

- **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 The outdated weights cast doubt on the accuracy of the consumer price indexes.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.

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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).