextArea?fromdate=09/30/02&todate=09/30/02&s1secid=0&secid=0&ArchiveMode=1>

PRESS NOTE

INDIA-National Summary Data Page (NSDP for Special Data Dissemination Standard (SDDS)).

Shri D.C.Gupta, Finance Secretary, Government of India formally launched India's National Summary Data Page (NSDP) on July 21, 2003 under the Special Data Dissemination Standard (SDDS), established by the International Monetary Fund (IMF). India, thus, joins 53 select IMF member countries, which subscribed to SDDS.

2. The Special Data Dissemination Standard (SDDS) was established by the International Monetary Fund (IMF) to guide member countries that have, or that might seek, access to international capital markets in the provision of their economic and financial data to the public. The SDDS is expected to enhance the availability of timely and comprehensive statistics and therefore contribute to the pursuit of sound macro economic policies. The SDDS is also expected to contribute to the improved functioning of financial markets.

3. Subscription to SDDS was opened in early April, 1996. Although subscription is voluntary, it carries a commitment by a subscribing member to observe the standard and to provide information to the IMF about its practices in disseminating economic and financial data- metadata- for DSBB.

4. The NSDP provides quick access to a single comprehensive source of economic and financial data consistent with the data categories and components described in the subscriber's metadata. Additionally, the NSDP includes further links to additional data or information on other national Internet data sites. The NSDP needs to be one continuous page to which the Fund can establish the hyperlink

5. India had subscribed to the IMF Special Data Dissemination Standard (SDDS) in December, 1996 and started complying to the SDDS on January 1, 1999 ; and fully met the SDDS subscription on December 14, 2001 (which indicates norms relating to coverage, timeliness and quality of data). As part of the SDDS, we were also required to create a NSDP which would contain various economic and financial data relating to India and hyperlinked with the IMF website. The relevant data are already in the public domain in the web-sites of the concerned Ministries/Departments of the Government of India like Ministry of Statistics & Programme Implementation, Department of Economic Affairs (Budget Division), Department of Expenditure (Controller General of Accounts), Ministry of Commerce & Industry, Registrar General of India and the other agencies including Reserve Bank of India (RBI). However, this data was required to be readily accessible and available to the interested persons, agencies, and Member countries of the IMF, worldwide.

6. It is, in this background that the Ministry of Finance, Department of Economic Affairs (Economic Division) as the Nodal Agency has developed the NSDP in consultation with all the concerned Ministries/Departments of the Government of India and other agencies like RBI. The IMF had hyperlinked India's NSDP to the Fund's DSBB on July 7, 2003. The efforts made by India in this regard have been appreciated by the international financial community.

INTERNATIONAL MONETARY FUND

INDIA

Detailed Assessments Using the Data Quality Assessment Framework (DQAF)

Prepared by the Statistics Department

Approved by Carol S. Carson and David Burton

March 29, 2004

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

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ACRONYMS

<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
<i>1968 SNA</i>	<i>System of National Accounts 1968</i>
ADs	Authorized dealers
<i>BPM5</i>	<i>Balance of Payments Manual</i> , fifth edition
CAG	Comptroller and Auditor-General of India
c.i.f.	Cost, insurance and freight
C,S&M	Concepts, sources, and methods
CGA	Controller General of Accounts
CPI	Consumer price index
CPI-AL	Consumer price index for agricultural labourers
CPI-UNME	Consumer price index for urban non-manual employees
CPI-IW	Consumer price index for industrial workers
CPI-RL	Consumer price index for rural labourers
CSO	Central Statistical Organisation
DEA	Department of Economic Affairs
DSBB	Dissemination Standards Bulletin Board
DGCIS	Directorate General of Commercial Intelligence and Statistics
DQAF	Data Quality Assessment Framework
ECD	Exchange Control Department of the RBI
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>
<i>GFSM 1986</i>	<i>A Manual on Government Finance Statistics 1986</i>
IMF	International Monetary Fund
<i>ISIC</i>	<i>International Standard Classification of all Economic Activities</i>
ISWGNA	Intersecretariat Working Group on National Accounts
MOF	Ministry of Finance
MOS	Ministry of Statistics and Programme Implementation
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual 2000</i>
NSC	National Statistical Commission
NSSO	National Sample Survey Organisation
RBI	Reserve Bank of India
ROSCs	Reports on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard
STA	IMF Statistics Department
TAC	Technical Advisory Committee on Cost of Living Index Numbers
WPI	Wholesale price index

DETAILED ASSESSMENT USING THE DATA QUALITY ASSESSMENT FRAMEWORK (DQAF)

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

I. NATIONAL ACCOUNTS

0. Prerequisites of quality

0.1 Legal and institutional environment

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

The responsibility of the Central Statistical Organisation (CSO) for compiling and disseminating national accounts estimates derives from the Government of India (Allocation of Business Rules), 1961 and subsequent amendments.¹

The Allocation of Business Rules define a Ministry of Statistics and Programme Implementation which has, among other things, the following tasks:

- Coordination of statistical work with a view to identifying gaps in data availability or duplication in data availability in respect of Departments of the Government of India and State Statistical Bureaus;
- Laying down and maintenance of norms and standards, in the field of statistics, involving concepts and definitions, methodology of data collection, processing of data and dissemination of results;
- Preparation of national and regional accounts; and
- Functioning as the Cadre Controlling Authority and dealing with the centralized aspects of managing the Indian Statistical Service including all matters pertaining to training, career planning and manpower planning.

In actual practice, the CSO compiles the national accounts for all-India itself and leaves the practical work of constructing regional accounts to the 28 States and 7 Union Territories, giving them technical advice.

¹ These documents are referred to herein as the Allocation of Business Rules.

0.1.2 Data sharing and coordination among data producing agencies are adequate

On the whole, the procedures to ensure the flow of source data for the national accounts to the CSO seem still to work more or less reasonably. However, a deterioration has been noted over the years. Data sharing and coordination are in part based on good will among the data producing agencies and often generates statistical information that does not meet the intended quality standards.

There are two ways in which data flow to the National Accounts Division. Some of the data are directly collected at the center either by the CSO itself or by the National Sample Survey Organisation (NSSO). Both the CSO and the NSSO are part of the Statistics Wing of the Ministry for Statistics and Programme Implementation. The CSO conducts for instance the Annual Survey of Industries, Economic Censuses and the index of industrial production. The NSSO is responsible for the collection of all-India household and enterprise sample surveys and undertakes the fieldwork for the Annual Survey of Industries.

Traditionally, however, many statistics² are collected through an administrative statistical system largely financed by central government. Under this system, the primary data are collected by statistical units in the various departments of every state (or by district offices belonging to the State Departments, or even at a lower level by village officials). The apex coordinating level in the states is formed by the Directorates of Economics and Statistics. These agencies are responsible for the statistical coordination and publish statistical abstracts and handbooks for the states. The CSO does not receive the statistics collected at state level directly from the State Departments, and only in some measure receives these statistics from the Directorates of Economics and Statistics. Normally, the main flow of data is from the State Departments to the statistical units in the corresponding Indian Government Ministries. Even though the ministries are not formally accountable to the CSO, they share the information received with the CSO. The both laterally and vertically strong decentralization of this administrative system makes the CSO rather vulnerable because, in the absence of a formal statistics law, it is responsible for the compilation for the national accounts and other all-India statistics without being in a position of exercising direct control on the methodological and collection conditions of a considerable section of the basic statistics. The CSO fulfills its coordinating tasks largely by having meetings, participating in working groups and technical advisory committees, organizing conferences, providing training, and maintaining many other ways of contact at all levels of government.

The August 2001 *Report of the National Statistical Commission* is very forthright about the administrative statistical system where it notes that the system, in certain areas, has almost collapsed. A report written in connection with the proposed World Bank project to modernize the Indian Statistical System incorporates a similar view in noting that the coordination and interlinkages among the various subsystems is minimal.

² In particular those on agriculture, livestock, forestry, fishing, as well as sections of mining and public sector enterprises.

Even when one accepts that the collection of statistics in a country the size of India necessarily involves a large measure of decentralization, it is clear that the present status of the CSO needs to be enhanced to effectively perform the task of coordinating such a system.³ It appears that the recommendations made by the National Statistical Commission (NSC) on restructuring the Indian statistical system need the authorities' urgent attention to avoid further fading of the once well working organization. The rapid structural changes in the Indian economy, which are likely to diminish the relative importance of administrative data collection, are one more reason to revamp with determination the way India's official statistics are currently compiled and disseminated.

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

The CSO treats individual data as strictly confidential even though there exists only very partial formal provision to that effect. The Collection of Statistics Act, 1953 stipulates that:

- No individual information without previous consent of the owner may be published in such a manner as would enable any particulars to be identified;
- No person not engaged in the collection of statistics under the Act shall be permitted to see any individual information; and
- If any person engaged in connection with the collection of statistics under the Act willfully discloses any information he shall be punished with imprisonment or a fine, or both.

However, the Collection of Statistics Act of 1953 serves exclusively the Annual Survey of Industries. The Act is not only limited to establishments in certain activities, it also does not protect individual data from small scale producing units and households.

The CSO informs respondents of their obligations to respond to obligatory surveys and of the confidentiality of the data collected. For instance, this is done with respect to the Annual Survey of Industries in a letter from the NSSO shortly before the questionnaires are sent out.

In its publications, the CSO also adheres strictly to a rule that ensures that every published figure refers to a sufficient number of units so that individual data cannot be identified. However, validated individual data on households and unregistered enterprises are made available to researchers three years after they were collected and after removal of the characteristics that identify the household. Filled-in questionnaires are burnt on the premises of the Statistics Wing four years after receipt. All computers are password-protected, doors are locked by keys, and permanent security is present in the building. Outside office hours, only officers with electronic cards can enter the office.

³ The position of director general of the CSO has been left vacant for more than four and a half years.

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

Official statistics in respect of households and unregistered enterprises are based on voluntary responses. Several administrative-based surveys suffer from low response rates and consideration may be given to introducing more legal incentives to respond to core questionnaires, particular so in view of the ongoing relaxation of administrative controls and divestment of public enterprises. Such consideration would be consistent with the views of the NSC, which recommends strengthening the legal foundations of data collection, while taking into account respondents' rights to privacy.

Nonresponse to the Annual Survey of Industries is punishable by force of the Collection of Statistics Act, 1953, but the fines are low (about US\$10 in first instance, thereafter US\$4 for each day of noncompliance) and prosecution is very rare. The letter that the NSSO sends to respondents of the Annual Survey of Industries before the questionnaires are mailed seeks the cooperation of the addressees by underscoring the importance of the statistics for effective industrial development policy formulation, by announcing workshops, and by providing a contact where the results of the statistics can be obtained.

0.2 Resources

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

With about 40 staff at officer level and 40 supporting staff in the National Accounts Division, the authorities indicate that the unit is adequately staffed to perform the required tasks. The qualifications are high: all officers have university degrees in statistics and some have obtained doctors' degrees. New staff receive two years of training and refresher courses are also available. The Statistics Wing of the Ministry of Statistics and Programme Implementation has its own Training Division, while outside training may also be granted.

People who enter the Indian Civil Service tend to remain for their full working lives; this is also true for the Statistical Service. Many staff rotate after about five years on unilateral decision taken by management.

Modern computer technology is available and the software used is up to date. Overall, financial resources are adequate. Forward plans that allocate budgetary resources to future statistical development are temporarily stalled pending decisions on the proposals of the NSC and the major World Bank project to modernize many aspects of the Indian Statistical System.

0.2.2 Measures to ensure efficient use of resources are implemented

Various measures are in place to ensure efficient use of resources. Operational and financial targets are set with any major data collection project and planning ensures that the time of field staff is not wasted. Through introduction of new technologies, efficiency improvements

have been sought, and reached, for instance concerning the timeliness with which statistics are released. The Staff Inspection Unit of the Ministry of Finance (MOF) monitors the efficient use of personnel resources. Targets are assigned to individual officers as well as other staff and the progress they make is monitored. It would be useful for the CSO to maintain a set of efficiency indicators.

0.3 *Quality awareness*

0.3.1 Processes are in place to focus on quality

Managers and staff of the CSO alike are sensitive to the various dimensions of data quality and they are proud to belong to what is considered the top layer of the Indian Statistical Service. However, methods like Total Quality Management or ISO 9000 are not in place and the CSO has not adopted a mission statement. (The NSC report contains proposals both concerning quality auditing and a mission statement for the Indian Statistical System.)

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

The quality of data is monitored from the collection in the field (through inspections, cross-checking etc.) until the compilation and dissemination stages. Guidance on improving the quality of statistics is among other things provided by the National Advisory Board on Statistics and the Advisory Committee on National Accounts Statistics. The latter convenes normally about twice a year, but much more often if major changes in methodology are introduced. The NSSO receives directions from the Governing Council. At state level coordination committees exist in which the CSO and/or NSSO are represented.

Periodic user surveys are not undertaken. However, the foreword to the annual national accounts publication welcomes suggestions from users for improvement in the coverage and/or presentation of various statistics included in the publication.

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

Processes are in place to deal with quality considerations and the trade-offs implicit in choices. An example is the decision to release advance estimates of the national accounts, recognizing the risk of being criticized if revisions have to be made. The main users, such as the MOF and the Reserve Bank of India (RBI), understand these quality tradeoffs, but this is not true for all users.

The report of the NSC is an example of external advice sought by the authorities on how the quality of Indian statistics can be improved.

1. Integrity

1.1 Professionalism

1.1.1 Statistics are compiled on an impartial basis

There is no formal professional independence of the CSO from the Ministry of Statistics and Programme Implementation. However, by tradition there is no interference by the ministry or any other agency (such as the MOF or the Advisory Committee on National Accounts Statistics). The first release of national accounts data is not signed off by the minister, or even seen by the minister before publication.

Staff are hired on the basis of competence, requiring a master's degree for the officers and the passing of a competitive exam conducted by the Union Public Service Commission. The impartiality of the statistics is further promoted by staff attending meetings and seminars that discuss the methods used to compile the Indian national accounts.

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

Generally, the choices of sources and statistical techniques are based solely on statistical considerations. Staff are also encouraged to explain the choices made in the CSO's publications, during conferences and seminars, or by contributing articles to the *Journal of Income and Wealth* of the Indian Association for Research in National Income and Wealth.

The only doubt on the statistical independence of the CSO relates to the habit of not publishing data that deviate from those originating from main source agencies (for instance the Ministry of Agriculture). If the CSO questions the validity of a basic source estimate, it tries to solve this bilaterally rather than release varying data.

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

Although nothing would prevent the CSO from commenting on erroneous interpretation, it is not in the habit of commenting or requesting rectification. The CSO defends this position with three arguments: in a democratic society everybody is free to say what he/she wants; scientific mistakes are usually dealt with by the academic community; and the country is so large that giving reactions on erroneous interpretation and misuse would be highly impractical. Nonetheless, the CSO scans the major press on articles related to its statistics on a daily basis. It also may invite reporters for a technical explanation of the data the CSO produces. However, it should be noted that of late the CSO has not given a press conference with the release of its national accounts data.

1.2 Transparency

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

The formal terms and conditions under which the Ministry of Statistics and Programme Implementation works are laid down in the Allocation of Business Rules, the Collection of Statistics Act, 1953, the Central Civil Services (Conduct) Rules, 1964, and other administrative laws, which are freely available to the public.⁴ Further explanations can for instance be found in its *Annual Report* and on the web sites of the ministry and the IMF's Dissemination Standards Bulletin Board (DSBB) .

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

Internal government access is not given before the statistical data are released. The press release, appearance on the internet, and information of the main user agencies (among which the Office of the Prime Minister, the Minister of Statistics and Programme Implementation, and the MOF) by facsimile or special messenger take place at exactly the same time.

The IMF's DSBB informs the large public that prior government access does not exist.

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

Statistics for which the CSO is responsible are clearly identified as such. An example is the national accounts data published by the MOF in its annual *Economic Survey*. Still, the CSO does not request attribution when its data appear in other publications.

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

Traditional users of the CSO's statistics are well aware of main changes in methodology, source data, etc., through discussions in advisory committees, announcements in working groups, standing committees for specific areas, seminars, conferences organized by the Indian Association for Research in National Income and Wealth, etc. All changes are also discussed in the Advisory Committee on National Accounts Statistics, of which the basic documents and the conclusions are published. However, it is possible that relative outsiders may not receive advance notice of major changes in the statistics, as these are not normally indicated in the standard publications.

⁴ The Central Civil Services (Conduct) Rules, 1964 are referred to herein as the Civil Services Conduct Rules.

1.3 Ethical standards

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

The CSO's staff are bound to act in accordance with the Civil Services Conduct Rules, which contain a large number of Government of India's decisions on matters such as connection with the press or radio, acceptance of gifts, private trade or employment, consumption of intoxicating drinks and drugs, etc. The section in the rules on unauthorized communication of information states that no government servant shall, except in accordance with any general or special order of the government or in the performance of good faith of the duties assigned to him, communicate directly or indirectly, any official document or any part thereof or information to any government servant or any other person to whom he is not authorized to communicate such document or information.

Other guidelines for staff behavior can be found in the Official Secrets Act 1932 and in the Prevention of Corruption Act 1988. Staff take an oath at their installation, by which they promise allegiance to the Constitution and to act according to the Official Secrets Act. Staff receive instruction in these matters, including practical ones on how to speak on the telephone, how to address a public, and so forth. About three or four times a year, staff are requested to renew their oaths on different aspects of ethical behavior (nonviolence, national integrity, etc.) expected from members of the Indian Civil Service.

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 *System of National Accounts 1993 (1993 SNA)* is largely followed as a general framework for compiling national accounts statistics, although several elements of the *1968 SNA* are still present. The CSO is working toward further incorporation of the *1993 SNA* recommendations.

2.2 Scope

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

The Indian national accounts statistics do not cover all tables and accounts that the Intersecretariat Working Group on National Accounts (ISWGNA) has defined as a minimum requirement for implementation of the *1993 SNA* or those whose compilation the ISWGNA has recommended.

The minimum set defined by the ISWGNA includes the following items:

- annual value added and gross domestic product (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 world accounts (until net lending).

India fails to meet the minimum requirements because annual expenditures of GDP at constant prices are not published. The lacking information refers to imports and exports of goods and services at constant prices. The authorities indicated, however, that they would be able to produce these data in the immediate future.

The *1993 SNA* tables and accounts whose regular publication the ISWGNA recommends are the following:

- 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.

Of these, the CSO only compiles quarterly value added and GDP at current and constant prices by activity. Input-output tables (consistent with the accounts) are compiled every fifth year.

The Indian national accounts define residence in accordance with the *1993 SNA* and the fifth edition of the IMF's *Balance of Payments Manual*. Included are the following in particular:

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

Nonetheless, in practice it is very difficult to distinguish between workers who are only temporarily away from India (which should be treated as Indian residents) and those that remain abroad for more than one year (these workers are economically nonresidents).

The production boundary is close to the *1993 SNA* recommendations. The scope of output measurement includes among other things the following items:

- all goods for own final consumption (in practice only estimates are made for production of agricultural, forestry, and fishing goods),
- output of goods for own-account fixed capital formation,

- mineral exploration, and
- production of entertainment, literary or artistic originals (in principle, but not yet in practice).

In variance with the *1993 SNA*, not included are:

- production of computer software on own account, and
- estimates of illegal output sold to willing buyers (with a few exceptions).

The asset boundary has yet to include a few newly introduced recommendations of the *1993 SNA*.

Among tangible assets the following should be included:

- defense related assets that could be used for civilian purposes. This is in the Indian accounts limited to dwellings for military staff.
- valuables. These are in India only recognized when purchased by enterprises.
- historical monuments. In India they are not taken into account, but this is not material because they are rarely transferred in ownership.

Among intangible assets the following should be included:

- mineral exploration (whether successful or not). In India it indeed is included.
- systems and standard applications computer software and databases (purchased or built in-house). In India they are only recorded when purchased.
- entertainment, literary or artistic originals. In India in principle included, but in practice they are not yet included.
- patented entities. In India they indeed are included.
- leases and other transferable contracts. These are in principle included in India.

Deviations from the *1993 SNA* are kept under review and may lead to future revisions.

2.3 Classification/sectorization

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

The *1993 SNA* is in principle followed to classify institutional units. However, for most institutional sectors no accounts are worked out as yet. In the publications, the public sector is taken as a major grouping of institutional units. The supplementary information provided allows specialists to identify the general government sector as well, but not the various levels of government such as central, state, and local government, and social security institutions. The nonprofit institutions serving households cannot be distinguished from the household sector.

The National Industrial Classification, 1987 is used to classify the principal economic activity of establishments in the national accounts. This classification is broadly based on the *International Standard Classification of all Economic Activities (ISIC)* rev. 2 (the basic statistics already use the 1998 version of the National Industrial Classification, which is consistent with *ISIC* rev. 3 to the four-digit level).

The national product classification is the Common Product Nomenclature 1988, which is compatible with the National Industrial Classification, 1987 at the three-digit level.

The functional classifications to break down the final consumption expenditures of households and government are in accordance with those recommended in the *1968 SNA*.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

The valuation rules used for recording flows are partially in accordance with the *1993 SNA*. Market output is valued at factor cost instead of at basic (or producer's) prices. Output for own use is valued at equivalent market prices. The valuation of intermediate consumption is at purchasers' values, that is, including sales tax, excise taxes, and nondeductible modified value added taxes. The deductible part of the modified value added taxes is excluded from the valuation of final uses. GDP is normally presented at factor costs, a concept not used any more in the *1993 SNA*.

Corrections are made when transfer prices are detected, but such is not very common in actual practice. Information on insurance and freight for merchandise imports is available, but not published. Imports of goods are recorded at cost, insurance, and freight (c.i.f.), and exports at their free on board (f.o.b.) values. The *1993 SNA* recommends f.o.b. valuation in both cases. Transactions in foreign currency are converted using the mid-point exchange rate prevailing in the market at the moment the transactions take place.

2.4.2 Recording is done on an accrual basis

Most transactions are recorded on an accrual basis, but all government operations and nearly all transactions with the rest of the world are recorded on a cash basis. Deviations of the principle of recording on an accrual basis also exist in agriculture (see further section 3.2.1).

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

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

3. Accuracy and Reliability

3.1 Source data

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

A deficiency seriously impacting the collection of basic data on production is the absence of a single, reliable, and broad-based business register of the larger producing units. The most important list of producing units presently available is the list of manufacturing production units available with the States' Chief Inspectors of Factory. Included in the list are establishments with ten or more workers on any day in the preceding 12 months.⁵ They refer to local kind of activity units, whereby 'local' is taken in the strict sense of having a different street address. The NSC report states that the list is grossly incomplete and, on the other hand, includes units that have not been operating for quite some time. The Department of Company Affairs maintains a directory of joint stock companies. However, the list is of bad quality, and of the 480,000 firms listed, fewer than half file the required annual balance sheets and accounts.⁶

The table below summarizes for each ISIC section the main basic sources for the annual accounts estimates and their coverage. In constructing this table, the results of all current exhaustive and sample surveys that directly measure the activity have been considered as positive contributions to coverage.

Regarding prices, extensive use is made from the wholesale price index and the consumer price indexes for agricultural laborers, industrial workers, and urban nonmanual employees.

In the table's section on sources for the production approach, the lack of sufficient basic data for private business and personal services stands out.

Source data that are based on sample surveys generally use scientific random sampling techniques, use proper imputation methods to handle nonresponse, and determine grossing-up factors scientifically. However, as noted above, due to inadequate registers the sampling frames may be of suspect quality. Area sampling is therefore used for measuring the activities of nonregistered establishments. The quality of some of the administrative statistics on productive activities has been publicly questioned. For instance, the NSC report indicates that crop area statistics are of poor quality as a result of overburdening of the local agencies that should monitor land use.

⁵ Establishments with 20 or more workers if the manufacturing process is carried out without the use of power.

⁶ It should be noted that the non-filing firms mostly belong to the segment of small units.

Table 1. Main Sources for the Annual National Accounts

Production approach		
Activity	Main sources	Assessment of coverage
Agriculture	<ul style="list-style-type: none"> - Crop area statistics - Yield statistics (principal crops) - Cost of cultivation statistics (principal crops), fertilizer statistics - Horticultural crop surveys and eye estimates -Commodity Boards - Integrated sample survey on milk, eggs, and wool - Slaughter statistics; sample survey for meat and dung (some states) 	Good
Forestry	<ul style="list-style-type: none"> - Volume and price estimates by State Forest Departments 	Satisfactory
Fishing	<ul style="list-style-type: none"> - Surveys on landing of marine fish - Various estimates on inland fishing by State Fishing Departments 	Good
Mining and quarrying	<ul style="list-style-type: none"> - Administrative data 	Good
Manufacturing	<i>Registered sector:</i> <ul style="list-style-type: none"> - Annual Survey of Industries <i>Unregistered sector:</i> <ul style="list-style-type: none"> - Rolling follow-up surveys of the Economic Census - Index of Industrial Production 	Satisfactory (good for registered, poor for unregistered establishments)
Electricity, gas and water supply	<ul style="list-style-type: none"> - Statements by electricity producers - Administrative data on gobar gas - Budget data for water supply 	Good
Construction	<ul style="list-style-type: none"> - Administrative data on cement - Annual /survey of Industries for steel - Administrative data on industrial wood and coal used for producing bricks and tiles - Industrial Production Index for fixtures etc. 	Satisfactory (given that indirect measures are used)

Production approach		
Trade, hotels and restaurants	- Gross Trading Index, representing the value of output and imports entering trade	Poor
Transport, storage and communication	- Annual reports for railways, other public transport, and communication - Vehicle licenses - Volume of shipping cargo	Poor (Good for railways and communication)
Financial intermediation	- Data collected by the Reserve Bank of India and the National Bank for Agricultural and Rural Development (cooperative credit societies) - Statements from public insurance companies	Good
Real estate, renting, and business activities	- Fixed growth rates	Poor
Public administration and defense; compulsory social security	- Budget data	Good
Education/ Health and social work	- Budget data on public agencies - Number of recognized educational institutions	Good for public agencies Poor for private producers
Other community, social, and personal service activities	- Fixed growth rates - Budget data for public agencies - Number of workers	Poor
Net taxes less subsidies on products	- Budget data	Good

Expenditure approach		
Expenditure category	Main source	Assessment of coverage
Final consumption expenditure of households and nonprofit institutions serving households	- Commodity flow	Poor
Government final consumption expenditure	- Budget data	Good
Acquisitions less disposals of tangible fixed assets	- Commodity flow	Poor

Expenditure approach		
Acquisitions less disposals of intangible fixed assets	- Statements from public enterprises - Commodity flow	Satisfactory
Additions to the value of non-produced non-financial assets	- Enterprise surveys	Good
Changes in inventories	- Budget data and annual reports for the public sector - Annual Survey of Industries - Analysis of the balance sheets of joint stock companies by RBI - Bank advances to registered household trading establishments	Satisfactory
Exports and imports of goods	- Balance of payments	Good
Exports and imports of services	- Balance of payments	Good

Household consumption expenditure surveys of sufficient sample size are conducted only every five years and they suffer, from a national accounts point of view, from collecting information only on a reference period covering part of the year instead of relating to a full year. The estimates of private final consumption expenditure in the national accounts are based on a detailed commodity flow analysis.

Comprehensive government budgetary data are available; they partially originate from the MOF, and partially are collected by the CSO from the States and from public entities on a lower level (the latter on a sample basis). The central government data include extra-budgetary funds such as the Providence Fund. All defense related expenditures are included in the total expenditures for the public sector. Estimates on the capital stock owned by government are also made.

