

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

This Report on the Observance of Standards and Codes—Data Module for Thailand was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on April 10, 2006. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Thailand nor the Executive Board of the IMF.

The Response by the Authorities to this report and the Detailed Assessments Using the Data Quality Assessment Framework (DQAF, July 2003) are also included.

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THAILAND

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

Prepared by the Statistics Department

Approved by Robert W. Edwards and David Burton

April 10, 2006

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

The datasets covered in this report are national accounts, government finance, monetary, and balance of payments statistics. The agencies that compile the datasets assessed in this report are the National Economic and Social Development Board (NESDB), Fiscal Policy Office (FPO) in the Ministry of Finance (MOF), and Bank of Thailand (BOT).

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

NESDB: <http://www.nesdb.go.th>;

FPO: <http://dw.mof.go.th/foc/gfs/index.html>;

BOT: <http://www.bot.or.th>

This report is based on information provided prior to and during a staff mission from October 3–17, 2005 and publicly available information. The mission team comprised Mr. William E. Alexander (Head), and included Ms. Candida Andrade, Messrs. Tobias Wickens, Jens Reinke (all STA), David Hughes (Expert), and Ms. Mabel Hollstein (Administrative Assistant, STA).

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ABBREVIATIONS

<i>1968 SNA</i>	<i>System of National Accounts 1968</i>
<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
BOP	Balance of Payments
BOT	Bank of Thailand
<i>BPM5</i>	<i>Balance of Payments Manual</i> , fifth edition
DMD	Data Management Department
DQAF	Data Quality Assessment Framework
DSBB	Dissemination Standards Bulletin Board
FPO	Fiscal Policy Office
GFMIS	Government Finance Management Information System
GFS	Government Finance Statistics
<i>GFSM 2001</i>	<i>Government Financial Statistics Manual 2001</i>
ITRS	International Transactions Reporting System
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
MOF	Ministry of Finance
NESDB	National Economic and Social Development Board
NSO	National Statistical Office
ROSC	Report on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard
STA	IMF Statistics Department

I. OVERALL ASSESSMENT

1. Thailand subscribed to the Special Data Dissemination Standard (SDDS) on August 9, 1996, and started posting its metadata on the Dissemination Standards Bulletin Board (DSBB) on September 19, 1996. Thailand is in observance of the SDDS, meeting the specifications for coverage, periodicity, timeliness, and the dissemination of advance release calendars.¹ Thailand does not use any of the flexibility options for timeliness and periodicity allowed by the SDDS. Appendix I provides an overview of Thailand's dissemination practices compared to the SDDS.
2. The Report on the Observance of Standards and Codes (ROSC)—Data Module contains the following main observations. Thailand possesses a well-developed macroeconomic statistical system, with many strengths that span all of the datasets assessed in this report. The government clearly recognizes the importance of good statistics for effective decision-making in all sectors of the economy, and it is well accepted at all levels of the statistics-producing agencies that quality builds trust and, thus, is a cornerstone of statistical work. The professionalism of staff—and the pride they take in their work—are notable. The public has ready access to data and metadata, including through the Internet, and prompt and knowledgeable support service is available to users. The statistical agencies currently are at various stages of implementing international best practice methodologies; overall, the statistical system would benefit from an acceleration of this activity. In addition, it would be desirable to strengthen the source data on which the aggregate macroeconomic statistics are based, and to strengthen what, in some instances, risks becoming an outdated legal framework for the collection, compilation, and dissemination of macroeconomic statistics. There is some scope, too, to strengthen statistical revision policies and practices. Section II provides a summary assessment by agency and dataset based on a four-part scale. This is followed by staff's recommendations in Section III. The authorities' response to this report and a volume of detailed assessments are presented in separate documents.
3. In applying the IMF's Data Quality Assessment Framework (DQAF), July 2003, the remainder of this section presents the mission's main conclusions. The presentation is done at the level of the DQAF's quality dimensions, by agency for the first two dimensions and across datasets for the remaining four.
4. With regard to **prerequisites of quality**, various laws and decrees authorize the Bank of Thailand (BOT), the National Economic and Social Development Board (NESDB), and the Fiscal Policy Office (FPO) in the Ministry of Finance (MOF) to collect, compile, and disseminate the relevant statistics. These laws do not necessarily give exclusive authority to

¹ Due to technical problems with the implementation of the Government Finance Management Information System (GFMIS) and accrual accounting, the timeliness of the monthly data does not fully meet SDDS standards. This is indicated in a note on the National Data Summary Page on the DSBB.

the relevant agency to collect the particular statistics in which they specialize, but, as a matter of practice, cooperation among the agencies is effective and there has been little overlapping of responsibilities. In the case of balance of payments statistics, no explicit mandate is given to the BOT to compile these statistics, adversely affecting their comprehensiveness. The BOT relies to some degree on foreign exchange control legislation for the necessary powers to collect comprehensive balance of payments source data, which may become increasingly problematic over time if exchange controls are further liberalized. Resources are broadly commensurate with the present needs of the statistical system, although additional resources would permit best-practice methodologies to be implemented at a faster pace. The agencies devote considerable attention to monitoring the overall quality of the statistical program and ensure that statistics remain relevant to users' needs through regular contacts with the users. As to **assurances of integrity**, a combination of legislation and tradition affords a high degree of independence to the agencies for their statistical work. They are free to choose methodologies and appropriate data sources. Staff are well trained, exhibiting a high degree of professionalism in their work. The terms and conditions under which statistics are compiled are readily available to the public. The government does not have access to statistics prior to their release to the public. Staff of the statistical agencies are held to a high ethical standard in the conduct of their work.

5. Concepts and definitions, in general, are **methodologically sound**, and broadly conform to internationally accepted standards. Monetary statistics follow the *Monetary and Financial Statistics Manual (MFSM)*. Balance of payments statistics conform to the *Balance of Payments Manual*, fifth edition (*BPM5*). Data on quarterly and annual GDP generally conform to the *System of National Accounts 1968 (1968 SNA)*, but conversion to the *System of National Accounts 1993 (1993 SNA)* has begun and some *1993 SNA* changes have been introduced. Government finance statistics are in transition to the *Government Finance Statistics Manual 2001 (GFSM 2001)*, with full implementation expected by 2009. In the cases of national accounts and government finance statistics, full implementation of the *1993 SNA* and *GFSM 2001* would bring the scope of the statistics fully into line with accepted international methodologies. In the case of balance of payments statistics, a need exists to expand the scope by developing data sources for unrecorded trade and by ensuring better coverage in the areas of services, income, and transfers. The classification of financial derivatives in the monetary statistics needs to conform with the *MFSM*. In general, the basis for recording stocks and flows would benefit from a full adoption of accrual methods and greater reliance on market prices.

6. The **accuracy and reliability** of macroeconomic statistics, while generally sound, are adversely affected in some instances by deficiencies in source data collection programs. For instance, data sourcing for balance of payments statistics could depend less on the International Transactions Reporting System (ITRS) with more recourse to alternative sources. More reliable source data for household expenditure would improve the national accounts, while government finance statistics would benefit from more timely actual data on local governments. Procedures for assessing source data are adequate, as are statistical techniques and procedures to assess and validate intermediate data and statistical outputs. However, the base year for constant price national accounts statistics is far too old, and

should be updated. Studies and analyses of revisions are routinely carried out, although the results of revision studies could be used more effectively to improve preliminary balance of payments data.

7. As to **serviceability**, the periodicity and timeliness of the statistics meet or exceed SDDS standards. Datasets are internally consistent, and there is broad consistency across datasets. Because of the recent adoption of *MFSM* methodology for monetary statistics, the new series are available only from January 2005; however, the main aggregates are reconcilable between both the old and new series. Data revisions generally follow a regular and transparent schedule, preliminary and revised data are clearly identified, but studies and analyses of revisions normally are not published.

8. The statistical agencies provide users with a high level of **accessibility** to data and metadata, primarily through their websites and regular publications. Data are presented clearly and, for the most part, with appropriate detail. Statistical publications and websites identify suitable contact points for user assistance. Prompt and knowledgeable support services are available. With the exception of national accounts, suitably detailed metadata are readily available to users.

II. ASSESSMENT BY AGENCY AND DATASET

9. Assessment of the quality of four macroeconomic datasets—national accounts, government finance, monetary, and balance of payments—was conducted using the DQAF, July 2003. In this section, the results are presented at the level of the DQAF elements and using a four-point rating scale (Table 1). Assessments of the prerequisites of data quality and the assurances of integrity (Dimensions “0” and “1” of the DQAF) are presented in Tables 2a–c. For each dataset, the assessment of methodological soundness, accuracy and reliability, serviceability, and accessibility (Dimensions “2” to “5” of the DQAF) are shown in Tables 3a–d.

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

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

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

Table 2a. Thailand: Assessment of Data Quality—Dimensions 0 and 1—National Economic and Social Development Board

<p>0. Prerequisites of quality</p> <p>Legal and institutional environment The <i>NESDB Act of 1978</i>, together with a formal civil service agreement, gives the NESDB a strong legal basis for compiling and disseminating the national accounts statistics. The NESDB has good data sharing and coordination procedures with other government agencies. Confidentiality of respondents' data is guaranteed under the <i>Statistics Act, B.E. 2508 (1965)</i>, which governs the operations of the National Statistical Office (NSO), the NSO being the main supplier of data for the national accounts. The NESDB and NSO have effective procedures for protecting and disposing of respondents' data. The <i>Statistics Act</i> specifies penalties for respondents who do not supply relevant data. However, the NSO prefers to use persuasion in such cases.</p> <p>Resources Staff and computer resources are sufficient to perform existing tasks. However, the speed of development work is slow, owing to staff restrictions. Staff are well trained, and turnover is low. The existing accommodation is conducive to good working conditions. Effective procedures ensure the efficient use of resources.</p> <p>Relevance At an annual workshop, open to any interested person, the NESDB and other participants can raise any statistical issues. Mechanisms exist to raise issues outside this program, if necessary. The NESDB is active internationally, taking part in as many meetings and seminars as possible. The NESDB undertakes user surveys to identify new and emerging data requirements.</p> <p>Other quality management Management does not have a formal quality program, but is committed to data quality and cascades this down through the ranks. This issue is also covered in staff training. The NESDB also takes every opportunity to demonstrate its commitment to quality to the wider community. Management monitors quality and forms an integral part of the planning process.</p>	<p>1. Assurances of integrity</p> <p>Professionalism The <i>NESDB Act</i> establishes the independence of the NESDB. The Secretary-General can only be appointed, and dismissed, by the Prime Minister. Professionalism is actively promoted and supported within the NESDB. For instance, recruitment and promotion are based on ability and expertise. All staff receive internal on-the-job training in relevant subjects. Every opportunity also is taken to attend international courses and seminars. Peer group reviews of work processes are regularly undertaken. Staff are encouraged to write and publish methodological articles. The NESDB is free to choose whatever it considers are appropriate data sources and methodologies. It also decides on the method and timing of data dissemination. The NESDB undertakes press conferences to explain its data to the media and, thus, the chance of misinterpretation is reduced. When such misinterpretation does take place, appropriate corrective action is taken. All media references to statistics are identified and circulated within the NESDB.</p> <p>Transparency The terms and conditions under which the national accounts are produced are given in the relevant publications and on the NESDB website. The NESDB publications identify where additional information can be found. No other government agency has access to the statistics prior to their public release. Publications clearly identify the NESDB by name and its logo. The NESDB requests that, whenever its data appear in the publications of other bodies, the source is clearly identified. All major changes to statistics are announced in advance in the relevant NESDB publications and on its website. Minor changes are just noted when they are introduced.</p> <p>Ethical standards There is no written guidance on ethical standards. However, all staff are regularly reminded of the need to keep data confidential. National accounts compilers are guided by the Code of Conduct for Public Servants.</p>
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Table 2b. Thailand: Assessment of Data Quality—Dimensions 0 and 1—Fiscal Policy Office in the Ministry of Finance

<p>0. Prerequisites of quality</p> <p>Legal and institutional environment The FPO in the MOF compiles and disseminates a broad range of economic and fiscal data in accordance with the <i>Official Information Act, B.E. 2540 (1997)</i>. The responsibility for collecting, processing, and disseminating government finance statistics (GFS) according to the <i>GFSM 2001</i> is assigned to the FPO in a ministerial regulation on the <i>Organization of the Fiscal Policy Office, B.E. 2545 (2002)</i>, Section 8, number 4 (2). Formal arrangements and procedures, through the establishment of a GFS Committee, have been set among the FPO, source data-producing agencies, and other macroeconomic statistics compilers. Individual reporters' data are kept confidential and used for statistical purposes only in accordance with the <i>Official Information Act</i>. Statistical reporting is normally ensured through the GFS Committee and, as a last resort, the <i>Official Information Act</i>.</p> <p>Resources While adequate to perform their existing tasks, the number of staff assigned to GFS compilation will not suffice to perform any further development in the migration to full accrual accounting at all levels of government. Owing to a relatively high rate of staff turnover, a core group of staff with extensive GFS knowledge does not exist in the FPO, with the exception of the head of the division. Facilities, as well as computer and financial resources, are adequate. Sufficient measures have been implemented to ensure the efficient use of resources.</p> <p>Relevance The relevance and practical utility of GFS are monitored regularly through a users' survey on the FPO's GFS website. On a formal and informal basis, the FPO regularly consults with policy departments and other users, such as the NESDB, on the relevance and usefulness of the GFS.</p> <p>Other quality management A recently introduced quality standard for government agencies is the main guiding principle for data quality management. The FPO has been certified under the data quality standard of this program. Adequate processes are in place to monitor the quality of the GFS program, such as obtaining feedback and data quality surveys from users.</p>	<p>1. Assurances of integrity</p> <p>Professionalism A general culture of professionalism is continuously promoted in the FPO (and the rest of the MOF). GFS compilers are committed to compiling statistics according to the <i>GFSM 2001</i> methodology and are not influenced, in any way, by any fiscal policy analysis or other considerations. Recruiting procedures ensure that GFS compilers are suitably qualified. The FPO is taking several measures to prevent the misinterpretation or misuse of its statistics, e.g., through posting comprehensive metadata on its website and explanatory materials in the <i>Fiscal Journal</i>, as well as in monthly press releases on GFS. If GFS data are used incorrectly or misinterpreted, the FPO is allowed to comment and/or provide further explanations.</p> <p>Transparency The code of practice in terms of data collection, processing, dissemination, and analysis is published on the FPO and MOF websites and is readily available to the public. The FPO, MOF, and SDDS websites report that there is no internal governmental access to the GFS prior to their release. It is clearly identified that the GFS are produced by the FPO and, where relevant, the data sources are clearly identified. Should there be major changes in methodology or source data, the policy is to inform users in advance.</p> <p>Ethical standards GFS compilers are guided by the Code of Conduct for Public Servants and the Code of Practice for compiling GFS.</p>
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Table 2c. Thailand: Assessment of Data Quality—Dimensions 0 and 1—Bank of Thailand