Benchmark data for the annual accounts are nowadays available on a quinquennial basis; this refers in particular to the Economic Census, which is in principle conducted every ten years but is supplemented by a halfway update.

The adequacy of the main sources for the quarterly accounts is summarized in the following table.

The non-adequacy of indicators for forestry is not very serious given the small weight of this activity in overall GDP. However, the lack of indicators for private services warrants the development of new short-term statistics in this field.

The indicators on production are mostly of sufficient quality to allow making estimates that are consistent with the annual accounts data. Too few indicators exist to fruitfully try to establish expenditure components of quarterly GDP.

Ad-hoc surveys are conducted when necessary to supplement regular surveys. Examples are the time use survey used to study the work force, surveys into the portion of output that farmers sell on the market, and surveys to update certain ratios such as the value added per worker.

Table 2. Main Sources for the Quarterly National Accounts

Production approach		
Activities	Main sources	Adequacy for quarterly estimates
Agriculture	- Production estimates of forecast crops (about 70 percent of total crops)	Adequate
Livestock	- Indicators on the production of milk, eggs and wool (about 75 percent of total livestock output)	Adequate
Forestry	- Annual forecast	Not adequate
Fishing	- Indicators on quarterly production of inland and marine fish	Adequate
Mining and quarrying	- Statements on coal, crude petroleum - Index of Industrial Production, section related to mining	Adequate
Manufacturing	- Index of Industrial Production, section related to manufacturing	Adequate
Electricity, gas and water supply	- Index of Industrial Production, section related to electricity - Central government data for water	Adequate
Construction	- Production of cement, steel, and coal - Index of Industrial Production for wood and fixtures	Adequate
Trade, hotels and restaurants	- Gross Trading Index, representing the value of output and imports entering trade	Adequate
Transport, storage and communication	- Production of the railways - Number of commercial vehicles - Cargo handled in major ports - Civil aviation data - Communication revenues	Adequate
Financial intermediation	- Aggregate bank deposits and credits - Sums insured life insurance - Receipts less claims casualty insurance	Adequate
Public administration	- Central government expenditure	Adequate
Real estate, renting, business services, community, social, and personal service activities	- Central government expenditure for public services - Annual forecast for private services	Not adequate

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

Source data generally are consistent with the definitions, scope, and classifications needed for national accounts purposes. They also are normally consistent with the time of recording, with the notable difference between those source data that are available on the agricultural year instead of the fiscal year (see further section 3.2.1). However, even in that case additional information is available to make a more satisfactory allocation in time possible.

3.1.3 Source data are timely

Some source data become available only after a long period. Balance sheet information, for example, takes a long time to come in and be treated by the statistical agencies. Audited data from public enterprises are only available after two years after the reference year. Budget data take about two years to be finalized.

On the whole, however, the situation is acceptable. All price indexes are timely, except for the export and import unit values, which show a one-year lag. International trade statistics are available within one month, the balance of payments statistics are in time for the national accounts “quick estimate.”

If source data are late, action is taken, usually first by way of a telephone contact. If necessary, higher-level staff get involved.

3.2 Statistical techniques

3.2.1 Data compilation employs sound statistical techniques

The overriding approach for measuring GDP is from data on production. In the annual accounts, private final consumption expenditure and gross fixed capital formation are entirely or largely estimated using the commodity flow approach. The quarterly accounts provide exclusively estimates from the production approach and a breakdown by expenditure categories is not being compiled.

Production approach procedures

Annual output and intermediate consumption estimates are compiled for about 500 activities/products, that is, mostly at the three-digit level of the activity classification and a few at the four-digit level (the publication level is much more aggregate). Quarterly output estimates are at the two-digit level of the activity classification; the technical coefficients with respect to goods and services entering the production process are all fixed.

The reliance on fixed ratios that are more than five years old when estimating annual GDP at current prices from the production side is considerable but not yet excessive. The biggest categories that make use of outdated fixed ratios are the activities trade, real estate, construction, and private transportation. The unregistered manufacturing sector formerly also belonged to this list, but since the introduction of the so-called Follow-up Surveys (they follow up on the Economic Census), a regular refreshment of the ratios has taken place.

Concerning the techniques used to address a number of specific compilation issues the following is observed:

- The output of owner-occupied dwellings is valued as the estimated rentals that tenants would pay for similar accommodation. The computation is very imprecise, though, because only two types of dwellings and two types of location are distinguished.
- The concept of work in progress is rather limited if one compares current Indian practice with the *1993 SNA* recommendations. Work in progress is recorded with respect to part of standing timber, large construction projects, and the output of large equipment such as ships. However, the concept of work in progress is not applied to growing crops, stocks of fish, or livestock reared for the purposes of food.
- As indicated above, work in progress is not distinguished regarding growing crops. In fact, the timing of transactions related to crops is recorded in a rather special way. In variance with the recommendations of the *1993 SNA*, the Indian accounts record crop output as occurring at the moment of the harvest. However, they also adopt the harvests of the agriculture year, which extends from July to June, without modification in the financial year, which goes from April to March. The result is that crop output according to the agriculture year is shifted back in time by three months.⁷ On the other hand, the prices used to value agricultural crops are taken from the moment that the bulk of the harvest appears on the market and this is about one month after the actual harvest takes place. A further complicating factor is that in order to match receipts for agricultural output with the corresponding costs incurred during the period the crops were growing, the costs on goods and services are in first instance capitalized to be only recorded as intermediate consumption at the moment the harvest takes place.
- The CSO revalues data on inventories received from enterprises in order to compute changes in inventories as the difference between opening and closing stocks of inventories at average prices of the period. In principle, this is the correct procedure.

⁷ The consequences of this shift used to be very limited as farmers traditionally prepared the land for the next season during the period April-June. However, cropping patterns have changed, resulting in a considerable part of the Rabi season's harvest now taking place in the April-June quarter. The new pattern is reflected in the Indian Crop Calendar, which the quarterly accounts use to allocate output to quarters. Nevertheless, the quarterly accounts retain the four-quarter totals as they are recorded in the annual accounts. This takes away much of the specific usefulness of the quarterly accounts for subannual economic analysis.

However, the revaluation is done only partially. Business reports inventories at “cost” or at “net realizable value,” whichever is less. The CSO thus does not have direct information on opening and closing stocks at current market prices (which should be the starting point of the exercise), and neither does it try to convert the reported commercial valuation to current market valuation.

- As recommended by the 1993 *SNA*, the CSO uses the perpetual inventory method as basis for the estimation of consumption of fixed capital.
- No effort is undertaken to convert government receipts and expenditures (such as taxes on products or compensation of employees), which are recorded on a cash basis in the basic statistics, towards a transaction basis.

Regarding the procedures for compiling volume measures of GDP the following is noted:

- The deflators used are as specific as possible with regard to the variables being deflated in terms of price concept, coverage, and reference period. Nonetheless, in a few cases the correspondence is less close. Examples are the deflation of import duties and excises by the wholesale price index, the deflation of the sales tax by the average of the consumer price index for industrial workers and the wholesale price index, and the deflation of government value added by the consumer price index for industrial workers. The CSO indicated that the theoretically incorrect deflation of taxes originates from a lack of commodity detail in the MOF data.
- Except for agriculture and mining, single indicator methods are used to come to estimates of value added at constant prices. The 1993 *SNA* recommends double deflation, but the CSO has observed that this may lead to unacceptable results such as negative contributions to GDP at constant prices, especially for those industries that work with small margins. Still, the CSO is examining whether in the future more use of the double deflation method can be made.
- In accordance with accepted good practices, the output volume of trade is estimated by applying the base year margin rates to the corresponding volume of sales.
- No chain indexes are used to measure the volume change of GDP and in principle the base year is only changed every ten years, which probably is insufficient in view of the dynamics of the Indian economy.

Expenditure approach procedures

In the Indian system of national accounts, important categories of expenditure are derived by applying the commodity flow approach rather than by using independent sources. This is the case for private final consumption expenditure and gross fixed capital formation.

Expenditure categories are largely calculated with sufficient detail. Private and government final consumption expenditure by function are broken down into two-digit categories. Gross fixed capital formation is published by type of asset, type of acquiring institution, and industry of use. Changes in inventories are published by type of acquiring institution but not

by type of good. A breakdown of changes in inventories by type of good is only made on occasion of the construction of an input-output table.

There is a significant level of reliance on fixed ratios in those expenditure categories that depend on the commodity flow method: private final consumption expenditure and gross fixed capital formation.

Concerning the techniques used to address a number of specific compilation issues of the expenditure approach, the following should be mentioned:

- Government final consumption expenditure is exclusive of final sales.
- Expenses of residents abroad are included in imports and in private final consumption expenditure; conversely expenses of nonresidents in the economy are included in exports.
- Expenditures on items that are considered stores of wealth such as jewelry, antiques and works of art are included in the estimates of valuables only in so far as they are purchases by enterprises. Similar expenditures by households are included in final consumption expenditure.

As concerns the volume measures of expenditures on GDP the following is noted:

- Private final consumption expenditure at constant prices is calculated according to the type of product. For many food items, the quantity terms are multiplied by the prices of the base year. Where the data are only available in value terms, and in the absence of a proper broad-based consumer price index, deflation takes place by the appropriate subindex of the wholesale price index. In the case of services items, the same deflator is used as applied to deflate value added of the service producing industry.
- Government final consumption expenditure at constant prices is computed by deflating the element compensation of employees with the consumer price index for industrial workers and the element net purchases of goods and services (purchases for intermediate consumption less incidental sales) by the wholesale price index.
- The calculation of gross fixed capital formation at constant prices varies by type of investment goods. The CSO prepares a series of specific deflators to obtain capital formation in construction at constant prices. Machinery other than electrical, electrical machinery, and transportation equipment produced by resident enterprises are deflated by relevant components of the wholesale price index. Other equipment is deflated by the wholesale price index for machinery and transport equipment. Livestock treated as fixed-capital assets is available in quantities, which are evaluated at base year prices. Imported goods entering gross fixed capital formation are deflated by the import unit values for the respective groups.
- As mostly no breakdown of inventories by type of product exists, it is impossible to properly deflate the category changes in inventories.

- Imports and exports of goods and services are not published at constant prices.

Specific quarterly compilation techniques

The following is noted concerning specific quarterly compilation techniques used in the Indian system of national accounts:

- To adjust the quarterly estimates to the values recorded in the annual accounts, the difference between the sum of the four quarterly values and the overall value of any year is allocated to the quarters in proportion to the originally estimated values in the quarterly accounts. Taken by itself, this benchmarking technique causes a so-called “step” problem, that is, an abrupt change may be introduced between the last quarter of a given year and the first quarter of the following year. However, the CSO indicated that it uses a procedure that would automatically avoid the step problem.
- The quarterly estimates are not published seasonally adjusted format. The CSO considers the available time series too short to properly adjust for seasonality and also thinks that users prefer to deseasonalize the series themselves. To avoid misunderstandings in the interpretation of quarter-to-quarter growth rates if the series are subject to seasonal influences, the CSO publications show growth rates of quarters in comparison with the corresponding quarter in the previous year.

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

It is difficult to comprehend the full extent of the challenges national accountants in India face in being required to combine the largely dissimilar information received from numerous agencies, both laterally and vertically decentralized, into a consistent description of the all-India economic processes. Luckily at least some data are harmonized: the classifications are valid universally, company accounts and balance sheets follow standard accounting rules, and budgets are drawn up according to uniform rules.

The introduction of changes in such a complex and extensive system is accordingly a major operation. As noted above, the CSO is reluctant to make adjustments to source data without approval of the provider, or as a minimum the backing of a high-level advisory committee.

Nevertheless, new techniques have been developed to deal with, for instance, the activity of the nonregistered manufacturing and services producing establishments. Given that the Economic Censuses provide the best estimates of total activity of manufacturing establishments but cannot be conducted every year, Follow-up Surveys have been introduced to annually update the estimates for part of the manufacturing sector according to a procedure that may be summarized as follows. First geographical sampling areas are selected. A listing is made of all establishments in the selected areas. The nonregistered establishments that are active in the kinds of manufacturing selected for the year in question are then requested to provide information that updates the most recent Enterprise Survey. This methodology

ensures relatively fresh data on the nonregistered sector with its characteristic large number of entries and exits, provided that it may be assumed that the overall activities of the sector do not move geographically (that would invalidate the choice of the area).

3.3 *Assessment and validation of source data*

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

For many surveys used in the national accounts, information about sampling errors is available. However, for instance with the Annual Survey of (registered) Industries or the Follow-up Surveys for the nonregistered manufacturing establishments, no sampling errors are published. When available, the information on both sampling and non-sampling errors is carefully reviewed.

The various imputation techniques to deal with imputation methods for non-response in surveys are well known in India. The Ministry of Statistics and Programme Implementation has regular meetings with statistical units in the States to try and reduce non-response. All data received by the CSO are routinely checked for outliers and other improbable results. Even though the data have been reviewed in earlier stages, the National Accounts Division still finds outliers in the provided information. Such values are discussed with the data providers. Surveys and census are routinely audited by way of post-enumeration checks and other measures to verify the accuracy of the data collection.

Before use for national accounts purposes the source data are analyzed on temporal consistency and consistency with related data sources. Pressure may be exercised to adjust the sample selection when the errors become too large, but in the short run the National Accounts Division may decide simply not to use the statistics in question (provided it concerns a minor source). Consistency checks on definitions, valuation, reference periods and classifications always are conducted.

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

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

The data compiled from the main sources used to compile national accounts statistics are checked with other primary/secondary sources.

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

Systematic procedures exist to routinely assess the potential discrepancies in intermediate data, for instance, by comparing them with employment or household survey data.

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

No supply and use framework is currently used to investigate discrepancies to make outputs consistent. Although the basic data is sometimes limited, similar investigations take place by analyzing commodity flows at a detailed level. The remaining discrepancies between GDP by productive activities and GDP by expenditure components are shown explicitly.

The CSO validates its estimates against estimates by others such as forecasts, business expectations, estimates by industrial associations, etc. However, this validation does not lead to change the CSO's original estimates.

3.5 Revision studies

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

The National Accounts Division investigates the direction and magnitude of revisions between preliminary and final data. However, in line with the traditions developed in the Indian Statistical System, it would not feel free to unilaterally adjust a major source statistic if the investigation suggests the existence of a bias. The strong preference would be to bring the problem out in a paper or in the discussion during a seminar. In large part this preference stems from a wish to hedge against outside criticism in view of the risk that the correction made in the accounts could turn out to be wrong. However, this stance can also lead to larger revisions to be made on the preliminary estimates, and thus equally result in (maybe even more fierce) criticism, particularly from non-administrative sides.

4. Serviceability

4.1 Relevance

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

There are many channels by which the CSO is able to consult users about their concerns. Among the most broad based are the annual conference of the Indian Association for Research in National Income and Wealth and the users conference that was organized a few years ago and attended by users in the Ministries, the States, and the academic world. The Advisory Committee on National Accounts Statistics includes members that are primarily users of statistics. Comments in writing are also invited by the CSO's secretary in the Foreword to the annual publication.

CSO staff regularly participate in international statistical meetings and seminars organized by international and regional organizations such as the United Nations Economic and Social Commission for Asia and the Pacific.

4.2 *Timeliness and periodicity*

4.2.1 *Timeliness follows dissemination standards*

In accordance with India's subscription to the SDDS, the quarterly accounts are published within three months after the end of the reference quarter. The so-called quick estimates of the annual accounts are published ten months after the reference year.

4.2.2 *Periodicity follows dissemination standards*

India's national accounts estimates are disseminated with quarterly periodicity as prescribed under the SDDS.

4.3 *Consistency*

4.3.1 *Statistics are consistent within the dataset*

The annual accounts are internally consistent in the sense that a statistical discrepancy is shown that bridges the gap between GDP by the production approach and GDP by expenditure categories. The discrepancy has been small: on average about 2 percent of GDP during the last seven years, with a minimum value of 0.0 percent and a maximum of 3.9 percent for the individual years. However, it should be noted that some components of expenditure are estimated making use of the commodity flow method, in particular in private final consumption expenditure.

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

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

Very long time series of about 50 years are available. The latest major revision of the estimates (the adoption of the new base year 1993–94) has been worked back to 1981–82 and the revised values for the earlier years have been obtained by splicing.

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

The national accounts statistics are fully consistent with the balance of payments. They are thought to be close to the government finance statistics.

4.4 *Revision policy and practice*

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

The major revisions of the national accounts used to follow a cycle of ten years in accordance with the schedule of the Population Census. This is because the Census generates, among other things, new information on the labor force by economic activity. However, the most recent change of the national accounts base year referred to 1993–94 instead of 1990–91. The CSO wishes to come to a five-year cycle of changing the base year in the future.

Sufficient explanation on the changes introduced on occasion of the new base year 1993–94 has been provided in a brochure published by the CSO. However, it has not been possible to publish a very detailed discussion of the sources and methods such has been done in relation to the base year 1980–1981.

To avoid breaks in the time series, major new source data are only incorporated on occasion of the change of the base year. New information of minor importance is used in making the estimates when it becomes available.

The CSO releases, for the financial year ending March, a quick estimate of the annual accounts with a time lag of about ten months. The quick estimates are normally twice revised with an annual periodicity. The schedule for these revisions takes into account the timing for preparing important economic policy documents, such as the budget and publications by the RBI. Quarterly accounts estimates may be revised during the current year and as is necessary to ensure consistency with the annual accounts.

4.4.2 *Preliminary data are clearly identified*

The text of the publications suggests that that preliminary estimates are subject to revision but this could be expressed more explicitly. Usually, the tables do not carry warnings that the data are still subject to revision. A positive exception is the Press Note of January 2002 that clearly indicates in the tables which data concern provisional estimates.

4.4.3 *Studies and analyses of revisions are made public*

All major issues that have given rise to revision of the estimates are explained in a several-page annex to the hardcopy publication, entitled Notes on Methodology and Revisions in the Estimates. The next issue of the national accounts publication will introduce a table to allow users to make a better assessment of the reliability of preliminary data. The table will show both the revised figures and the previous estimates accompanied by an explanation of the causes of revision.

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 data are published in a clear manner and they are always accompanied by an analysis of the most recent developments. Several tables contain ratios such as shares in GDP or income per capita. The interpretation of the data is facilitated by charts. The data sets are published with various level of detail.

While the publications always provide data for several accounting periods, the press releases on the quarterly accounts do not show all quarters for which the estimates have been revised. Although these data are made available on the Internet, it is highly advisable that also the press releases present longer time series.

The quarterly national accounts series are not published in seasonally adjusted form. The publications contain growth rates in comparison with the corresponding quarter of the previous year.

5.1.2 Dissemination media and formats are adequate

National accounts data are simultaneously released via a press release and on the Internet. At the time of the first release, all detailed information is available (with minor exceptions of certain breakdowns that may take another two weeks to be finalized). The series are also published in the dedicated hard copy publication *National Accounts Statistics*, and in various general series issued by the CSO such as the annual *Statistical Abstract*, the *Monthly Abstract of Statistics*, and the *Statistical Pocketbook*. The MOF includes national accounts statistics in its *Economic Survey*.

Longer time series than appear in the publications are made available by the CSO on diskette and CD-ROM.

5.1.3 Statistics are released on a pre-announced schedule

The first release of national accounts data is on a preannounced day, but not at a pre-announced hour. There is no predetermined day for release of the hard copy publications.

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

Statistics are made available to all users strictly at the same time. The press is not briefed in advance due to low attendance during press conferences as the reporters try to get the data out to the papers as soon as possible.

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

Unpublished, but nonconfidential, data such as certain breakdowns by states can be obtained for free. The availability of additional information is not widely publicized by the CSO.

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

Extensive documentation on concepts and methods is published on occasion of base-year changes, but these publications may be difficult to find after a number of years. Other metadata are rather scarce. Information about response rates to main surveys is not given. Some additional information on sources, such as the difference between the RBI and the DDGCIS statistics on the imports and exports of merchandise, however are provided as a matter of routine. The SDDS summary methodologies are reviewed every quarter.

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

No short introductions for instance in the form of brochures exists to inform general users about the national accounts. On the other hand, comprehensive sources and methods publications are produced on occasion of the change of the base year. Detailed methodological papers brought in discussion in meetings of the Advisory Committee on National Accounts Statistics are published.

5.3 Assistance to users

5.3.1 Contact person for each subject field is publicized

Although the publication clearly mention the CSO as the agency responsible for the compilation of national accounts and the annual publication even provides an extensive list with the names of the officers working in the National Accounts Division, no specifics are mentioned such as telephone numbers, postal/facsimile/e-mail addresses, the right contact person for particular types of questions, etc. The pages for India on the Dissemination Standard Bulletin Board form an exception in this respect.

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

Catalogues of publications including price information are widely available, for example in the Monthly Abstract of Statistics and on the website. An excellent overview of the statistics compiled by the Ministry of Statistics and Programme implementation is the *Guide to Official Statistics*. Unfortunately this publication is only produced at irregular times.

II. PRICE STATISTICS (CONSUMER PRICE INDEX)

Background information

At the present, three consumer price indexes (CPIs) covering all-India are compiled: the CPI for industrial workers (CPI-IW), the CPI for urban non-manual employees (CPI-UNME), and the CPI for rural labourers (CPI-RL).⁸ All of the three indexes are explicitly developed and designed for compensation purposes for various segments of the population. The coverage of each of the three CPIs is confined to the consumption expenditures of the households/families belonging to each of the three population segments, all of which form only a fraction of the total population. Therefore, in practice the wholesale price index (WPI) is the most widely used measure of inflation in India.

However, of the three CPIs, the CPI-IW is the one most commonly used where a measure of consumer price inflation is needed, and the report deals only with this index. For comparison, key information on the three indexes are summarized in the table below.

Table 3. Overview of all-India Consumer Price Indexes

	CPI for industrial workers (CPI-IW)	CPI for urban non-manual employees (CPI-UNME)	CPI for rural labourers (CPI-RL)
Responsible authority	Labour Bureau, Ministry of Labour	Central Statistical Organisation	Labour Bureau, Ministry of Labour
Scope of index	Industrial workers families' consumption expenditure on goods and services	Urban non-manual employees households' consumption expenditure on goods and services	Rural labourers households' consumption expenditure on goods and services
Weight reference period	1981-82	1982-83	1983
Periodicity	Monthly	Monthly	Monthly
Coverage of sample of prices:			
Centers/villages	76 centers ^{1/}	59 centers	600 villages
States/union territories	21	25	20
Outlets	16,500	30,660	1,461
Items	260	250	180
Price quotes	160,000	255,500	61,000
Index published for	- All-India - 76 centers	- All-India - 59 centers	- All-India - 20 states

1/ Although prices are collected in 76 centers, only prices from 70 centers are used in compilation of the all-India CPI-IW. The 70 centers are spread over 21 states or union territories. With the additional 6 centers the coverage increases to 24 states or union territories.

⁸ In addition, a consumer price index for agricultural labourers (CPI-AL) is compiled as sub-index of the CPI-RL.

The three indexes differ considerably with respect to population and geographical coverage as well as usage. The weight reference periods of all three indexes date back some twenty years.

The National Statistical Commission (NSC) in its 2001 report states that the CPI-IW, because of its limited population coverage and outdated weights, is unsatisfactory as a measure of inflation in modern India. It also states that the WPI is in practice the preferred measure of inflation but that this, on the other hand, is an inadequate measure of inflation. The NSC, therefore, recommends that:

- An all-India CPI covering the whole population of the country should be compiled, possibly by combining a CPI for the whole rural population and a CPI for the whole urban population.
- Weights should be updated every five years and no later than every ten years.
- The existing system of price collection should be streamlined and augmented in order to improve coordination and cooperation and to provide price data for compilation of an all-India CPI.
- Administrative procedures in connection with weight revisions should be streamlined so as to secure earlier implementation of new set of weights.

The World Bank in its project plan for modernization of the statistical system in India also addresses the area of price statistics. The project plan as regards consumer price indexes is in line with the recommendations of the NSC as it gives priority to development of an all-India CPI and activities to improve the price collection system and the quality and timeliness of sources for weighting data.

The work on an all-India CPI following the above mentioned recommendations has already been initiated under the responsibility of the Central Statistical Organisation (CSO). The weights of the index will refer to 1999–2000, for which a family expenditure survey has been carried out. The price collection is to be undertaken by the National Sample Survey Organisation (NSSO) and the Labour Bureau in cooperation. Compilation and dissemination will be undertaken by CSO. It is still too early to indicate the exact time for the release of an all-India CPI as there are still substantial work and consultations that need to be undertaken. Ultimately, the Indian Government will take the decision as to when an all-India CPI can be published.

0. Prerequisites of quality

0.1 Legal and institutional environment

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

The Government of India (Allocation of Business) Rules, 1961, with subsequent amendments, assigns the responsibility of collection, compilation and dissemination of data for the CPI-IW to the Ministry of Labour. The compilation and dissemination is undertaken by the Labour Bureau under the Ministry of Labour. The Minister holds the final authority for all decisions regarding the CPI-IW.

The CPI-IW has been compiled by the Labour Bureau since 1944 and the Minimum Wages Act of 1948, which is still in effect, also assigns the responsibility of compilation of the CPI-IW to the Ministry of Labour. However, it was not until 1958–59 that a reliable index for all-India was compiled on the basis of the Family Living Survey for that period and following the recommendations of the Technical Advisory Committee on Cost of Living Index Numbers (TAC), constituted by the government in 1954, and for which a secretariat exists in the CSO.

The CPI-IW is specifically intended and designed for compensation purposes for industrial worker families, and it is widely used for adjustment of wages and allowances for industrial worker families as well as many other groups of the population. Because of the extensive use of the index for compensation purposes, its main users, i.e. the labour market parties and the central government, are consulted in a tripartite hearing process before any major changes are implemented. No major changes are implemented without consultation with all of the involved parties through the tripartite meetings. The hearing process, which has a long tradition, ensures general acceptance of the index from all major user groups for its intended purposes.

0.1.2 Data sharing and coordination among data producing agencies are adequate

The all-India CPI-IW is compiled on the basis of prices collected in 70 centers distributed in 21 states or union territories across the country. The states or union territories are grouped in five regions where regional offices on behalf of the Labour Bureau offer technical assistance to the price collectors and price supervisors located in the centers. All prices are collected by price collectors visiting the outlets or markets. The price collectors and price supervisors are employees of the State Governments working in the Directorates of Economics and Statistics and the Labour Departments engaged by the Labour Bureau on part-time basis.

The Labour Bureau compiles CPIs for six additional centers on request of State Governments. However, these are not included in the calculation of the all-Indian CPI. The Labour Bureau also offers advice and technical assistance to states when required. Source data for weights are based on a family income and expenditure survey carried out by the NSSO on behalf of the Labour Bureau. Coordination is ensured by carefully planning and meetings between the parties. The methodologies of compilation of all CPIs in the country are examined and approved by the TAC. There is no ongoing data sharing between the divisions in the Labour Bureau responsible for the CPI-IW and the CPI-RL or between the Labour Bureau and the CSO, which compiles the CPI-UNME.

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

The confidentiality of individual respondents' data is maintained through the application of the Central Civil Services (Conduct) Rules, 1964. The Civil Services Conduct Rules state that individual responses shall be treated as confidential, and not be disclosed or used for other than statistical purposes. Violation of the rules of confidentiality may result in punishment in the form of fines and ultimately dismissal. Such penalties have been applied where violation has occurred. The question of confidentiality is very important as it is feared that information that could identify the reporting outlets could be used by users in order to influence the index. The staff in the Labour Bureau as well as price collectors and supervisors are all subject to the Civil Services Conduct Rules and the rules are well known to the staff.

To ensure confidentiality, access to individual data is restricted to staff who require the information in the performance of their duties. To prevent unauthorized access, passwords are required to obtain access to computers used for handling of individual data. The index series are published on a level of aggregation that prevents direct or indirect disclosure of individual data.

The respondents are clearly informed about the purpose and importance of the activity, and that information provided will be used for statistical purposes only, and that no information is published in such a manner as would enable any particulars to be identified.

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

The Bureau has no formal legal authority to obtain requested data from respondents. However, in general, outlets do not refuse permission to price collectors to record prices, and procedures are in place to ensure the proper and timely recording on a voluntary basis.

0.2 Resources

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

Overall, the number of the staff is adequate to perform the required tasks. The staff of the Labour Bureau working on the CPI-IW is divided between the central office in Shimla and five regional offices. The staff engaged in the compilation of the CPI-IW comprises 58 full-time persons employed in the central office. Twenty-two persons are employed in the five regional offices, and 94 price supervisors and 261 price collectors are located in the centers.

The qualifications of the central staff are adequate. The staff comprises statisticians, economists, and office clerks. Employment is offered after careful interviewing and examination of applicants. New staff in the Labour Bureau go through a two-year training course in methodology and compilation methods. Seminars on selected topics within index construction are held from time to time and when felt needed. Similarly seminars are held to discuss and follow up decisions and recommendations of external bodies such as the NSC or the TAC.

The Labour Bureau also conducts seminars and workshops for main users of the index such as workers and employers organizations. The bureau organizes annual meetings with the regional officers about price collection and undertakes regular workshops in the states for the price collectors and price supervisors.

Senior as well as junior staff are knowledgeable about CPI concepts and methods of index calculation. There is high awareness of the need to ensure as far as possible consistency between the concept and purpose of the index and the methods applied. Also considerable efforts are devoted to ensure a robust production process in order to ensure the collection, compilation and publication of the index on a timely basis. However, little research on CPI methodology is carried out and participation in international work on price statistics has not been a point of priority so far.

Overall, sufficient computer resources are allocated both to the central office in Shimla and the five regional offices. The collected prices from most of the centers are sent to the central office in Shimla by mail. However, for five centers prices are reported electronically via internet, and other centers are encouraged to follow this method of reporting.

Overall, financial resources for compiling the statistical series are adequate for performing the required tasks. Due to the extensive use of the CPI-IW for adjusting wages and allowances paid by the Central Government or the states to the household sector, sufficient resources are allocated to ensure the quality and credibility of the index.

At present a new statistical system for compiling the CPI-IW, based on an Oracle database platform, is under development. It is expected to be ready for production before the end of 2002. The resources necessary to develop the new system as estimated by the Labour Bureau has been received. Similarly, the Bureau has received adequate support to undertake a major revision of the CPI-IW, including updating of the weight basis to 1999–2000.

0.2.2 Measures to ensure efficient use of resources are implemented

Managers promote efficiency and the production process is streamlined in order to ensure that the index can be published on the pre-announced monthly dates. Rules of procedures and data formats are harmonized across states so that the reporting of prices and checking and validation of the data can be undertaken efficiently and timely.

At the time of meetings with regional officers and price collectors and supervisors, instructions are given to improve efficiency and timeliness. The Labour Bureau has been able to improve efficiency and to shorten the production period. It is expected that implementation of the new statistical system will further improve efficiency.

Internal processes exist within the Labour Bureau to measure resources used to compile the statistical series. The compilation process from time to time is also assessed by outside bodies, such as in the *Report of the Study Group on Labour Statistics*, carried out by a working group under the Ministry of Labour in 1999.

0.3 Quality awareness

0.3.1 Processes are in place to focus on quality

Managers and staff are aware of and sensitive to the dimensions of data quality. Integrity and reliability of the index are eminent features of the CPI-IW. This is recognized throughout the organization. Managers and staff are carefully instructed to comply strictly to all rules regarding integrity and confidentiality to prevent any influence from other parties.

Consistency in concepts as well as in published data are also an issue of high priority as even very small discrepancies or ambiguities in the published indexes may have considerable effect as many wages and allowances are adjusted according to the CPI-IW. Staff are trained and instructed to follow rules and procedures in the compilation of the CPI-IW to ensure the quality of the index.

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

Measures are in place to monitor the quality of the various statistical stages. Through the regional offices and the price supervisors, efforts are continuously made to ensure that the

guidelines for price collectors are followed. The processing of data is carefully checked each month according to a fixed schedule for checking and validation of data, both manually and automatically. Indexes down to item level are checked and cross-checked across item groups and centers. Two states compile indexes for their own state, based on the same set of prices as collected by the CPI-IW price collectors. The indexes compiled by the states are used for extra checking and validation against the results of the Labour Bureau. Before publication the final index figures are double checked to prevent mistakes.

The TAC provides guidance and recommendations on the quality of the statistical series and on strategies for improving data production. Although this body is advisory, its recommendations are followed in practice.

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

Tradeoffs between timeliness and accuracy/reliability are met by improving the system of price collection and data compilation and validation. Further improvement in quality is expected with the implementation of the new statistical system.

New or emerging data requirements as well as methodological issues may be raised by the TAC, to which the Labour Bureau will have to respond. Meetings are periodically convened with the main users of the index to review existing statistical series and methods. Users may raise questions and suggestions to the Bureau.

Updating of the weights of the CPI-IW, which at present refers back to 1981–82, has for a long period been considered as the most important requirement for improving the index. This has been acknowledged by the Labour Bureau as well as the NSC. In order to meet this requirement, the Bureau has conducted a Working Class Family Income and Expenditure Survey during 1999-2000 and derived a new set of expenditure weights on this basis. Compilation of a revised CPI-IW based on the new weights is in process and may be ready for release in 2003. However, the revised CPI-IW will not be introduced before tripartite meetings and approval of the TAC.

1. Integrity

1.1 Professionalism

1.1.1 Statistics are compiled on an impartial basis

The Allocation of Business Rules and the Minimum Wages Act, 1948 address the general need for the professional independence of the Labour Bureau as the data producing agency and prohibits interference from others, including other government agencies, in the

compilation and/or dissemination of the CPI-IW. There is thus a long standing tradition of non-interference and impartiality of the bureau; the open decision process in the tripartite hearing process is supportive of this. Professionalism is promoted by the two-year training course for all new staff. On occasion, courses and workshops are organized for the staff as well as for main users.

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

The choice of source data and statistical techniques for sampling, processing and validation is based solely on statistical considerations made by the staff in the bureau. A methodological document is available on request. It is not available on the Bureau's homepage.

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

The Labour Bureau seeks to build and maintain trust in its work by commenting publicly on erroneous interpretations or misuse of the statistical series. Efforts to prevent misinterpretation or misuse of statistics are made by providing explanatory materials and documentation. Such actions are regarded as necessary to assure the general acceptance of the index. When differences in annual growth rates between the CPI-IW and the wholesale price index were intensively discussed, the bureau in 2001 produced and published the report *Variation in inflation rate depicted by the wholesale price index and the CPI-IW during 1995-99*, which offers a thorough analysis of the two index series.

1.2 Transparency

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

The terms and conditions under which the index is compiled and disseminated, are publicly available in the *Indian Labour Yearbook*, in the *Reference Book on Consumer Price Index Numbers*, in the *Labour Bureau's Annual Report on Consumer Price Index Numbers*, in press releases, and on the Bureau's homepage. The main terms and conditions are also published on the IMF's Dissemination Standards Bulletin Board (DSBB). Statistical publications identify where more information about the data producing agency and its products can be found, including reference to the Bureau's homepage.

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

The CPI-IW is released at the same time to all users. No parties, including other government agencies, are supplied with data in advance of the official release. This is publicly identified on the IMF's DSBB.

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

Data released to the public are clearly identified as the Labour Bureau's product. Attribution to the Bureau is not explicitly requested.

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

Major changes in methodology, sources, and statistical techniques are introduced only after thorough discussion and agreement in the tripartite meetings and consultations with the TAC. Notices of changes are released to the general public at the time when the changes take effect.

1.3 Ethical standards

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

Guidelines for staff behavior are outlined in the Civil Services Conduct Rules, which are implemented and followed in the daily work in the Labour Bureau and in the contact with users and respondents. The Director and Chief of Division regularly remind staff to maintain the ethical standards in respect of integrity, confidentiality and impartiality.

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 concept and definition of the index population are based on national standards and cover industrial worker families only. Industrial worker families are defined as those in which at least one of the members is employed as a manual worker in one of seven industrial sectors (factories, mines, plantations, railways, public transport, electricity and distribution establishment and ports and docks) and which derive 50 percent or more of their income through this employment. However, the selection of CPI-IW centers has been made on the basis of three sectors only, namely: factories, plantations, and mining. The concept and definition of consumption expenditures are broadly in line with the recommendations in the *SNA* as they include households' purchases of goods and services for their own final consumption, with the exception that second-hand goods such as used cars are not included. The same national standards will be followed in the revised CPI-IW, expected to be available for publication in 2003.

2.2 Scope

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

The scope of the CPI-IW is confined to the population of industrial worker families only, rather than the whole population of resident households, such as recommended in *1993 SNA*. Thus, the CPI-IW does not cover, for an example, individuals living in institutional households, urban non-manual workers, rural labourers, households whose primary activity is farming or fishing, or foreigners (tourists) visiting India.

The scope of consumption expenditures broadly follows the *1993 SNA*. The CPI-IW covers expenditures incurred by households on purchasing goods and services for own final consumption plus imputed values of goods and services, which are not purchased but procured otherwise for consumption. Own-account production of market goods for own final consumption is included by imputed market values. The value of consumption of owner-occupied housing is included by the rental equivalent approach. All fixed capital formation is excluded. Expenditure on services of illegal market goods and services are excluded also.

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 households follows national standards determined by the NSSO. The NSSO produces detailed guidelines and instructions to field staff as regarding the classification of households. The classification of households' consumption expenditure on goods and services is also based on a national classification determined by the NSSO. This classification also addresses problems of timing, credit purchase, payment in kind and imputations. However, it does not follow *SNA's* Classification of Individual Consumption by Purpose and deviations are not kept under review.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

The price concept applied follows in principle the definition of purchaser prices in *SNA* as the prices recorded in general include indirect taxes less subsidies on products, and discounts and rebates available to all consumers are deducted. The consumption expenditure, and hence also the weights of the CPI-IW, is valued on the basis of the purchaser prices.

2.4.2 Recording is done on an accrual basis

Prices of goods and services are recorded at the time of visit of the price collectors. For all practical purposes, this is in accordance with 1993 SNA.

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

Grossing/netting procedures follow good practices to some extent. However, as purchase of existing goods is excluded from the index, no netting procedures are carried out for used goods, such as used cars, for an example.

3. Accuracy and Reliability

3.1 Source data

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

The weight source data are collected from a comprehensive data collection program that takes into account country-specific conditions. The weights of the present CPI-IW are derived from the Working Class Family Income and Expenditure Survey, conducted by the NSSO during 1981-82. The survey covers approximately 32,600 industrial worker families in 70 centers located in 21 states or union territories across the country. The 70 centers are chosen purposively with respect to industrial importance (sectoral employment, see section 2.1.1) and geographic location. The centers are distributed in 21 states or union territories with a maximum of five centers per industrial sector in a state. The geographical coverage is assessed as comprehensive, taking the scope of the CPI-IW into account. The population covered by the sample constitutes roughly 20 percent of the total population in India.

The NSSO carries out family surveys every five years, so that the technical and institutional set-up for undertaking family surveys is in principle available. However, because of the particular coverage of the CPI-IW as regards the index population and the geographical coverage, the household sampling frame of the regular five-yearly NSSO family survey cannot be used directly. Therefore, a special survey designed for the construction of weights for the CPI-IW has to be carried out by the NSSO on request of the Labour Bureau.

Expenditures on goods and services are distributed on some 260 item groups for all-India, varying from 110 to 170 from center to center. The collected expenditure data covers purchases of market goods and services, goods produced for own consumption at imputed market prices and the imputed rental value of owner occupied dwellings.

Price data are collected from a comprehensive sample of goods and services. Volatile prices, such as for meat, vegetables, and fruits, are collected weekly. Prices that are less volatile, such as those for utensils, furniture, clothing and household appliances, are collected monthly. Price data for house rents, school or college fees, and other goods and services, the price of which are known to vary less frequently, are collected every six months. The total sample covers about 260 items for which 160,000 prices are collected from 16,500 outlets and open markets in the 70 centers.

In general, items that account for more than one per cent of the expenditure group to which they belong and for which prices are expected to be available on a regular basis, are included in the index. Items for which the price movements are found likely to be representative of items left out of the sample, are chosen. For each item prices are collected from two outlets in each locality/market in a given center. In addition two “reserve” outlets are selected, in case prices are not observable from the primary selected outlets. The number of localities/markets varies between centers depending on the size of the centers and the type and size of the localities/markets. The outlets are selected in cutoff sampling in order to maximize coverage in a cost-efficient way.

Detailed specifications of product varieties are provided to the price collectors to ensure that the same variety is being priced from period to period and that changes in specifications are recorded and taken into account. For scrutiny and verification of prices, the staff follow the development of prices in the press and elsewhere. Main user groups, the CSO, and the TAC are free to raise question on any specific issue which they may find needs to be taken into account in the CPI-IW.

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

Source data for both prices and weights broadly approximate the definitions, scope and classifications of the CPI-IW, as the NSSO family survey and the CPI-IW are closely linked together. The source data are also consistent with the time of recording, reference periods and valuation of CPI estimates. However, the current weights are based on source data from 1981-82, and no adjustments have been made in order to take into account changes in pattern of consumption or emergence of new products. Therefore, in practice divergences inevitably exist between the weights source data and the scope of the index.

3.1.3 Source data are timely

As indicated above, source data for weights are clearly outdated. A special survey for CPI-IW weights has been carried out for 1999–2000 (September 1999–August 2000) to replace the old set of weights from 1981–82. Price data are timely, so that the CPI-IW can be published before the end of the month following the reference month, allowing for the necessary time for data compilation and validation.

3.2 Statistical techniques

3.2.1 Data compilation employs sound statistical techniques

The detailed expenditure for groups of goods and services comprise in total some 260 items, which is at a sufficient level for detailed analysis.

Appropriate techniques are used to address specific issues of measurement for CPI weights. The weights are established on the basis of industrial worker families' consumption expenditure. Household residential capital formation expenditures are excluded from the index. The weight for owner-occupied dwellings is estimated at market rental values. Goods and services purchased are valued at the actual prices paid by the households regardless of the method of payment. Goods and services produced for own final consumption are valued at market prices at the time produced.

In general, accepted statistical techniques are used to compile the CPI-IW. For each center the elementary item indexes are calculated as the long term ratio of the arithmetic average prices. However, the sub-index for rented dwellings is calculated as a chained index of ratios of arithmetic average prices with half-yearly links. Each half-year the present and previous price observations are matched and a half-yearly index link is calculated and chained onto the index in the previous period. For items which are sold through both regular outlets and subsidized outlets, i.e. so-called fair price shops, a special procedure is applied to obtain a weighted average price. Higher level indexes are calculated as the weighted average of the item indexes applying center specific item weights, i.e., as Laspeyres type indexes. The all-India CPI-IW is calculated as a weighted average of the 70 center indexes, where the weights are calculated as the estimated consumption expenditure of industrial workers household in each center in proportion to the total consumption expenditure of industrial workers in all 70 centers.

The weight reference period is March 1981–February 1982 and the price reference period is the year 1982. However, no adjustment to take account for price changes between the two periods were carried out because of lack of price series and as the possible effects were thought of marginal importance. When the 1981–82 weights were introduced in 1988 linking factors were calculated and published together with the new index series. The treatment of missing prices broadly follows internationally accepted statistical methods. In the case of temporarily missing prices, the item indexes are estimated by the Bureau on basis of the price development of comparable products or carried forward. In case the number of available prices for a given item is found too small, usually below 25 percent, these prices are ignored and the item index of the preceding month is carried forward or estimated on the basis of comparable observations from other markets.

Three methods are applied when it is observed that an item variety has become permanently unavailable. First, if a replacement variety of similar quality can be found it is substituted for the disappearing product and the whole price change is included in the index. Instructions are

given to the price collectors for collection of substitutes. Second, if the replacement product is assessed to be of a different quality, but still comparable in terms of product specifications and functionality, overlapping prices are used to adjust for the quality difference between the new and the old variety. Price collectors are instructed to obtain the price of the new variety also for the preceding period, so that overlapping prices can be obtained with the help of which the price series for the two varieties can be linked. Third, in case of substantial shifts in quality in terms of specifications and/or functionality, the new variety is linked into the index to show no change, assuming that the whole of the price change is due to change in quality.

New items that emerge on the markets are not included in the index until the weights are updated. This means that new products that gain market shares, such as personal computers, for an example, are not included in the sample. As the price movement of new products often differ from the price movements of existing products, exclusion of new products can cause severe bias in the index. Seasonal items are dealt with according to good practice by applying a variable weights approach. At the time when a certain item disappears from the market it is excluded from the sub-index, which is then calculated on the basis of the available item indexes, the weights of which are rescaled to sum to unity.

Finally, although of limited importance due to the marginal weight in the overall index, the treatment of free houses, i.e. houses provided by central or local authorities to private households free of charge, seems to contradict the concept of a consumer price index, as the (basic period imputed) prices of these are kept constant.

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

The scope and compilation method for the CPI-IW is agreed with the main users of the index and finalized in consultation with the TAC. They are not subject to adjustment or changes by, for example, including data from external sources. The CPI-IW covers only industrial worker families. In terms of total household final consumption expenditure the CPI-IW covers less than 50 percent.

3.3 Assessment and validation of source data

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

Price data are routinely assessed for errors by price collectors and by the Labour Bureau as part of the monthly production of the CPI-IW. Data are carefully examined and checked for outliers by comparing data both over time and across product groups at the same point in time. Due to the judgemental nature of the sample of centers, outlets, items and varieties, it is

not possible to calculate meaningful figures on sampling errors. Problems with nonresponse are sought to be minimized by training price collectors and selecting “reserve” outlets. Methods applied in case of nonresponse, i.e., missing prices, are published and available on request.

The expenditure survey for industrial worker families, which is the data source for the weights, is carried out by the NSSO. Problems regarding misclassification, non-response and other measurement errors are solved by the NSSO in consultation with the Labour Bureau in the course of production of the survey. The NSSO’s instructions to field staff describe in detail definitions, classifications, and rules to prevent as far as possible mistakes and errors.

The survey is carried out after close cooperation between the NSSO and the Labour Bureau so that the expenditure breakdowns are consistent with the CPI.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Main intermediate data are validated against other information where applicable

Intermediate data are compared with other price indexes, such as the CPI-RL and the CPI-UNME as part of the regular scrutiny of weekly and monthly price data.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

Unusual movements in prices for particular centers, items or price collectors are investigated. In cases where individual observations need to be checked, the central office contacts the regional officers or supervisor and asks for verification.

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

Statistical discrepancies between the indexes for different centers or for different product groups are investigated and measures are taken to remove or explain them. Indexes calculated by the Labour Bureau are routinely checked each month against CPI-RL and CPI-UNME and the indexes compiled by two states.

3.5 Revision studies

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

The center-level CPI-IWs and the all-India CPI-IW are final when first published and are not subject to revision. Revisions of weights are thoroughly examined by the Labour Bureau, the results are communicated to the main users and the TAC, and possible actions to be taken are

discussed and agreed, for an example by expanding the sample of items for price collection. Old price index series are not recalculated using the new set of weights.

4. Serviceability

4.1 Relevance

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

An established process of consultation takes place periodically with the CSO and the TAC and the main users. The needs of the main domestic users are taken into account after thorough discussion and agreement (see also 0.1.1). The concerns of international or macroeconomic users, who require a measure of overall inflation in the economy as well as more detailed subindices, have not yet been met. Because of the confined coverage of the CPI-IW comparison with international statistics is hampered.

4.2 Timeliness and periodicity

4.2.1 *Timeliness follows dissemination standards*

Both the center-level and the all-India CPI-IW are published on the last working day in the month following the reference month, which meets the SDDS requirements.

4.2.2 *Periodicity follows dissemination standards*

Both the center-level and the all-India CPI-IW are published monthly according to SDDS standards.

4.3 Consistency

4.3.1 *Statistics are consistent within the dataset*

Both the center-level and the all-India CPI-IW are consistent with the weighted average of the sub-indexes of the index. The overall all-India CPI-IW is also consistent with the weighted average of center-level indexes.

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

Consistent time series data from August 1968 to the present are available on the Labour Bureau's homepage (www.labourbureau.nic.in) including linking factors on center-level and for all-India between the new and the old CPI-IW series.

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

Due to the specific index population coverage the CPI-IW is not consistent or reconcilable with CPI-RL or CPI-UNME. The CPI-IW has been compared to these series but significant divergences in the growth rates have been found. On a medium or longer term scale the CPI-IW is broadly in line with the WPI, although for the last half of the 1990's considerable and sustainable differences appeared. For short term purposes these measures may show substantial different developments.

4.4 Revision policy and practice

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

The CPI-IW is considered final when published and has never been revised. Revision of weights is undertaken by the Labour Bureau in consultation with CSO and TAC. The weighting data have not been revised regularly, say, every five or ten years. However, as already mentioned, a new set of weights referring to 1999–2000 is under construction.

4.4.2 Preliminary data are clearly identified

No preliminary index data are published.

4.4.3 Studies and analyses of revisions are made public

Revised weights are available in publications for the main aggregates only.

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 CPI-IW is presented in a clear manner in user-friendly tables. However, indexes are published for five main aggregates only: (1) Food, pan, supari, tobacco, and intoxicants; (2) Fuel and Light; (3) Housing; (4) Clothing, bedding and footwear; and (5) Miscellaneous, and for nine and five sub-aggregates under main aggregates 1 and 5, respectively. Index series for, say, fuel, or electricity, or for all goods or all services are thus not available.

5.1.2 Dissemination media and formats are adequate

Dissemination media and formats are adequate. The monthly CPI-IW is published in the press release and on the Labour Bureau's homepage. It is also published in the *Monthly Index*

Letter and in *Indian Labour Journal*. The monthly indexes are sent to some 1000 key users by mail. The all-India CPI-IW and center-level indexes are published in the annual report *Consumer Price Index Numbers*. The home page contains, free of charge, the latest data and time series of the all-Indian CPI-IW back to 1968, 12-month moving averages, annual inflation rates and the center-level indexes for the last two months. In addition, time series of the CPI-RL are available.

5.1.3 Statistics are released on a pre-announced schedule

The monthly CPI-IW is released according to a preannounced schedule and available on the Bureau's homepage.

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

The index is released simultaneously to all users on the date specified in the pre-announced schedule. No advance information is provided for any parties.

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

Unpublished (but non-confidential data) such as specialized tabulations or detailed item-level indexes are provided to users on request. The availability of nonpublished data is not made available to the public, but it is well known to all major users.

5.2 Metadata accessibility

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

Metadata, including information on concepts, definitions and methodology are available in the publication *Consumer Price Index Numbers in India* (1989). The annual report *Consumer Price Index Numbers* contains a brief methodological documentation. Published metadata, however, does not address questions about deviations from internationally accepted standards.

The SDDS summary methodology page has not yet been completed.

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

Metadata is published in the above mentioned publications only. The level of detail is adapted to the needs of the intended audience, i.e., primarily employer's and employees organizations and Central and State Governments.

5.3 *Assistance to users*

5.3.1 *Contact person for each subject field is publicized*

Users of the index are provided with adequate and knowledgeable assistance. The monthly press release identifies the postal address of the Bureau and the Bureau's homepage and e-mail address. The annual report *Consumer Price Index Numbers* identifies only the address of the Bureau's homepage. Although the names and telephone numbers of specific contact persons are not routinely published, the Bureau's home page contains the names and addresses of senior staff.

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

A catalogue of publications is available to users in *Indian Labour Yearbook* and in *Pocket Book of Labour Statistics* (annual). A list of publications and their prices is also available on the Bureau's homepage.

III. PRICE STATISTICS (WHOLESALE PRICE INDEX)

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The Government of India (Allocation of Business) Rules, 1961, with subsequent amendments, assigns the responsibility for compiling the WPI to the Office of the Economic Adviser in the Department of Industrial Policy and Promotion under the Ministry of Commerce and Industry. The Economic Adviser holds the final authority for all decisions regarding the WPI. The Office of the Economic Adviser has compiled and published the WPI since 1942, the compilation of the WPI being one of the key functions of the Office.

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

Procedures are in place to ensure efficient and timely flow of price source data between the Office of the Economic Adviser and other price data producing agencies. Prices are collected from official as well as non-official sources. The official sources are the Directorate of Economics & Statistics, Ministry of Agriculture, Agricultural Marketing Departments of Central and State Governments, State Directorates of Economics and Statistics, District Statistical Offices, and other agencies belonging to the State Governments. The non-official sources are various chambers of commerce and associations of manufacturers and individual enterprises, and manufacturers that report prices directly to the Office of the Economic Adviser. Source data for weights are derived from the national accounts, from the Annual Survey of Industries, and from agricultural statistics.

The Office of the Economic Adviser is responsible for keeping the data producing agencies informed to ensure proper understanding of data requirements, and is active in doing so. Staff have lately been visiting all states where instruction meetings for reporting agencies were organized with the view to improve the quality of the reported data and minimize problems with non-response and timeliness.

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

The confidentiality of individual respondents' data is maintained through the application of the Central Civil Services (Conduct) Rules, 1964. The Civil Services Conduct Rules state that individual responses should be treated as confidential, and not be disclosed or used for other than statistical purposes. In case of violation of the rules disciplinary actions can be taken in the form of warnings, fines and, ultimately, dismissal. The rules are well known to all staff.

All individual respondents reporting to the office of the Economic Advisor are informed in writing that the reported data will be treated confidentially. Likewise data collected through the Annual Survey of Industries, which are used for the weighting diagram of the WPI, are also collected under conditions of confidentiality.

To ensure that access to individual data is restricted to staff who require the information in the performance of their duties, passwords are used to control access to computers used for handling of individual data. The index series are published on a level of aggregation that prevent direct or indirect disclosure of individual data.

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

Although the Allocation of Business Rules assigns the responsibility of compilation of the WPI to the office of the Economic Adviser, the office has no formal legal power to obtain the requested data from the respondents. The accuracy of the basic data thus is dependent upon the voluntary cooperation of business enterprises. However, the NSC has recommended exploring the feasibility of bringing the collection of price data under the umbrella of the Collection of Statistics Act, 1953.

The weighting basis for the WPI is compiled on the basis of national accounts figures, the Annual Survey of Industries, and agricultural statistics, which are conducted under the provision of the Collection of Statistics Act, 1953.

The office provides assistance to respondents in completing and submitting forms. Through interaction with various chambers and associations of manufacturers, and government departments, paying field visits and organizing workshops, the Office informs about the WPI and reporting formats to prevent misunderstanding. It has also been made possible for the respondents to report prices by fax or e-mail in addition to the traditional reporting by mailed post. Over the last few years, these activities have improved the data accuracy, the response rate, and the timeliness.