<p>0. Prerequisites of quality</p> <p>Legal and institutional environment The BOT collects, compiles, and disseminates monetary and balance of payments (BOP) statistics. Compilation is undertaken under the <i>Bank of Thailand Act, B.E. 2485 (1942)</i> and regulated under several statutory orders, namely the <i>Commercial Banking Act, B.E. 2505</i>, the <i>Act on the Undertaking of Finance Business, Securities Business and Credit Foncieris, B.E. 2522</i>, and the <i>Exchange Control Act, B.E. 2485</i>. There is no explicit legal mandate for compiling BOP statistics, but the BOT's authority to do so is not challenged. Reporting under these Acts is mandatory, but the Acts do not cover sufficient data sources for BOP compilation. Existing regulations safeguard the confidentiality of individual reporters' data and impose penalties on those who might disclose these data. Adequate data-sharing arrangements are in place within the BOT to ensure the efficient and timely flow of monetary and BOP statistics source data to the BOT and its pertinent departments.</p> <p>Resources Staff resources are adequate to compile monetary and BOP statistics. Staff are knowledgeable of the statistical methodologies and have attended in-house training courses and training courses organized by the IMF and regional organizations. Compilation processes are highly computerized, and computer systems are regularly updated.</p> <p>Relevance Mechanisms are in place to monitor users' needs, including periodic meetings with targeted users. Users' surveys are conducted every two years. Staff members participate in statistical meetings and seminars organized by international and regional organizations. Users' feedback is also encouraged through the publication of the telephone number and e-mail address of the staff responsible for each dataset.</p> <p>Other quality management The BOT has well-built processes for managing the quality of the statistical process and products. These include the role of the Data Management Committee and the Statistical Code of Practice, which are closely aligned with international best practices. Operational audits of the data sources and compilation process are conducted regularly.</p>	<p>1. Assurances of integrity</p> <p>Professionalism The Ministry of Finance oversees the overall affairs of the BOT according to the <i>Bank of Thailand Act</i> but, in practice, the BOT is empowered to formulate the policies and procedures deemed necessary to carry out its central bank responsibilities. Professionalism is actively promoted within the BOT, and compilers feel that they are free from undue influence or pressures from upper management and outside agencies in the conduct of their duties of compiling statistics. Professionalism is supported by the BOT recruitment and personnel policies, which take into account a candidate's professional and educational qualifications, and promotions are merit-based. In addition, the BOT has in place a proactive culture change program to entrench in the staff the BOT shared values, core purpose, and vision, and to facilitate the buildup of relations with the staff of other reporting institutions.</p> <p>Transparency The terms and conditions under which monetary and BOP statistics are collected, processed, and disseminated are posted on the BOT's website. There is no internal governmental access to statistics prior to their release. All BOT statistics publications are clearly identified with its name, logo, and insignia. Users are informed in advance of major changes in methodology of the monetary and BOP statistics.</p> <p>Ethical standards The BOT's Code of Conduct provides clear guidelines on the staff's behavior and ethical standards, and the Statistical Code of Practice provides additional guidelines on the adherence to the principle of objectivity in the collection, compilation, and dissemination of statistics. New staff are made aware of the guidelines when they join the organization and are reminded periodically, namely, at the time of the annual performance reviews.</p>
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Table 3a. Thailand: Assessment of Data Quality—Dimensions 2 to 5—National Accounts

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions The national accounts are broadly in line with the 1968 SNA, but are in the process of being updated to the 1993 SNA. However, this is not expected to be completed until 2008.</p> <p>Scope The published data cover annual and quarterly GDP, from both the production and expenditure approaches, and at current and constant prices. Some outputs, such as annual supply and use tables, are not produced. The production and asset boundaries generally conform to the 1968 SNA.</p> <p>Classification/sectorization All transactions and flows use appropriate international classifications.</p> <p>Basis for recording The valuation rules used for recording flows and stocks are generally in accordance with the 1968 SNA. However, output and value added are shown at market, rather than producer, prices. All government data are recorded on a cash, rather than accrual, basis. Also, average monthly, rather than daily, exchange rates are used.</p>	<p>Source data An economic census of businesses is undertaken every 10 years and updated in the intervening years. There are biennial surveys of all establishments. Various sources, such as other ministries, are used to derive estimates for the intervening periods. A household socio-economic survey is run every two years.</p> <p>Assessment of source data The NESDB routinely assesses source data.</p> <p>Statistical techniques Extensive use is made of benchmark data, but only for two to three years. The base year for the constant price figures is 1988, which is far too old.</p> <p>Assessment and validation of intermediate data and statistical outputs Source data are routinely checked against other available data. There is a statistical discrepancy between the production and expenditure figures. These are investigated and adjustments are made when necessary.</p> <p>Revision studies Revision studies are undertaken and used to improve the statistics.</p>	<p>Periodicity and timeliness Quarterly GDP estimates are published two months after the end of the period, in line with the SDDS requirements.</p> <p>Consistency The quarterly estimates are fully consistent with the annual figures. The current and constant price figures are totally comparable. The statistical discrepancy is shown separately in the publications. It is generally less than 1 percent for the annual figures. The figures for imports and exports are totally consistent with those produced by the BOT. The figures for general government are reconcilable with the government finance statistics produced by the MOF.</p> <p>Revision policy and practice There is a well-established revision policy, which is fully explained to users. Any changes outside this cycle are clearly noted in the publications. Preliminary data are clearly indicated in the publications. The results of the revision studies are noted in the publications. However, a time-series analysis of the revisions is not published to allow an assessment of the reliability of preliminary data.</p>	<p>Data accessibility The GDP figures are published in a clear manner with different levels of detail, as appropriate to the specific publication. Analyses of the current period developments are also given. An advance release calendar is published. The data are available to all users at the same time via a press release, publications, and the NESDB website. Some additional breakdowns can be supplied as long as they do not breach the confidentiality rules. However, this service is not advertised.</p> <p>Metadata accessibility There is a methodological guide for the quarterly GDP figures, in Thai and English. However, this should be more comprehensive, and also cover the annual figures. The NESDB updates the SDDS metadata as soon as a change occurs. Some more general sets of metadata are produced to meet the needs of a wider audience.</p> <p>Assistance to users Specific contact points for each topic, as well as a catalog of the NESDB's products, are given on the NESDB website. Details for the national accounts are given in the quarterly publication.</p>

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

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions Monthly, quarterly, and annual GFS (including debt) are compiled and disseminated according to the <i>GFSM 2001</i>, and an official migration path is followed to implement fully by 2009 the <i>GFSM 2001</i> for all of general government.</p> <p>Scope GFS cover the operations of the consolidated general government sector, all its subsectors, and the consolidated nonfinancial public sector. GFS currently cover all economic stocks and flows, except for a full balance sheet and a statement of other economic flows. Debt of social security funds (an immaterial amount) and local governments are not included in GFS.</p> <p>Classification/sectorization The general government sector and nonfinancial public corporations are defined in accordance with the 1993 <i>SNA</i> and <i>GFSM 2001</i>. All GFS aggregates and components are classified in accordance with the <i>GFSM 2001</i> methodology.</p> <p>Basis for recording Flows are recorded at market prices, but not available stocks—liabilities are recorded at face value. Not all general government data are on an accrual basis.</p>	<p>Source data Although the source data collection programs are broadly adequate for the compilation of GFS, there is room for improvement. Local government data for the latest two years have to be estimated. With the introduction of accrual accounting and the GFMIS at the budgetary central government level in 2004/05, there have been unexpected problems in the timeliness and availability of monthly and quarterly source data for budgetary central government and some of the extrabudgetary funds. Not all sources are yet on an accrual basis and/or using market prices as valuation.</p> <p>Assessment of source data The source data are routinely assessed and verified against other sources. Issues are resolved through the GFS Committee and direct contacts.</p> <p>Statistical techniques Statistical techniques (including the estimation of local government data) employed to compile GFS are sound.</p> <p>Assessment and validation of intermediate data and statistical outputs All results are cross-checked with the relevant GFS Committee members' data.</p> <p>Revision studies Revision studies are carried out routinely to improve the estimates of local government data.</p>	<p>Periodicity and timeliness The GFS disseminated by the FPO follow the SDDS requirements for timeliness and periodicity.</p> <p>Consistency GFS are internally consistent and also consistent or reconcilable for the period 1990 to present. The GFS are largely consistent with the national accounts, BOP, and monetary statistics. Small differences are reconcilable.</p> <p>Revision policy and practice Preliminary data are replaced with actual data when they become available. This policy follows a clear schedule, which is posted on the FPO website. Preliminary and revised data are clearly identified. When estimated local government data are replaced with actual data, no analysis of differences between the revised and estimated data is published to allow an assessment of the reliability of the preliminary data.</p>	<p>Data accessibility GFS accessibility is adequate. Time series of the GFS are disseminated according to the standard components, statements, and tables of the <i>GFSM 2001</i> on the MOF and FPO's websites, in monthly press releases, and in other FPO publications. GFS are released to all users at the same time, strictly according to an advance release calendar posted on the FPO website. Users are invited on the website to request statistics not routinely disseminated.</p> <p>Metadata accessibility The FPO and MOF websites include a detailed document <i>Thailand's GFS: Information on Methodology, Data Coverage, and Compilation Practices</i>. The complete <i>GFSM 2001</i>, translated in Thai, is also posted on these websites. Simplified metadata on GFS also exist to accommodate a varied audience.</p> <p>Assistance to users The FPO and MOF websites include complete contact information for GFS, as well as a complete list of all FPO publications available in its e-library.</p>

Table 3c. Thailand: Assessment of Data Quality—Dimensions 2 to 5—Monetary Statistics

<p>2. Methodological soundness</p> <p>Concepts and definitions The concepts and definitions conform to the methodology of the <i>MFSM</i>.</p> <p>Scope Coverage of monetary statistics includes all depository corporations, except money market, mutual funds, and credit cooperatives. However, cooperatives and mutual funds represent less than 5 percent of total deposit-like liabilities.</p> <p>Classification/sectorization Sectorization of institutional units is in line with the <i>MFSM</i>. Classification of financial instruments is in line with the <i>MFSM</i>, except for financial derivatives, which are classified as off-balance sheet positions.</p> <p>Basis for recording The basis for recording generally follows the <i>MFSM</i> methodology: (1) uses market prices or fair prices for valuation, except for securities intended for investment purposes recorded at book values; (2) relies on accrual accounting; and (3) performs grossing and netting operations, as recommended.</p>	<p>3. Accuracy and reliability</p> <p>Source data Source data are obtained from a comprehensive and up-to-date register of all financial institutions. They provide sufficient detail to identify financial instruments and counterpart sectors, and approximate the definitions, valuation, and time of recording recommended in the <i>MFSM</i>. The source data are timely.</p> <p>Assessment of source data Procedures to assess source data are sound. Balance sheet data are routinely reviewed, and banks are consulted for clarification when unusual movements in the data are detected.</p> <p>Statistical techniques Statistical techniques are sound. The compilation process is highly automated. Electronic compilation procedures minimize errors.</p> <p>Assessment and validation of intermediate data and statistical outputs The intermediate data are assessed and validated against available information, namely, the information provided by the register for government securities.</p> <p>Revision studies Revisions are carried out and used to inform the data collection and compilation process.</p>	<p>4. Serviceability</p> <p>Periodicity and timeliness The periodicity and timeliness are in line with the SDDS requirements.</p> <p>Consistency Monetary statistics are consistent within the dataset. Consistent time series following the 1986 guidelines are available. However, data compiled according to the <i>MFSM</i> only start in January 2005, and main aggregates are not always easily reconcilable. Monetary statistics are consistent with BOP and government finance statistics.</p> <p>Revision policy and practice The revision cycle is pre-determined, stable, and communicated to users through the BOT's quarterly bulletin and website. The reasons underlying the revision cycle and the revisions are explained to the public. The magnitude of the revisions is normally negligible.</p>	<p>5. Accessibility</p> <p>Data accessibility Presentation of monetary statistics is generally clear, dissemination media are adequate, and the statistics are released on a preannounced schedule. Statistics are made available to all users at the same time, and no users outside the Data Management Department (DMD) have prior access. Unpublished nonconfidential data are available to users on request.</p> <p>Metadata accessibility Methodological notes are posted on the BOT's website, which is hyperlinked to the IMF's DSBB. Other brief and more detailed methodological notes are found in the BOT's bulletins.</p> <p>Assistance to users The BOT provides adequate assistance to users, and contact information is provided in the BOT's publications and website. All questions receive a response within three working days. A list of publications, calendar of dissemination, and prices is available on the BOT's website. Each statistical publication includes subscription forms.</p>
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Table 3d. Thailand: Assessment of Data Quality—Dimensions 2 to 5—Balance of Payments Statistics

<p>2. Methodological soundness</p> <p>Concepts and definitions The BOP concepts and definitions follow the provisions of <i>BPM5</i> and other international best practice.</p> <p>Scope In general, the scope is consistent with guidelines and good practices. However, some data on foreign trade not recorded by customs are not included in the BOP, in particular, smuggling, Internet commerce, and shuttle trade. Data on services and income are not fully recorded, owing to data source constraints.</p> <p>Classification/sectorization The BOT follows broadly the sectorization and classification recommended by the <i>BPM5</i>. Deviations exist with regard to transfers and various current account items. Reinvested earnings are not included in the BOP.</p> <p>Basis for recording The BOT records transactions at market prices or uses appropriate proxies. However, the recording principles mix cash and accrual accounting, owing to constraints in the source data. In BOP, data disseminated by the BOT value imports c.i.f. rather than f.o.b.</p>	<p>3. Accuracy and reliability</p> <p>Source data Data collection programs are not fully comprehensive. Customs and foreign exchange records are the most important data sources, but IIP, external debt, and tourist expenditure surveys are also used. Further sources complementary to the ITRS should be developed. Data sourcing is done in a timely fashion.</p> <p>Assessment of source data Source data are routinely assessed.</p> <p>Statistical techniques Data compilation, estimation, and adjustments are carried out using sound techniques.</p> <p>Assessment and validation of intermediate data and statistical outputs In general, sound methods are used for assessing and validating data at all stages of the compilation process. Most financial accounts data are reconcilable with the international investment position, but the lack of secondary data prevents the checking of some data categories.</p> <p>Revision studies Revision studies are carried out in sufficient detail. Results of the studies are used for fine-tuning preliminary data of most items, with the important exception of trade data.</p>	<p>4. Serviceability</p> <p>Periodicity and timeliness BOP data are compiled monthly and published on a monthly, quarterly, and annual basis via the BOT website. Monthly data are available within two months, while quarterly and annual data are available within three months, consistent with the SDDS requirements.</p> <p>Consistency BOP data are consistent over time. Data are also internally consistent and reconcilable with related datasets.</p> <p>Revision policy and practice There is a sound and transparent revision policy. Revisions are carried out quarterly for some items and annually for others, depending on data availability. However, revision studies are not published.</p>	<p>5. Accessibility</p> <p>Data accessibility BOP data are clearly presented and easily accessible through the BOT website and its statistical publications. A publication schedule is published. Only staff of the DMD of the BOT, who are directly involved in compilation, have prior access to data. Detailed data not published routinely are available from the BOT on request, and contact details are easily available.</p> <p>Metadata accessibility Metadata are available from the statistical bulletin and the website of the BOT, and are sufficiently detailed.</p> <p>Assistance to users The BOT publishes detailed contact information for each subject field for questions and comments. All questions receive a response within three working days. A catalog of publications is also available.</p>
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III. STAFF'S RECOMMENDATIONS

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

National Accounts

- Change the base year for the volume figures every year or, at least, every five years.
- Expedite the full conversion to the *1993 SNA*.
- Disseminate a more detailed methodological guide for the national accounts in hard copy and/or on the NESDB's website.

Government Finance Statistics

- Explore ways to include monthly data for the seven extrabudgetary funds that are excluded from the 2004/05 and 2005/06 data, so that the monthly (and quarterly) time series for the consolidated central government are consistent and comparable with the earlier data.
- Resolve problems with the GFMIS so that monthly (and quarterly) accrual data can be produced for the budgetary central government.

Monetary Statistics

- Include financial derivatives now recorded as off-balance sheet positions in monetary statistics.
- Reconstruct the monetary statistics following the *MFSM* as far back in time as possible.

Balance of Payments Statistics

- Develop comprehensive data sources (covering unrecorded trade, services, income, transfers, and the financial account) to complement the existing administrative data from the ITRS.
- Strengthen the BOT's legal mandate to compile and disseminate balance of payments statistics, including provisions for mandatory reporting of balance of payments source data by all resident units.