0.2 Resources

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

The number of staff in the Office of the Economic Adviser is adequate for compilation of the current WPI. The Office employs 11 full time persons. The qualifications of the staff, which consists of both economists and statisticians, is adequate. Staff are in general recruited at masters degree level. As employment in the central government is popular, there is competition and the office has no problems in recruiting qualified staff. New staff undertake two weeks courses in data handling and index compilation. New and existing staff participate in on-the-job training and seminars on selected topics from time to time. Seminars are

organized to discuss and follow up upon decisions/recommendations of external bodies such as the NSC or the TAC. Senior staff are experienced and knowledgeable on WPI statistics as well as related areas such as consumer price indexes, national accounts and industrial statistics. However, participation in international meetings, workshops and courses has been very limited to date.

Overall, sufficient computing resources are allocated for compiling and disseminating the WPI. The office serves as the central statistical service unit in the Department of Industrial Policy and Promotion and is adequately equipped with computer facilities. Financial resources for compiling the current statistical series are also adequate.

However, the NSC and the Working Group on Revision of the WPI have recommended that the present price collection method be analyzed with the possible outcome of considerably increasing the sample of respondents and products, and introducing price collectors. Implementation of this is expected to require additional staff and resources. The NSC also has recommended that the services sector be included in the WPI and that the existing WPI be restructured to introduce stages of processing indexes. This, too, is expected to require extra resources.

0.2.2 Measures to ensure efficient use of resources are implemented

Processes and procedures are in place to ensure that resources are used efficiently. The WPI Division is a well-knit unit performing a tightly-scheduled task of producing weekly WPIs on a timely basis. The performance of all staff is monitored thoroughly and the number of staff is reviewed from time to time.

0.3 Quality awareness

0.3.1 Processes are in place to focus on quality

Managers and staff are aware of and sensitive to the dimensions of data quality. Increasing awareness of the quality of the WPI regarding accuracy, reliability, serviceability and accessibility has been developed over the last couple of years, partly because of the growing and extensive use of the WPI as the general measure of inflation in India.

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

Measures are in place to monitor the quality of the various stages of collecting, processing, and disseminating the data. As part of the ongoing weekly production, potential problems are identified by the staff, possibly after consultation with individual respondents or other data suppliers.

To ensure and improve the quality of the WPI, the office of the Economic Adviser is assisted by the experts in the TAC. All technical and quality related issues are sorted out with the help of this committee. In addition, working groups representing users, respondents and experts are from time to time formed on selected issues.

All respondents can easily get in contact with the office by telephone or e-mail. Providers of price data are also represented in the Working Group on Revision of the WPI.

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

Processes are in place to deal with quality considerations. There is recognition by the management of the tradeoffs among the dimensions of quality. Two such tradeoffs are identified. The first, between accuracy/reliability on the one hand and resources and respondents' burden on the other, is dealt with by communication and consultations with the agencies from which prices are received. The Head of the office has lately been undertaking meetings in all states with representatives of organizations of enterprises and manufacturers about the WPI and the importance of correct and timely reporting of prices. The second tradeoff is between accuracy/reliability and timeliness, which has been dealt with by improving the possibilities for price reporting, i.e., by introducing fax and e-mail for reporting of prices. The question of reducing the present weekly periodicity to, perhaps, every two weeks or monthly has so far not been considered.

Updating of the weights of the WPI, which at present refer back to 1993–94, has for a long period been considered as one of the most important requirements for improving the quality of the WPI. The office, as well as the NSC, has recommended that the weights should be updated every five years and no later than every ten years. At present, the office is compiling a new set of weights based on data for 1998–99.

1. Integrity

The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to

1.1 Professionalism

1.1.1 Statistics are compiled on an impartial basis

The professional independence and integrity of the office of the Economic Advisor is ensured by the Ministry of Commerce and Industry under the Allocation of Business Rules. There is no interference from the ministry or any other government organization and the compilation of WPI is done on an impartial basis and in a professional manner.

Professionalism is actively supported by publication of methodological reports and by participation in and organizing meetings and workshops. Meetings on price index issues may also be organized on the initiative of the TAC, which may also raise questions to the Office of the Economic Adviser. In addition, the office has recently organized a training program for the price indexes officers of the Central Bank of Nepal. However, as already noted (0.2.1), broader international exposure so far has had little or no priority.

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

Choices of data sources and statistical techniques are decided by the Working Group on the Revision of the WPI and based solely on statistical and professional considerations. Decisions regarding the current WPI are published in hard copy and also available on the office's homepage (www.eaindustry.nic.in).

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

The Office of the Economic Adviser is entitled to comment publicly on erroneous interpretations or misuse of the statistical series in the media and in other fora. The office makes active use of this right. On request from users, the NSC or respondents, the office carries out analysis and provides explanatory material.

1.2 Transparency

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

The terms and conditions under which the index is compiled, as laid down in the Allocation of Business Rules and other administrative laws, is published in Hindi and English and available from bookstores selling government publications. A summary of the terms also appears on the IMF's DSBB.

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

On each Friday the Office of the Economic Adviser finalizes the WPI and issues the *Press Release*, which is embargoed for publication until the following Sunday. The *Press Release*, embargoed until Sunday, is also made available on Friday to the Ministry of Finance and the Reserve Bank of India. Internal government access to the WPI press release prior to its release to the public is not identified on the IMF's DSBB.

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

Data released to the public in hard copies or on the internet are clearly identified as the product of the office of the Economic Adviser. Attribution is not requested when the WPI is used by others.

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

Advance notice of major changes in methodology, data sources or statistical techniques is given in the office's *Press Release*, also available on the internet. Major users such as MOF, RBI, other government agencies and organizations are also informed of major changes in advance through various bodies, such as the TAC.

1.3 Ethical standards

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

Staff behavior is governed by the comprehensive Civil Services Conduct Rules, which cover areas relating to performance of duties, rules for confidentiality and personal conduct. The staff of the office are aware of these rules and are reminded of them from time to time.

2. Methodological Soundness

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

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 purpose of the index is to meet Indian requirements by providing a measure of the development in wholesale prices. In India, the WPI is generally used as the headline measure of inflation. Because of its use, the authorities consider that the index should not be restricted to domestically produced items but also cover imported goods. The concepts and definitions for both weights and prices are thus not consistent with those for a producer price index, which in general internationally is regarded as analytically more meaningful than a WPI. Deviations from the 1993 SNA guidelines are under review as part of the ongoing work to update the weights of the WPI.

2.2 Scope

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

The scope of the WPI is the wholesale transactions of goods on the domestic markets. It is broadly consistent with accepted international standards although adapted to Indian conditions. Services are not within the scope of the index.

The WPI covers primary products (agriculture and mining), energy (fuel, power, light and lubricants), and manufactured products. Imported goods are included only partially and indirectly. For primary products and energy, only goods produced for the domestic market by resident enterprises are covered. Imports of primary products and energy do not enter into the compilation of the weights, and no prices for these products are collected. For manufactured products the weights are based on the market value of goods produced for the domestic market by resident enterprises plus the market value of imported goods. However, prices are collected for domestically produced goods only. Imported products are excluded from the index.

The delimitation of market enterprises of the economy is in broad accordance with the *1993 SNA*. Free zones/bonded warehouses/factories operated by offshore enterprises under customs control are not included because they are viewed as being of only marginal importance for the Indian economy.

Differences in scope between the WPI and the *SNA* are not made public. As deviations from the *SNA*, the WPI excludes market services, changes in output inventories, own-account production of market goods for own final consumption, output of market goods for own-account fixed capital formation, production of housing services of owner-occupiers for their own consumption and illegal market goods and services.

The NSC has recommended that the services sector be included in the WPI and that the existing WPI be restructured to introduce stages of processing indexes.

2.3 Classification/sectorization

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

The classification and sectorization used in the compilation of the WPI broadly follow internationally recommended systems. At one- and two-digit level, the classification of institutional units and transactions is based on *1968 SNA*. Classifications below that level follows the National Industrial Classification, 1987, which is broadly based on the *ISIC* rev. 2. No product classification is applied. Deviations from internationally guidelines are under review as part of the ongoing work of compiling a new set of weights for the WPI based on data from the national accounts and the Annual Survey of Industries for 1998–99.

2.4 Basis for recording

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

The valuation rules used for recording flows and stocks are partially in accordance with the *1968 SNA*. At one- and two-digit National Industrial Classification level the weights are calculated on basis of gross national product at market prices, adjusted for the exclusion of services.

Below the two-digit level weights for energy and manufactured products are calculated on the basis of the Annual Survey of Industry's figures for net trade value recorded at market prices, i.e. basic prices plus product taxes. Weights for primary products below the two-digit level are calculated on the basis of data from the Ministry of Agriculture for production values at primary market prices, i.e. wholesale prices. Weights for agricultural products are calculated as the average of three years in order to smooth extreme observations in any single year caused by changing weather conditions (the monsoon, in particular).

From these source data, weights for subgroups and detailed commodity groups are calculated in proportion to the share of total product value. In total the WPI consists of 435 commodity groups. Output for own-use or intermediate consumption and transactions between units of the same enterprise are not included in the weights. Deviations from the principles in the 1993 SNA are under review as part of the ongoing work with establishing the new set of weights for the WPI as mentioned above.

2.4.2 Recording is done on an accrual basis

Prices are not entirely recorded on an accrual basis. Each week, the respondents are asked to indicate the price charged during the week, or, if there have not been any sale, what price would have been charged had there been a transaction.

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

No grossing/netting procedures are carried out as stage of processing indexes are not compiled at present. As mentioned already, the NSC has recommended that the existing WPI be restructured to introduce stages of processing indexes.

3. Accuracy and reliability

Source data and statistical techniques are sound and statistical outputs sufficiently portray reality.

3.1 Source data

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

In the absence of a comprehensive and up-to-date business register the weight source data are less than adequate. The weights are derived from national accounts figures combined with more detailed information from the Annual Survey of Industries for energy and manufacturing and from the Ministry of Agriculture for primary products.

The commodity group weights of the WPI are, with some exceptions, derived from the detailed Annual Survey of Industries, which is carried out every five years, and sales data

from the Ministry of Agriculture for the same period (i.e., the average of the three years centered around the year of the Survey of Industries). The weights of the current WPI are based on the survey undertaken in 1993–94. The Survey is based on cut-off sampling to increase coverage and ensure inclusion of all major units. Units below the cut-off threshold are covered by random sampling.

The Annual Survey of Industries is based on the list of registered manufacturing units, maintained by the State Chief Inspector of Factories and a sample of production units obtained from the Annual Survey of Industries plan. However, the NSC report states that the list is grossly incomplete and includes units that have not been operating for long periods. Source data for energy and primary products (agriculture) are based on statistics and administrative data for these sectors and are found to be of sufficient coverage. Because of the questionable quality of the weighting source data for the manufacturing sector, the coverage of total output and of the activities (in terms of value added) within the main industrial group at the *ISIC* one-digit level is difficult to estimate. Nevertheless, the coverage of both is reported to be above 80 percent. The weights for the three major groups of the WPI and the number of commodity groups and price quotations are shown in the table below.

Table 4. Weights, Number of Commodity Groups, and Price Quotations
in the Wholesale Price Index

Major Group	Weight (in percent)	No. of commodity groups	No. of price quotations
Primary products	22	98	455
Energy	14	19	72
Manufactured products	64	318	1391
Total	100	435	1918

Prices are collected weekly. For manufactured products and energy, the five largest producers for each commodity group are selected for price collection. Less than 2,000 prices are collected. The majority of the prices are collected from individual respondents; the rest of the prices are obtained from various state bodies and associations of manufacturers. However, the individual respondents are mainly sampled from the list of registered manufacturing units, as mentioned under 3.1.1. Thus, the coverage and representativity of the enterprises selected for price collection may be questioned. Prices for primary products are obtained mainly from the Ministry of Agriculture and they are assessed as comprehensive. Household unincorporated enterprises are excluded from both the Annual Survey of Industries and the WPI. The detailed Annual Survey of Industries is conducted every five years. A less comprehensive survey is carried out annually. This, however, is not sufficiently detailed for providing data for the calculation of weights for the WPI. No ad-hoc surveys are conducted to fill data gaps.

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

Due to the limitations of the source data for weights and prices, it is questionable to what extent source data approximate the definitions and scope required for the WPI.

Because prices are obtained from a wide variety of sources and markets they are not always consistent with the concept of wholesale prices. For manufactured products and energy most prices are collected from individual producing units, which are asked to report the basic price plus product taxes (if any). However, a number of prices are collected ex-warehouse or from other primary or secondary markets and even retail markets, and may or may not include cost of transportation and margins. Prices for primary products are collected mainly from markets for agricultural products.

The lack of price uniformity is well recognized by the Office of the Economic Adviser (see *Revision of Index Numbers of Wholesale Prices in India. Report of the Working Group*, 1999). The NSC in its report also addresses this problem and suggest that the possibility of engaging exclusive staff for the price collection should be explored. At present, the office is considering the possibilities of improving and extending the price collection.

3.1.3 Source data are timely

The source data for weights refer to 1993-94. As already noted, however, compilation of a new set of weights based on data for 1998-99 is in progress. Source data for prices are very timely. As the WPI is compiled weekly, tight deadlines for collection of the prices need to be observed. Steps have been taken by the Office to ensure timely response from the individual respondents, such as introducing the possibility of reporting prices via the internet or fax. The Office also keeps in close contact with other departments and agencies that provide price data for the WPI.

3.2 Statistical techniques

3.2.1 Data compilation employs sound statistical techniques

The WPI is compiled and published for commodity groups at the four-digit level according to the National Industrial Classification and for aggregates thereof in classes, groups and main tabulation categories. The WPI is not compiled according to branches of industries.

Proper statistical techniques are used to address specific issues in calculation of the weights for the WPI. The detailed weights of the WPI are established on the basis of net trade values for manufactured products and energy, and production values at market prices for primary products. Work in progress (growing crops, standing timber, stocks of fish), owner-occupied housing, large construction projects and output of large items of equipment are excluded. Although the timing of transactions does not necessarily follows the accrual principle, for compilation of the WPI this is of minor importance.

In the main, internationally accepted statistical techniques are used to compile the WPI itself. The detailed commodity group indexes are calculated as the unweighted arithmetic average of the long term price relatives belonging to each product group. Higher level indexes are calculated as the weighted average of the commodity group or subgroup indexes of which they consist, i.e. as Laspeyres type indexes. Both the weight reference period and the pricing base period of the WPI refer to 1993–94. When introducing new weights, as last took place in 2000 when the 1993–94 weights were brought into use, linking factors to the old index series were calculated.

The treatment of missing prices only to some extent follows internationally accepted statistical methods. Prices for missing products are carried forward usually for two–three weeks, depending on the type of product. If, after two–three weeks, the product has not reappeared the respondent is requested to select a new product for replacement as similar as possible to the disappearing product. The respondent is requested to indicate the price of the new product backward, so that overlapping prices are obtained. However, if no replacement product of similar quality can be found, the product in question is deleted from the sample. Thus, over time the number of priced products decreases, which reduces the reliability and representativity of the index. No quality adjustment is carried out, as only products of similar quality are included in the sample when products disappear. Seasonal products are dealt with by a variable weights approach where the weight of an out-of-season product variety is assigned to an in-season variety of the same product for which prices can be obtained.

New products are not included in the WPI, which is not in accordance with internationally accepted recommendations. New products that gain market shares, such as personal computers or new car models, for example, are not included in the sample until the next weight revision. Because of the time lag between the weight reference period and the time at which the weights are introduced in the index, this may be up to seven or eight years after the current weight reference period, if the weights are revised every five years. As the price movements of new products often differ from the price movements of existing products, exclusion of new products is likely to cause bias in the index.

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

Adjustments are made to source data when concepts followed in their compilation are not consistent with WPI. Before implementing a new set of weights data for the detailed commodity groups, the list of producing units is carefully examined and checked against other sources. On this basis the Office undertakes procedures to adjust the data to improve coverage and representativity. Thus, adjustments of weights may be undertaken and producing units not on the list may be selected for price collection.

The regular compilation provides only to some extent a comprehensive measure of price change in covered economic activities. It is difficult to estimate the proportion of output for the sectors in scope of the WPI that is not covered by the WPI, because there is no formal

documentation of this. It may be from 10–20 percent or even over 20 percent, as the coverage is reduced over time because of the non-inclusion of new products in the index. The services sector, which accounts for roughly 50 percent of total output, is excluded from the scope of the WPI. Hence, the proportion of total output for the economy not covered in the regular WPI compilation lies well above 60 percent.

3.3 *Assessment and validation of source data*

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

Source data are adequately assessed and validated. As regards source data for the weights, information about non-sampling errors, methods of imputation, non-response and coverage of institutional units and products are published in reports from the NSSO on the Annual Survey of Industries. Sample errors are not available. Adjustment to the weighting source data of the current WPI made by the office of the Economic Adviser is described in *Revision of Index Numbers of Wholesale Prices in India* (1999).

Price data are checked both manually and by computer run procedures and outliers are identified and checked after contact with the respondents. Price data received from government agencies, trade associations, regulatory authorities, are checked according to the same procedures as for individual respondents. Appropriate measures are taken to validate the source data for weights and make them consistent with WPI concepts.

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

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

Intermediate data received from the main data sources are validated against other data sources. Detailed WPI sub-indexes, down to commodity-group indexes are checked and compared with other sources such as the CPI-IW, CPI-UNME and CPI-RL, or with information from business organizations, etc.

3.4.2 *Statistical discrepancies and other potential indicators of problems in intermediate data are investigated and available to guide users*

Unusual movements in the index are investigated as was the case, for example, in 2001 when a sharp rise in fuel prices took place. Information about non-released data is not published. However, when released, unusual movements in the WPI or its sub-indexes are explained in the weekly *Press Release* (also available on the office's homepage).

3.4.3 Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated and available to guide users

The WPI is compiled and published for all commodity groups and all higher level product-group indexes are derived from the lower level indexes of which they consist. Hence there are no discrepancies.

3.5 Revision studies

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

When first published, the WPI is preliminary. It is made final after a period of eight weeks on the basis of the information available up to that point in time. Differences between preliminary and final data are investigated. In periods of weights revisions analysis is undertaken in order to assess changes in the weighting data. When the new set of 1993–94 weights was introduced in the WPI in 2000, the index was recalculated from 1993–94 with the new set of weights, and comparisons with the old index series with 1981–82 weights were made and published.

4. Serviceability

4.1 Relevance

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

The relevance and practical utility of existing statistics in meeting users' needs are monitored. Monthly meetings are organized in the High-Power Price Monitoring Board under the Cabinet Secretariat, with participation of a range of Government agencies. Annual meetings are held with the Chambers of Commerce in each of the four regions in the country. The Office of the Economic Adviser interacts regularly with other government bodies, universities, and various groups of respondents and users. In addition the TAC may on its own initiative raise questions or recommendations concerning the WPI. The staff does not participate in international statistical meetings to discuss the relevance of their work.

4.2 Timeliness and periodicity

4.2.1 Timeliness follows dissemination standards

Provisional weekly indexes are released two weeks after the reference week. This exceeds the SDDS requirements. Final weekly indexes are released 8 weeks after the reference week.

4.2.2 Periodicity follows dissemination standards

The WPI is compiled and published weekly, which exceeds the SDDS standards.

4.3 Consistency

4.3.1 Statistics are consistent within the dataset

The overall WPI and all sub-indexes are derived from the lower level indexes of which they consist and are internally consistent.

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

Consistent time series for the overall WPI and all subindexes are available back to 1994. Linking factors to the previous series with 1981-82 as weight and price reference year are calculated. The changes in methodology and coverage from the old to the new series is documented in *Revision of Index Numbers of Wholesale Prices in India*, (1999), which also discusses trends in the time series.

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

The WPI follows the same classification as for industrial production statistics.

4.4 Revision policy and practice

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

The practice of revisions of provisional WPI figures follows a publicly well known and pre-determined schedule and is strictly adhered to. Revisions in the form of weight updates have normally been undertaken every ten years; the last time in 2000 and before that in 1989.

4.4.2 Preliminary data are clearly identified

Preliminary data are clearly identified as such. The revised data are disseminated with the same level of detail as previously published for the data being revised.

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

Revisions of the WPI series are explained in the *Press Release*. The introduction of the 1993-94 weights in the WPI is documented in *Revision of Index Numbers of Wholesale Prices in India* (1999).

5. Accessibility

5.1 Data accessibility

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

The presentation of the statistical series is commensurate with users' needs. The WPI is released on a weekly basis through the *Press Release* of the Office, which contains the latest provisional and final figures for the overall WPI and major subindexes. Current-period developments are commented upon. Revisions are clearly stated and explained.

5.1.2 Dissemination media and formats are adequate

The WPI is presented in a clear and understandable manner in the *Press Release*. The detailed indexes for all 435 commodity groups are shown in a table attached to the release. No seasonally adjusted series are compiled or published. The *Press Release*, including all figures and tables, is also available on the office's homepage. Annual data and longer time series are published in the annual publication *Index Numbers of Wholesale Prices in India*. The overall WPI and all sub-indexes are available back to 1994 on the office's homepage, on both weekly, monthly and annual frequency.

5.1.3 Statistics are released on a pre-announced schedule

A schedule for data release is pre-announced in the weekly *Press Release* and on the Internet.

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

Each Friday the WPI is released to the press under embargo until the following Sunday, when it is released to the general public; these procedures are announced on the IMF's DSBB. Breaches of the embargo have not occurred.

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

Nonpublished and nonconfidential detailed data are made available to users, respondents, the TAC or the general public on request. Special tables are also provided. Although the possibility of obtaining such data is not publicized, it is widely known among main users.

5.2 Metadata accessibility

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

Metadata for the WPI are published in *Revision of Index Numbers of Wholesale Prices in India* (1999), which provides users with partial information about the index. Scope, coverage,

definitions and concepts are described mainly in broad terms, and precise definitions and concepts are difficult to find. For example, the metadata do not contain a clear definition of the concept and sources of the weighting base. Likewise, issues such as the treatment of missing prices or deviations from international standards are not described. The SDDS summary methodology is updated so as to document the current WPI.

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

Different levels of detail are not available to meet users requirements as WPI metadata are published only in *Revision of Index Numbers of Wholesale Prices in India* (1999). As noted above, this is insufficient for users who require technical information. No brochures have been prepared to inform general users about the WPI.

5.3 Assistance to users

5.3.1 Contact person for each subject field is publicized

On request to the Office, prompt and knowledgeable service and support is available to users. While the weekly *Press Release* does not contain the name or telephone number of a contact person or reference to the Office's homepage, the homepage shows the name, address, telephone and fax number for a contact person and the e-mail address of the Economic Adviser.

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

A list of publications is included in the *Handbook of Industrial Statistics*. A list of available main users is also available on request to the Office.

IV. GOVERNMENT FINANCE STATISTICS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The MOF, through the Department of Economic Affairs (DEA), has assumed, without a legal requirement, a major responsibility for compiling and disseminating fiscal data on general government. Nationally reported fiscal statistics are account data on budgetary units of central and state governments.⁹ Consistent with Articles 112-117, 151 and 264-293 of the Constitution, the Comptroller and Auditor-General of India (CAG) reports on accounts of the Union Government (central government) and the States.¹⁰

The Controller General of Accounts (CGA) of the MOF submits to the public (1) *Monthly Accounts (provisional) of the Union Government* (central government) within one month of the reference month, except for the March (annual) Accounts, which is disseminated within two months after the fiscal year and (2) the annual *Union Government Finance Accounts and the Union Government Appropriation Accounts*, as audited by the CAG, are presented to the Parliament about ten months after the end of the fiscal year. Consistent with Article 112 and 202 of the constitution, comprehensive annual central government data are contained in the *Annual Financial Statement*, which is presented to the Parliament by the Finance Minister.¹¹ Annual provisional data on state governments, in aggregated summary form, are submitted nine months following the fiscal year.

The DEA has the ministerial authority to compile, and does compile, general government data (based on central and state records on budgetary units, but not including local government data), as reflected in the MOF's *Indian Public Finance Statistics* (covering, two years later, details on the major heads of receipts and expenditures). RBI, with the cooperation of the DEA, compiles and reports within nine months summary aggregates of general government operations (not including local government data) on the basis of provisional annual data from these two sources (as reported in Statement 56 of the RBI December *Bulletins*), and compiles and publishes detailed data on state government activities two years after the reference fiscal year. The MOF "Statement of Liabilities of the Central

⁹ In this report on statistics, budgetary data refers to actual data of government budgetary units (rather than to data in budget documents on prospective events).

¹⁰ In this report, the Union Government is usually called the central government.

¹¹ The *Annual Financial Statement* comprises the Consolidated Fund, the Public Accounts, and the Contingency Fund (Articles 266-67 of the Constitution). All revenue, loan receipts, and loan repayments form the Consolidated Fund.

Government” (Annexure 6 of the “Receipts Budget”) includes the total domestic and external debt of central government.

Apart from legislative mandates that require the compilation of budgetary and expenditure accounting records, a gap exists regarding legislation with mandates for compiling fiscal statistics that are consistent with, and form part of, the macroeconomic statistical framework. The DEA compiles government finance statistics (GFS) for international reporting (for the IMF’s *Government Finance Statistics Yearbook*), but these data are not published domestically. Working arrangements for the compilation of records for budgetary units are consistent with agreed responsibilities.

In accordance with Article 150 of the Constitution, the President (through the CGA), may on the advice of the CAG prescribe the form of the accounts of the Union and the states. The form of accounts of the public sector corporations are set on the basis of commercial accounting standards.

While significant authority for compiling and disseminating accounting data on budgetary units exists, the responsibility to compile, and disseminate nationally and internationally, an integrated, comprehensive statement based on international government finance statistics guidelines, does not exist.

The fragmentation of responsibilities for compiling and disseminating data on general government operations and balances complicates working arrangements for compiling the consistent and timely fiscal statistics that are needed for macroeconomic policymakers and others. This particularly may be the case when steps are made to establish a migration path for compiling and reporting, over time, general government data more in line with the internationally standard methodology of the IMF’s *Government Finance Statistics Manual 2001 (GFSM 2001)*.

0.1.2 Data sharing and coordination among data producing agencies are adequate

Official cooperation is evident among agencies collecting and compiling data on public sector units. Both the MOF and the RBI compile and publish data on combined operations of general government. The CGA of the MOF reports on provisional and final accounting records of central government, and the DEA of the MOF reports data on central and state governments based on audited data. The RBI compiles and publishes data on central and state governments. The CAG compiles the state government accounts and audits, inter alia, the Union and state government accounts as well as accounts of public sector units of the Union and state governments.

Close contacts are maintained among compilers and users of statistics as needed. Evidence of such procedures or mechanisms to ensure this cooperation is the comprehensive composition of officials engaged in the writing the *Report of the Committee on Fiscal Statistics* that was submitted to the National Statistical Commission (NSC) in May 2001. The 13 dedicated members, including the NSC representative, were senior officials representing a wide range

of entities, namely, MOF, Ministry of Statistics and Programme Implementation, RBI, Planning Commission, and non-government organizations.

There appears to be scope to enhance arrangements for cooperation between fiscal data compilers and compilers of other macroeconomic sectors to ensure integrity of the macroeconomic statistical system. Documentation of standing committees to ensure this consistency is not in evidence. However, the routine and timely reconciliation of fiscal accounts with banking accounts, for example, reflect working arrangements that limit the scope for deficiencies in the statistical links between monetary and fiscal data.

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

Data on individual public corporations are made publicly available with no specific authority deemed to be needed for their dissemination, in keeping with national transparency goals.

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

Statistical reporting on general government or public sector activities is not ensured through legal mandate. However, there are legal and/or administrative provisions that ensure that statistical compiling agencies are able to access all data required for compilation of fiscal data, for relevant government agencies, at central and state levels of government (see section 0.1.1 above). Articles 112, 150, and 202 of the Constitution play the dominate role in governing the compilation and publication of accounts data on central and state government operations. Public enterprises, functioning under the Indian Companies Act, are required to prepare and publish their accounts in accordance with statutory rules that apply to all corporate entities.

No law mandates the compilation and dissemination of fiscal statistics, and the authorities of the CAG and the MOF stated that no such law is needed. But the lack of a designated unit mandated to compiling general government statistics is likely to hamper the provision of adequate and timely fiscal statistics in the coming years. It is observed that a legal or administrative mandate for a unit to compile and disseminate fiscal statistics does not imply the discontinuation of compilation or dissemination requirements of various agencies or data sharing protocols. The cooperation of local government respondents is sought through CAG plans to limit the reporting burden.

0.2 Resources

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

While most resources are adequate, there are not sufficient professional staff in the DEA dedicated to compiling GFS, nor is there no single government unit with the authority and responsibility to compile, and disseminate nationally and internationally, an integrated,

comprehensive, GFS statement in accordance with international statistical guidelines. Various staff officials in entities of the MOF and RBI engage in the activities of compiling fiscal data. Provisions are made for internal training of compilers of fiscal data, such as that provided by the CGA Training Institute. However, these facilities do not meet the increasing demands of modernizing accounting systems and technological changes that are underway. Also, external training that directly and indirectly contributes to compiling fiscal data, particularly for those features related to the *GFSM 2001* methodology, is not deep or extensive. The CGA Office, responsible for prescribing the form of accounts for the Union and state governments, would benefit from increased exposure of its officials to the benefits deriving from adopting new accounting systems, such as those for accrual accounting, resource accounting, and output-based accounting. There is an adequate access to computing equipment and software, but there is no automated mechanism for transforming accounting data to statistical data.

0.2.2 Measures to ensure efficient use of resources are implemented

The main costs associated with compiling fiscal data, including the necessary supporting accounting system, are essentially identified in the budgeting and accounting documents of the CGA and DEA. There is no identification of the additional costs of compiling fiscal data on general government operations by the RBI. The specific costs of compiling GFS data by the Public Finance Unit of the Economics Division of the DEA on the basis of existing and evolving accounting source data on budgetary units, while not identified, are not likely to be large, particularly in view of the limited priority attached to this process in units largely concerned with other issues. No evident measures by DEA have been taken to ensure the efficient use of resources.

0.3 Quality awareness

0.3.1 Processes are in place to focus on quality

Based in the capabilities and experience of staff members in fiscal data compiling units, quality seems to be a primary element in accounting and statistical work. Moreover, the documented internal audit and reporting responsibility of the CGA and the independent auditing mandate of the CAG, including the *General Standards No. 5 of Government Auditing*, reflect a deep-seated objective of quality. There is no additionally available documented evidence of the essential role of quality specifically in the area of statistical work.

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

The accounting system of central and state governments has an embedded system of checks to help ensure quality of fiscal data. There is no international statistical or accounting standard that is used for monitoring and improving statistical quality. (Accounting policies

are based on the *General Financial Rules and Receipt and Payment Rules, Government Accounting Rules 1990*, and *Form of Accounts of the Union and States (Basic) Rules*.) A committee has been set up by the CGA to examine the issue of specifying Accounting Standards for Government Accounting. The Committee has submitted its Report and has recommended the establishment of a Government Accounting Standards Board. The Board, if established, would play a critical role in the extent to which the government enhances its accounting system to support policymaking on the basis of consistent macroeconomic statistics as well as accounting records on budgetary units of government.

Substantial efforts have been made to establish systematic arrangements to obtain feedback from users of fiscal data. The MOF establishment of websites, with their reported email and telephone contacts with MOF officials, reflects a substantial systematic effort to obtain feedback from users of fiscal data so that data quality may be improved. For example, many policymakers, primary users of fiscal data, in writing for *The Report on the Committee on Fiscal Responsibility Legislation* focused on three available fiscal variables that are compiled by the MOF on the central government, namely, the fiscal deficit, the revenue deficit, and the primary deficit.¹² In addition, a team of experts from various institutions submitted in June 2001 a *Report of The Advisory Group on Fiscal Transparency* to the Standing Committee on International Financial Standards and Codes, thus providing further feedback to compilers.

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

Consistent with the nature of existing fiscal data and the MOF goal of improving the accuracy of fiscal data, the MOF has not considered or measured tradeoffs regarding the quality of fiscal data.¹³ To help ensure data quality, the CGA uses a 15 digit classification code for all cash transactions. While limited evidence has demonstrated the organized commitment to quality, the statistical system with its independent institutional and computer reviews, in conjunction with career service and associated codes of conduct, are consistent with addressing quality in statistical planning. The *Report of the Advisory Group on Fiscal Transparency* and the *Report of the Committee on Fiscal Statistics Submitted to National Statistical Commission* reflect processes and mechanisms aimed at addressing emerging data requirements.

¹² While it is useful that the domestic feedback is supportive of the statistical aggregates compiled and reported, the use of these three deficits does not conform with the 1986 international convention, which focuses on major analytical aggregates such as net lending and net borrowing as well as the deficit.

¹³ When the collection of local government data is established, a process for considering accuracy and timeliness goals will be needed.

1. Integrity

1.1 Professionalism

1.1.1 Statistics are compiled on an impartial basis

Compilation and dissemination of fiscal data are supported by laws that establish the independence of the CAG and RBI from the MOF. The independent RBI and the MOF publish data on operations of the budgetary units of central and state governments. (The CAG had published combined data until 1987-88.)¹⁴ The DEA, which compiles and reports GFS for publication in the *GFS Yearbook* is of course not independent of the MOF, but any compromised annual reporting of these data would likely be detected because users can compare them with the source data of the independent CAG. While efforts are made to promote professionalism, there is no systematic effort to take advantage of international seminars and conferences to better utilize international guidelines and best practices.

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

The source of provisional monthly and annual data for central government operations is the accounting records of the CGA, and the source of annual data for state governments are its state government auditing counterparts. The statutory audit responsibilities for both the central and state government accounts is with the CAG. The code of conduct rules for career civil servants, the Central Civil Services (Conduct) Rules, 1964 assist in providing safeguards for GFS compilers against any political influence.

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

The CGA has responsibility for prescribing the form of accounts for the central and state governments, and has a specialized technical accounts group that is responsible for providing accounting advice on government accounting. The entities compiling and disseminating fiscal data, according to the authorities, are permitted typically to comment on erroneous interpretations or misuses of statistics.

¹⁴ The CAG in the past has published general government data in the *Combined Finance and Revenue Accounts*, and is in the advanced stage of publishing more current annual data on central and state governments.

1.2 Transparency

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

Laws and regulations broadly governing the reporting of accounting data of government are freely disseminated to the public and summarized on the IMF's DSBB. The limitations on public access to all detailed fiscal data are not identified. For example, some additional details on provisional annual data on operations of central government budgetary units (particularly details on taxes) could be made available and are not unless specifically requested, and no public reference to this limitation and additionally available data is provided. While records on annual audited accounts are quite comprehensive, transparency goals are consistent with some additional data to be disseminated and for the identification of public access limits to be published.

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

The sole authority for publishing annual and monthly provisional data on central government operations is the CGA, and these accounts are published upon approval only of the CGA.

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

Statistical products of data disseminating agencies include the identification of these respective agencies. Statistical products of other agencies are often, but not always, identified in publications. For example, Table 18 of the *RBI Bulletin* on central government accounts, while identifying the CGA as the data source, does not identify the CGA publication. Also, Tables 2.1 and 2.2 of the DEA *Indian Public Finance Statistics*, also concerning central government operations of budgetary units, does not identify the CGA publication (or source).

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

There is no evidence of notices being given for changes in methodological or other changes that materially affect published data, but there has been in recent years only one known change. No advance notice was given in that case.¹⁵ However, such changes would be reflected in the future in the official websites according to the authorities. Such notifications will be needed during any migration path toward implementing major aspects of the 2001 GFS methodology.

¹⁵ A new accounting approach was introduced in 1999–2000 that excludes the reporting of central government lending to state governments of funds provided through small savings. While no advance notice is evident, this note was properly included in Table 89 of the *Handbook of Statistics on Indian Economy* (RBI, 2001), and no such note of this important change was identified in central government operations in the MOF *Indian Public Finance Statistics 2000–2001*.

1.3 Ethical standards

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

There is a published code of conduct for all government employees. Violations of these codes call for suitable punitive actions. There is a required Statement of Immovable Property that calls for certain reporting when major purchases by individuals are conducted. There is no specific reference to compilers and disseminators of fiscal data. Periodic refresher courses regarding code-of-conduct guidelines are conducted in the CGA's training institute.

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 nationally reported fiscal data, but not a number of aggregates therein, is related to guidelines in the IMF's *A Manual on Government Finance Statistics (GFSM 1986)*, which calls for reporting cash transactions and outstanding debt. There are links between time series of these data in national reports and those in the *GFSM 1986* framework, but some linkages to the *GFSM 1986*, such as for lending minus repayments, net borrowing, and changes in cash balances, are often not transparent or straightforward (see, for example, the DEA *Indian Public Finance Statistics*). No documented bridge table for linking nationally reported aggregates and those in the *GFSM 1986*, reflecting in part the periodic changes in the national classification codes, is available. Also, no migration path has been considered for implementing in nationally appropriate stages the compilation of fiscal statistics according to the *GFSM 2001* methodology.

The Office of the CGA has the view that the existing accounting system of the government does not lend itself to support the methodology outlined in the *GFSM 2001*. CGA officials indicated that several official committees have examined the possible shift from a cash-based to an accrual-based accounting system for government accounts. While these committees recognized the shortcomings of the cash basis of accounting and proposed supplementing the present system with accrual accounting in specific areas, they have not recommended a shift to an accrual accounting system in view of their understanding of its shortcomings, including those regarding revenue transactions. These committees rejected an option for shifting over to an accrual based system. The CAG indicated its plans to examine the benefits of the *GFSM 2001* in due course.

In response to queries, the mission emphasized that the fundamental aspect of the *GFSM 2001* methodology is its call for compiling a comprehensive and integrated set of stock and flow data, including balance sheet data and holding gain data. It also underscored the need to establish a migration path for implementing various aspects of the 2001 methodology in a series of nationally determined stages over a substantial period of time.

(One stage, for example, may include the establishment of a financial balance sheet, which does not include nonfinancial assets.) It stated that the *GFSM 2001* methodology called for compiling both accrual and cash data and that the statistical reporting system for the *GFSM 2001* methodology accommodates the use of accounting records based only on cash records.

2.2 Scope

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

Available annual fiscal data, taken from accounts of budgetary units of the central and state governments, do not include data on certain relatively small extrabudgetary funds and data on local government operations, which may become more significant in coming years. Recently, there was passage of the seventy-third and seventy-fourth amendments of the Constitution, which recognize local governments as an independent level of government and outline the powers, authority, and responsibilities of these local bodies. The continued absence of fiscal reporting on local governments (totaling about 250,000), following a required implementation period, would represent a significant omission in the coverage of government, particularly as their role in government activities expands (their expenditure apparently reflects, at this time, less than five percent of general government expenditure).¹⁶ Over time, there also may be a requirement to report statistics on Public Sector Undertakings as part of the public sector.

Annual data on economic flows and stock holdings of budgetary units of central and state governments, between these levels of government, are available, thus enabling consolidated data on general government (except for local government) to be produced.

Provisional annual fiscal data on the combined accounts of budgetary units of central and state governments are replaced by final data after audited accounting reports become available (after about one year according to the CAG) and compiled statistics are published (roughly two years after the reference year).

No supplementary data on quasi-fiscal activity, which may be significant, are provided.

For future statistical planning, the authorities indicated that they would take into account the *GFSM 2001* methodology, which is in harmony with the other major internationally recognized macroeconomic statistical systems, namely, the *System of National Accounts 1993*, the IMF's *Balance of Payments Manual*, fifth edition, and the IMF's *Monetary and Financial Statistics Manual 2000*. This GFS methodology also covers, in an integrated

¹⁶ Local government operations at this time are mainly dependent on transfers from state governments.

manner, all economic stocks and flows of units within its scope—as specified in the following tables in *GFSM 2001*:

- Classification of Revenue (Table 1, *GFSM 2001*).¹⁷
- Economic Classification of Expense (Table 2).¹⁸
- Classification of Transactions in Assets and Liabilities (Table 3).
- Classification of Holding Gains in Assets and Liabilities (Table 4).
- Volume Changes in Assets and Liabilities (Table 5).
- Classification of Assets and Liabilities (Table 6).
- Classification of Outlays by Functions of Government (Table 7).
- Classification of Transactions in Financial Assets and Liabilities by Sector (Table 8).
- Statement of Sources and Uses of Cash (Table 9).

2.3 Classification/sectorization

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

Institutional sectors are defined in accordance with the 1993 *SNA*, but they are not fully identified. References to extrabudgetary funds as part of the central government are typically omitted. These funds include the Central Road Fund, the Sugar Development Fund, the Steel Development Fund, and Railway Reserve Funds. (The 2001 *Report on the Advisory Group on Fiscal Transparency* (page 73) has identified these extrabudgetary funds.) The absence of a fully reported identification of extrabudgetary funds as part of government is not consistent with transparency for the government sector. The transactions and holdings of these extrabudgetary funds are of statistical interest to the extent that they imply significant government activities not already evident in statistics on budgetary units of government.

Revenue, expenditure, and financing items are reported largely in line with the *GFSM 1986*, although some linkages are not transparent. For example, the reporting of privatization receipts and cash balance changes is not obvious in the MOF's *Indian Public Finance Statistics*.¹⁹

¹⁷ See Appendix 4 of the *GFSM 2001*.

¹⁸ The ideal for the *GFSM 2001* methodology is for transaction data to be provided for a cross classification of functional (COFOG)—Table 7—and economic classifications of expense (Table 2).

¹⁹ No bridge table linking classification codes with nationally reported or *GFS Yearbook* aggregates.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

Current transactions are recorded on a current market basis. Outstanding debt data are available, according to authorities, on both the basis of the amount due on maturity (conforming with the *GFSM 1986* methodology) and the market price (conforming with the *GFSM 2001* methodology).

Transactions in foreign currency are converted to rupees using the exchange rate prevailing in the market at the moment they take place, and outstanding balances denominated in foreign exchange are valued at the exchange rates on the reporting date for the balance sheet.

2.4.2 Recording is done on an accrual basis

Transactions of government are recorded on a cash basis, in accordance with the *GFSM 1986*. Only limited plans are in process to decide on whether, or the extent to which, accrual accounting will be introduced to supplement cash-based reporting. No planning was evident for a migration path that practically reaches national objectives regarding stages for implementing various aspects of the *GFSM 2001* methodology. The *Report of the Committee on Fiscal Statistics* submitted to the National Statistical Commission in May 2001 (page 42) provides a partial list of the drawbacks of using cash accounting. The *Report of the Advisory Group on Fiscal Transparency* by the Standing Committee on International Financial Standards and Codes (see Appendix VII) points to advantages of accrual accounting and suggested initial steps such as the compilation and publishing of supplementary information, such as accounts receivable on revenue and commitments to government employee pension plans. The *Report of the Committee on Fiscal Responsibility Legislation* of the Ministry of Finance supports a continuation of the cash-based accounting system.

To whatever extent the *GFSM 2001* methodology is implemented on whatever migration path, the international reporting (but not necessarily the recording) of transaction data according to the *GFSM 2001* methodology, from 2003, will include reporting on both an accrual and a cash basis. There will be, in 2003 *GFS Yearbook* report forms, certain tables calling for accrual data with a classification category, for example, on the consumption of fixed capital; those compilers with only cash records would simply not have an entry for this category. If pension liabilities to government employees are identified as liabilities according to the *GFSM 2001* methodology, the associated actuarial data will be needed.²⁰

²⁰ The use of accrual accounting data is quite useful for the calculations of data on government transactions and liabilities for government employee pensions.

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

All transactions are shown on a gross basis, except for borrowing and amortization transactions. Certain corrective transactions (e.g., refunds of taxation) are appropriately netted against the original transactions.

3. Accuracy and reliability

3.1 Source data

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

Data covering certain economic stocks and flows are provided from administrative systems (possibly supplemented from other sources) for central and state governments. These include all transaction data and, according to authorities, debt data on the basis of the amount due at maturity and on a market valuation basis.

Data are consolidated for the general government sector (excluding local governments), as information to allow such consolidation is available. Over time, significant source data on general government activities will become available at: <http://www.cagindia.org>.

Steps are not yet in place to permit the collection of local government data or to allow for the consolidation of general government data covering this level of government. The authorities indicated that the CAG, working with the MOF, would soon need to establish exactly the level of reporting detail that is required for local governments to ensure that these data, on a consistent basis, are included in consolidated general government data for the fiscal year 2004–2005.²¹ The Eleventh Finance Commission has recommended that grants be provided to local bodies to ensure that they can function as effective units and can properly report on their activities (see the MOF *Guidelines for the Utilization of Local Bodies Grants Recommended by the Eleventh Finance Commission*).

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

Budget charts of accounts for central and state government budgetary units (but not yet local governments) align with GFS categories. The CAG is in the process of identifying the level of detail (including intergovernmental transactions and positions) that will be effectively mandated for local governments. If finalized soon and adequate resources are available, these local governments could fully report by 2004–2005. Data are available on public enterprises

²¹ To permit consolidation, the CAG will need to ensure that all transactions among the three levels of government are identified.

in the event that data on consolidated activities of the public sector are envisioned. (These data include the book value of equity; the *GFSM 2001* methodology, calls for, as feasible, collecting government data on the market value of this equity, as these financial holdings should be on the government balance sheet.)

Budget management systems do not presently include provision for automatic derivation of GFS items from account data. The DEA, with its detailed knowledge of the accounts of budgetary units and the *GFSM 1986* methodology, has not yet worked closely enough with the CAG accounting and computer system to take this automation step.

The timing of recording, and valuation, of source data are consistent with GFS concepts (the *GFSM 1986* methodology). Compilers in the statistical unit of the Economics Division of the DEA are fully aware of differences between source data on accounts of budgetary units and GFS concepts.

Information published under financial accountability arrangements (publicly available data on budget outcomes) has a scope that has similarities with GFS, and, with some effort, can be reconciled with that of the *GFSM 1986* methodology.

3.1.3 Source data are timely

Budget management or accounting systems provide final comprehensive annual data after ten months and provisional monthly records of the central government budgetary units after one month. No data on the relatively minor operations of extrabudgetary funds are available. No monthly or quarterly data on state government operations had been made available to compilers. The CAG stated its plan to develop over time the monthly reporting of provisional aggregates of state government transactions after several months following the reference period. The MOF Department of Expenditure officials indicated to the mission that they have the current capability to provide provisional quarterly data on budgetary units of state governments within two months of the reference period and that they would make these data available to MOF statistical compilers.

Annual provisional data of many state government aggregates for the fiscal year ending in March are published in December of the same calendar year (in the *RBI Bulletin*). The final more comprehensive data on state government activities, reflecting in part the differing timing availabilities of audited state data, have been published (in *Indian Public Finance Statistics*) two years after the end of the fiscal year, while audited account records are all available after about one year. A substantial improvement in the timing availability of all audited records was indicated by the CAG as being feasible.

3.2 Statistical techniques

3.2.1 Data compilation employs sound statistical techniques.

There are, appropriately, no current procedures in place to allow for the estimation of missing data as there are no missing data on operations of central and state government budgetary

units. Following the identification of the specific level of reporting by local governments to be requested by the CAG, in conjunction with the identification of mandated timeliness of reporting of these local governments, there may be a need to establish procedures for estimating missing data on local governments to the extent that some units may not be able to respond in a timely manner.

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

No statistical techniques are employed to adjust reporting of fiscal data. No need for such adjustments at this time is perceived.

3.3 *Assessment and validation of source data*

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

The problems with material gaps in coverage of data collection—the absence of monthly and quarterly state data and the absence of any data on local governments—have been identified and are being addressed. With respect to data on state governments, the mission observed that compilers could collect provisional quarterly data from MOF sources and that the CAG also had plans for reporting, subannual data, possibly on the CAG website. With respect to local governments, the priority for implementing the collection and reporting of consistent data is unclear. The balance between accuracy and timeliness of data on local governments has yet to be established. The provisional annual accounts on budgetary central government units are available two months after the end of the fiscal year and are of assistance for fiscal policy development and analysis. The provisional character of these data is identified, and final comprehensive data, available within ten months of the reference period, are also properly identified.

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

3.4.1 Main intermediate data are validated against other information where applicable

Major fiscal data aggregates reported nationally are reconcilable with the GFS (1986) aggregates, but the reconciliation is not always readily apparent, often reflecting differences between these aggregates in these reporting systems and the lack of sufficient metadata that would need to be available to assist in this effort.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

Data on expenditure by economic type and by function are cross checked for consistency.

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

No evidence has been made available to suggest that differences in fiscal and monetary data are addressed. However, central government data on budgetary units are reconciled each month, and this reconciliation limits the extent to which fiscal and monetary linkages are likely to be inconsistent. Fiscal data represent a source of data for national account and balance of payments data. Thus, statistical series of these macroeconomic sectors, depending on the consistent identification of government units covered by the respective data sets, are also expected to be harmonized with fiscal statistics.

3.5 Revision studies

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

Revisions from provisional to final data incorporate all material data changes resulting from available up-to-date audited data. (This inclusion of all material data changes is also the case for transitions from budget estimates to revised estimates—based on substantial actual transactions—and from revised estimates to provisional fiscal data.)

Major aspects of data revisions have been identified according to the authorities. Documentation on the reasons for these revisions and the direction and magnitude of revisions are not yet available, but the experience of authorities with familiarity with these data suggests that the revisions are small. These officials have the view that provisional data are reliable and robust approximations of the final audited data. Nonetheless, the mission observed that periodic studies are important for policymakers and compilers to assess the quality of reported provisional data.

4. Serviceability

4.1 Relevance

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

Fiscal data are compiled within the same timeframe as account preparations for budgetary units, and are used in the process of determining and evaluating fiscal policy. However, the provisional general government data, aside from data on central government budgetary units, were not available with sufficient timeliness and detail to allow users to assess properly the degree to which government is achieving its stated social and fiscal policies. The reason is that monthly and quarterly data on state governments were found as not being made available to statistical compilers and that annual final account data on all state operations have been available only after about one year. Moreover, local government data are not available at all. The methodological basis, and classification structure, of the available government data are

largely adequate. The details provided in monthly data, including details on revenue, on budgetary units of the central government, however, fall short of analytical needs. In view of the websites with available data and associated contacts, there is significant feedback from users, but no feedback from users has been routinely sought.

4.2 Timeliness and periodicity

4.2.1 Timeliness follows dissemination standards

Timeliness of monthly central government operations data, except for March data, is within the SDDS-prescribed one month after the reference period. The timeliness of quarterly central government debt data is within one quarter after the reference period. The MOF plans to disseminate monthly central government debt data one month after the reference month, in response to mission queries, are welcome steps for serviceability. For general government operations (covering both central and state government data), data on the main aggregates of annual data do not conform with SDDS requirements, as their release follows within three quarters after the reference period, instead of the standard two quarters (the flexibility option is utilized for the timeliness of these general government operations data).²² In view of mission findings that timely sources of provisional quarterly consolidated data as all states exists, it appears that provisional quarterly data on central and state governments can be reported within one quarter.

4.2.2 Periodicity follows dissemination standards

Consistent with SDDS requirements, the central government operations data are published at least monthly and annually, general government operations data are published at least annually, and central government debt is published at least quarterly. See section 4.2.1 above.

4.3 Consistency

4.3.1 Statistics are consistent within the dataset

- The fiscal data reporting in national publications and on official websites are similar for each level of government, for transactions and debt of each sector covered in accounts, and for components of each aggregate. Steps are being taken to ensure that complete and consistent sets of transaction data, including identified net lending, net borrowing and changes in cash positions, are transparently included in all reports of fiscal statistics. The GFS sent to the IMF for use in the *GFS Yearbook* are consistent within the *GFSM 1986* guidelines, which call for:

²² The Indian fiscal transparency ROSC, February 2001, calls for more timely data on general government (paragraph 32).

- Deficit/surplus = (-) financing.
- Major aggregates are consistent—(revenue & grants) less (expenditure & lending minus repayments) = sum of financing, where financing = net borrowing plus reductions in cash balances.
- Table B expenditure (by function) = Table C expenditure (by economic type).
- Domestic financing is consistent (allowing for holding gains) with change in domestic debt.
- Foreign financing is consistent (allowing for holding gains) with change in foreign debt.
- Transfers paid = transfers received between levels/subsectors of government.
- Interest paid in Table B = interest paid in Table C.

Following the introduction in 2003 of reporting GFS to the Fund for the *GFS Yearbook*, which calls for reporting data on the basis of classifications of the 2001 GFS methodology, regardless of the availability of full balance sheet information, holding gains, accrual accounts, etc., the GFS compilers plan to take steps to ensure that data are consistent for the items listed below.

While reporting for the *GFS Yearbook* in 2003 is to be based on the classifications in the *GFSM 2001*, there is no necessary implication that reporting or recording systems have changed. The Fund has a bridge table linking the *GFSM 1986* classifications with the *GFSM 2001* classifications (as provided to the MOF). Also, to the extent that national account data are not available for certain transactions such as consumption of fixed capital, there simply would be no reported entries for these items. If accounting records are only available for cash transactions, which is typically the case, these data will be published in the *GFS Yearbook*. While the *GFSM 2001* identifies the ideal reporting of both cash and accrual data, the important issue is that compilers report the basis of recording and use the main account data that are available (possibly a mix of cash and accrual data) for the accrual reporting and the cash data for the cash tables for the *GFS Yearbook*.

- The difference between the opening and closing balance sheets, for each asset/liability category, equals the sum of transactions, net holding gains and losses, and other changes to the volume of assets for that category.
- If consistency as defined above is achieved by deriving any component residually, then an annotation to this effect is published.

- Net-operating balance less net-acquisition of nonfinancial assets equals net lending/borrowing.
- Net lending/borrowing, derived from revenue less expenses less net acquisition of nonfinancial assets, equals financing.
- Components of revenue, expense, net acquisition of nonfinancial assets, and financing add to aggregates.
- Detailed revenue, expense, net acquisition of nonfinancial assets, and financing table data agree with the aggregates in the government operations table.
- Transfers paid = transfers received between levels/subsectors of government.
- Cash deficit/surplus is harmonized with any available accrual “policy balance” (net lending/borrowing less net acquisition of financial assets for policy purposes), after excluding changes to accounts payable/receivable, accrued interest, and depreciation.
- Procedures are in place to benchmark or appropriately link monthly and quarterly data to annual data.
- Revisions due to annual benchmarking are within acceptable limits.
- Information on revisions due to benchmarking is provided to users.
- The sum of GFS aggregates for component levels of government, or other subsectors of GFS, equal aggregates for the consolidated combination of those subsectors, less consolidation adjustments. Note that the net operating balance, net lending/borrowing, change in net worth, and net worth, should add across all subsectors of GFS.

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

Divergences from the expected trend in the revenue and/or expenditure time series are related to the underlying fiscal policy and/or economic developments.

Previous series are adjusted, and identified, to account for discontinuities arising from methodological developments, changes in the statistical system, etc.