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

SDDS Data Category	Coverage (meets SDDS)	Periodicity		Timeliness		Comments
		SDDS	Thailand	SDDS	Thailand	
Real Sector						
National accounts	Yes	Q	Q	1Q	11W	
Production index	Yes	M	M	6W (<i>1M encouraged</i>)	4W	
Employment	Yes	Q	Q	1Q	3M	
Unemployment	Yes	Q	Q	1Q	3M	
Wages/earnings	Yes	Q	Q	1Q	3M	
Price index: consumer prices	Yes	M	M	1M	NLT 1W	
Price index: producer prices	Yes	M	M	1M	NLT 1W	
Fiscal Sector						
General government or public sector operations	Yes	A	A	2Q	2Q	
Central government operations	Yes	M	M	1M	1M	
Central government debt	Yes	Q	M	1Q	NLT 2M	
Financial Sector						
Analytical accounts of the banking sector	Yes	M	M	1M	NLT 1M	
Analytical accounts of the central bank	Yes	M (W recommended)	W (Key components of BOT's assets and liabilities) M (reserve money and SDDS prescribed components)	2W (<i>1W encouraged</i>)	1W	
Interest rates	Yes	D	D	1D	1D	
Stock market: share price index	Yes	D	D	1D	1D	
External Sector						
Balance of payments	Yes	Q	Q	1Q	NLT 1Q	
International reserves and foreign currency liquidity	Yes	M (W recommended)	W for official reserves assets M for reserves template data	1W for official reserves assets 1M (1W encouraged for the reserves template)	NLT 1W for official reserves assets	

SDDS Data Category	Coverage (meets SDDS)	Periodicity		Timeliness		Comments
		SDDS	Thailand	SDDS	Thailand	
Merchandise trade	Yes	M	M	8W <i>(4-6W encouraged)</i>	NLT 1M	
International Investment position	Yes	A <i>(Q recommended)</i>	A	3Q <i>(1Q encouraged)</i>	9M	
External debt	Yes	Q	Q	1Q	1Q	
Exchange rates	Yes	D	D	1D	1D	
Socio-demographic data						
Population	Yes	A	M	...	1M	

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

Italics indicate encouraged categories.

INTERNATIONAL MONETARY FUND
THAILAND

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

Response by the Authorities

April 10, 2006

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**RESPONSE BY THE AUTHORITIES TO THE RECOMMENDATIONS
OF THE IMF'S
ROSC—DATA MODULE MISSION**

I. GENERAL RESPONSE

The Thai authorities have relied extensively on macroeconomic data for their work in monitoring and analyzing economic and financial developments, as well as for policy implementation purposes. Indeed, statistics-compiling agencies in Thailand have long recognized the need and importance of producing a high-quality statistics series as part of effective policymaking. The authorities therefore have committed to achieving international standards and best practices in statistical compilation and dissemination. In 1996, Thailand adopted the Special Data Dissemination Standard (SDDS) and the participation in the Report on the Observance of Standards and Codes (ROSC)—Data Module in 2005 marked yet another important milestone of progress for Thailand in this area.

In this connection, the Thai authorities would like to extend their sincerest thanks and appreciation for the hard work, dedication, and interest of all the assessment team members in their tasks of assessing four macroeconomic datasets, namely, National Accounts, Government Finance, Monetary, and Balance of Payments Statistics. They also appreciate receiving the close cooperation and constructive advice prior to and throughout the actual assessment. The assessment has resulted in a comprehensive report on Thailand's current statistical compilation practices and important recommendation guidelines from which the authorities can further improve their practices accordingly.

The ROSC assessment team closely worked together with the Thai authorities and examined virtually all aspects of Thailand's statistical compilation practices. The results have confirmed the authorities' strong dedication to achieve high-quality data, as reaffirmed by the mission's recognition of Thailand's practices with regard to transparency, professionalism, ethical standards, quality of source data, and assistance provided to data users. Nevertheless, the authorities concur with the recommendations that there is still room for further improvement in certain areas, including the scope and revision policies.

The following sections contain responses from each of the authorities directly responsible for the corresponding datasets.

II. RESPONSE BY THE NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT BOARD

A. National Accounts

Recommendations by the IMF

- Change the base year for the volume figures every year or, at least, every five years.
- Expedite full conversion to the 1993 SNA.
- Disseminate a more detailed methodological guide for national accounts in hard copy and/or on the NESDB's website.

The Office of National Economic and Social Development Board (NESDB) plans to change the base year to the annual chained volume measure by the end of 2006. The NESDB, in cooperation with a group of external experts, already had finalized the study on the adoption of the most appropriate approach to better reflect the value at constant price. On November 18, 2005, the result of this study was presented to participants in the academic workshop on "Shift of the base year for the constant price estimates," at which chained volume measure was widely supported. In this regard, the NESDB agreed and, hence, decided to implement annual chain-linking. In the meantime, the NESDB will continue to inform and educate the public, especially data users, on the introduction of the annual chain-linked indices.

With regard to the full conversion of the *1993 SNA*, the NESDB plans to complete at least the production accounts by the end of 2007. Some implementation has already been put in place as mentioned in Volume III. On progress to date, the experimental set of SUTS with 90 industries and 120 products has been completed, using basic prices to record output. The *1993 SNA* working group has been established with the responsibility to coordinate with other data-producing agencies in order to expedite the implementation process.

In response to the IMF's recommendation, the methodological guide is under the process of being improved and updated. The document will be available both in Thai and English and is planned for release by early 2006 via website and hard copy.

Subsequent to the mission's recommendations, the NESDB has taken many immediate actions and introduced changes to the national accounts compiling process in order to enhance its data quality. These include the dissemination of seasonally adjusted GDP series at current market prices and annotation on revised figures for the quarterly GDP and annual National Income Statistics. The NESDB has also released the English, in addition to the Thai, version of the commentary to the annual National Income Statistics, the Flow-of-Funds Accounts, and the Capital Stock of Thailand. Moreover, all current issues of the NESDB's publications pertaining to national accounts statistics have included specific contact points for each subject field, and this practice will also apply to future issues.

III. RESPONSE BY THE FISCAL POLICY OFFICE, THE MINISTRY OF FINANCE

A. Government Finance Statistics

Recommendations by the IMF

- Explore ways to include monthly data for the seven extrabudgetary funds that are excluded from the 2004/05 and 2005/06 data, so that the monthly (and quarterly) time series for the consolidated central government are consistent and comparable with the earlier data.
- Resolve problems with the GFMIS so that monthly (and quarterly) accrual data can be produced for the budgetary central government.

The Fiscal Policy Office (FPO) meets regularly with the State Enterprise Policy Office (SEPO), the BOT, and the NESDB to discuss data pertaining to all state enterprises, as well as seven autonomous government agencies. As for the 2004/05 annual data, the FPO will use the data from the NESDB and/or the SEPO in order to ensure data consistency. However, the monthly historical series is not yet available. Such data series could be available from the Government Finance Management Information System (GFMIS), once fully implemented.

On the GFMIS, the FPO holds regular meetings among four government agencies (BOT, NESDB, the Ministry of Finance (MOF), and the Bureau of the Budget) together with the representative of the GFMIS project to resolve problems with the GFMIS so that source data on accrual basis can be produced by 2007 for the budgetary central government. A work plan has been set as follows:

- Mapping between GFS classification and accounting code;
- Developing an application for GFS data; and
- Conducting GFS dataset accuracy test.

IV. RESPONSE BY THE BANK OF THAILAND

A. Monetary Statistics

Recommendations by the IMF

- Include financial derivatives now recorded as off-balance sheet positions in monetary statistics.
- Reconstruct the monetary statistics following the *MFSM* as far back in time as possible.

The Bank of Thailand (BOT) recognizes the importance of including financial derivatives transactions in monetary statistics, and has included, as part of its work plan, further enhancement of the quality of monetary statistics. The dissemination of monetary statistics inclusive of financial derivatives is projected to start in 2007.

The BOT intends to publish on the BOT website at the end of March 2006 the historical series as far back as year 2003. During the transition to *MFSM*, the BOT will accommodate data users by providing the pre-*MFSM* until the end of 2006.

B. Balance of Payments Statistics

Recommendations by the IMF

- Develop comprehensive data sources (covering unrecorded trade, services, income, transfers, and the financial account) to complement the existing administrative data from the International Transactions Reporting System (ITRS).
- Strengthen the BOT's legal mandate to compile and disseminate balance of payments statistics, including provisions for mandatory reporting of BOP source data by all resident units.

The BOT concurs with the IMF's recommendations that a more comprehensive data source to complement ITRS needs to be developed to expand the coverage and comply with accrual accounting basis. The BOT fully recognizes limitations of the ITRS and attempts have been made to seek and incorporate supplementary data into the BOP compilation. This includes surveys on the International Investment Position, External Debt, as well as the recent surveys on trade credit and freight and insurance for imports/exports. In addition, administrative data from public and state enterprises and direct reports are also used to supplement data obtained from the ITRS. The BOT also acknowledges that additional data sources should be developed to enhance data collection for certain items in services, income, and transfer accounts. To this extent, a working group was formed to prioritize and to study the feasibility of each subject. The BOT also plans to implement the result of the aforementioned study in phases according to the priority of each item. The first phase, expected to start in July 2006, will focus on obtaining supplementary data sources for significant value item of services and income accounts and will be completed by 2008.

The issue of legal mandate has been addressed and acknowledged by government agencies. As part of a recent reform, the NSO has drafted an amendment to the Statistics Act to ensure a legal mandate for other individual government agency to compile and disseminate national statistics under its own responsibility at present. The legal mandate for the BOT to compile and disseminate BOP statistics and to conduct relevant surveys will also be applied.

INTERNATIONAL MONETARY FUND

THAILAND

Detailed Assessments Using the Data Quality Assessment Framework (DQAF)

Prepared by the Statistics Department

Approved by Robert W. Edwards and David Burton

April 10, 2006

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

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ABBREVIATIONS

<i>1968 SNA</i>	<i>System of National Accounts 1968</i>
<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
ABS	Australian Bureau of Statistics
BOP	Balance of Payments
BOT	Bank of Thailand
<i>BPM5</i>	<i>Balance of Payments Manual</i> , fifth edition
CBS	Central Bank Survey
COFOG	Classification of the Functions of Government
CPI	Consumer Price Index
CGD	Comptroller General's Department
DCS	Depository Corporations Survey
DMD	Data Management Department
DMS	Data Management System
DQAF	Data Quality Assessment Framework
DSBB	Data Standards Bulletin Board
FPO	Fiscal Policy Office
GFMIS	Government Finance Management Information System
GFS	Government Finance Statistics
<i>GFSM 1986</i>	<i>A Manual of Government Finance Statistics</i> , 1986
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
IAS	International Accounting Standards
ICAAT	Institute of Certified Accounts and Auditors of Thailand
IIP	International Investment Position
I-O	Input-Output
IPSAS	International Public Sector Accounting Standards
ISWGNA	Inter-Secretariat Working Group on National Accounts
ITRS	International Transactions Reporting System
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
MOF	Ministry of Finance
NESDB	National Economic and Social Development Board
NSDP	National Summary Data Page
NSO	National Statistical Office
ODCs	Other Depository Corporations
OFCs	Other Financial Corporations
PPI	Producer Price Index
PSO	Thailand International Public Standard Management System and Outcomes
SDDS	Special Data Dissemination Standard
SES	Socioeconomic Survey
SUTS	Supply and Use Tables

DETAILED ASSESSMENT USING THE DATA QUALITY ASSESSMENT FRAMEWORK (DQAF)

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

I. NATIONAL ACCOUNTS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The *National Economic and Social Development Board (NESDB) Act* of 1978 empowers the NESDB to collect and compile macroeconomic statistics, but does not specifically mention national accounts. However, by *Ministerial Regulations* of 2002, the NESDB has sole responsibility for producing national accounts statistics. Additionally, there has never been any challenge to the NESDB's responsibility for compiling and disseminating national accounts.

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

A regular program of discussions with the main data-supplying agencies ensures the timely delivery of data. Similar discussions also take place with other suppliers, but only when necessary. Thus, the NESDB does not experience any delays in receiving the data required to produce national accounts to the established timetable.

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

The NESDB is covered by the *Official Information Act B.E. 2540 (1997)*, which states that all individual data collected by government agencies must be kept confidential. It further states that such data cannot be disclosed or used for nonstatistical purposes without the written agreement of the respondent. Individual records that are no longer required are shredded by the appropriate compilers, but only with the permission of a senior officer. Individual offices have to be locked when not in use. Secure access to the building is also being introduced. Individual staff have their own computer password that only gives access to the relevant data.

The NESDB itself does not run many surveys—it relies on other government agencies to undertake this work, principally the National Statistical Office (NSO). Thus, the data supplied to the NESDB are covered by the rules and regulations applying to the originating agency. The operations of the NSO are covered by *The Statistics Act, B.E. 2508 (1965)*, which is currently being updated. The *Statistics Act* states that respondents' data must be kept confidential. This requirement is also noted on all survey questionnaires. Failure to comply with this regulation could result in a jail term of up to six months and/or a fine of no more than 1,000 baht (around US\$25). All questionnaires are kept in lockable facilities that can be accessed only by authorized staff.

The NSO has an aggregation rule that data will not be released if they relate to fewer than three individual respondents. Even so, data are still reviewed before release to ensure there is no indirect disclosure owing to the dominant position of one entity. The NSO applies these arrangements to the data supplied to the NESDB, that is, only aggregate data are given. Individual records sometimes are provided to researchers, but with identification details removed. The destruction of report forms is undertaken by another group in the NSO, but the survey staff are not aware of the details of this operation. Access to the NSO buildings and computer systems is tightly controlled.

Recommendation: The NSO survey teams should ensure that report forms are being destroyed in a secure fashion.

Recommendation: The revised Statistics Act should be passed as soon as possible to bring the fines for noncompliance up to date.

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

Section 22 of the *Statistics Act* states that all respondents must supply requested data. The penalty for not supplying data is a fine of up to 500 baht (about US\$12). However, no prosecution has ever taken place, as the NSO prefers to use persuasion to ensure response. All questionnaires give a contact point for respondents who require assistance. The NSO adopts a positive attitude to respondents' complaints, persuading respondents of the need to respond.

Recommendation: The revised Statistics Act should be passed as soon as possible to bring the fines for noncompliance up to date.

0.2 Resources

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

A total of 37 staff work on national accounts, which is just enough to compile and disseminate the existing dataset. Thus, developments, such as the adoption of the *System of*

National Accounts 1993 (1993 SNA), are proceeding slowly. All recruits are required first to have a degree in a relevant subject, mainly economics. Occasionally, internal training courses are offered, but staff gain most experience through on-the-job training and mentoring. However, established policy encourages staff to take all opportunities to attend international training courses. Staff have all levels of experience, and turnover is quite low. Salary levels are those established for the whole civil service and are quite low compared to the private sector.

Computer facilities fully meet the needs of national accounts. All data are held on two file servers, so that a hardware failure and/or loss of data would not affect the work. Another set of data is held in a separate building, but still on the same site. Thus, the loss of the site would have a serious impact on the system.

The office building is in good condition and creates a satisfactory working environment. The office furniture and equipment are of good quality and are in good condition. Transportation facilities are adequate to meet the needs of the NESDB.

Funding of the statistical program is adequate for the current workload.

Recommendation: The number of staff working on national accounts should be increased to speed up developmental activity.

Recommendation: The NESDB should arrange for the offsite backup of data.

0.2.2 Measures to ensure efficient use of resources are implemented.

Formal staff performance reviews take place every six months. Work processes are regularly reviewed to identify any changes that would improve efficiency. When necessary, the NESDB recruits outside experts to review its systems. All work activities are costed regularly, and this information is used to reallocate resources, as necessary.

0.3 Relevance

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

Any user can attend the annual workshop on national accounts. The NESDB uses this workshop to promote user interest in the subject and to discuss recent developments. Users are also free to raise any issue of concern. User feedback is also possible via the NESDB website. Regular meetings take place with the main policy departments. The staff take every opportunity to attend international meetings and seminars. The NESDB undertakes regular user surveys via its publications to obtain views on the relevance of the statistics.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

Management is committed to data quality and cascades this concern down through the ranks. Although no formal training is offered for staff, supervisors and mentors actively promote quality issues. Peer groups regularly review work processes and discuss data quality. Given resource constraints, there is an active program to improve efficiency in work processes. However, such reviews pay due consideration to quality to ensure that this does not suffer.

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

Managers regularly monitor work processes; for example, supervisors check the work of their team. Also, the computer systems have built-in checks on all aspects of data capture and processing.

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

All aspects of quality are considered as part of the planning process; for instance, improvements have been made to the computer systems to save staff time, but without reducing the quality of its outputs.

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis.

The secretary-general of the NESDB reports directly to the prime minister to ensure noninterference from other agencies. The NESDB undertakes economic forecasting work for the government, as well as producing national accounts. The working conditions ensure that there is no interference with national accounts from the rest of the NESDB. However, these arrangements have not been formalized and published.