Breaks in time series are identified, as needed, and the reasons are explained. In view of possibilities for introducing various stages on the basis of the *GFSM 2001* methodology, the associated need for revising significant periods of data, and reporting overlapping data for some periods, on the different bases is understood.

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

Procedures are in place to help ensure that fiscal data for central and state governments are harmonized with related national accounts aggregates, such as net lending/borrowing, government consumption, and net acquisition of nonfinancial assets. Procedures are in place to help ensure that fiscal financing data for central and state governments are harmonized with banking data, balance of payments data, and national accounts data. Steps are being taken to ensure that these fiscal data are identified and reported.

4.4 Revision policy and practice

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

The release of revised data on central government budgetary units follows an understood schedule, but the schedule for reporting revised (final) annual data on state operations is not well identified. Steps are being taken to ensure that a clear and published schedule for state governments to report in a timely manner is being implemented. Steps are being taken to ensure that revisions to provisional central and state data reporting have a more predictable pattern within the framework of the regular publication schedule.

4.4.2 Preliminary data are clearly identified

Provisional and final data are identified properly in published statistics. Revised data are disseminated in the same way, often with more detail, as the original data. Coherence between provisional and final data seem sufficient to allow provisional data, even if not quite in sufficient detail or if subject to the likely minor revisions, to be used for policy determination and analysis.

4.4.3 Studies and analyses of revisions are made public

The CGA website contains details of provisional and final accounts of the central government over the past few years. Since they have observed that variations were minor, they saw no need to provide information specifically on changes to provisional data or explanations on the reasons for data revisions. In this light, no time series of revisions of fiscal data of budgetary units of the central (Union) government and no documents of studies or analyses of data revisions are made available. Also, there is no documented or published analysis of how provisional data has differed from revised data to allow for an assessment of the reliability of provisional data on central and state government operations.

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)*

Fiscal data are presented in different ways that usually allow, with effort, major aggregates and balancing items to be identified and related to detailed underlying data. The presentations of data on major aggregates are mixed regarding the ease with which proper identifications and interpretations by observers familiar with international statistical conventions can be made. In the *Indian Public Financial Statistics*, there is no transparent summary of the aggregate statistics for the central government or for state governments. There are difficulties in fully identifying only the government transactions and balances in accounts that are also used in operations of entities that for statistical purposes are not defined as government. It is difficult to identify the important aggregates net borrowing, lending minus repayments, or changes in cash positions. The statistics available on the Public Account and the Contingency Fund do not facilitate an understanding of their significance regarding central government transactions. The DEA *Key to the Budget Documents* and the annual publication of the CGA's office *Accounts at a Glance* (also available on the CGA website) facilitate an understanding of central government operations.²³ More broadly, fiscal accounts are presented in a acceptable manner for use in the budget development and monitoring process, and are useful for economic and fiscal policy development. National publications provide a coverage and detail similar to those in account records, often with different aggregates than those set out in the *GFSM 1986* tables.

5.1.2 *Dissemination media and formats are adequate*

Several annual government finance publications are officially issued by the central government, including *The Annual Financial Statement*, *Provisional Accounts of the Union Government*, *Report of the Comptroller and Auditor General of India for the Union Government (Civil)*, the *Economic Survey*, *India's External Debt*, and *Indian Public Financial Statistics* (covering central and state operations). The *State Finances—A Study of Budgets* is issued by the RBI. Monthly data on operations of budgetary central government units are disseminated by the CGA on official websites. The authorities (of the MOF Budget Division of the DEA), who now issue central government debt data on a quarterly basis, disseminate these data on a website in an adequate format.

²³ See also the MOF *Budget at a Glance*, and the DEA *An Economic and Functional Classification of the Central Government Budget*.

5.1.3 Statistics are released on a pre-announced schedule

The dissemination policy relating to fiscal data is widely understood and is publicized on websites. The date of release of GFS publications is not typically indicated in preceding GFS publications or in a list of forthcoming publications bulletin. The schedule on the MOF SDDS web site for releasing central government debt data was observed to not be current, although the authorities indicated plans to ensure its currency.

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

Statistical publications and new information on websites are made available to all users simultaneously, and without preferential treatment of selected users.

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

Nonpublished data, including detailed data, are often made available on request even though the amount of published data are significant. The availability of detailed non-published data, and the terms and conditions on which it is made available, are not publicized in GFS publications.

5.2 Metadata accessibility

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

Concepts, sources, and methods (C, S, & M) are not widely documented in disseminated reports. C, S, & M have not been revised in recent years, and the authorities indicated that there has been no need to document or publish such changes (as the authorities begin to implement various stages of the *GFSM 2001* methodology, the revisions to C, S, & M will need to be published).²⁴ A MOF published document, *An Economic and Functional Classification of the Central Government Budget*, is quite helpful in describing and linking concepts, including financing concepts. However, the nationally published data do not fully identify differences in reported aggregates from those reported according to international conventions on transaction data, which includes changes in cash positions. In any event, the sources of account data on budgetary units are fairly evident but not clearly identified in much of national reporting.

Compilation methods for accounting reports, including those related to the treatment of transactions in the Public Account and the Contingency Fund, are documented in accounting manuals (and on the CGA website). But compilation methods for fiscal statistics, such as for the *Indian Public Finance Statistics*, are not documented or made available. C, S, & M

²⁴ There has been a different treatment or classification of certain transactions regarding small savings. See footnote in section 1.2.4 above.

documentation of nationally published fiscal statistics does not identify differences from internationally accepted standards nor does it provide an explicit description of coverage and compilation problems. Source data and GFS for central and state governments have a similar form. Bridge tables linking source data and GFS, reflecting in part periodic changes in the detailed national classification codes for accounts of budgetary units, are not documented or made available.

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

Published technical descriptions of concepts, but not sources and methods, are helpful but not complete for assessing the strengths and weaknesses of fiscal data. The C, S, & M information provided to general users in publications is not sufficient to allow them to understand the framework under which the statistics are produced.

5.3 Assistance to users

5.3.1 Contact person for each subject field is publicized

Contact persons are identified in websites but not generally in publications. The authorities indicated that prompt and knowledgeable service and support have been made available through these contacts, which have been able to provide rapid response to queries about the misuse of fiscal data.

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

The producing agencies for fiscal data provide a variety of fiscal tables through their websites. MOF data producing agencies generally do not provide a catalogue, or a full listing elsewhere, of their statistical products and services.

V. MONETARY STATISTICS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The Reserve Bank of India Act, 1934 specifies that the RBI has the responsibility for collecting banking statistics on scheduled banks. Thus, according to Section 42 (2) of the RBI Act, “Every scheduled bank shall send to the Bank a return signed by two responsible officers of such bank showing (a) the amount of its demand and time liabilities and the amount of its borrowings from banks in India (classifying them into demand and time liabilities), (b) the total amount of legal tender notes and coins held by it in India, (c) the balance held by it at the Bank in India, (d) the balances held by it at other banks in current account and the money at call and short notice in India, (e) the investments (at book value) in Central and State Government securities including treasury bills and treasury deposit receipts, (f) the amount of advances in India, (g) the inland bills purchased and discounted in India (and foreign bills purchased and discounted)...” The RBI’s Department of Banking Operations and Development collects returns from all scheduled banks, and its Urban Banks Department and Rural Planning and Credit Department collect returns from cooperative banks. The Department of Government and Banks Accounts prepares central bank accounts. The Act also specifies that the RBI has the responsibility for compiling and publishing scheduled banks’ statistics. Thus, according to Section 43, “The Bank shall cause to be published ... a consolidated statement showing the aggregate liabilities and assets of all the scheduled banks together, based on the returns and information received under this Act or any other law for the time being in force.” Based on these data, the Division of Money and Banking Statistics situated within the Department of Economic Analysis and Policy compiles monetary statistics. No other agency than the RBI is involved in producing monetary statistics.

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

Arrangements are in place to ensure the efficient and timely flow of source data within those RBI departments that are involved with the collection, compilation and dissemination of monetary statistics. Thus, once the Department of Banking Operations and Development has collected data from scheduled banks, and the Urban Banks Department and Rural Planning and Credit Department have collected data from cooperative banks, the data are transferred to the Department of Economic Analysis and Policy for the compilation and dissemination of (provisional) monetary statistics. Provisional monetary data are finalized subsequent to receiving final data from the relevant departments and offices. Regular meetings are held between these departments to ensure the use of proper concepts on a consistent basis.

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

Monetary statistics do not disclose data on individual banks. Section 45E of the RBI Act, as well as Section 28 of the Banking Regulation Act, require the RBI to protect the confidentiality of the data collected from banks. Thus, according to Section 45E of the RBI Act, “Any credit information contained in any statement submitted by a banking company under section 45C or furnished by the Bank to any banking company under section 45D, shall be treated as confidential and shall not, ..., be published or otherwise disclosed.” This information, however, can be published or disclosed in the public interest in a consolidated form. The legislation which guarantees confidentiality of the respondents’ information is available to the public at large. All RBI staff are required to abide by the appropriate rules and regulations to prevent disclosure information of confidential nature, and the new staff are required to take an oath of secrecy under the RBI Staff Regulations Act of 1948. Moreover, access to individual data are restricted to the staff who require the information in the performance of their duties, and passwords have been built into the software programs to prevent an unauthorized access to individual data.

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

The RBI Act, 1934 requires all scheduled commercial banks to report data to the RBI on a two-week basis and within a seven-day period from the reference date. Should a bank fail to report within the time-limit, the RBI sends a show-cause notice to the bank. Furthermore, should the bank fail to respond to the notice, the RBI imposes penalties on the bank. Failures in data reporting have been rare. Other mechanisms that are in place to ensure adequate reporting of data include providing a point of contact as well as providing training to the data reporters in banks.

0.2 Resources

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

The number of the staff is adequate to perform the required duties related to the compilation of monetary statistics. The Department of Economic Analysis and Policy recruits staff on a highly competitive basis. Only candidates with post-graduate qualifications in economics and statistics are regarded as eligible for the economist positions and, from among them, only a few are selected after two written tests and a panel interview. The newly recruited staff are given an intensive on-the-job training in the Reserve Bank Staff College for four weeks, within the RBI for two weeks, as well as in a commercial bank for one week. Computing resources, coupled with support services, as well as financial resources, provided for compiling monetary statistics are adequate to perform required tasks.

0.2.2 Measures to ensure efficient use of resources are implemented

Processes and procedures that are in place at the RBI to ensure that resources are used efficiently include the shared understanding between managers and their staff on work objectives, use of consistent concepts and methodologies across the different units within the RBI, data procedures developed to minimize processing and tabulation errors, periodic reviews of working processes undertaken to identify the need for improvement, and the use of outside experts to evaluate statistical methodologies and compilation systems. A good example of the last procedure is to be found in *Report of the Working Group on Money Supply (June 1998)*, which examines various arguments for using alternative money supply measures by a working group comprising the RBI staff and outside experts. Another example is the *Report of the National Statistical Commission*, which provides an assessment by a group of outside experts of all processes involved in the monetary (as well as other areas of) statistics.

0.3 Quality awareness

0.3.1 Processes are in place to focus on quality

The RBI recognizes that its statistics must have the confidence of its users, and exercises quality control at every stage of data production and dissemination. The Department of Economic Analysis and Policy verifies that data reporting practices followed by the banks are consistent with the regulations. All levels of the Department participate actively in the review of data prior to publication.

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

The RBI undertakes data reviews to identify problems at the various stages of collecting, processing and disseminating of data. For example, the Working Group on Money Supply comprising RBI staff and outside experts has been periodically constituted (in 1961, 1977 and in 1998) in response to structural changes in the Indian economy to formulate recommendations on the appropriate concept of domestic liquidity. While no comprehensive user surveys are conducted, the *RBI Bulletin* regularly disseminates a questionnaire to the readers on its quality to obtain a feedback.

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

The RBI recognizes that there are tradeoffs among the dimensions of quality (for example between timeliness and accuracy/reliability). Consequently, in order to ensure quality and timeliness of data, the staff frequently put in extra working hours. Meetings are periodically convened with policy makers and other data users to review existing monetary statistics, and to identify any emerging data requirements. Once again a good example is to be found in *Report of the Working Group on Money Supply (June 1998)*, prepared by a group comprising the RBI staff and outside experts for reviewing alternative money supply measures.

1. Integrity

1.1 Professionalism

1.1.1 Statistics are compiled on an impartial basis

The statutory provisions under which the RBI compiles monetary statistics are adequate to support its independence in conducting the function in this area. Professionalism of the staff involved with monetary statistics is ensured through the recruitment process as well as by the assignment structure. Thus, the recruitment process focuses on those who have post-graduate qualifications in economics or statistics, and the assignment structure encourages the staff to prepare research papers, attend training courses and seminars on monetary policy and statistics, as well as to deliver lectures at the RBI's training centers. To safeguard professionalism, the RBI staff are required to refrain from participating in political activities, as well as from publishing views that might be considered detrimental to the interest of the RBI or the Government of India.

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

The choices of data sources and statistical techniques are informed solely by statistical considerations that are explained in the methodological notes/footnotes that supplement the published data tables.

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

The RBI staff seeks to prevent misinterpretation or misuse of statistics by providing explanatory materials and briefings to the press through the RBI's Press Relations Division. They follow the financial press and other media. Whenever misinterpretation of data is found, they clarify the issue in various RBI publications and/or send an appropriate reply to the press through the Press Relations Division.

1.2 Transparency

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

The terms and conditions under which monetary statistics are collected, compiled and disseminated, including the obligation to compile and disseminate the statistics (on scheduled commercial banks) and the confidentiality of individual responses, are described in the legislative documents, namely, the Reserve Bank of India Act of 1934 and the Banking Regulation Act of 1949. These documents are available to the public, in English as well as in

Hindi, from the book stores selling government publications, from the Controller of Publications, Civil Lines, New Delhi 110006, India, and from the Ministry of Law, Justice and Company Affairs, New Delhi, 110006 India. The terms and conditions are also described in various RBI publications and summarized on the IMF's DSBB.

An advance release calendar which provides one-quarter-ahead notice of the precise release dates is disseminated on the RBI's internet website under the heading "Statistics." A regular notice to this effect is published in the monthly *RBI Bulletin*.

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

The fact that data are provided to the senior officials of the MOF about one week prior to their release is publicly identified on the IMF's DSBB.

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

The RBI is clearly identified in the footnotes to the monetary data tables as the source of monetary statistics that are published in its as well as in the other government publications.

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

Advance notices on major changes in methodology, source data and statistical changes are provided through the *RBI Bulletin* and *Annual Report*.

1.3 Ethical standards

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

All RBI staff are required to abide by the appropriate rules and regulations under the RBI Staff Regulations Act of 1948. The new staff are required to take an oath of secrecy. The guidelines on staff behavior and the ethical standards are published, with a copy available in each department for reference by the staff.

2. Methodological soundness

2.1 Concepts and definitions

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

The analytical framework used by the RBI in compiling the central bank's survey and the depository corporations survey is currently being adapted to the guidelines outlined in the IMF's *MFSM*. The monetary survey is derived by consolidating the accounts of the central bank, scheduled banks and cooperative banks. Key aggregates identified in the monetary

survey data are net bank credit to the central government; credit to the state government; credit to the commercial sector (comprising the resident nongovernment nonbank sector—including public and private enterprises, households and nonprofit organizations, as well as nonbank financial institutions); net foreign assets; currency with the public; demand deposits; and time deposits of residents. For new monetary aggregates, the division between foreign and domestic positions is based, appropriately, on the statistical residency criterion, although it is modified, where necessary, by the consideration of the center of economic interest. Thus, the repatriable nonresident foreign currency deposits are classified as foreign liabilities; nonrepatriable nonresident rupee deposits (the acceptance of which ceased on April 1, 2002) are classified as domestic liabilities (money supply); and repatriable nonresident rupee external deposits are also classified as money supply since withdrawals from these accounts are allowed to finance local expenditures and/or investments by nonresidents. At the same time, the migration to *MFSM* has not yet been completed, and the RBI staff are aware of the areas where further work is needed. Projects have, therefore, been undertaken (1) to introduce a detailed sectorization scheme under which the commercial sector would be subdivided; and (2) to broaden the institutional coverage to deposit-taking nonbank financial institutions. In the latter respect, deposits of nonbank financial institutions have already been included in the broader liquidity measures.

2.2 Scope

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

The monetary survey covers the RBI, close to 300 scheduled banks, and over 2000 cooperative banks in India. It includes the RBI headquarters as well its 20 branches, and the banks' headquarters as well as their resident branches. At this stage, it does not include the deposit-taking nonbank financial institutions. However, the RBI staff have developed broader measures of domestic liquidity that include deposits of nonbank financial institutions.

2.3 Classification/sectorization

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

The RBI's monetary statistics are in the process of migrating to the guidelines outlined in the *MFSM*. At present, the sectorization scheme adopted for monetary statistics appropriately distinguishes between nonresident and resident sectors, but the subdivision of the resident sector data does not provide sufficient information on the sectoral distribution of domestic credit. Thus, under the present sectorization scheme, the resident sector data are subdivided by (1) central government; (2) state government; and (3) the commercial sector (comprising the resident nongovernment nonbank sector—including public and private enterprises, households and nonprofit organizations, as well as nonbank financial institutions). This means that the subdivision of the commercial sector by public enterprises, nonbank financial institutions, and private sector is lacking. Flow of funds accounts, however, provide much of the sectoral detail that is missing from monetary accounts. As part of the project on the

financial survey data, efforts are being made, however, to implement the detailed sectorization scheme recommended under guidelines outlined in the *MFSM*.

The classification of financial instruments used for monetary statistics is in broad conformity with guidelines outlined in the *MFSM*. Thus, the data separately identifies (1) Monetary gold and Special Drawing Rights; (2) Currency and deposits; (3) Securities other than shares; (4) Loans; (5) Shares and other equity, but not (6) Insurance technical reserves; (7) Financial derivatives; and (8) Other accounts receivable/payable. Although banks in India undertake financial derivatives activities, transactions in derivatives are treated as off- balance sheet items.

In the RBI's monetary statistics, the securities repurchase agreements (repos) are recorded on a change-of ownership basis, rather than as collateralized loans. This treatment is consistent with the RBI Act of 1934 that limits the RBI's borrowing to the level of its capital stock. At the same time, data on securities involved in repos are separately available for analysis.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

The general recommendation of the *MFSM* is that the valuation of financial assets and liabilities should be carried out on the basis of market prices or market price equivalents. The only exception to this rule is that loans should be valued at their book values without adjustment for expected losses. These principles are broadly followed in the RBI's monetary statistics.

Thus, (1) financial assets generally traded in markets on a regular basis are valued by directly using the price quotations from these markets; (2) monetary gold is valued at market prices (specifically, at 90 percent of the monthly average level of the London closing price); (3) securities are valued at market prices; loans are valued at current book value without adjustment for expected loan losses arising from anticipated defaults by borrowers; and (4) shares and other equity on the asset side of the balance sheet are valued at market prices, but those on the liability side are valued at historical, or book values; and, finally, (5) valuation adjustments (including holding gains and losses on instruments) are presented in the revaluation account in the appropriate sectoral balance sheets or other aggregated presentations for the depository corporations sector.

Also, the conversion of foreign-currency denominated assets and liabilities to domestic currency is carried out at prevailing market exchange rates. For this purpose, the RBI as well as the banks use the end-period mid-point New York closing rate. While the RBI does conversion of its foreign-currency denominated positions on a weekly basis, banks do it on a two-week basis.

2.4.2 Recording is done on an accrual basis

By and large, as recommended under the guidelines outlined in the *MFSM*, financial transactions are recorded on an accrual basis in the RBI's monetary statistics. At the same time, commercial banks do not treat interest on financial assets or liabilities as accruing on a continuous basis during the accounting period but, instead, add it to the credit and deposit positions at the end of each quarter. Financial transactions are recorded simultaneously between parties in conformity with guidelines outlined in the *MFSM*.

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

Assets and liabilities are presented on a gross or net basis in conformity with guidelines outlined in the *MFSM*. In particular, (1) claims on a particular transactor or group of transactions are not netted against the liabilities to that transactor or group of transactions; and (2) provisions against loans are shown on a gross basis on the liability side, and loans are included in domestic credit on a gross basis on the asset side. For the central bank subsector and other depository corporations subsector, the data on financial assets and liabilities are aggregated into major categories—for example, loans classified by debtor sector and deposits classified by credit sector. In conformity with guidelines outlined in the *MFSM*, the monetary survey is obtained by canceling out all financial flows and outstanding claims and liabilities between all depository corporations, while preserving the presentation of data on all stocks and flows that are claims on (and liabilities to): financial corporations subsectors other than the depository corporations subsector; other domestic sectors; and nonresidents.

3. Accuracy and reliability

3.1 Source data

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

The source data for compiling the central bank survey are the balance sheet data prepared by the RBI's Department of Government and Bank Accounts on a weekly basis. These balance sheet data are generated by an electronic general ledger system based on complete recording. Source transactions are recorded and balance sheet data are generated from a predetermined classification of accounts.

The source data for commercial banks are the individual returns collected on a two-week basis. The incoming returns come in the form of a report form which is filled out by every bank and submitted to the regional office of the RBI's Department of Banking Operations and Development. This submission takes the form—in the majority of cases—of an electronic diskette, which is hand-carried to the appropriate regional office, or—as in case of minority of cases—of on-line submission. The reporting format provides, by and large, sufficient detail to compile monetary statistics in conformity with guidelines outlined in the

MFSM. The only exception is the area of sectorization where the scheme that is being used does not provide for all sectoral distinctions.

No use of supplementary data is involved. On the banks' deposits with the RBI, as well as on their borrowing from the RBI, the latter uses its own records while compiling the other depository corporations' survey. All source data needed for compiling monetary statistics are kept under periodic reviews to ensure that data collection remains comprehensive. Moreover, the RBI staff monitors financial press and research papers for information on financial developments for integration in the monetary statistics, and holds periodic meetings with financial market participants and the business community to identify new developments that need to be taken into account in monetary statistics compilation.

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

The monetary survey is based on complete reporting by scheduled banks and cooperative banks. These returns reasonably approximate the required definitions, scope, classifications, valuation, and time of recording. No supplementary data sources such as financial market data and data reported from counter parties of depository corporations are used.

3.1.3 Source data are timely

The accounting records of the RBI and other depository corporations, and the subsequent preparation of balance sheet data, are sufficiently timely to allow for compilation of monetary statistics. The RBI balance sheet data are compiled on a weekly basis with a lag of only three working days. Thus, the balance sheet for Friday is finalized on the following Wednesday. Commercial and cooperative banks report accounting data on a two-week basis with a lag of seven days. This enables the monetary survey to be disseminated within 15 days. Delays due to untimely data submission by banks are rare.

3.2 Statistical techniques

3.2.1 Data compilation employs sound statistical techniques

Data compilation procedures minimize processing errors such as coding, editing, and tabulation errors. The RBI's report form is designed to encourage computer processing. Computer program processes source data promptly.

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

No data adjustments and transformations are involved.

3.3 *Assessment and validation of source data*

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

The RBI receives questions on monetary data from several sources, for example, the government of India, Members of Parliament, financial reporters and the press at large, and the research community. These questions are addressed by the Department of Economic Analysis and Policy. In the process, the latter uses the opportunity to monitor the accuracy of the RBI's monetary statistics.

The RBI has other statistical systems, and the source data collected for compiling monetary statistics are cross-checked against their results. These data collection systems are (1) basic data returns collected from banks' branches through a combination of census and sampling methods; (2) monthly returns from banks to the Department of Bank Operations and Development; and (3) annual balance sheets of banks. Appropriate measures are undertaken when discrepancies of unacceptably large size are found.

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

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

No secondary data sources, such as data on financial market operations and sample surveys, are used to check the accuracy of the other depository corporations' balance sheets.

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

The Department of Economic Analysis and Policy identifies statistical discrepancies and, in collaboration with the Department of Banking Operations and Development investigates their sources.

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

Procedures have been established for collaboration between the Department of Economic Analysis and Policy and the Department of Banking Operations and Development for resolving problems posed by large or unexplained fluctuations in monetary or credit aggregates.

3.5 Revision studies

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

The RBI staff regularly undertakes studies to investigate the sources of errors, omissions and fluctuations in the data and explain the methods of revising the data. Following these studies, measures are undertaken to incorporate their findings on data compilation for the subsequent periods.

4. Serviceability

4.1 Relevance

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

The RBI undertakes specific actions to ensure that monetary statistics address issues of concern to users. First, an established process of consultation takes place periodically with policy departments within the RBI. Second, working groups (comprising RBI staff and outside experts) are established on a periodic basis to ascertain users' needs. Examples are *Report of the Working Group on Money Supply* (June 1998) and *Report of the National Statistical Commission*. Third, the RBI staff participates in international statistical meetings and seminars organized by international and regional organizations. In recent years, such meetings and seminars have been organized by the BIS and the Bank of England. Although no monitoring of assistance to users has been carried out through comprehensive user surveys, the *RBI Bulletin* regularly disseminates a questionnaire to the readers on its quality; this questionnaire does not specifically relate to monetary statistics.

4.2 Timeliness and periodicity

4.2.1 *Timeliness follows dissemination standards*

The central bank data are disseminated about one week after the end of the reference week. Thus, the data for each Friday are finalized on the following Wednesday, and disseminated on the following Saturday through the *Weekly Statistical Supplement*. The two-week (provisional) data on the other depository corporations are disseminated within 15 days after the reference date. This degree of timeliness compares favorably with the SDDS, which requires that (1) the monthly data on the central bank should be disseminated within two weeks after the end of the reference month; and (2) the monthly data on the other depository corporations should be disseminated within one month after the end of reference month.

4.2.2 Periodicity follows dissemination standards

The periodicity of the central bank data is weekly, while that of the other depository corporations data is a two-week period, compared with the monthly periodicity required under the SDDS for both the central bank and the other depository corporations data.

4.3 Consistency

4.3.1 Statistics are consistent within the dataset

The RBI's monetary statistics are internally consistent. No discrepancy exists between the central banks' and other depository corporations' data on interbank positions as recorded in monetary statistics. This is achieved through the use of the RBI's records in the compilation of the other depository corporations' accounts. Other internal consistency checks are also developed, in particular an analysis of flows to explain changes in stocks over time, in order to ensure accuracy of the information used in the compilation of monetary statistics.

Additionally, the monetary statistics are broadly consistent with the statistics of the flow of funds accounts. Monetary data on credits to and deposits of banks in the central bank survey and other depository corporations survey are used as an input for the flow of funds accounts. Moreover, the sectoral distribution of deposits and credits pertaining to commercial banks in the flow of funds accounts is derived by applying the sectoral ratios calculated from the relevant basic statistical returns to the aggregate data. Statistics of the broader financial corporations sector are being developed by widening the coverage of the monetary survey to include nonbank financial institutions.

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

Consistent time series data are available for at least past five years. This reflects the fact that whenever changes in source data, methodology and statistical techniques are introduced, historical series are reconstructed for a minimum of five years. Detailed methodological notes identify and explain the main breaks and discontinuities in time series, their causes, as well as adjustments made to maintain consistency over time. Any unusual changes in economic trends are explained in the analytical text included in the publication and in the database accessible to users.

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

The RBI's monetary statistics are consistent with other statistical systems, such as balance of payments statistics, the international investment position, and government finance statistics. The net foreign assets in monetary statistics are consistent with the corresponding measure derivable from the international investment position. Also, transactions in net foreign assets in monetary statistics are consistent with the corresponding measure derivable from balance

of payments statistics. Some differences exist between the two areas of statistics, but they are attributable to differences in definitions rather than those in data. Finally, the central government uses the RBI's records on the government deposits in, and government borrowing from, the depository corporations in government finance statistics.