Prospective employees must pass an entrance examination, as well as meet the necessary qualifications and experience, before they can attend an interview. Promotion is solely based on aptitude for the post, and candidates have to go through an interview process, except for the most senior posts. Most training is on-the-job, but international training is undertaken whenever possible. Staff are encouraged to publish work, and senior staff are also engaged in broadcasting activities.

Recommendation: The NESDB should publish a statement on the independence of the national accounts system from their other responsibilities.

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

The NESDB is totally free to decide on which data sources, compilation techniques, and dissemination practices it should use.

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

The national accounts publications contain detailed and clear commentaries on the statistics to reduce the possibility of misinterpretation of the figures. There is also a press briefing for the quarterly GDP figures to explain the numbers to the media. The NESDB is free to decide how it should respond to any incorrect interpretation or misuse of its statistics. This may simply involve writing to the appropriate person or, in more serious cases, the secretary-general may make a public statement.

1.2 Transparency

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

The quarterly national accounts publications contain information on the terms and conditions under which they are produced. This information is also on the NESDB's website.

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

There is no prerelease access to national accounts data by any other government agency, as stated in the Special Data Dissemination Standard (SDDS) metadata. However, the NESDB's forecasting team has such access to produce revised forecasts. This situation is not made public but is clear because the revised forecasts are released at the same time as the GDP figures.

Recommendation: The NESDB should publish details of the prerelease access to the national accounts data by their forecasting team.

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

The NESDB's own publications are clearly identified with its name and logo. The NESDB formally requests that any reproduced statistics be similarly identified, and this is also stated on their website.

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

All major changes to statistics are announced in advance in the relevant NESDB publications and on its website. Minor changes will just be noted when they are introduced.

1.3 Ethical standards

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

There is no internal written guidance on ethical standards. However, all civil servants are subject to the application of general ethical standards and must sign an agreement on joining. Staff are regularly reminded about their obligations.

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 national accounts are broadly in line with the *System of National Accounts 1968 (1968 SNA)*, but are in the process of being updated to the *1993 SNA*, although this is not due to be completed until 2008.

2.2 Scope

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

The national accounts do not fully meet the tables and accounts that the Inter-Secretariat Working Group on National Accounts (ISWGNA) has determined as a minimum requirement. This is because the NESDB has not yet fully implemented the *1993 SNA*. The published data cover annual GDP from both the production and expenditure approaches, at current and constant prices. The value-added components at current prices are also produced annually. A full set of accounts for the whole economy is not published, but sector tables for government and nonprofit institutions serving households have been developed. As well as requiring the above tables and accounts, the ISWGNA also recommends some additional tables, generally considered to be very useful to users. Of these, quarterly GDP from both the production and expenditure approaches, at current and constant prices, are published. On the other hand, annual supply and use tables (SUTS) are not produced; only a set of input-output (I-O) tables is produced every five years. However, SUTS are being developed: an experimental set comprising 67 industries and 97 products has been produced and currently is being extended to 90 industries and 120 products.

The GDP figures cover the whole economy—there are no free zones in Thailand. The production boundary is generally in line with the *1968 SNA*. However, the *1993 SNA* concepts of own-account production of all goods for own final consumption, and output of goods for own-account fixed-capital formation have already been implemented. The asset boundary is also generally in line with the *1968 SNA*. However, the *1993 SNA* concept of defense-related assets that could be used for civilian purposes has already been implemented. The other *1993 SNA* changes will be implemented in due course.

Recommendation: The NESDB should expedite the conversion to the 1993 SNA, including the publication of all the recommended accounts and tables.

2.3 Classification/sectorization

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

The *1968 SNA* is followed to classify institutional units, transactions, and other flows. International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 3 and the Central Product Classification (CPC) are used to classify industries and products, respectively, with some country-specific adaptations. The Classification of Individual Consumption by Purpose (COICOP) and the Classification of the Functions of Government (COFOG) are used to classify household consumption and government expenditure, respectively.

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 generally in accordance with the *1968 SNA*. However, the output figures are valued at full market prices, that is, all taxes and subsidies are allocated across industries; output for own use is also valued at equivalent market prices. Thailand has a value-added tax system, but the deductible part is also included in intermediate consumption, and output. Imports are valued c.i.f. in conformance with the *1968 SNA*. The figures are converted into baht using monthly average midpoint exchange rates.

Recommendation: The output figures should be converted to basic prices.

2.4.2 Recording is done on an accrual basis.

Transactions and flows are recorded on an accrual basis and work-in-progress is allocated to the period in which it is produced. However, all government transactions are recorded on a cash basis. It is not possible for the NESDB to convert all government figures onto an accrual basis. The Ministry of Finance (MOF) is converting its accounts onto an accrual basis, but in general, it will not be possible to apply this change back over time. However, taxes and

subsidies could be converted by identifying the average period between when they accrue and when they are actually paid.

Recommendation: The NESDB should investigate to see if the cash figures for taxes and subsidies could be converted onto an accrual basis.

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

The NSO undertakes full censuses of all producers every 10 years. This information is subsequently updated using all possible means, such as registration data from the Ministry of Commerce and information from the regional offices. The NSO uses this updated register to undertake sample surveys of businesses, which are a major source of data for national accounts. Typically, these sample surveys are done every two years and are stratified by industry, region, and number of employees. Within each of the resulting groups, the NSO selects an interval sample. The size of the sample varies from group to group in order to generate reliable figures for each group. However, the total size of the sample is constrained by the budget allocation, which could adversely affect the result, although the budget for the following year would be adjusted to cover the additional requirement. New questions can be introduced with the agreement of the users of the data, including the NESDB. Such new questions are always pilot-tested to ensure they can be answered correctly. For the years when such surveys are not undertaken, and for quarterly data, the NESDB uses alternative sources, such as production data from the Ministry of Industry and VAT records. The NESDB considers these data sources to be comprehensive and reliable.

The NSO undertakes a Socioeconomic Survey (SES) of households every two years to collect household economic data. A sample of enumeration areas is first selected, and an interval sample of households is then derived for each of these areas. Every effort is taken to get full response to this survey. Households that still refuse to cooperate are not replaced, because it is believed that this would make the enumerators less diligent in obtaining responses from the original sample. Also, the survey supervisors are based in headquarters and would find it difficult to replace nonrespondents with similar households. To cover for this nonresponse, the sample size is made 20 percent higher than would be strictly necessary. Unfortunately, this could introduce bias into the results, given that high-income households are more likely to refuse to cooperate. The areas surveyed are spread over the year to pick up

seasonal changes in consumption. The continuous nature of the survey would also make it difficult to replace nonrespondents with similar households. Households are not instructed to record their expenditures as they take place; instead, they are asked to remember their expenditure on food during the previous week, and expenditure over as much as a year for other items. As is common in other countries, the survey only covers households, not those living in institutions. The whole of Thailand is covered by the survey. For the years not covered by the SES, and for quarterly data, the NESDB uses whatever indicators are available. For many items, all that is possible is to use changes in population and price information. However, the NSO is planning to run the SES every year, which, together with running it throughout the year, will generate reliable quarterly results.

The NESDB obtains central government data from the MOF. The MOF is in the process of creating a system for capturing local government data, that is, provincial government, municipalities, and villages, which accounts for about 15 percent of total general government expenditure. However, in the interim, the NESDB gets aggregate data for local government from the Ministry of the Interior. This is broken down into the components required for national accounts using details available directly from the Bangkok Metropolitan Administration and from the NSO for all other provincial governments and municipalities. This accounts for about 65 percent of total expenditure by local government. Data on imports and exports of goods and services are obtained from the balance of payments (BOP) produced by the Bank of Thailand (BOT).

Detailed breakdowns of the consumer price index (CPI) and producer price index (PPI) are available for use as deflators—down to the seven-digit level of the classification for the CPI and three-digit level for the PPI. The production data are also available at this level of disaggregation, allowing for detailed compilation of the current and constant price figures.

Ad hoc surveys can be undertaken when required. Contacts with users and data suppliers are maintained through the annual workshop organized by the NESDB.

Recommendation: The NSO should try to replace nonrespondents to the SES to avoid any bias in the results.

Recommendation: The plan to undertake the SES every year should be implemented to obtain more reliable quarterly figures for household final consumption.

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

The surveys undertaken by the NSO meet the specified needs of the existing system. Data from administrative records are easily converted into the variables needed for national accounts. Coverage of economic activities is considered comprehensive. The only activities that are known to be excluded are those that are illegal.

3.1.3 Source data are timely.

All respondents are informed of deadlines, but, occasionally, late responses still have to be chased up. This means that all data are obtained in time to be included in the national accounts.

3.2 Assessment of source data

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

Because most of the data are collected through censuses or nonrandom samples, sampling errors are not relevant. Information is available on identified nonsampling errors and other aspects of survey operations. Revisions to the annual figures are incorporated as soon as they are available. Computer programs undertake comprehensive checks on the data, including consistencies with previous years and with similar businesses. Any unusual values are checked with the respondent and changes are made, if necessary.

3.3 Statistical techniques

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

The computer programs ensure there are no processing errors. No adjustments are made to unit records without checking with the respondents. Imputations for nonresponse are based on the average per employee of related establishments. Data are compared with those for similar businesses, and unusual values are queried with the respondents.

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

Coverage of informal activities is considered good. In the ten-yearly production censuses undertaken by the NSO, enumerators list all businesses in each area. This means that all established businesses should be covered. However, this exercise will still miss businesses that do not have a fixed location, such as street traders. To cover this, each detailed production activity is considered separately and adjusted using all available data. In some cases (e.g., fruit and vegetables), commodity flow techniques are used, that is, data on the other supply and demand components are used to estimate those missing from recorded activities. Illegal activities are not currently included, but there is a project under way to see if the value of such activities can be estimated. It should be noted that gambling is illegal in Thailand and, thus, is currently excluded from the national accounts.

Output and intermediate consumption are compiled at the seven-digit level of the product classification. Gross fixed-capital formation and changes in inventories are analyzed using

the same classification and by type of asset/inventory. Some use is made of extrapolation for the surveys run every two years. Also, some ratios are used from the five-yearly I-O tables, but only for the breakdown of intermediate consumption required for deflation purposes.

The estimates for imputed rent of owner-occupied dwellings are based on values reported by owners in the SES. Enumerators are instructed to check these values against actual rent paid for similar properties in the same area. Any unusual values are queried with the respondent and adjusted, if necessary.

Work-in-progress is recorded for all activities except agriculture. This is due to the difficulty of estimating the value of the harvest at the beginning of the year. Unfortunately, the method used for private forestry cultivation could, in theory, involve some unintentional double counting. Detailed data are available for each project allowing the NESDB to build up costs during the cultivation period. For each period, these costs have been included in output, with compensation of employees forming value added. However, the methodology specifies that the full value of felled trees would also be included in the output for that period. This means that output and value added would be overstated by the accumulated values for the previous period. Fortunately, none of this timber has yet been felled, so this has had no effect on the GDP figures. In theory, the value of the timber should be allocated back over the complete growing period in proportion to the costs incurred in each quarter. Given the long growing period for timber, this could involve making small revisions over long periods. In this case, it may be reasonable simply to subtract the built-up costs from output when the timber is felled.

Although figures are used for all types of inventory, the figures are not adjusted for holding gains. The NESDB needs to find out the valuation method used by businesses. If it turns out the inventories are recorded at current prices, then no adjustment is necessary. However, any other valuation method will require an appropriate calculation. Consumption of fixed capital is calculated using the preferred perpetual inventory method. As previously noted, no adjustments are made to convert government cash data to an accrual basis.

For most industries, the double deflation method is used to derive constant prices values, that is, output is based on quantities data or deflated using an appropriate component of the PPI or CPI. Then, intermediate consumption is broken down using ratios from the I-O tables, and each component is deflated by relevant components of the PPI or CPI. However, in a few cases, value added is deflated directly. For instance, there is no specific price index for financial services, so the NESDB had been advised to use the total CPI figures. It would be better to apply this to output rather than value added. Intermediate consumption then could be deflated by the method used for other industries, and value added derived by residual. Taxes and subsidies currently are not deflated because output and value added are recorded at full market prices. Trade margins are broken down by product and, when quantity data are available, are correctly deflated using base-year margin rates. However, in some cases, when quantities are not available, value added is deflated by the total CPI.

The most serious problem with the constant price figures is that the base year is 1988, which is very old. The NESDB currently has an outside expert looking at the best method to use to

express the constant price figures, that is, a fixed base year or annual chain-linking. This review, together with previous concerns about finding a suitably stable base year, has led to the serious delay in updating the figures. It should be noted that the introduction of annual chain-linked indices can take some time owing to the difficulty of explaining the methodology to users.

All of the components of the expenditure measure of GDP are derived independently, using very detailed classifications. Household final consumption and capital formation make use of NSO benchmark data, but this is at most only two to three years old. Government final consumption correctly excludes incidental sales. Appropriate adjustments are made to imports, exports, and household consumption for nonresidents' expenditure in Thailand and for residents' expenditure in other countries.

Household final consumption is deflated with appropriate components of the CPI. Thus, the implicit deflators are consistent with the CPI, even though they will have different weights. Government final consumption is deflated by the implicit price index from the production figures for government. Gross fixed-capital formation uses appropriate components of the PPI. Changes in inventories are derived correctly by deflating opening and closing levels using price indices appropriate to that time.

The current price figures for imports and exports are deflated using price indices supplied by the BOT. For goods, the price indices are based on unit values from the Customs data. However, as is common in other countries, these figures can be very unreliable and erratic. Thus, the BOT removes outliers and then takes a 12-month moving average of the results. Fortunately, the Ministry of Commerce is now running an enterprise survey to collect prices directly from importers and exporters. The NESDB already has investigated these figures for exports and found them to be more reliable than the series from the BOT. Thus, when the corresponding price index for imports is also available, these values could be used to extend forward the existing series. This means that better constant price figures would be available for the future, but there would be a break in the series, which would have to be explained to users. The existing deflators for services are acceptable—using CPI components for export price movements from partner countries for imports.

Quarterly figures are correctly adjusted to be consistent with annual totals using the Denton technique. The compilation methods derive proper seasonally unadjusted estimates. The constant price figures are then seasonally adjusted using the well-established X-12 technique. Unfortunately, the current price values are not seasonally adjusted.

Recommendation: The NESDB should correct the treatment of work-in-progress for private forestry.

Recommendation: The NESDB should derive inventory valuation adjustments, if necessary.

Recommendation: The double-deflation method should be extended to all possible industries.

Recommendation: The base year for the constant price estimates needs to be updated as a matter of urgency.

Recommendation: Price indices from the enterprise survey run by the Ministry of Commerce should be used to deflate imports and exports of goods, as soon as they are both available.

Recommendation: The current price values for quarterly GDP should be seasonally adjusted, as are the constant price figures.

3.4 Assessment and validation of intermediate data and statistical outputs

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

The source data used to compile national accounts are routinely checked against any other available data. In particular, the indicators used to extrapolate forward the benchmark data from the NSO surveys are checked against the NSO data, when this becomes available.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Appropriate changes are made if the above checks with other source data identify significant differences. This may involve using a different data source or just applying adjustments to the received data.

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

The NESDB explicitly publishes a series of values for the statistical discrepancy between the production and expenditure estimates for GDP. It is currently developing annual SUTS, which would fully balance the GDP figures and remove the statistical discrepancy. However, the existing system also minimizes the size of the statistical discrepancy by using commodity flow techniques to remove differences between supply and demand for specific products that are known to present problems.

Recommendation: The NESDB should introduce annual SUTS as soon as possible.

3.5 Revision studies

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

The NESDB regularly undertakes studies of the revisions to its figures. The direction and magnitude of these changes are assessed and alternative sources or adjustments are made to the data, if necessary. The results of these studies are fully documented for internal control purposes.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

The GDP estimates are compiled quarterly, in line with the SDDS.

4.1.2 Timeliness follows dissemination standards.

The quarterly estimates are published on the first Monday of the third month following the end of the reference period, well within the three months recommended in the SDDS.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

As noted above, the NESDB publishes a separate series for the statistical discrepancy. This discrepancy is quite small and stable, usually less than 1 percent of total GDP for the annual figures. The constant price figures are fully consistent with the equivalent current price values. Also, the quarterly estimates add up to their annual versions for the aggregate series for which quarterly values are estimated.

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

The NESDB maintains a consistent set of annual GDP estimates back to 1951, and the quarterly series goes back to 1993. Thus, there are no breaks in these series. The latest set of hard copy publications contains figures from 1996, but the full runs of data are held on the NESDB's website.

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

Imports and exports are identical to the values in the balance of payments. The data for general government are fully reconcilable with those in the government finance statistics (GFS), although both systems use different disaggregations. In particular, the NESDB has to use data from other sources to break down the local government figures.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

The revision cycle is very stable from year to year and is clearly stated in the publications and on the NESDB website. Normally, the annual figures are only revised twice before becoming final. The quarterly figures are only revised once in the following quarter, and then

again when new, or revised, annual figures are introduced. The NESDB fully explains the reasons for revisions in its publications. When, exceptionally, revisions are made outside this regular cycle, they are clearly shown and explained in the publications.

4.3.2 Preliminary and/or revised data are clearly identified.

Preliminary figures are clearly marked as such in the tables. Consequently, when a figure is revised, this is not explicitly indicated in the tables. This is the case even for changes outside the normal revision cycle, although these will be noted in the text. Thus, it may be more helpful to users to mark each value that has changed since the last publication.

Recommendation: The NESDB should consider if it would be more helpful to users to indicate revised figures in the data tables, rather than marking those that are provisional.

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

Revisions are explained in the publications, but the results of the formal analyses undertaken by the NESDB are not published.

Recommendation: The results of revision studies should be published.

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 publications are well laid out with commentary, charts, and tables to meet the needs of all users. However, an English version only of the detailed commentary is included in the quarterly publication, while the annual publication includes an English version only of the executive summary. Tables containing different levels of detail are also included in the publications. Only constant price figures are shown seasonally adjusted, because the current price equivalents are not yet seasonally adjusted.

Recommendation: Include an English version of the commentary in the annual national accounts publication.

5.1.2 Dissemination media and format are adequate.

The NESDB produces detailed annual and quarterly publications. Its quarterly press release is issued at the same time as the fuller quarterly publication. It would be possible to produce the press release some days before the detailed quarterly publication. This data then also should be included on the NESDB's website. If this summary data could be put onto the

website even sooner than in a press release, this should be considered as an alternative approach.

Recommendation: The quarterly GDP figures should be published as soon as possible.

5.1.3 Statistics are released on a preannounced schedule.

The publications are released to a preannounced schedule that is published a full year in advance. No publication misses this day, or time.

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

The data are available to all users at the same time via a press release, hard copy publications, and the NESDB website. A press conference takes place at the same time as the data are released.

5.1.5 Statistics not routinely disseminated are made available upon request.

More detailed unpublished breakdowns can be supplied free of charge, as long as they do not breach the confidentiality rules. However, this service is not advertised.

Recommendation: Advertise the availability of more detailed breakdowns of data.

5.2 Metadata accessibility

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

Only a fairly short methodological guide on the quarterly GDP estimates is published, but this is in English as well as Thai. A more detailed guide is maintained, but only for internal use. The SDDS metadata are regularly updated and shown on the NESDB's website.

Recommendation: Publish a detailed methodological guide for national accounts.

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

The NESDB produces general publications about its operations, which cover national accounts.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized.

Specific contact points for each topic are given on the NESDB website but not in the hard copy publications.

Recommendation: Include specific contact points for each topic in the hard copy publications.

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

A general catalog of publications is available on the NESDB's website, and a full annual list is given in the quarterly publication.

Table 1. Thailand: Data Quality Assessment Framework (July 2003): Summary of Results for National Accounts
(*Compiling Agency: National Economic and Social Development Board*)

Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X	X			Development work is slow, owing to insufficient staff.
0.2 Resources		X				
0.3 Relevance		X				
0.4 Other quality management		X				
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions			X			The 1968 <i>SNA</i> is used, but some 1993 <i>SNA</i> changes have been introduced. Some tables are not produced. Output is recorded at market prices; no accrual adjustments are made to government data.
2.2 Scope			X			
2.3 Classification/sectorization		X				
2.4 Basis for recording			X			
3. Accuracy and reliability						
3.1 Source data		X				Base year for constant price estimates is far too old. Time series of revisions are not published.
3.2 Assessment of source data		X				
3.3 Statistical techniques			X			
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
4. Serviceability						
4.1 Periodicity and timeliness		X				Time series of revisions are not published.
4.2 Consistency		X				
4.3 Revision policy and practice			X			
5. Accessibility						
5.1 Data accessibility			X			Availability of unpublished data is not advertised. Published guide could be more detailed.
5.2 Metadata accessibility			X			
5.3 Assistance to users		X				

II. GOVERNMENT FINANCE STATISTICS

The government finance statistics (GFS) examined in this assessment are the consolidated general government sector (and its subsectors) statistics compiled and disseminated by the Fiscal Policy Office (FPO) in the Ministry of Finance (MOF), following the *Government Finance Statistics Manual 2001 (GFSM 2001)* statistical framework.

0. Prerequisites of quality

0.1 Legal and institutional environment

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

The FPO in the MOF compiles and disseminates a broad range of economic and fiscal data in accordance with the requirements of the *Official Information Act, B.E. 2540 (1997)*. Moreover, a Ministerial Regulation on the *Organization of the Fiscal Policy Office Act, B.E. 2545 (2002)*, section 8, number 4 (2), assigns the responsibility and authority for collecting, processing, and disseminating government finance statistics to the FPO in the MOF. According to this regulation, the FPO should report on fiscal statistics, with a broad institutional coverage and following international standards (*GFSM 2001*), for (1) use in fiscal policy analysis in the MOF; and (2) dissemination domestically and to the IMF for publication in the *GFS Yearbook*.¹ Copies of the *Official Information Act, B.E. 2540 (1997)* are available in Thai and English from the Office of the Official Information Commission. Copies of the *Organization of the Fiscal Policy Office Act, B.E. 2545 (2002)* are available in Thai from the MOF, on the website of the Office of the Council of State, and in any public library that keeps copies of Acts and Royal Decrees.

No other agency in Thailand produces and/or disseminates fiscal statistics with a broad institutional coverage and according to international standards. However, as planned in the transfer of responsibilities from the Bank of Thailand (BOT) to the FPO, the BOT continues to monitor treasury operations as an essential input for reserve money management decisions, and is maintaining its government finance statistics database for that purpose. The BOT continues to disseminate these fiscal statistics, which are compiled according to *A Manual of Government Finance Statistics, 1986 (GFSM 1986)* methodology, in its quarterly bulletin,

¹ Starting in 1999, the Thai authorities have embarked on a comprehensive program to upgrade their fiscal data compilation and reporting systems. The main features of this program are (1) the compilation and dissemination of government finance statistics, with comprehensive institutional coverage, by the MOF; and (2) the adoption of the *Government Finance Statistics Manual 2001 (GFSM 2001)* methodology for compiling and disseminating government finance statistics for purposes of fiscal analysis, as well as the development of data management information systems. As part of this program, the responsibility for compiling government finance statistics data for dissemination domestically and in the IMF's *Government Finance Statistics Yearbook (GFS Yearbook)* was transferred from the BOT to the FPO in the MOF in 2001.

the *Economic and Financial Statistics*, and on its website. These data are consistent with the cash data compiled and disseminated by the FPO, and the relationships between the two datasets are explained in the metadata on the FPO's website. Nonetheless, the BOT envisages replacing these cash data in the *GFSM 1986* framework with data in the *GFSM 2001* framework in the near future.

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

The FPO compiles and disseminates fiscal data covering the general government sector and all its subsectors, as well as the nonfinancial public sector. Formal arrangements and procedures have been established between the FPO and the source data-producing agencies to facilitate the effective and timely flow of source data.

A GFS Steering Committee, comprising all relevant agencies,² was established in 2000 to coordinate fiscal data reporting and compilation. The GFS Steering Committee has the following mandates and responsibilities: (1) improving fiscal data according to international standards; (2) studying and analyzing the budgets for the general government sector and nonfinancial public corporations; (3) analyzing the impact of the general government sector and nonfinancial public corporations on the country's economic and financial systems in the short- and long-run; and (4) establishing a subcommittee, working group, or individual to perform specific tasks or studies. The GFS Committee meets every month. All source data agencies are members of the GFS Committee and have the responsibility to provide source data to the FPO in a timely manner for the compilation of *GFSM 2001* data.

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

In accordance with the *Official Information Act, B.E. 2540* (1997), Section 23, individual reporters' data are kept confidential and are only used to compile government finance statistics for the subsectors of general government and nonfinancial public corporations. Data stored electronically are password-protected and are only accessible by the government finance statistics compilers in the FPO.

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

Technically, the *Official Information Act, B.E. 2540* (1997) can be used to ensure reporting of source data to the FPO for compiling and disseminating government finance statistics. However, it has never been necessary to use this act to ensure reporting. Instead, through

² The FPO and Comptroller General's Department in the MOF, BOT, National Economic and Social Development Board, Bureau of the Budget, Local Administration Department, and the Bangkok Metropolitan Administration are represented on the GFS Steering Committee.

official correspondence, the FPO requests data reporting and cooperation from the various source data-producing agencies. In addition, the FPO regularly explains the importance of providing source data for the compilation of comprehensive government finance statistics. The GFS Steering Committee is also used to encourage source data reporting (especially extrabudgetary funds and local governments) and to resolve any data problems. The government finance statistics compilers in the FPO also have regular, direct contact with all source data providers to resolve data issues.

0.2 Resources

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

The number of staff assigned to government finance statistics compilation is just adequate to perform their existing tasks. However, as Thailand moves to full accrual accounting over the next few years, the existing number of staff may not suffice to further develop government finance statistics. Currently, four staff members in the Public Finance Unit of the FPO are responsible, among other things, for compiling and disseminating government finance statistics covering the general government and nonfinancial public sector. To reduce the burden of government finance statistics compilation with a limited number of staff, the FPO established a computerized Government Finance Management Information System (GFMIS), but this system is not yet fully operational.

The qualifications of the government finance statistics compilers are adequate, and staff attend government finance statistics training courses organized by the IMF and internally by the FPO. Salary levels of government employees are less than in the private sector for comparable jobs and positions, but other benefits, such as job security and welfare benefits, make jobs in the government sector attractive.

Given the relatively high rate of staff turnover, a core group of staff with extensive government finance statistics knowledge does not exist in the FPO, with the exception of the Head of the Division.

Staff have adequate facilities and computer resources to perform their tasks, and financial resources are adequate to carry out existing duties.

Recommendation: Increase staff, and retain existing staff with knowledge and experience of GFSM 2001 methodology to ensure continuity in the compilation and dissemination of comprehensive GFS.

0.2.2 Measures to ensure efficient use of resources are implemented.

Given the limited number of staff involved in government finance statistics compilation, the FPO focuses strongly on effective staff performance and efficient use of resources in this task.

The FPO recently established a “Cost Center” in each of its departments (“bureaus”). These centers determined the cost of each bureau, and the next step will be to measure the cost of staff members against the output. The FPO’s annual budget is determined according to the regular budgetary process.

The FPO has made extensive use of IMF technical assistance in government finance statistics methodology since 2000. In addition, assistance in government finance statistics compilation and training has been received from the Australian Bureau of Statistics (ABS) in mid-2003. The government finance statistics compilers also visited the ABS in late 2003.

All MOF staff are subject to annual performance reviews. Staff members have performance indicators against which they are evaluated every six months.

0.3 *Relevance*

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

The FPO disseminates government finance statistics on its website (<http://dw.mof.go.th/foc/gfs/index.html>), which includes a user survey to establish whether data meet users’ needs. The most recent results show that 86 percent of users (about 100 responses were received) consider the government finance statistics data and other information provided to be “good.”³ In the survey, provision is also made for new suggestions and how to improve the relevance of the data.

Formally and informally, the FPO regularly consults with policy departments (e.g., other divisions in the FPO responsible for fiscal analysis and the BOT), as well as other data users, such as the NESDB. When possible, government finance statistics compilers participate in statistical meetings and seminars in Bangkok or elsewhere in Asia.

0.4 *Other quality management*

0.4.1 Processes are in place to focus on quality.

The government finance statistics compilers in the FPO recognize the importance of data quality and always strive toward producing data that meet all dimensions of data quality. To facilitate this, data are produced and disseminated according to the *GFSM 2001* and the IMF’s Special Data Dissemination Standard (SDDS).

³ The possible ratings are “strongly agree,” “good,” “neutral,” “not so good,” and “strongly disagree.”

The Thai government has recently introduced a special quality standard for government agencies—similar to the ISO standards for the private sector and public corporations—called “Thailand International Public Standard Management System and Outcomes (PSO).” The assessments are done by the Government Official Commission. The FPO has a PSO1101 certification—the data quality standard of the PSO—and will be assessed every two years.

To assist users in understanding all the quality dimensions that the FPO takes into consideration, the FPO has also translated the IMF’s *Data Quality Assessment Framework for Government Finance Statistics* in Thai and posted it on the FPO’s website.

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

Several processes are in place to monitor the quality of government finance statistics disseminated: (1) data edits exist to ensure that data add vertically and horizontally; (2) external and internal (MOF) users provide feedback on data quality issues on a formal and informal basis; (3) the MOF conducts quality assessment surveys of data users; and (4) through IMF technical assistance in government finance statistics, the quality of the data is assessed against international standards (*GFSM 2001*).

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

Any data quality issues that emerge from the processes in place to monitor these issues (0.4.2) are addressed as soon as possible.

Consideration is always given to trade-offs between data coverage and timeliness, on the one hand, and accuracy and reliability, on the other hand. For example, actual local government data are only available with a two-year lag. Not to compromise the timeliness and data coverage, local government data are estimated until actual data become available.

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis.

While no specific law or provision supports professional independence, a general culture of professionalism is continuously promoted in the FPO (and broader MOF) through seminars and other informal arrangements.

Government finance statistics compilers in the FPO are committed to compiling statistics according to the methodology of the *GFSM 2001* and are not influenced in any way by any fiscal policy analysis or other considerations. All government finance statistics compilers have attended courses in government finance statistics organized by the IMF and/or internally organized by the FPO.

A Recruitment Committee in the FPO is responsible for recruiting new staff members. Vacancies are advertised in newspapers, on the MOF and FPO websites, as well as on bulletin boards in the MOF and FPO. Potential candidates do written tests as well as interviews to determine their ability in macroeconomics and statistics.

Staff are encouraged to do research and analysis, as well as to participate in lectures and conferences. For example, government finance statistics compilers published government finance statistics articles in the “Fiscal Journal,” as well as on the FPO’s government finance statistics website. Compilers also participated in seminars, such as the Collective Workshop on Capacity Building in Macroeconomic Statistics (July 26–28, 2004), in Bangkok, which was organized by the ASEAN Secretariat and Japanese MOF. One of the government finance statistics compilers gave a lecture to ASEAN member countries on “Application of GFS: Case Study of Thailand.”

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

Government finance statistics source data and data dissemination issues are based solely on the international standards, such as the *GFSM 2001* and the SDDS. Dissemination of government finance statistics is primarily done by way of a comprehensive website and monthly press releases.

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

If the government finance statistics data are used incorrectly or misinterpreted, the FPO is allowed to comment and/or provide further explanations to the users.

The FPO is taking several measures to prevent misinterpretation or misuse of its statistics. The FPO’s government finance statistics website contains comprehensive materials to explain government finance statistics methodology and compilation practices. The website also contains, in addition to the *GFSM 2001* (which has been translated in Thai), metadata on definitions and concepts as well as on data sources.

The FPO issues monthly press releases on government finance statistics and also publishes *GFSM 2001* explanatory materials in the *Fiscal Journal*. To improve users’ knowledge of the *GFSM 2001* framework, the FPO held several government finance statistics seminars in the MOF and for the news media. At each press conference with the release of government finance statistics, the methodology and data are explained to the media.

1.2 Transparency

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

The code of practice in terms of data collection, processing, dissemination, and analysis is published on the FPO and MOF websites and thus is readily available to the public.