4.4 Revision policy and practice

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

The RBI's monetary statistics, which are initially disseminated, are provisional since the other depository corporations' data are provisional (the central bank's data are final). The Department of Economic Analysis and Policy finalizes these statistics after receiving the final data from the concerned departments. The finalized monetary statistics for each two-week period are published only at the end of the quarter. This revision policy follows a predictable pattern of which users of statistics are informed through various RBI publications, and all key revisions are explained in the text or footnotes to data tables.

4.4.2 Preliminary data are clearly identified

Preliminary data are identified in all RBI publications. Users are alerted that the initially published data are preliminary and subject to revision. The revised data are disseminated with the same level of detail as previously published for the data being revised.

4.4.3 Studies and analyses of revisions are made public. (See also 3.5.1)

The RBI staff regularly undertakes studies to measure, assess, and explain the sources of revisions made to the data. Although in many instances these studies take the form of internal publications, some are published in the *RBI Bulletin*. Revisions tend to be small in magnitude.

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 RBI publishes monetary statistics in a clear manner, and charts and tables are disseminated with the data to facilitate the analysis. It publishes datasets with various levels of detail (disaggregation), and includes analysis of current-period developments in each publication. Long-term monetary data series, starting 1970, are published in the *Handbook of Statistics* and, upon request, are also made available to the users in the form of CD-ROM.

5.1.2 Dissemination media and formats are adequate

The RBI releases data through a variety of publications. These are *Weekly Statistical Statement*, *RBI Bulletin*, *Report on Currency and Finance*, *Handbook of Statistics*, *Macroeconomic and Monetary Developments* (which is issued with the *Statement on Monetary and Credit Policy*), *Report on Trend and Progress in Banking*, and *Annual Report*. All these publications are available on the RBI's Internet website (<http://www.rbi.org.in/>).

5.1.3 Statistics are released on the preannounced schedule

An advance release calendar, which provides one-quarter-ahead notice of the precise release dates, is disseminated on the RBI's Internet website (<http://www.rbi.org.in/>) under the heading "Weekly Statistics." A regular notice to this effect is published in the monthly *RBI Bulletin*.

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

The data are released simultaneously to all users, on the date specified in a pre-announced schedule, through publication in the relevant issue of the RBI's *Weekly Statistical Supplement* and through placement on the RBI's Internet website (<http://www.rbi.org.in/>) under the heading "Weekly Statistics." The press is not briefed in advance. Thus, no measures are needed to avoid release to the public in advance of the regular schedule.

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

Sub-aggregates, which are not published, are not made available upon request. At the same time, requests for sub-aggregates have been rare since the data are published in detail.

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

All RBI publications in which monetary statistics are published contain notes and/or footnotes providing users with adequate information about what the data mean and about the methodology used to collect and process them. These metadata are also disseminated through placement on the RBI's Internet website (<http://www.rbi.org.in/>). Moreover, the SDDS summary methodologies and other related metadata are regularly reviewed and updated.

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

Articles published in the RBI publications inform external users about the monetary statistics and other financial statistics. Additionally, *Report of the Working Group on Money Supply*

(June 1998) provides a detailed account of arguments for using alternative money supply measures. Metadata on monetary statistics are disseminated through RBI publications at various levels of detail adapted to the needs of the intended audience.

5.3 *Assistance to users*

5.3.1 *Contact person for each subject field is publicized*

A contact person is identified on all RBI publications, although not by subject. Users frequently request assistance in the form of clarification and explanation of data through mail, telephone, facsimile and email, and the assistance is promptly provided. Although no monitoring of assistance to users has been carried out through comprehensive user surveys, the *RBI Bulletin* regularly publishes a questionnaire to the readers on its quality.

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

A catalogue of publications, documents, and other services to users is available and updated each year. The *RBI Bulletin* regularly publishes a list of RBI publications. Prices of the statistical products and services are clearly disclosed—for example, in the list of publications published in the *RBI Bulletin*—and assistance is provided in placing orders. The RBI's *Annual Report* is made available free of charge.

VI. BALANCE OF PAYMENTS STATISTICS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

While there is no law, or other formal arrangement, assigning responsibility for the collection, processing and dissemination of balance of payments statistics, there is a clear recognition, through established practice, that responsibility resides with the Reserve Bank of India (RBI). The data are compiled by the Division of International Finance, the Department of Economic Analysis and Policy, at the RBI. The division is also responsible for research on methodology of balance of payments statistics. The division also has responsibility for compiling data on external debt.

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

Arrangements for data sharing among agencies are adequate. Data are obtained from the Directorate General for Commercial Intelligence and Statistics (DGCIS) and from the MoF. The RBI receives these data in a timely fashion.

Contacts with other data producing agencies are maintained on an ongoing basis.

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

Information on foreign exchange transactions are reported to the RBI's Exchange Control Department (ECD) by the authorized dealers (ADs). The identity of the transactors is not known to the RBI. Consequently, that information could not be divulged by the RBI. Under the Foreign Exchange Management Act, there are penalties for disclosure of confidential information by AD staff. The Bank Regulation Act requires that the RBI staff maintain such confidentiality.

Where the surveys are conducted by the RBI, the RBI's general service regulations provide for sanctions against the disclosure of information. The penalties are set out in the general staff regulations. Disciplinary action can extend to dismissal.

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

The Reserve Bank of India Act, 1934 and the Foreign Exchange Management Act do not provide specific authority to collect statistics for balance of payments purposes. Most of the information obtained is a by-product of reporting of foreign exchange transactions. The

Foreign Exchange Management Act requires transactors to report accurate and complete information on all foreign exchange transactions. There are severe penalties for failing to do so. Where there are balance of payments transactions that do not involve foreign exchange (e.g., reinvested earnings), the information is sought by survey on a voluntary basis. The response rates to these voluntary collections are low.

The RBI is concerned about respondent burden and fears that additional authority to collect information (e.g., on reinvested earnings) will not necessarily increase the response rate and that it may project a negative image to nonresident investors at a time when India is endeavoring to attract investment from abroad.

The RBI is sensitive to ADs' burden in providing the information and undertakes discussions with them before introducing changes to the report form, pointing out the benefits of improved data quality. The RBI also provides extensive training to AD staff to ensure that instructions are adequately understood.

0.2 Resources

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

Overall, the number of staff appears to be adequate to perform existing tasks; the numbers have fallen in recent years, as part of a productivity exercise at the RBI. There has been on average an annual turnover of staff of about 10 percent per year over the past five years. Senior staff have seen a substantial increase in uncompensated overtime and overall stress levels.

The RBI endeavors to provide a balanced mixture of continuity and movement: staff development is an important part of the RBI's human development, involving a general view that staff should move to new areas of work every four or five years. At the same time, there is a recognition that programs need to have experienced staff to maintain them. The staff serve as back-ups to each other; in this manner, staff development and program continuity are achieved simultaneously.

The staff are well qualified: most have either undergraduate or graduate qualifications. In addition, the RBI has its own institute, which staff are encouraged to attend. The courses are mainly on economic theory. Specific training for the compilation of balance of payments statistics is generally provided on-the-job. The existing staff manual on the compilation of balance of payments statistics was completed in 1987.

Senior staff all have their own computers; junior staff share one between two. Software requirements are sufficient, in both standardized form and through tailored programs. The most recent versions of Excel and Foxpro are used. Excel formulas are checked for accuracy

by senior staff in the balance of payments unit whenever there are changes to the data sources or presentation.

There is a well-established process for budgeting for the coming year. Submissions are made by managers to justify their needs for ongoing programs and for development work (e.g., a number of development projects have recently been identified in the 2001 *Report of the National Statistical Commission* and will be budgeted for fiscal year July 2002 to June 2003). Resources, human, computer, and financial, seem sufficient for compiling balance of payments statistics.

0.2.2 Measures to ensure efficient use of resources are implemented

The RBI has a standing committee on balance of payments, which is chaired by the Deputy Governor. The committee gives the balance of payments a high profile within the RBI and reflects the importance attached to the data.

Because the RBI produces monetary statistics and flows of funds tables, there is cross-over of data input and staff among these areas, fostering an environment of consistency and interest in the data.

Staff each have an annual performance appraisal and performance indicators are set out at that time, and performance is reviewed against those performance criteria. The RBI was very active in contributing to the *Report of the National Statistical Commission*, which indicates the areas that require further work, inter alia, on balance of payments statistics.

Given the environment of resource constraints, the RBI's annual budgeting process has resulted in the Division of International Finance's having its staff resources reduced by about 15 percent over the past five years, reflecting the need for increased staff efficiency, as well as the recognition of increased productivity that computers produce.

0.3 Quality awareness

0.3.1 Processes are in place to focus on quality

The RBI has an environment of professional development, which, as far as balance of payments statistics are concerned, results in a ongoing review of the means of addressing quality issues, most notably completeness and accuracy. This consciousness is found in the contributions on balance of payments provided for the *Report of the National Statistical Commission* and the concern to implement the recommendations of that report. As noted, the links between and among the various macroeconomic statistics are actively nurtured through the inter-exchange of data and staff.

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

The standing committee on balance of payments (see also 0.2.2) reviews the work of the balance of payments unit and provides feedback and direction for its research program. Among other things, the committee ensures that values in residual series in the balance of payments do not become too large.

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

Senior staff in the balance of payments unit recognize there is tradeoff between accuracy and timeliness. The Division of International Finance serves as the secretariat to the RBI's standing committee on balance of payments, which reviews, identifies, and initiates steps for further work in improving the quality of the balance of payments statistics.

There is a revisions policy, with a regular revisions cycle. The recommendations of the *Report of the National Statistical Commission* offer a major framework for addressing areas requiring improvement.

There are no users surveys to obtain feedback on data quality issues. However, in each issue of the *RBI Bulletin*, users' feedback is sought. In addition, the RBI's website provides users with a contact email address (in the Press Relations Department) and with answers to frequently asked questions. From commentary in the media, and from the questions asked of the RBI staff, the impression gained by the RBI staff is that the user community are generally satisfied with the quality of the balance of payments data.

1. Integrity

1.1 Professionalism

1.1.1 Statistics are compiled on an impartial basis

There is no formal provision or law that ensures the professional independence of balance of payments statistics. There is, however, a professional culture that respects the spirit of statistical independence. Balance of payments statistics are reviewed by the very senior levels of the RBI prior to their release. No pressure is brought to bear to change the data.

Recruitment is undertaken via open competition. Candidates are required to have a minimum of a masters degree in economics or statistics but a graduate qualification is preferred. The process involves the writing of examinations and formal interviews. Those who perform best are those who are offered employment.

The RBI has its own in-house professional publication, *Reserve Bank of India Occasional Papers*. Professional staff are encouraged to produce papers for publication. The procedures are similar to those for other professional journals, including an anonymous outside review. In the annual performance indicators for each professional staff member there are performance criteria that would include the preparation of papers. Staff are also encouraged to attend professional seminars (such as a recent two-day seminar on a service industries index, jointly sponsored with the MOF).

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

The choice of source data is based solely on statistical considerations. Most data are obtained from ADs' reports on foreign exchange transactions, which provide a wide coverage of most balance of payments transactions. For small value, unclassified, transactions, a random sample is applied to the ADs' data to obtain detail on the nature of the transaction. The statistical method was described in a report of a technical group on statistics on international trade in services; the report will soon be placed on the RBI's website.

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

The RBI's Press Relations Department, acting as a conduit, is responsible for dealing with such situations, were they to arise. The balance of payments unit would be asked by the Press Relations Department to prepare a written response which the Press Relations Department would send, once it had been cleared by the RBI's senior management. There have been no recent such occurrences but were there to be one, the balance of payments unit would be able to pursue the matter. There are no media briefings but the RBI's website provides a contact name.

1.2 Transparency

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

The terms and conditions under which statistics are collected, processed and disseminated are not specifically mentioned on the RBI's website; they are, however, on the IMF's Dissemination Standards Bulletin Board (DSBB). Moreover, inasmuch as the RBI uses its authority under the Reserve Bank Act to obtain information on foreign exchange transactions from which it derives balance of payments statistics, and inasfar as the general staff regulations are covered in that Act, the information is indirectly available to the public.

The RBI's website has a "statistics" section where users can obtain all the RBI's statistical information.

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

No official outside the RBI has access to the balance of payments statistics prior to their release to the public. It appears to be generally understood, and appreciated, in India that the RBI has sole responsibility for approving the release of the data. The RBI's sole responsibility in this matter is indicated on the IMF's DSBB.

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

The RBI's name appears on the hard copy release of India's balance of payments, as well as being on the Bank's website. There is a standard arrangement between and among data producing agencies that when one agency reproduces the data produced by another agency that the compiling agency is formally cited.

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

Users and providers are involved in the review of possible changes (e.g., the recent technical group on statistics on international trade in services involved representatives from two banks, one from the MOF, and one from the Ministry of Commerce and Industry, as well as four from the RBI). Proposed methodological changes, such as those that will arise from implementing the Report of the Technical Group on international trade in services, are to be placed on the RBI's website as well as being discussed in the RBI's *Annual Report*. When the changes are brought into effect, the RBI indicates the change in the *RBI Bulletin* at that time.

1.3 Ethical standards

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

The RBI Staff Regulations, 1948—which is updated over the years—set out the code of conduct for staff. All staff are apprised of these regulations at the time they are recruited and are required to sign an oath of secrecy at the time of appointment. The RBI's authority would appear to provide sufficient protection against political interference. Under the Staff Regulations, RBI staff are expressly prohibited from involvement in political activity. The RBI indicates that its credibility is shown, at least as far as the balance of payments statistics are concerned, through the confidence that users place in the data.

2. Methodological soundness

2.1 Concepts and definitions

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

Concepts and definitions used to compile the balance of payments are broadly in line with *BPM5*. All transactions between residents and nonresidents are in scope. However, the overall presentational structure of the balance of payments does not follow *BPM5*, although most of the components are available to move to a *BPM5* presentation. The current account is presented as goods and invisibles (though the component parts—services, income and current transfers—are shown separately), while the RBI still uses the term capital account to refer to the financial account. There is no capital account, in *BPM5* terminology. The financial account is presented with a different breakdown from that in *BPM5*.

2.2 Scope

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

The principle of residence is broadly in line with that in *BPM5*, based on the concept of center of economic interest. When Indians work or live abroad for more than 6 months, they become classified as nonresidents; according to *BPM5*, they would need to be resident abroad for more than one year.

2.3 Classification/sectorization

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

While, in principle, the sectors used in the balance of payments are broadly consistent with those in *BPM5*, little information on sectors is provided. Monetary authority corresponds to the RBI; general government covers all general government units (the central government and the state and local government, even though, in practice, there are no transactions by the latter with the rest of the world); banks comprise all public and private commercial banks; and other covers all other institutional units in India.

The main deviations from *BPM5* in the current Indian balance of payments are:

Goods: The Indian balance of payments do not show the breakdown of goods as recommended by *BPM5* (general merchandise, goods for processing, repairs on goods, goods procured in port, and nonmonetary gold). All are included under general merchandise.

Services: There is limited quarterly information on services (but more information is available for annual data, in a separate publication): transportation services are not shown by means of transport; travel is not shown by purpose of traveler; and insurance and freight on goods imports are inappropriately included with goods. Communication services are not compiled on a gross basis.

Current and capital transfers: At present, as there is no capital account (according to *BPM5*) in the Indian balance of payment statistics, all capital transfers are included in current transfers.

Financial account: The Indian estimates of direct investment exclude debt transactions, contrary to the recommendations of *BPM5*. All such transactions are presently included in “other capital” or “commercial borrowings.” “Commercial borrowings” may also include portfolio investment (such as floating rate notes).

The RBI intends to move a *BPM5* presentation within the next one–two years.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

For the most part, the Indian balance of payments statistics are compiled at market prices. They are compiled in rupees and U.S. dollars. All transactions are recorded at the mid-point exchange rate prevailing at the time of the transaction in order to convert them to rupees. To derive the estimates in US dollars, the data, once aggregated, are converted using the average rupee: US dollar exchange rate for the month. The high frequency of the conversion minimizes distortions that might otherwise arise with floating exchange rates.

The balance of payments estimates are mainly based on actual transactions data. The only exception is for reinvested earnings which are derived as the first differences of balances outstanding, and would, therefore, include any revaluations or realized holding gains or losses.

2.4.2 Recording is done on an accrual basis

For the most part, transactions are recorded on a payments (cash) basis. Interest income is recorded on an accruals basis. Exports are recorded when they leave India (drawn from the data from the DGCIS), after allowing for certain timing and valuation adjustments.

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

Grossing/netting procedures are broadly in accordance with *BPM5*. Most transactions in the current account are recorded on a gross basis and on a net basis in the financial account, separately for assets and liabilities.

3. Accuracy and Reliability

3.1 Source data

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

The data sources are broadly sufficient to compile major items of balance of payments statistics. The Indian balance of payments is primarily an international transactions reporting system, with ADs' reports on foreign exchange transactions representing the main source of information. Additional information is obtained from other sources, as appropriate. A survey of direct investors is also undertaken.

The RBI staff consider the ADs reports to provide the most comprehensive and cheapest means to obtain balance of payments statistics. The codes are broadly in line with the requirements of balance of payments. However, there is, at present, insufficient information on a quarterly basis on transactions in services and additional information is required for certain other transactions.

Goods: The main source of information on goods exports is the DGCIS, which, after adjusting for timing and valuation differences, are used in the balance of payments estimates. Goods exports are on an fob basis. For imports of goods, the data from the ADs' reports are used. These data are on a cif basis.

Transportation: Data on transportation are available from the ADs' reports. However, there is no quarterly disaggregation by purpose of transportation (annual data providing a breakdown of purpose of transportation is provided in a separate release). Also, as imports are recorded on a cif basis, freight charges are not recorded in transportation. Estimates of freight on goods exports are derived by a factor from the DGCIS data.

Travel: The estimates for travel are based on the numbers of travelers from the Ministry of Immigration times an estimate of average expenditure. These estimates are compared with the ADs' reports. Differences between the two data sources are monitored. To ensure that the use of the derived data do not affect net errors and omissions, other parts of the ADs' data (other services, transfers) are adjusted, accordingly. There is no quarterly disaggregation by traveler (annual data providing a breakdown of type of traveler is provided in a separate release).

For other services, the information is largely obtained from the ADs' reports. There is a mechanism within the RBI to capture information on software exports that are not sent through customs, and information obtained from National Association of Software Service Companies serves as a benchmark. The MoF provides information on the Government of India's debits for government services: nie. Over the course of the next year, the RBI will be changing the ADs' reports to address the shortcomings of the present system on the recording of transactions in services, in order to provide more detail.

Transactions that fall below the \$10,000 threshold are not reported in detail. To overcome what could constitute a sizable residual, a large representative sample of ADs report all such transactions in detail for four days every two weeks. These data are then prorated to the sum of all transactions below \$10,000 to provide a detailed breakdown. Consequently, values in residual categories remain small.

Interest income is calculated on an accruals basis. For “commercial loans” (i.e., those undertaken by corporations directly abroad), the RBI maintains a loan-by-loan database from which it derives the accrual of interest. For government external debt, the MOF maintains a similar database and accrues interest in a like fashion. For banks, interest is credited at periodic intervals (varying according to customers’ preferences) and accrued quarterly. For interest on reserve assets, interest is also calculated on an accrual basis.

For reinvested earnings, the RBI conducts an annual survey of direct investment enterprises. The survey is based on a quinquennial census and is designed by the RBI’s Department of Statistical Analysis and Computer Services. The response rate for the census is reasonably high (although the response is slow) and the results are considered to be sufficiently reliable to establish a benchmark. However, with the rapid increase in direct investment in India since the last census (in 1997), the benchmark data need to be updated. The survey of direct investment enterprises covers all financial assets and liabilities (and reinvested earnings) outstanding with nonresidents; those where there is no direct investment relationship with the creditor or debtor are also reported but are shown separately. Reinvested earnings for balance of payments purposes are derived as the first differences between the outstanding levels, (prorated on the share of equity ownership of the direct investor). As a consequence, reinvested earnings will include valuation changes and realized holding gains and losses, as well as reinvested earnings from operations. The final estimates are then derived from ratios between the survey results and the census results, depending on response rates per industry. Quarterly estimates are derived by dividing the annual data by four. Because of the difficulty in obtaining a full and timely response, there are no data in the balance of payments statistics on reinvested earnings since 1998–99. This data difficulty, coupled with the misclassification (or omission) of debt transactions between direct investment entities, means that estimates of direct investment in India are understated and make comparisons with other countries misleading.

The MOF provides data on “external assistance” for both official and nonofficial purposes. However, as the RBI does not have a “capital account” (in *BPM5* terminology), all capital transfers that may be included in “external assistance” are included in current transfers. However, capital transfer are not materially significant and are separately identified in current transfers.

For direct investment, the RBI compares the information from the ADs with approvals data from the Ministry of Commerce and Industry. Only equity flows are recorded in direct investment.

For other financial account transactions, the compilers of balance of payments at the RBI compare the data on corporate borrowings reported by the ADs with information on external commercial borrowings from the ECD and with information from the Exim Bank. However, the RBI makes no estimate for trade credit extended for under 180 days. Data on portfolio investment are obtained from bank custodians and compared with the data from the ADs. The commercial banks also provide information on rupee accounts of Indian living/working abroad.

For financial derivatives, no information is currently provided, as, up to April 2002, financial derivative contracts with nonresidents were not permitted. Following this change, the RBI has indicated that the ADs' report forms will be modified. This change will involve discussions with the ADs.

Reserve assets are provided by the RBI's Department of External Investment and Operations, with transactions being provided separately from positions data. The reserves data are prepared weekly.

The data estimated by the balance of payments unit on banks' assets and liabilities with nonresidents are used in the compilation of monetary aggregates at the RBI.

The ADs are identified from the register of licensed dealers maintained by the RBI.

The RBI reviews its report form periodically and undertakes extensive training of AD staff (and their trainers) to ensure that they understand what is required, why it is required, and why it is important.

The RBI responds to the changing economic and financial environment and users' needs. For example, the ADs' report forms are to be revised in light of the need for more information on services.

Revisions incorporate all changes from available up-to-date information.

The balance of payments staff regularly review the financial press and other sources of economic information in order to remain current on developments and to ensure that publicized transactions are captured correctly in the data. However, the RBI will need to review additional avenues for obtaining the information from sources other than ADs as the Indian economy becomes more integrated with the international economy—and with that development, the greater use of transactions that will take place outside the present reporting framework. The RBI recognizes this need, as reflected in its adoption of the recommendations of the *Report of the National Statistical Commission*, which noted many of these points.

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

Definitions, scope, classification, and valuations are broadly in line with *BPM5*. Adjustments to source data are made where appropriate. Several additional sources of information are used to ensure more complete coverage. As the system is largely cash based, the time of settlement, not the time of change of ownership, is the basis of time of recording for most transactions.

Efforts have been made, and are ongoing, to reconcile data on merchandise trade from the DGCIS with those from the ADs. The *Report of the Study Group on Merchandise Trade* presents the findings. Both the RBI and DGCIS have indicated their intention of continuing work on the reconciliation.

The present data sources do not allow the RBI to provide gross estimates of communications services.

The RBI uses information from custodians to capture information on transactions costs for portfolio investment. Consequently, transactions in portfolio investment are recorded gross (with grossed up transactions in services).

The external debt data, produced in the same division as the balance of payments data, are checked against data on private sector borrowing and repayment of debt from ECD and the ADs.

3.1.3 Source data are timely

The ADs report every two weeks, with a lag of seven working days. The data are delivered, on diskette, to the regional branches of the RBI, and then processed by the ECD and the Department of Statistical Analysis and Computer Services. The RBI is encouraging the ADs to report online, once a secure method of reporting has been accepted. Where there are late respondents, the ECD staff follow up. Persistent recalcitrance in reporting prompts the head of the ECD to contact the head of the AD concerned.

Aggregate merchandise trade data on goods imports and exports are received from DGCIS within one month; detailed data are provided within three months.

3.2 Statistical techniques

3.2.1 Data compilation employs sound statistical techniques

The RBI has set up data checks to ensure consistency of reporting and to identify unusually high value transactions. These are followed up.

The ADs are involved in the process of revision of the report forms. The ADs' staff are provided with manuals on definitions and classifications. This information is also available on the RBI's website.

The AD report form is clear, well designed, and easy to complete. It is appropriate for computer processing. The ADs input the transaction information (as reported on the foreign exchange form) directly into their computer system at the time of the transactions.

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

No adjustment is made to goods imports to place them on an fob basis. They are recorded on a cif basis as that is the basis that settlement is recorded in the ADs' reports. Goods exports are reported in the balance of payments on an fob basis, using the data from the DGCIS, and adjusting for timing and valuation. The RBI expects to place goods imports on an fob basis within the next two years.

As the RBI feels that its system is sufficient for the moment to capture nearly all transactions between residents and nonresidents, no adjustment is made for undercoverage (with the exception of reinvested earnings).

For travel, as expenditure patterns vary across time and country, the average expenditure estimate will need to be revised to reflect changes in weights. The *Report of the National Statistical Commission* recommended that a more sophisticated model (to reflect these changing weights) be developed. The RBI has agreed with this recommendation.

3.3 Assessment and validation of source data

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

The RBI has edit checks which identify unusual movements. If necessary, the AD is contacted for confirmation. The threshold for “high value” varies depending on the component series in the balance of payments and the branch of the AD reporting – some branches have much higher volume and value of transactions than others, and have, consequently, higher thresholds. Should further follow up be necessary, the ECD will be asked by the balance of payments unit to contact the ADs on behalf of the balance of payments unit. Response to queries is usually fast.

When the RBI removes foreign exchange transactions between resident banks in India from the ADs' reports, it ensures that the sum of inter-bank credit entries approximates the sum of inter-bank debit entries.

The ECD undertakes annual audits of ADs' branches with high volume and value foreign transactions to ensure that reporting is undertaken correctly.

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

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

As noted, data on direct investment are compared with approvals data from the Ministry of Commerce and Industry. The balance of payments staff also review the financial press and maintain files of "economic intelligence" to ensure that developments in the market are reflected in the data.

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

The estimates on travel that are derived from data from the Ministry of Immigration on numbers of visitors times an estimate of their average expenditure is checked against the information from the ADs' reports.

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

Although, for the most part, the Indian balance of payments data are drawn from a closed international transactions reporting system, other sources of information are used, thus leading to minor net errors and omissions. These have remained relatively small.

As part of its ongoing edit processes, the RBI staff review the data to ensure that transactions in residual categories do not grow above a certain limit. If there are concerns about the size of these residual categories, the ADs are asked to investigate further what are the underlying transactions. As a result, the size of the residual categories remains low.

The creditor locational tables from the Bank for International Settlements are used as a check against the external debt data but are not considered to be sufficiently accurate to be used as a primary source of information. Bilateral studies are not undertaken.

3.5 *Revision studies*

3.5.1 *Studies and analyses of revisions are carried out routinely and used to inform statistical processes (see also 4.4.3)*

There have been no revisions studies. However, explanations of large revisions are provided at the time of their dissemination, through footnotes on the RBI's website and in the *RBI Bulletin*.

4. Serviceability

4.1 Relevance

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

The balance of payments data are regularly analyzed and reviewed by the Short-Term Balance of Payments Monitoring Group, which comprises senior representatives from the RBI and the MOF. In addition, the RBI has an internal Balance of Payments Standing Committee, which is chaired by the Deputy Governor. Other members of the Committee are the department heads of other departments at the RBI. There is no formal user group involving other agencies but informal discussions are held with users on an individual basis.