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

There is no internal governmental access to the government finance statistics data prior to their release. This fact is publicly identified on the Data Standards Bulletin Board (DSBB), as well as on the respective websites where the government finance statistics are simultaneously released to the public and other government officials: the MOF (<http://http://dw.mof.go.th/foc/gfs/c.html>), the FPO (www.fpo.go.th), and the BOT (http://www.bot.or.th/BOTHomepage/Databank/Econdata/Sdds/Sdds_e.htm).

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

The released government finance statistics are clearly identified as being produced by the FPO in the Ministry of Finance of Thailand. Data sources are also identified, where relevant.

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

No major changes in methodology or source data have been necessary since the introduction of the *GFSM 2001* methodology in 2000. However, should such changes occur, the policy is to inform users about this in advance.

1.3 Ethical standards

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

FPO staff in the MOF are guided by the code of conduct for public servants and the code of practice for compiling government finance statistics. Both these codes are provided on the MOF and FPO websites and are well-known to government finance statistics compilers.

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.*

Monthly, quarterly, and annual government finance statistics are compiled and disseminated according to the *GFSM 2001*, following a Ministerial Regulation on the *Organization of the Fiscal Policy Office Act, B.E. 2545 (2001)*, section 8, number 4 (2). The regulation stipulates that the FPO should report on fiscal statistics, with a broad institutional coverage and following international standards (*GFSM 2001*), for (1) use in fiscal policy analysis in the MOF and (2) dissemination domestically and to the IMF for publication in the *GFS Yearbook*.

The authorities are following a migration path to implement the *GFSM 2001*. While the migration to the *GFSM 2001* started in late 2000, an official migration path was adopted in 2003, taking into account progress already made by the FPO. Taking into account as well the implementation of accrual accounting by the Comptroller General's Department (CGD) and the Government Finance Management Information System (GFMIS), the original migration path has recently been updated as follows:

Target	Planned Target Dates	Status / Comments
1. Compile of existing data according to the <i>GFSM 2001</i> .	October 2002	Already implemented. Budgetary data are on a cash basis and include grants in kind. Extrabudgetary funds and social security funds data are on an accrual basis. Local government data are a mixture of cash and accruals. No balance sheet information other than debt is compiled.
2. Compile mostly accrual data according to <i>GFSM 2001</i> , with more complete balance sheet information.	March 2006, for FY2004/05	Compile: * Statement of Government Operations (all accruals, except for local governments, which are mixture of cash and accruals) for general government and its subsectors; * A complete balance sheet for central government—financial assets and liabilities valued at market prices, nonfinancial assets valued at “net book value”; and * Only transfers (grants) among government units will be consolidated—current with existing practices and in line with <i>GFSM 2001</i> .

Target	Planned Target Dates	Status / Comments
3. Expand and improve information in (2) above.	March 2007, for FY 2005/06	Compile: * Statement of Government Operations (all accruals, except for local governments, which are mixture of cash and accruals) for general government and its subsectors; * Statement of Source and Uses of Cash for central government (and its subsectors); * A complete balance sheet for central government—financial assets and liabilities valued at market prices, and nonfinancial assets valued at “net book value”; and * Expand consolidation to interest and other intragovernmental transactions.
4. Compile data on an accrual basis	March 2010, for FY 2008/09	Compile for all general government units (including local governments): * A complete balance sheet, with all assets and liabilities valued at market prices; * Statement of Other Economic Flows.

The FPO compiles and disseminates monthly, quarterly, and annual debt data according to the *GFSM 2001*. Debt data are broken down by residency, as well as by maturity, holder, and instrument. Government-guaranteed debt are shown separately as a memorandum item.

2.2 Scope

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

The compiled and disseminated government finance statistics cover the operations of the consolidated general government sector, all its subsectors, as well as the consolidated nonfinancial public sector, thereby also capturing the quasi-fiscal activities carried out by nonfinancial public corporations in Thailand.⁴

The nonfinancial public sector in Thailand comprises the units of the general government sector plus the nonfinancial public corporations. The general government sector consists of the central government and local governments subsectors. The central government subsector comprises all entities covered by the general budget (budgetary central government), the extrabudgetary funds and institutions (i.e., central government units with their own budgets), and two social security funds.

⁴ Most of the quasi-fiscal activities are, however, carried out by financial public corporations.

Specifically, the government finance statistics coverage operates as follows:

- Monthly, quarterly, and annual consolidated central government data cover all central government operations (see 3.1.1⁵);
- Quarterly and annual general government data cover all central and local government operations (the latest two years of local government data are estimates), and
- Annual nonfinancial public sector data cover the operations of all general government units and all nonfinancial public corporations in Thailand.

The FPO has made significant progress in migrating toward the *GFSM 2001*. Because the migration to the *GFSM 2001* and the implementation of the GFMIS have not yet been completed, government finance statistics currently cover all economic stocks and flows, except for the following:

- the Statement of Sources and Uses of Cash;⁶
- the Statement of Other Economic Flows; and
- financial and nonfinancial assets in the Balance Sheet.

Monthly, quarterly, and annual debt data are compiled for the consolidated central government sector (budgetary central government and all extrabudgetary funds)—in line with SDDS requirements—as well as for the nonfinancial public corporations sector. Debt data for local governments are not available and, thus, no debt data for the consolidated general government sector are compiled or disseminated at this stage. The two social security funds have no debt other than an immaterial amount of accounts payable; nonetheless, these data are not included in the debt data currently being compiled and disseminated.

Recommendation: Compile all the GFSM 2001 statements and tables on all stocks and flows once the migration to the GFSM 2001 (including the implementation of accrual accounting) has been completed.

Recommendation: Expand the coverage of debt statistics to include social security funds and local governments.

⁵ For 2004/05, the monthly and quarterly central government data exclude the operations of seven extrabudgetary funds, owing to problems with source data availability.

⁶ A Statement of Sources and Uses of Cash is done only for the budgetary central government and local governments, not for extrabudgetary funds and social security funds. As a result, a Statement of Sources and Uses of Cash cannot be compiled for the consolidated central and consolidated general governments.

⁸ The change in inventories is thus zero for the cash-based data.

2.3 *Classification/sectorization*

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

The general government sector and nonfinancial public corporations are defined in accordance with the *System of National Accounts, 1993*. This work has been done in close cooperation with the National Economic and Social Development Board (NESDB) and BOT, to ensure consistency among the sectoral data.

Government finance statistics that are compiled and disseminated for the general government sector, all its subsectors, and the nonfinancial public sector are defined in accordance with the *GFSM 2001*.

In the government finance statistics tables compiled and disseminated:

- **Revenue** is defined and classified according to the *GFSM 2001* (also see “Basis of Recording”).
- **Expenditure** is defined and classified according to the *GFSM 2001* (also see “Basis of Recording”). The term “expenditure” does not form part of the main government finance statistics system but can be calculated as an additional aggregate for analytic purposes (Box 4.1 of the *GFSM 2001*). In the *GFSM 2001* system, expenditure is defined as the sum of **expense** plus the **net acquisition of nonfinancial assets** – both of which are also defined and classified according to the *GFSM 2001*. However, for transactions in nonfinancial assets, all the cash-based data exclude consumption of fixed capital, and all acquisitions of inventories are recorded as expenses at the time they are purchased.⁸ Thus, for the cash-based data, the net acquisition of nonfinancial assets represents purchases minus sales of nonfinancial assets. Data for extrabudgetary funds, which are on an accrual basis, include consumption of fixed capital (calculated at historical cost values), and inventories are recorded as expenses when they are used. Nonfinancial assets received in the form of grants-in-kind are included in all the data. An economic classification of expense and a Classification of Functions of Government (COFOG) are done.
- **Financing** (i.e., the **net acquisition of financial assets** and the **net incurrence of liabilities**) is defined and classified by residency, instrument, and holder according to the *GFSM 2001*. Residency is defined in accordance with the *GFSM 2001*.
- All the main *GFSM 2001* **balancing items** are defined according to the *GFSM 2001*. Because consumption of fixed capital is not yet available for all of general government, only a gross operating balance is calculated. In addition, following the recommendations of the *GFSM 2001* (Box 4.1), a supplementary analytical balance, the “overall fiscal balance,” is also compiled and disseminated.

For annual data covering the general government sector and its subsectors, all details in the *GFSM 2001* Statements and Tables in the IMF's *GFS Yearbook Questionnaire* are compiled and disseminated domestically.⁹ Monthly and quarterly government finance statistics cover the complete *Statement of Government Operations*.

In line with the SDDS requirements, monthly and quarterly debt data are classified by residency, maturity, and holder. Annual debt data are classified by residency, instrument, and holder in accordance with the *GFSM 2001*.

2.4 *Basis of recording*

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

Flows are recorded at market prices, and available stocks—currently only liabilities—are valued at face value. Based on the migration path, valuation of stocks at market prices will be implemented over the next few years—first for liabilities, then financial assets, and lastly for nonfinancial assets.

Transactions in foreign currency are converted to Thai baht using the midpoint exchange rate prevailing in the market at the time these transactions take place. The outstanding stock of debt is converted from foreign currency to Thai baht using the midpoint exchange rate prevailing on the last working day of each month.

2.4.2 *Recording is done on an accrual basis.*

In the Thai migration to an accrual basis of recording, the current status is the following:

Budgetary central government	All data through 2003/04 are on a cash basis. Annual data from 2004/05 onwards will be on an accrual basis (available early-2006). Monthly and quarterly data for 2004/05 are on a cash basis.
Extrabudgetary central government units/entities	Data are on an accrual basis.
Social security fund	Data are on an accrual basis.
Local governments	Data for all local governments are on a cash basis, except the data for the Bangkok Metropolitan Authority, which are on an accrual basis.
Nonfinancial public corporations	Data are on an accrual basis.

Recommendation: Value all assets and liabilities at market prices and record all stocks and flows on an accrual basis once the migration to GFSM 2001 is completed.

⁹ No data are available for other economic flows or stocks of nonfinancial and financial assets.

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

Grossing/netting procedures are consistent with the *GFSM 2001*, where all transactions are shown on a gross basis, except for transactions in financial assets and liabilities. Corrective transactions, such as refunds, are netted against the original transactions.

3. Accuracy and reliability

3.1 Source data

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

A complete list of nonfinancial public sector units exists in the FPO, which corresponds with those lists used by macroeconomic statistics compilers in the BOT and NESDB. Detailed bridge tables between the source data and the *GFSM 2001* classification categories have been developed for all general government units.¹⁰ These bridge tables have been incorporated in the GFMIS, but the GFMIS is not yet fully operational. As a result, data are still bridged to the *GFSM 2001* framework using Excel tables.

Although the source data collection programs employed to compile government finance statistics are broadly adequate for the compilation of government finance statistics covering the general government sector and its subsectors, as well as for the nonfinancial public corporations, there is room for improvement.

In all cases, except for local governments, administrative records and financial statements are used to compile government finance statistics. In the case of local governments, actual data from their financial statements are only available with a two-year lag. As a result, local governments' data for the latest two years are estimated by the FPO (see 3.3). These estimates reasonably approximate local government operations and are replaced with actual data when they become available. No balance sheet data for local governments (including debt data) are currently available.

With the introduction of accrual accounting, the new chart of accounts, and the GFMIS at the budgetary central government level in 2004/05, there have been unexpected "teething problems" in the timeliness and availability of monthly and quarterly source data for budgetary central government and some extrabudgetary units. The authorities are working expeditiously to resolve these problems, but it is expected that the problems might only be resolved by the end of the 2005/06 fiscal year:

¹⁰ Aggregated bridge tables exist for the nonfinancial public corporations data, and these source data are bridged to the *GFSM 2001* classifications using Excel tables.

- Although accrual accounting has been implemented at the budgetary central government level since October 2004 (i.e., the 2004/05 fiscal year), accrual monthly and quarterly data cannot yet be produced from this system. As a result, the CGD uses the GFMIS source data and produces cash monthly and quarterly source data. Nonetheless, the actual, annual 2004/05 source data for the budgetary central government will be on an accrual basis.
- Because the GFMIS will be expanded to “state enterprises” only in the coming year, no monthly and quarterly data are available for seven of the extrabudgetary funds,¹¹ starting with the 2004/05 fiscal year. Previously, these monthly and quarterly data were available through the CGD system, but this system was terminated six months after the introduction of the GFMIS (i.e., early 2005). Annual 2004/05 data will be available in yearly 2006, directly from these entities.

Once the GFMIS is fully implemented (and the problems to produce accrual source data from the GFMIS have been resolved), and GFMIS has been rolled out to include the “state enterprises,” the source data for central government units will be obtained more efficiently and will be more complete to compile government finance statistics on an accrual basis. At a later stage, GFMIS will also be implemented in local governments, which should significantly improve the timeliness and availability of these source data.

The government finance statistics compilers in the FPO regularly consult with the source data agencies—directly and through the GFS Committee.

Recommendation: Resolve problems with GFMIS so that monthly and quarterly accrual (and cash) source data can be produced for the budgetary central government.

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

With a few exceptions, the source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required by the *GFSM 2001*. The exceptions are discussed below.

Source data reasonably approximate the *GFSM 2001* requirements as follows:

- For all central government units, the source data follow the respective charts of accounts, based on the International Public Sector Accounting Standards (IPSAS).

¹¹ Sports Authority of Thailand, Tourism Authority of Thailand, Water Waste Management Authority, National Science Museum, Botanical Garden Organization, Thailand Institute of Scientific and Technological Research, and Civil Aviation Training Center.

- For annual central government data, the source data are sufficiently detailed to allow detailed classifications according to the *GFSM 2001*. The new budgetary central government chart of accounts has been developed in close collaboration with the government finance statistics compilers, to ensure that enough details are available for government finance statistics compilation, including details to consolidate the various levels of government.
- For quarterly and monthly data, the available source data are sufficiently detailed to compile a complete Statement of Government Operations.

Actual, annual source data (available with a two-year lag) for local governments do not follow IPSAS (with the exception of the Bangkok Metropolitan Authority), but broadly approximate the definitions required. These annual data are sufficiently detailed to allow detailed classifications according to the *GFSM 2001*. The available monthly and quarterly source data are sufficiently detailed to compile reasonable estimates for local government operations (Statement of Government Operations).

Nonetheless, the central and local government source data have the following shortcomings in terms of scope, valuation, and time of recording (see also 3.1.1), because the migration to accrual accounting is not yet completed and problems are being experienced with the implementation of the GFMIS:

- **Valuation and time of recording:** Budgetary central government and most of local government source data are still on a cash basis—not on an accrual basis—and available stock data are valued at face value, not market value. Also, no information is yet available to compile all the *GFSM 2001* statements and tables (e.g., a complete Balance Sheet and a Statement of Other Economic Flows).
- **Scope:** For 2004/05, monthly and quarterly source data for seven of the extrabudgetary funds are not available at all, following the implementation of the GFMIS in October 2004 (these data will be available on an annual basis in January 2006). These monthly and quarterly data are likely to be unavailable for 2005/06 as well.
- **Scope:** All source data, with the exception of some extrabudgetary funds and all social security funds, currently exclude stocks of nonfinancial and financial assets.
- **Scope:** No source data are currently available on local government debt and, as a result, no total consolidated general government debt data are compiled.

For nonfinancial public corporations, the available source data are on an accrual basis (following IPSAS) and are sufficiently detailed to compile a complete Statement of Operations.

Detailed bridge tables exist between all the source data and the *GFSM 2001* classifications, and, through these, compilers are aware of the differences and adjustment processes. The

GFMIS has been developed to take account of these links between the source classifications and the *GFSM 2001* classifications. Until the GFMIS is fully functional, the government finance statistics compilers are using the bridge tables in Excel to compile the government finance statistics data from the source data.

Recommendation: Explore ways to obtain monthly data for the seven extrabudgetary funds (for 2004/05 and 2005/06), so that the monthly (and quarterly) time series for the consolidated central government are consistent and comparable with the earlier data.

Recommendation: Explore ways to obtain source data on local government debt to compile and disseminate local government and total consolidated general government debt statistics.

3.1.3 Source data are timely.

Generally, the source data from all general government and nonfinancial public corporations are provided with sufficient timeliness and periodicity to meet the timely dissemination of government finance statistics, covering the general government sector, its subsectors, as well as the nonfinancial public sector. Because of implementation problems with the electronic GFMIS project and its derivation of government finance statistics from the newly implemented accrual accounting data for the budgetary central government, these monthly source data are currently only available with a lag of about 30 to 40 days; normally the monthly source data would be available about three weeks after the end of the reference month.

Actual source data on local governments' operations are only available with a two-year lag, but the source data used to estimate their operations have sufficient timeliness and periodicity to compile preliminary government finance statistics covering the general government sector, its subsectors, as well as the nonfinancial public sector.

Through official correspondence from the FPO, all source data agencies are made aware of the deadlines for data reporting and, through the GFS Committee, follow-up procedures are employed to ensure timely reporting.

3.2 Assessment of source data

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

The source data are routinely assessed. The FPO uses internal, automated consistency checks to verify the source data when they are reported. Because the FPO is a source data user (not a compiler of source data), such data are normally consistent and accurate because they have already been verified at the administrative and accounting levels. The source data are also verified against the BOT data on central and local government financing.

Through the GFS Committee and direct contacts, the FPO has regular access to the source data compilers to resolve any issues or questions about the source data.

3.3 Statistical techniques

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

Once the GFMIS is fully functional, government finance statistics compilation will be almost completely automated for the budgetary central government data. In the meantime, government finance statistics compilation is done using Excel spreadsheets, which have built-in formulas to verify internal consistency (vertical and horizontal checks). All data are corrected when more accurate data become available (i.e., preliminary data are replaced with final data, with appropriate labeling).

The government finance statistics compilation procedures are described in detail in a document—posted on the MOF and FPO websites—called *Thailand's GFS: Information on Methodology, Data Coverage, and Compilation Practices*.

The only estimates employed are currently for the latest two years of local government data. The quarterly data are estimated as follows (and annual data are the sum of the quarters):

- **Revenue:** For each fiscal year, the Decentralization Act specifies the percentage of local government revenue in relation to budgetary central government revenue. The government finance statistics compilers estimate total local government revenue for the fiscal year based on this percentage. This amount is then apportioned to each quarter, based on the actual distribution of the Bangkok Metropolitan Authority's revenues in each quarter.
- **Cash deficit/surplus and financing:** The government finance statistics compilers obtain the “net claims of local governments on the banking system” from the BOT and use this amount to approximate total financing (which is equal to the cash deficit/surplus).
- **Expenditure (expense plus the net acquisition of nonfinancial assets):** The government finance statistics compilers calculate expenditure (*GFSM 2001* definition) as a residual (revenue minus the cash deficit/surplus).

If any discrepancies exist among the sums of the monthly and quarterly data, on the one hand, and the annual data on the other hand, these discrepancies are investigated and resolved. No government finance statistics data are published with these types of discrepancies.

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

The source data are transformed into the *GFSM 2001* classification codes and framework by using bridge tables that were compiled with IMF technical assistance. Most of these reclassifications will be done automatically through the GFMIS system, once it is fully functional. Currently, the reclassifications are done using Excel tables.

The data adjustments and transformations, including grossing/netting and consolidation adjustments, are in accordance with the *GFSM 2001*.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information where applicable.

The FPO cross-checks all the results—in particular, the financing data—with the BOT's Data Management Department (DMD).

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Through the GFS Committee, formal procedures are in place to resolve data classification and sectorization issues within the public sector statistics and also across the various sets of macroeconomic statistics.

Since only debt stock data for the consolidated central government are currently available, reconciliation between the stocks and flows are only done for debt data.

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

Using built-in checks, statistical outputs are cross-checked vertically and horizontally. Should any discrepancies exist, they are resolved by (1) ensuring there are no data errors made by the FPO and/or (2) contacting the source data compilers.

Through the GFS Committee, fiscal discrepancies are regularly monitored, compared, and resolved among the BOT, CGD, Budget Bureau, NESDB, Public Debt Management Office (PDMO), and other relevant macroeconomic data compilers.

3.5 *Revision studies*

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

The government finance statistics data are not subject to revisions, except for replacing preliminary data with audited data. However, in the case of local governments—where the data for the latest two years are estimated—the FPO does carry out regular studies to improve these data—internally and at the GFS Committee meetings. For example, local government data were first estimated based only on an extrapolation of the Bangkok Metropolitan Authority's operations. This method has been improved, as described in 3.3.1 above.

4. **Serviceability**

4.1 *Periodicity and timeliness*

4.1.1 *Periodicity follows dissemination standards*

The government finance statistics data disseminated by the FPO follow the SDDS requirements for periodicity:

- **Consolidated central government operations:** Monthly data are disseminated for the *Statement of Government Operations*, showing the main aggregates and balances for central government and all its subsectors.
- **Consolidated general government operations:** Quarterly and annual data are disseminated for the *Statement of Government Operations*, showing the main aggregates and balances for general government and all its subsectors.
- **Central government debt operations:** Monthly, quarterly, and annual data are disseminated covering the outstanding debt of budgetary and extrabudgetary central government, as well as government guaranteed debt. Social security funds' debt (consisting of an immaterial amount of accounts payable) are not currently included in the debt statistics. Because local government debt data are not available, no general government debt data are currently compiled and disseminated.

4.1.2 *Timeliness follows dissemination standards.*

The government finance statistics data disseminated by the FPO follow the SDDS requirements for timeliness, with the exception of monthly central government data (see below):

- **Consolidated central government operations:** From Thailand's subscription to SDDS through November 2004, monthly data had been disseminated within one month after the end of the reference month. However, owing to technical problems

with the implementation of the GFMIS and its automatic links with the newly implemented accrual accounting system, monthly central government data are only available about two months after the end of the reference month. As a result, monthly central government data have been disseminated about two months after the end of the reference month since December 2004. On Thailand's SDDS National Summary Data Page (NSDP), a footnote to the fiscal data indicates the current problems being experienced with the compilation of monthly data owing to the implementation of the GFMIS.

- **Consolidated general government operations:** Quarterly and annual data are disseminated within one quarter and six months, respectively, after the end of the reference periods.
- **Central government debt operations:** Debt data are disseminated two months after the end of the reference month.¹²

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

The statistics are internally consistent. Monthly data for the consolidated central government (and its subsectors) sum to the quarterly data which, in turn, sum to the preliminary annual data. Similarly, quarterly data for the consolidated general government (and its subsectors) sum to the preliminary annual data. The preliminary annual data are replaced once the final, audited annual data are available. To ensure consistency between the annual and quarterly data, the last (fiscal) month's and fourth (fiscal) quarter's data are adjusted accordingly.

The government finance statistics concepts, definitions, and classifications produced for the monthly, quarterly, and annual data sets are identical.

Data sheets have built-in "checks" to ensure data add vertically and horizontally. As a result, statistical discrepancies are the exception and, if they occur, they are very small. For all data, *net lending/borrowing* data in the Statement of Government Operations matches the *financing* data (net acquisition of financial assets and net incurrence of liabilities). Sub-aggregates, where available, add to the components in all cases.

The only stock data currently available are debt data. These data are reconcilable with the flow data in the Statement of Government Operations.

¹² Because these are stock data, the timeliness criteria apply to monthly, quarterly, and annual debt data.

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

Annual government finance statistics are available from 1990 onwards. The data series from 1990 through 2000 were obtained through reclassifying the cash-based *GFSM 1986* data. Changes in economic trends and/or methodology (such as the move from cash to accrual data) are explained in footnotes to the data tables. A detailed document on sources and methods—posted on the FPO’s website—explains the relationships between the *GFSM 1986* and *GFSM 2001* data, and their comparability.

Monthly and quarterly government finance statistics are available from the start of the 2001 fiscal year (i.e., from October 2000).

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

The government finance statistics are largely consistent with the national accounts, balance of payments (BOP), and monetary and financial statistics. This is the result of extensive work recently by the GFS Committee members to ensure consistent coverage, concepts, and definitions among the various macroeconomic datasets.

General government and nonfinancial public corporations’ external debt statistics compiled by the Public Debt Management Office in the MOF (and disseminated by the FPO) are reconcilable with the balance of payments statistics compiled and disseminated by the BOT. The only difference between these statistics is the treatment of government bonds issued abroad to nonresidents and subsequently bought by Thai residents in the secondary market.

Government finance and monetary and financial statistics are largely consistent. All local government financing data, as well as most of the central government financing data used by the FPO, are provided by the BOT. Small differences are being addressed in ongoing work to ensure that the coverage of the central government accounts in financial corporations data is complete.

Government finance and national accounts statistics are largely consistent. For central government, the NESDB uses the same CGD source data used by the FPO to compile government finance statistics. For local governments, the NESDB uses a different method than the FPO to estimate the details of the latest two years’ operations.¹³ While the FPO’s estimates are based on the BOT financing data, the NESDB’s estimates for local governments are based on extrapolations of the actual outcomes of two years ago. The FPO and NESDB are cooperating closely through the GFS Committee.

¹³ The FPO and NESDB use the same data source for the actual annual local government data.

A complete list of nonfinancial public sector units exists in the FPO, which corresponds with those lists used by macroeconomic statistics compilers in the BOT and NESDB.

4.3 *Revision policy and practice*

4.3.1 Revisions follow a regular and transparent schedule.

Generally, revisions to the data are limited to replacing preliminary data with actual data when they become available. Preliminary data are disseminated first, and then replaced by actual data, according to the following schedule:

- Previously published monthly and quarterly data are revised on the last working day of the following month and quarter, respectively.
- Annual data are revised on the last working day six months after the end of the reference year.

By estimating missing data, the FPO avoids unnecessary delays in producing government finance statistics due to a small number of nonreporting agencies or undercounting when some agencies do not report in time for the “GFS reporting deadlines” (this does not occur frequently, though). Once actual data are reported—usually the following month—these estimates are replaced with the actual data. These revision policies are posted on the FPO’s government finance statistics website.

4.3.2 Preliminary and/or revised data are clearly identified.

Users can clearly identify the nature of the data disseminated on the FPO and MOF websites: Preliminary data are indicated with a “P” symbol; estimated with an “E”; and revisions with an “R.”

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

As explained above, revisions primarily involve replacing preliminary data with final data or replacing estimates with actual (preliminary or final) data. If such revisions are significant, they are explained in footnotes. When the methodology of estimating local government data changes, this is explained in the detailed metadata posted on the FPO’s government finance statistics website. Nonetheless, when estimated local government data are replaced with actual data, no analysis of differences between the revised and estimated data is published to allow an assessment of the reliability of the preliminary data.

Recommendation: Publish an assessment and/or analysis of the differences between the revised and preliminary data to allow users to assess the reliability of the preliminary data (especially the local government estimates).

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).

Time series of the government finance statistics are disseminated according to the standard components, statements, and tables of the *GFSM 2001* on the MOF and FPO's websites, in monthly press releases, and in the *Annual Report on the Operations of the FPO*. The government finance statistics website is well developed and can be easily navigated to obtain monthly, quarterly, and annual data. A chart with time series on revenues, expenditures, and net lending/borrowing is also provided. Commentary (in Thai) on current period developments is posted on the websites where the data are disseminated, as well as in the monthly press releases.

5.1.2 Dissemination media and format are adequate.

The media and formats in which government finance statistics are disseminated are adequate. All available government finance statistics are disseminated on the MOF and FPO websites in two formats: html pages and Excel files for easy downloading of the data. A media release accompanies each data dissemination.

5.1.3 Statistics are released on a preannounced schedule.

The MOF and FPO websites include an advance release calendar (for one year ahead, and updated every six months) showing the dates on which the government finance statistics are released. The government finance statistics are released strictly according to these dates.

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

Government finance statistics are released on the MOF and FPO websites to all users simultaneously. There is no internal governmental access to the data prior to their release.

5.1.5 Statistics not routinely disseminated are made available upon request.

The disseminated government finance statistics are comprehensive. Nonetheless, the FPO often responds to individual requests for data not regularly disseminated. Users are invited on the government finance statistics website to contact the FPO for such data requests.

5.2 Metadata accessibility

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

The MOF and FPO websites include a document called *Thailand's GFS: Information on Methodology, Data Coverage, and Compilation Practices*. This document describes in detail the concepts, scope, classifications, basis of recording, data sources, and other relevant information (including the relationship between the *GFSM 1986* and *GFSM 2001* methodologies). These metadata are readily accessible on these websites. In addition, these websites include a Thai translation of the complete *GFSM 2001*.

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

To accommodate the varied audience and users of government finance statistics, the FPO published an article in the FPO's *Fiscal Journal* to explain the *GFSM 2001* in a simplified manner. At each press release, the FPO hands out a one-page explanation of the government finance statistics methodology to the media. Further explanations of the methodology are also done verbally.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized.

The MOF and FPO websites include complete contact information for the contact points about government finance statistics (names, telephone numbers, facsimile numbers, and e-mail addresses). They also include the physical addresses of the FPO and MOF.

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

The FPO does not have any hard copy catalogs. A complete list of all FPO publications that are available in its e-library is published on the FPO website. It is indicated that these publications can be downloaded free-of-charge from the e-library.

Table 2. Thailand: Data Quality Assessment Framework (July 2003): Summary of Results for Government Finance Statistics
(Compiling Agency: Ministry of Finance)

Element	NA	Assessment			Comments
		O	LO	LNO	
0. Prerequisites of quality					
0.1 Legal and institutional environment		X	X		Number of staff not sufficient to do further development work; relatively high staff turnover
0.2 Resources		X			
0.3 Relevance		X			
0.4 Other quality management		X			
1. Assurances of integrity					
1.1 Professionalism		X			
1.2 Transparency		X			
1.3 Ethical standards		X			
2. Methodological soundness					
2.1 Concepts and definitions		X	X		Cannot yet compile all <i>GFSM 2001</i> statements and tables (incomplete balance sheets; no statement of other economic flows, statement of source & uses of cash only for some subsectors).
2.2 Scope					Stocks not yet valued at market prices; accrual accounting not yet fully implemented
2.3 Classification/sectorization		X			
2.4 Basis for recording			X		
3. Accuracy and reliability					
3.1 Source data			X		Local government data are estimated for the latest two years; no local government debt data; seven of the extrabudgetary funds' data are excluded from the monthly and quarterly data (starting 2004/05).
3.2 Assessment of source data		X			
3.3 Statistical techniques		X			
3.4 Assessment and validation of intermediate data and statistical outputs		X			
3.5 Revision studies		X			
4. Serviceability					
4.1 Periodicity and timeliness		X			
4.2 Consistency		X			
4.3 Revision policy and practice			X		No analysis or assessment of differences between revised and estimated local government data is published.
5. Accessibility					
5.1 Data accessibility		X			
5.2 Metadata accessibility		X			
5.3 Assistance to users		X			

III. MONETARY STATISTICS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The Bank of Thailand (BOT) compiles monetary statistics as part of its responsibilities for the formulation and implementation of monetary policy, in the context of its central bank responsibilities regulated under the *Bank of Thailand Act, B.E. 2485 (1942)*, Section 5. The compilation of monetary statistics is regulated under several statutory orders, namely the *Commercial Banking Act B.E. 2505 (1962)*, applicable to commercial banks, the *Act on the Undertaking of Finance Business, Securities Business and Credit Fonciers B.E. 2522 (1979)* applicable to finance companies and credit fonciers, and the Order of the Ministry of Finance No. 147/2541 (1998), applicable to specialized financial institutions.

According to Section 23 of the *Commercial Banking Act*, the Minister of Finance may require that commercial banks submit financial statements to the BOT, accompanied by explanations and details as needed. Section 15 of this Act stipulates that commercial banks shall record completely and accurately all assets and liabilities and publish a summary statement as prescribed by BOT. Pursuant to Sections 24 and 56 of the *Act on the Undertaking of Finance Business, Securities Business and Credit Fonciers*, the BOT may require that finance companies and credit fonciers report complete and accurate information, accompanied by explanations as needed. The Order of the Ministry of Finance No. 147 delegates to the BOT the responsibility for, among other things, monitoring/examining the financial position and general operations of the specialized financial institutions, namely the Government Savings Bank, the Bank for Agriculture and Agricultural Cooperatives, Government Housing Bank, Export and Import Bank, and the Asset Management Corporation.