Staff attend, and have presented papers in, international fora. There is no formal user survey but user feedback is sought in the *RBI Bulletin*, although not specifically on balance of payments statistics. Users' requests for more detailed information on services have been met on an occasional basis in articles in the *RBI Bulletin* (January 2001, April 1999) and in *Monograph on India's Balance of Payments*, but not on an ongoing quarterly basis; new report codes for quarterly reporting are to be introduced soon.

4.2 Timeliness and periodicity

4.2.1 Timeliness follows dissemination standards

The quarterly balance of payments statistics are disseminated with a lag of one quarter, in line with the requirements of the SDDS.

Annual balance of payments data are the sum of the four quarters. Consequently, the annual data are available within one quarter of the end of the fiscal year (March). Additional annual information on services, income, and transfers is published later, as a separate release.

4.2.2 Periodicity follows dissemination standards

Balance of payments data are disseminated quarterly, in line with the SDDS requirements.

4.3 Consistency

4.3.1 Statistics are consistent within the dataset

The concepts, definitions and classifications are the same for the quarterly and annual data.

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

The data for the major components are presented on a consistent time series since 1989–90, with additional supplementary data on services, income and transfers since 1997. New forms (for greater disaggregation on services) will be introduced in April 2003. There will be no break in series for the major aggregates, however.

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

The data on exports and imports of goods and services are sent to the Central Statistical Organisation for use in the national accounts. In addition, data on the financial account of the balance of payments data feed directly into the flow of funds and the monetary statistics, both of which are compiled by the RBI. The external debt data are reconciled each quarter with financial account transactions in the balance of payments data.

4.4 Revision policy and practice

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

Revisions follow a regular pattern. The quarterly revision cycle is as follows:

In the June quarter, no revisions

In the September quarter, June quarter data are revised

In the December quarter, both the June and September quarters are revised.

In the March quarter, all three previous quarters are revised, and all earlier years (by quarter) for which there are new data. For example, in March quarter 2002, the data will be revised quarterly to 1998.

The revision cycle is well known (having been in place for several years) but there is no formal public document setting out the revisions cycle.

Revised data are indicated for a period, not for individual series.

4.4.2 Preliminary data are clearly identified

When data are first released, they are not regarded as or shown as *preliminary*; however, when data are revised, the whole time period, not just those series that have been revised, is denoted “PR” which stands for “partially revised.” The revised data are published with the same level of detail as the initial estimates.

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

There have been no revisions studies, but, as noted, explanations of large revisions are provided at the time of their dissemination, through footnotes on the RBI's website and in the *RBI Bulletin*.

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 are published in a clear and understandable manner. All the relevant information is published at the same time. There are no accompanying charts or text, although including them in both the RBI's website and *Bulletin* would facilitate interpretation. Further detail on services, income and transfers is published at a later stage. Data are not seasonally adjusted. The RBI's *Annual Report* includes a discussion of developments in the balance of payments. For the more general user, the RBI publishes each year *Macroeconomic and Monetary Developments* (for a particular year).

5.1.2 Dissemination media and formats are adequate

Each quarterly release has data for the previous six to eight quarters (depending on which quarter's data are released), year-to-date in the current year and the previous year, coupled with annual data for four years. The data are released on the RBI's website, in the *RBI Bulletin*. In due course, annual data (from 1950–51), and quarterly data (from 1990–91), are published in the *Handbook of Statistics on the Indian Economy* (on the RBI's website, on a CD-Rom and in hard copy). *Handbook of Statistics on the Indian Economy* is published in December of each year. Time series (quarterly from 1948–49 to the present) are available on the RBI's website, and on CD-ROM. *Monograph on the Indian Economy*, published in 1993, provides a quarterly time series from 1950–51 to 1988–89.

5.1.3 Statistics are released on a preannounced schedule

Since 1998, when a schedule of release dates for balance of payments was first announced, data have been released according to that schedule. The schedule has been placed on the RBI's website. The schedule is updated every quarter for the next four quarters.

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

The data are released to all users simultaneously, in accordance with the schedule. There is no media briefing.

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

No unpublished, nonconfidential data are released.

5.2 Metadata accessibility

5.2.1 Documentation on concepts, scope, classifications, basis for recording, data sources, and statistical techniques is available, and differences from international standards are annotated

Notes to the tables in the *RBI Bulletin* provide the user with methodological information; any changes are identified in at the front part of the *Bulletin*. Changes to methodology are also outlined in the RBI's *Annual Report*.

There is no current publication on concepts, sources and methods used in the balance of payments. *Monograph on the Indian Balance of Payments*, published in 1993, contains about 20 pages on concepts, sources, and methods. (The document is listed in the *RBI Bulletin*, which is released every month). Nonetheless, the document needs to be updated and circulated more widely.

As there have been no revisions studies, there is no indication of any known biases. The deviations from *BPM5* are not discussed.

As the primary source of information is the ADs' reports, the response rate is essentially close to 100 percent. However, no indication of the response rate has been provided in a published form on the survey used to calculate reinvested earnings.

As noted, the differences with the data on merchandise trade between the RBI's data and those of the DGCIS are discussed in the *Report of the Study Group on Merchandise Trade Data* (February 2001). In addition, the *Report of the Technical Group on International Trade in Services* (March 2002) outlines current and proposed methodology. It is intended that these reports will be placed on the RBI's website in the next few weeks. These differences are also mentioned in the RBI's *Annual Report*.

The SDDS summary methodology is reviewed, and, where appropriate, updated, every quarter. The metadata for the IMF's *Balance of Payments Yearbook*, Part 3, is reviewed every year.

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

The concepts, sources, and methods described in *Monograph on the Indian Balance of Payments* is designed for the specialist user of the balance of payments statistics. There is no document on concepts, sources, and methods prepared for the general user.

5.3 *Assistance to users*

5.3.1 *Contact person for each subset field is publicized*

There is no direct contact person for balance of payments indicated on the RBI's website. There is a "help desk", through which a user will be placed in contact with the balance of payments unit.

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

The December issue of the *RBI Bulletin* contains a list of all articles prepared by the RBI during the course of the year. Each monthly issue of the RBI contains a catalogue of the (hard copy) documents published. The prices of the documents are clearly indicated.

The RBI's *Annual Report* is available in hard copy with no charge; the *RBI Bulletin* and its *Weekly Statistical Supplement* are priced documents in hard copy. Both are available at no charge on the RBI's website.

Summary of the Special Data Dissemination Standard (SDDS)

The SDDS prescribes the following practices under each of the identified dimensions:

Data dimension (coverage, periodicity, and timeliness)

- the dissemination of 18 data categories, including component detail, covering the four main sectors of the economy, with prescribed periodicity and timeliness.

Access dimension

- the dissemination of advance release calendars providing at least one-quarter advance notice of approximate release dates, and at least a one-week advance notice of the precise release dates; and
- the simultaneous release of data to all users.

Integrity dimension

- the dissemination of the terms and conditions under which official statistics are produced and disseminated;
- the identification of internal government access to data before release;
- the identification of ministerial commentary on the occasion of statistical release; and
- the provision of information about revision and advance notice of major changes in methodology.

Quality dimension

- the dissemination of documentation on statistical methodology and sources used in preparing statistics; and
- dissemination of component detail and/or additional data series that make possible cross-checks and checks of reasonableness.

SDDS subscribers are required to:

- post descriptions of their data dissemination practices (metadata) on the IMF's Dissemination Standards Bulletin Board (DSBB). Summary methodologies, which describe data compilation practices in some detail are also disseminated on the DSBB.

- Maintain an Internet website, referred to as the National Summary Data Page (NSDP), which contains the actual data described in the metadata and to which the DSBB is electronically linked.

At the March 29, 2000 meeting of the IMF's Executive Board, Directors approved the incorporation of a new SDDS data category on external debt. The transition period for implementing this data category expires in March 2003.

As a result of the IMF Executive Board's Third Review of the SDDS in March 2000, the IMF staff began monitoring observance of the Standard through NSDPs maintained on the Internet. Monitoring commenced at the beginning of July 2000, and is limited to the coverage, periodicity, and timeliness of the data and to the dissemination of advance release calendars.

Source: Guide to the SDDS, February 2002: <http://dsbb.imf.org>

Data Quality Assessment Framework—Generic Framework
(July 2001 Vintage)

Quality Dimensions	Elements	Indicators
Prerequisites of quality¹	<p>0.1 Legal and institutional environment—<i>The environment is supportive of statistics.</i></p> <p>0.2 Resources—<i>Resources are commensurate with needs of statistical programs.</i></p> <p>0.3 Quality awareness—<i>Quality is a cornerstone of statistical work.</i></p>	<p>0.1.1 The responsibility for collecting, processing, and disseminating statistics is clearly specified.</p> <p>0.1.2 Data sharing and coordination among data producing agencies are adequate.</p> <p>0.1.3 Respondents' data are to be kept confidential and used for statistical purposes only.</p> <p>0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.</p> <p>0.2.1 Staff, financial, and computing resources are commensurate with statistical programs.</p> <p>0.2.2 Measures to ensure efficient use of resources are implemented.</p> <p>0.3.1 Processes are in place to focus on quality.</p> <p>0.3.2 Processes are in place to monitor the quality of the collection, processing, and dissemination of statistics.</p> <p>0.3.3 Processes are in place to deal with quality considerations, including tradeoffs within quality, and to guide planning for existing and emerging needs.</p>
<p>1. Integrity</p> <p><i>The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.</i></p>	<p>1.1 Professionalism—<i>Statistical policies and practices are guided by professional principles.</i></p> <p>1.2 Transparency—<i>Statistical policies and practices are transparent.</i></p> <p>1.3 Ethical standards—<i>Policies and practices are guided by ethical standards.</i></p>	<p>1.1.1 Statistics are compiled on an impartial basis.</p> <p>1.1.2 Choices of sources and statistical techniques are informed solely by statistical considerations.</p> <p>1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.</p> <p>1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.</p> <p>1.2.2 Internal governmental access to statistics prior to their release is publicly identified.</p> <p>1.2.3 Products of statistical agencies/units are clearly identified as such.</p> <p>1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.</p> <p>1.3.1 Guidelines for staff behavior are in place and are well known to the staff.</p>

Data Quality Assessment Framework—Generic Framework
(July 2001 Vintage)

Quality Dimensions	Elements	Indicators
2. Methodological soundness <i>The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.</i>	2.1 Concepts and definitions— <i>Concepts and definitions used are in accord with internationally accepted statistical frameworks.</i> 2.2 Scope— <i>The scope is in accord with internationally accepted standards, guidelines, or good practices.</i> 2.3 Classification/sectorization— <i>Classification and sectorization systems are in accord with internationally accepted standards, guidelines, or good practices.</i> 2.4 Basis for recording— <i>Flows and stocks are valued and recorded according to internationally accepted standards, guidelines, or good practices.</i>	2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices: see dataset-specific framework 2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices: see dataset-specific framework. 2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices: see dataset-specific framework. 2.4.1 Market prices are used to value flows and stocks. 2.4.2. Recording is done on an accrual basis. 2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.

Data Quality Assessment Framework—Generic Framework
(July 2001 Vintage)

Quality Dimensions	Elements	Indicators
3. Accuracy and reliability <i>Source data and statistical techniques are sound and statistical outputs sufficiently portray reality.</i>	3.1 Source data — <i>Source data available provide an adequate basis to compile statistics.</i> 3.2 Statistical techniques — <i>Statistical techniques employed conform to sound statistical procedures.</i> 3.3 Assessment and validation of source data — <i>Source data are regularly assessed and validated.</i> 3.4 Assessment and validation of intermediate data and statistical outputs — <i>Intermediate results and statistical outputs are regularly assessed and validated.</i> 3.5 Revision studies — <i>Revisions, as a gauge of reliability, are tracked and mined for the information they may provide.</i>	3.1.1 Source data are collected from comprehensive data collection programs that take into account country-specific conditions. 3.1.2 Source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required. 3.1.3 Source data are timely. 3.2.1 Data compilation employs sound statistical techniques. 3.2.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques. 3.3.1 Source data—including censuses, sample surveys and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and non-sampling error; the results of the assessments are monitored and made available to guide planning. 3.4.1 Main intermediate data are validated against other information where applicable. 3.4.2 Statistical discrepancies in intermediate data are assessed and investigated. 3.4.3 Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated. 3.5.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes.

Data Quality Assessment Framework—Generic Framework
(July 2001 Vintage)

Quality Dimensions	Elements	Indicators
4. Serviceability <i>Statistics are relevant, timely, consistent, and follow a predictable revisions policy.</i>	4.1 Relevance — <i>Statistics cover relevant information on the subject field.</i> 4.2 Timeliness and periodicity – <i>Timeliness and periodicity follow internationally accepted dissemination standards.</i> 4.3 Consistency — <i>Statistics are consistent within the dataset, over time, and with major datasets.</i> 4.4 Revision policy and practice — <i>Data revisions follow a regular and publicized procedure.</i>	4.1.1 The relevance and practical utility of existing statistics in meeting users’ needs are monitored. 4.2.1 Timeliness follows dissemination standards. 4.2.2 Periodicity follows dissemination standards. 4.3.1 Statistics are consistent within the dataset (e.g., accounting identities observed). 4.3.2 Statistics are consistent or reconcilable over a reasonable period of time. 4.3.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks. 4.4.1 Revisions follow a regular, well-established and transparent schedule. 4.4.2 Preliminary data are clearly identified. 4.4.3 Studies and analyses of revisions are made public.

Data Quality Assessment Framework—Generic Framework
(July 2001 Vintage)

Quality Dimensions	Elements	Indicators
5. Accessibility <i>Data and metadata are easily available and assistance to users is adequate</i>	5.1 Data accessibility — <i>Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.</i> 5.2 Metadata accessibility — <i>Up-to-date and pertinent metadata are made available.</i> 5.3 Assistance to users — <i>Prompt and knowledgeable support service is available.</i>	5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts). 5.1.2 Dissemination media and formats are adequate. 5.1.3 Statistics are released on the pre-announced schedule. 5.1.4 Statistics are made available to all users at the same time. 5.1.5 Non-published (non-confidential) subaggregates are made available upon request. 5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines or good practices are annotated. 5.2.2 Levels of detail are adapted to the needs of the intended audience. 5.3.1 Contact person for each subject field is publicized. 5.3.2 Catalogues of publications, documents, and other services, including information on any charges, are widely available.

¹The elements and indicators included here bring together the “pointers to quality” that are applicable across the five identified dimensions of data quality

Table 5. India: Data Quality Assessment Framework—Summary of Results for the National Accounts Statistics

(Compiling Agency: Central Statistics Organisation)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Pre-requisites of quality						
0.1 Legal and institutional environment			X			The Indian Statistical System needs to be modernized.
0.2 Resources		X				
0.3 Quality Awareness		X				
1. Integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions			X			Concepts and definitions of the <i>1993 SNA</i> are only partially followed.
2.2 Scope				X		No data on imports and exports at constant prices
2.3 Classification/Sectorization			X			The general government sector is not identified as such.
2.4 Basis for recording			X			Government and most external transactions recorded on a cash basis. Output valued at factor costs and imports at cif.
3. Accuracy and reliability						
3.1 Source data				X		Absence of good quality business register. Lack of current sources on services production and on private final consumption expenditure.
3.2 Statistical techniques				X		
3.3 Assessment and validation of source data		X				Wide use of single indicator methods to estimate GDP at constant prices. Taxes on products are deflated by wholesale and consumer price indexes. Considerable reliance on outdated ratios. Allocation of harvests in time is inaccurate.
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies			X			
						Analysis of revisions is only partially used to inform the statistical process.

Table 5. India: Data Quality Assessment Framework—Summary of Results for the National Accounts Statistics

(Compiling Agency: Central Statistics Organisation)

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	
4. Serviceability						
4.1 Relevance		X				Last major revision did not follow the preset schedule. Preliminary data are not always identified as such.
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice						
5. Accessibility						
5.1 Data accessibility			X			Press releases of quarterly accounts do not show all data that have been revised. The availability of unpublished detail is not widely publicized.
5.2 Metadata accessibility			X			Extensive documentation on concepts and methods is difficult to obtain. No short introductions on the national accounts.
5.3 Assistance to users			X			Information on how to obtain user assistance is incomplete.

Table 6. India: Data Quality Assessment Framework: Summary of Results for Consumer Price Index for Industrial Workers
(Compiling Agency: Labour Bureau)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Pre-requisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Quality Awareness		X				
1. Integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				Index covers limited section of population
2.2 Scope				X		
2.3 Classification/Sectorization		X				
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data				X		Outdated weights Inappropriate treatment of new products
3.2 Statistical techniques			X			
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
4. Serviceability						
4.1 Relevance		X				No well-established schedule to revise the index weights
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice			X			
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

Table 7. India: Data Quality Assessment Framework—Summary of Results for Wholesale Price Index
(Compiling Agency: Office of the Economic Adviser)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Pre-requisites of quality						
0.1 Legal and institutional environment			X			No legal authority to request data.
0.2 Resources		X				
0.3 Quality Awareness		X				
1. Integrity						
1.1 Professionalism		X				The data are released to the MOF and the RBI prior to publication and this is not publicized.
1.2 Transparency			X			
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions			X			Not in accordance with international recommendations for producer price indexes
2.2 Scope		X				
2.3 Classification/Sectorization		X				
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data				X		Inadequate weighting data, too small a sample of respondents and products, and non-uniform price data Inappropriate treatment of new and disappearing products
3.2 Statistical techniques			X			
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
4. Serviceability						
4.1 Relevance		X				
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice		X				
5. Accessibility						
5.1 Data accessibility		X				Insufficient methodological documentation for technical users No contact for user assistance in press release.
5.2 Metadata accessibility			X			
5.3 Assistance to users			X			

Table 8.India: Data Quality Assessment Framework—Summary of Results for Government Finance Statistics
(Compiling Agencies: Ministry of Finance and Reserve Bank of India)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Pre-requisites of quality						
0.1 Legal and institutional environment				X		There is no single unit with the authority and responsibility to compile, and disseminate nationally and internationally, an integrated, comprehensive GFS statement based on international statistical guidelines. Only a few professionals work part time on compiling GFS.
0.2 Resources			X			
0.3 Quality Awareness		X				
1. Integrity						
1.1 Professionalism		X				MOF reports do not generally identify other statistical reports as data sources, a reference practice not consistent with transparency goals.
1.2 Transparency			X			
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions				X		Nationally developed concepts for fiscal data are partly related to the <i>GFSM 1986</i> , although linkages to this international guideline are not typically transparent or straightforward. No migration path has being considered for implementing in nationally appropriate stages the compilation of fiscal statistics according to the 2001 GFS methodology. Fiscal statistics on local governments and extrabudgetary funds are not available.
2.2 Scope			X			
2.3 Classification/Sectorization		X				
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data		X				No documented studies of revisions exist on major elements of budgetary data on central and state governments.
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies			X			

Table 8.India: Data Quality Assessment Framework—Summary of Results for Government Finance Statistics
(Compiling Agencies: Ministry of Finance and Reserve Bank of India)

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	
4. Serviceability						
4.1 Relevance			X			No feedback from users has been routinely sought. Timeliness of data on general government operations does not meet SDDS requirement.
4.2 Timeliness and periodicity			X			
4.3 Consistency		X				No documents of studies or analyses of revisions for possible bias, etc. are available.
4.4 Revision policy and practice			X			
5. Accessibility						
5.1 Data accessibility			X			The availability of unpublished detail is not publicized. Additional information in disseminated reports is necessary for general users of statistics to understand the data. National reports do not identify differences from international standards. Bridge tables linking source data and GFS are not documented or made available.
5.2 Metadata accessibility				X		
5.3 Assistance to users			X			No catalogue of MOF publications, or complete listing elsewhere, is provided.

Table 9. India: Data Quality Assessment Framework—Summary of Results for Monetary Statistics
(Compiling Agency: Depository Corporations)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Pre-requisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Quality Awareness		X				
1. Integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				The resident sector data do not provide sufficient information on the sectoral distribution of domestic credit. Commercial banks add accrued interest to credit and deposit positions on a quarterly rather than continuous basis.
2.2 Scope		X				
2.3 Classification/Sectorization			X			
2.4 Basis for recording			X			
3. Accuracy and reliability						
3.1 Source data		X				
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
4. Serviceability						
4.1 Relevance			X			Comprehensive user surveys are not conducted.
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice		X				
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

Table 10. India: Data Quality Assessment Framework—Summary of Results for Balance of Payments Statistics
(Compiling Agency: Reserve Bank of India)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Pre-requisites of quality						
0.1 Legal and institutional environment			X			Absence of legal authority makes it difficult to collect data on transactions with nonresidents that are not conducted through ADs.
0.2 Resources		X				
0.3 Quality Awareness		X				
1. Integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions			X			Presentation structure departs from <i>BPM5</i> .
2.2 Scope		X				Sectoral presentation not provided
2.3 Classification/Sectorization			X			
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data			X			Inadequate and untimely data on reinvested earnings. No data on trade credit extended for less than 180 days.
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				Analysis of revisions only partially used to inform the statistical process
3.5 Revision studies			X			
4. Serviceability						
4.1 Relevance			X			No comprehensive user surveys are conducted . No detailed quarterly data on services
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice		X				

Table 10. India: Data Quality Assessment Framework—Summary of Results for Balance of Payments Statistics
(Compiling Agency: Reserve Bank of India)

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	
5. Accessibility						
5.1 Data accessibility		X				The current document on concepts, sources, and methods is out of date. Only one level of metadata is published
5.2 Metadata accessibility			X			
5.3 Assistance to users		X				

Results of India's User Survey

A. Summary of Results

A questionnaire was sent to 56 users among the academic and research community, banks and businesses, foreign embassies and international agencies, credit rating agencies, and government agencies seeking their views on India's macroeconomic statistics. While only 23 responses were received (including six from researchers, six from banks and businesses, five from the international community, four from credit rating agencies, and one from a government agency), major and informed users were well represented among the respondents. Follow-up discussions were held with a range of users.

While the respondents views were mixed, on the whole they rated the official statistics as being of quite good quality. On a scale of 1 to 5, with 5 being "excellent" overall quality and 1 being "poor" overall quality, average ratings for five categories of statistics (with the highest and lowest individual ratings shown in parentheses) were:

1.	monetary statistics	4.3	(5, 3.5)
2.	balance of payments statistics	3.8	(5, 3)
3.	prices	3.5	(5, 2)
4.	government finance statistics	3.2	(5, 1)
5.	national accounts	2.8	(5, 1)

A majority of respondents considered that the underlying methodologies of monetary, balance of payments, prices, and government finance were sound and that those official statistics were unbiased and accurate. Only a minority of respondents considered that national accounts statistics were accurate.

Generally, the respondents were more satisfied with the level of detail provided than with the coverage of the statistics, and with the frequency of compilation of data rather than their timeliness. On these four matters, monetary, balance of payments and prices statistics were rated more highly than government finance and national accounts statistics, although the ratings for balance of payments statistics were lower on the timeliness issue. Only a minority of respondents considered that enough information was provided to users about revisions to the national accounts. Most respondents stated that all of these official data could be readily accessed, although there were more concerns about ease of access to information (explanatory notes, methodological descriptions, references concerning concepts definitions, and statistics practice) pertaining to the use of the statistics. In this respect, the metadata of government finance and national accounts statistics were perceived to be less readily accessible than the metadata of other categories of statistics.

B. Comments of Respondents in User Survey

- The coverage and timeliness of official macroeconomic statistics has improved markedly in recent years.
- Greater sensitivity is required to the changing structure of the economy—better coverage of services, more frequent reconstruction of price and production indexes.
- Official statistics are weak with respect to the unorganized sector, industrial statistics, and the corporate sector. (Several comments along these lines.)
- Innovative methods (e.g., aerial crop surveys) should be devised to improve agricultural crop estimates.
- There is no overall consumer price index, and the GDP deflator comes too late.
- While inflation indicators are fairly comprehensive, an indicator of services sector inflation is needed.
- Coverage of the statistics is usually adequate. But there is often a problem in the accuracy of the data, which affects the strength of inferences that can be drawn from them.
- Improvements in fiscal data are needed, especially on the general government side and to get a picture of the overall public sector position (including the state enterprises). Although the RBI publishes estimates of the general government fiscal balance, there is not a clear enough breakdown of the revenue and expenditure items used to derive this balance. More transparency in data on the states' fiscal position would be helpful. (Several comments along these lines.)
- The monthly central government fiscal data do not contain several important items of information, such as gross tax collections for the month.
- The coverage of fiscal statistics is too narrow and excludes off-budget activities like the former Oil Pool fund.
- It would be helpful to have a better disaggregation of CPI data, e.g., into goods, energy, and services, or of personal computers and cars. (Several comments about the need for additional breakdowns.)
- Balance of payments data should capture more detailed service categories. (Several comments along these lines.)
- Recent balance of payments data have large “errors and omissions” items.

- More detail is required on foreign direct investment.
- There is a lack of current indicators of activity such as capital expenditure, inventory accumulation, or housing. (Several comments along these lines).
- Greater detail on external debt would be helpful. Although the MOF's external debt data are useful, they are not very timely. Some countries publish their external and domestic debt positions quarterly, and India could follow this practice.
- The timeliness of publication of national accounts and balance of payments statistics should be further improved. (Several comments along these lines).
- WPI data are timely, but the coverage (quotations) is unclear, and the gap is too wide between the provisional and the final figure.
- The number of revisions should be reduced and placed on a predictable cycle.
- Information pertaining to revisions is almost never provided. Significantly large revisions are never flagged.
- Revisions of price indexes are little explained.
- Explanations about revisions are often inadequate, as is the case of the recent revision of GDP data on the financial sector.
- The credibility of GDP data is affected by frequent and large revisions.
- Accessibility is good for annual data due to the RBI Handbook and the Economic Survey. More frequent data on fiscal and balance of payments variables would be desirable.
- Access to the data should be made easier.
- It is difficult to access back data after revisions.
- Improved internet presentations are desired, including direct spreadsheet formats.
- There should be a cell or contact officer in the CSO to assist users with technical inquiries (e.g., about reasons for revisions) and with access to unpublished data. (This reflects in combination the views of several users).
- Information on conceptual issues, data sources, estimation methods, and data limitations should be published along with the dataset.
- Better presentations of explanations and qualifications are required.

- The sources and methods publication for the national accounts is too outdated (it relates to 1989) and is frequently out of print.
- Most official descriptions of sources and methods need to be updated.
- The methodology for the services items in the national accounts is unclear.
- National accounts is based on too many outdated parameters/ratios, while the classification system for government finance statistics is inappropriate for economic analysis. Tax data are poor.
- Official statistics are becoming increasingly inaccurate and revisions are becoming more volatile.
- The weights of the price indexes are out of date.
- It is unclear why there is a wide divergence between RBI and DGCIS data on imports and some reconciliation needs to be made.
- The Indian statistical system has a high degree of integrity. (Several comments along these lines).
- There appears to be pressure to hide bad news by stretching definitions and using methodological tricks.
- The timing of revisions before important policy events raises issues of statistical credibility.
- Accountability/responsibility for statistics is at present spread too wide for any one agency to have any real control. What quality controls can central statistical agencies apply on state agencies?.

A serious long term issue is the inordinate delay in implementing the recommendations of the National Statistical Commission.