The dissemination of monetary statistics is not required by law. Even though the law does not formally assign the responsibility for the dissemination of monetary statistics, it was de facto delegated to the BOT, which disseminates them as a service to the public. The BOT is the sole agency in Thailand that produces and disseminates monetary statistics to the public. This long-standing arrangement, which has not been challenged by other institutions, has been effective, and there is no evidence of duplication of efforts.

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

The monetary statistics team of the BOT's Data Management Department (DMD) has access to the central computerized system for the purpose of compiling monetary statistics. The central computerized system has been in place since October 2003. Balance sheet data are reported electronically to BOT for purposes of bank supervision and compilation of monetary

statistics. Adequate data-sharing arrangements are in place within the BOT to ensure the efficient and timely flow of source data to the BOT. Informal contacts through telephone or e-mail are maintained between officials of the BOT and other agencies to facilitate data sharing and coordination. Coordination between the BOT, the Securities and Exchange Commission (SEC) (supervising mutual funds), the Ministry of Agriculture and Cooperatives (supervising the savings cooperatives), and the Ministry of Commerce (supervising the insurance corporations) is being strengthened to improve the information available on these institutions.

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

The general legal basis for the confidentiality of individual reporters' data is provided under the *Official Information Act B.E. 2540* (1997), Section 24. This law clearly states that individual responses are to be kept confidential and shall not be disclosed nor used other than for statistical purposes, unless disclosure is agreed to in writing by the respondent. Moreover, the *Commercial Banking Act*, Section 46 septem, as well as the *Act on the Undertaking of Finance Business, Securities Business and Credit Foncier Business*, Section 77, states that any breach of confidentiality is a criminal offense punishable by imprisonment (not exceeding one year) or a fine (not exceeding 100,000 baht) or both. Commercial banks and other reporting agencies are informed of their rights and obligations with regard to the provision of information to the BOT through official circulars.

Procedures are in place to prevent the disclosure of individual residual data. Access to the data compilation area is restricted to BOT designated staff, and access to the individual respondents' data is password-protected. Special aggregation rules have been developed to ensure that residual disclosure does not occur. Data stored electronically are also password-protected and accessible only by BOT designated staff. Compliance with this procedure is audited by the BOT's internal auditing regularly.

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

The financial institutions are informed of their reporting obligations, including report forms, methodologies, accounting conventions, and other relevant information through circulars issued by the BOT Financial Institutions Policy Group. These circulars aim to promote proper understanding of data requirements and facilitate compliance. To encourage response, BOT compilers meet with reporting institutions as needed, including to discuss changes in reporting requirements before they take place. A help desk at the DMD is available for clarifications and general assistance to facilitate compliance with reporting requirements.

Financial penalties for noncompliance with reporting requirements are regulated under Section 44 of the *Commercial Banking Act*, with regard to commercial banks, and under Section 70 of the *Act on the Undertaking of Finance Business, Security Business and Credit Foncier Business*, regarding finance companies and credit fonciers. Penalties to be imposed

are based on the length and frequency of the delays. The committee responsible for assessing the violation and the imposition of penalties provided for under these regulations includes one representative from the Royal Thai Police, the Ministry of Finance (MOF), and the BOT. In the last five years, financial penalties were applied in few instances, and the need to apply them has decreased steadily.

Reporting by the specialized financial institutions to BOT is not explicitly legally mandated, although Section 4 of the MOF Order No. 147 indicates that the specialized financial institutions covered by the Order “shall cooperate and facilitate” to carry out the BOT and the MOF’s responsibilities to follow up and supervise these institutions.

0.2 Resources

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

Staff resources for compiling monetary statistics are adequate to perform the required tasks. However, for full implementation of the *Monetary and Financial Statistics Manual (MFSM)*, the DMD staff may need additional in-depth training on specific subjects. The DMD has fully dedicated staff engaged in collecting, compiling, disseminating, and analyzing monetary and financial statistics, coordinated by a team of chief analysts. Most staff have a background in economics and accounting, and some have already attended the monetary and financial statistics courses provided by the IMF. The BOT has an internal training program, and encourages staff to attend conferences and seminars in their areas of work.

Financial resources are adequate, and staff’s remuneration is competitive with comparable positions in the public sector. Staff turnover in DMD is low compared with other departments at BOT. Annually the staff is assessed against a competency list, and specific training needs are identified. The Department has its own budget allocation for training purposes (in-house and outside Thailand).

Computer resources (hardware and software) used for compiling monetary statistics are broadly adequate and regularly updated (computers are replaced every 4 years). Also, new software has been installed as part of the Data Management System (DMS) project. Since October 2003, commercial banks and finance companies report electronically via the BOT wire system, and data are processed and validated through the DMS.

The derivation and compilation of monetary statistics are given high priority in computer processing. Monetary statistics are stored at a data storage server, which is backed up on a weekly basis. A DMS backup system is in place, and a contingency plan is regularly reviewed and tested. A new, fully computerized application for compiling and disseminating monetary statistics is expected to be installed by 2007, as part of the DMS expansion to include the data compilation and dissemination module.

The BOT provides an office building with adequate working facilities, for instance, lighting and cooling. Office furniture and equipment are adequate for compiling and disseminating monetary statistics.

0.2.2 Measures to ensure efficient use of resources are implemented.

In general, all BOT programs are subject to budget considerations and performance assessments. One of the BOT's strategic plans is to improve data management and organization efficiency. The DMD's vision of quality and up-to-standard data management is shared with the staff. Consistent concepts and methodologies are being put in place to ensure efficiency and internal coordination between different DMD teams. Errors are minimized through automatic cross-checks and validation procedures. Annual reviews of the work process and budget execution are also undertaken. Specialized ad hoc reviews take place when needed. Computing technologies are continuously updated (see 0.2.1). The implementation of the DMS has also contributed to enhance efficiency, accuracy, and resource usage.

No specific provision exists to measure resources used to compile monetary statistics vis-à-vis those employed for other macroeconomic data produced by the BOT. However, resources used to compile monetary statistics are monitored, and budgeting practices are in place to help allocate resources to priority areas. The operational audits of the statistical process undertaken within the BOT also aim at measuring the effectiveness of the use of resources in compiling monetary statistics (see also 0.4.2).

0.3 Relevance

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

Mechanisms are in place to gauge emerging needs and to ensure that statistics meet users' current and prospective needs. Meetings with policymakers to review monetary statistics and identify new data requirements take place when required, while meetings with data users take place on a quarterly basis to identify issues of concern. In addition, the BOT conducts users' surveys every two years, and the last survey was conducted in 2003. Users' feedback on monetary statistics is encouraged through the publication of the telephone number and e-mail address of each staff member responsible for the data. Interaction with users is reflected in the high volume of feedback, ranging from students and academia to other central banks. Queries/requests are answered within three business days. Data users in Thailand have already been informed about the BOT's ongoing efforts and plans to fully implement the *MFSM*.

To keep abreast of emerging data requirements, staff from the DMD attend statistical-related meetings, seminars, and training courses held by international and regional organizations, namely, the IMF, the Economic and Social Commission for Asia and Pacific (ESCAP), and

the South East Asian Central Banks (SEACEN) Training Institute. The ongoing plan to fully implement the *MFSM* is also part of the efforts to meet a broad range of users' needs.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

The BOT is fully aware of the importance of having high-quality statistics for analysis of monetary conditions and formulating and implementing monetary policy. This awareness is evidenced by the country's subscription to the Special Data Dissemination Standards (SDDS) in August 1996, and the establishment of the BOT Data Management Committee and DMD in 2000. The Committee, chaired by the Governor and including the heads of the Supervision, Monetary Policy, Financial Markets, Financial Institutions, and Information Technology Groups, is responsible for formulating BOT statistical policy and monitoring its implementation. The BOT DMS was completely overhauled in late 2003, including, among other changes, the design and implementation of new report forms for the other depository corporations (ODCs) fully consistent with the *MFSM*, and the computerization of data collection and processing with embedded verification and validation procedures at different levels of the process.

The key principles of the BOT's Statistical Code of Practice present a comprehensive framework for producing and disseminating high-quality statistics. The Code is closely aligned with international standards and best practices and is organized around the following main principles: relevance, integrity, quality, accessibility, confidentiality, and respondent burden. The key principles and associated detailed practices are used as a framework to guide the qualitative assessments and internal audits of the BOT's statistical processes and products.

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

The BOT has well-built procedures for quality control of the monetary statistics, and the Internal Audit Department regularly audits the statistical process undertaken by the DMD and reports the results directly to the Governor. Auditors meet with DMD staff to discuss findings and plans to improve any weakness detected. The Financial Institutes Monitoring and Analysis Department, under the BOT Supervision Group, conducts regular examinations to ensure that data reporting practices followed by the depository corporations are consistent with established guidelines. This responsibility is undertaken in cooperation with the DMD. In case of errors in the data submissions and/or nonreceipt of data, the examiners contact, informally or formally, the reporting institutions. Depending on the situation, DMD staff may also contact directly, informally or formally, the relevant reporting institution.

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

The trade-offs among the dimensions of quality are recognized by the BOT and DMD management. At this stage, accuracy is regarded as one of the most important dimensions of data quality, and this is communicated to compilers and users. The production of monetary statistics is being fully automated, and already includes a series of checks and validations at different stages of data collection and compilation. There are ongoing efforts to fully computerize the compilation of monetary statistics aligned with the *MFSM* through the expansion of the DMS to include the data compilation and dissemination module. This module, expected to become fully operational by mid-2007, will result in increased efficiency gains, thus facilitating managing the trade-offs affecting the statistical program.

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis.

Pursuant to the *Bank of Thailand Act*, the MOF oversees the overall affairs of the BOT, with the “general control and direction being entrusted to a Court of Directors.” The Court of Directors comprises the Governor, the Deputy Governors (appointed by His Majesty the King as chairman and vice-chairmen, respectively), and at least five other members appointed by the Cabinet. The tenure of the BOT Governor and management is not regulated by law. In practice the BOT is empowered to formulate the policies and procedures deemed necessary to carry out its central bank responsibilities. To formalize the BOT institutional independence, an amendment of the *Bank of Thailand Act* is under consideration to explicitly provide that undue influence and pressure may not be exerted over the organization’s operations.

The DMD is independent from the rest of BOT’s operations (before April 17, 2000, it was part of the Economic Research Department). The Head of the DMD is appointed by the Human Resources Committee, comprising the Governor as chairman, Deputy Governors and Assistant Governors, and the Senior Director of the Human Resources Department. He or she reports directly to the Assistant Governor for the Information Technology Group. The staff of the DMD feel that they are free from undue influence or pressures from upper management and outside agencies in the conduct of their duties in compiling statistics.

Professionalism of the staff is supported by BOT recruitment and personnel policies, which take into account a candidate’s professional and educational qualifications, and promotions are primarily merit-based. BOT staff must observe proper conduct, in particular, maintain integrity and honesty in their work, and ensure the confidentiality of individual respondent’s data. Violations of the Code of Conduct and the Statistical Code of Practice are very rare and subject to strict penalties. All new staff are given an opportunity to attend relevant statistical courses and to participate in seminars and workshops organized by international and regional

agencies. The BOT library and Internet service provide easy access to statistical-related research material.

The BOT initiated a proactive “culture change” program to entrench in the staff the BOT shared values, core purpose, and vision. In addition to training, the DMD cultural and social programs foster professionalism among the staff and facilitate the buildup of cooperative relations with the staff of the other financial institutions that report monetary statistics.

Monetary statistics compilers regularly attend internal meetings, that is, the Monthly Macroeconomic Meeting and Bimonthly Technical Meeting, as well as occasional meetings with other statistical agencies (e.g., NESDB and the MOF). In these meetings, compilers must be ready to explain or clarify any query on the monetary data compiled.

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

The choice of data sources and statistical techniques is based exclusively on statistical considerations. Monetary statistics are compiled strictly from the accounting records of the financial institutions, and source data are collected within the format of the BOT’s reporting system. Reporting forms were designed to meet the requirements of the *MFSM* methodology and also those of bank supervision. Decisions to disseminate monetary statistics are exclusively based on statistical considerations, and their timeliness and periodicity reflect the requirements under the SDDS. Users are informed in advance of the dissemination timetable of major aggregates through the Advance Release Calendar included in the SDDS metadata and of detailed data through the BOT’s schedule of release (www.bot.or.th/bothomepage/Other/Schedule_E.htm).

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

Normally, the BOT’s Communications and Relations Office acts as a public relations center in the BOT. Its responsibilities include coordination with the media to facilitate understanding and the buildup of trust and good relations. The staff in this office also follow closely the financial press, and when erroneous interpretation and misuse of statistics is detected, they inform and consult with the DMD. Comments and clarifications are then formulated by the DMD and made public through the Communications and Relations Office via press conferences/releases and attributed to the DMD. To prevent misinterpretation or misuse of statistics, the DMD provides explanations on the data disseminated in the *Economic and Statistics Bulletin* in its section on compilation methodology and in footnotes to each table. Moreover, courses/lectures regarding the interpretation and use of economic and monetary statistics are provided regularly by the Communications and Relations Office and the DMD (e.g., to media representatives, middle school teachers, and students).

1.2 Transparency

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

The BOT disseminates on the Data Standards Bulletin Board (DSBB) the terms and conditions under which statistics are produced and disseminated. Copies of the *Bank of Thailand Act*, the *Royal Decree Regulating the Affairs of the Bank of Thailand* and the *Commercial Banking Act, Law on the Finance Business, Securities Business and Credit Foncier Business* are available in Thai and English on the BOT website (www.bot.or.th/bothomepage/General/Laws_Notif_Forms/law_e.htm) and can be provided upon request. The Statistical Code of Practice is also available on the BOT website.

The BOT, through its Communications and Relations Office and DMD, makes an active and ongoing effort to inform the public about the terms and conditions under which it operates during press releases, meetings, lectures, and conferences. Names of contact persons for each subject field, their phone numbers, and mailing and e-mail addresses are also published both in the BOT *Economic and Financial Statistics* and on the website.

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

There is no internal government access to the monetary statistics disseminated, and the public is informed of this policy through the metadata posted on the DSBB.

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

All BOT statistics publications are clearly identified as BOT publications with its name, logo, and insignia. Each data set also identifies the original source, internal or external, of data. The BOT requests acknowledgement of the source when its monetary statistics are reproduced in other agencies' publications.

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

The BOT provides advance notice to the users, through articles in bulletins, briefings, and/or press releases, when significant changes in methodology, sources, and statistical techniques occur. Users are already informed of ongoing significant changes in methodology of the monetary statistics to be disseminated soon. More detailed information will be provided before the new monetary statistics will be disseminated.

1.3 Ethical standards

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

The BOT's Code of Conduct, in force since 1996, provides clear guidelines on the staff's behavior and ethical standards. In addition, the Statistical Code of Practice provides additional guidelines on the adherence to the principle of objectivity in the collection, compilation, and dissemination of statistics (see 0.4.1). New staff are made aware of the guidelines when they join the organization and are reminded periodically, namely at the time of the annual performance reviews.

In general, the image of integrity and honesty of the BOT management and staff is appreciated by the public. The strong culture for maintaining ethical and professional standards, supported by the public's image of the BOT integrity and independence, discourages political interference.

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.

Recently, the analytical framework used by the BOT in compiling monetary statistics was substantially revised and fully adheres to the guidelines outlined in the *MFSM*. The concepts and definitions used by the BOT for the compilation of monetary statistics follow to a great extent the *MFSM* in terms of identification of institutional units, instrument classification, and valuation of financial assets. Deviations from the *MFSM* are reviewed below (see 2.2, 2.3, and 2.4).

The main monetary aggregate compiled and disseminated by the BOT is broad money. It includes currency in circulation, transferable deposits, other deposits, certificates of deposits, and promissory notes held by the money holding sector (i.e., local government, other financial corporations, nonfinancial public enterprises, nonfinancial private enterprises, and other resident sectors in the depository corporations). Detailed components of broad money are provided to allow the users to construct from narrow to broad money aggregates. To facilitate intertemporal consistency, the BOT also disseminates the monetary aggregates compiled under the *Draft Guide to Money and Banking Statistics in International Financial Statistics*.

The framework used provides measures of monetary aggregates based on a combination of liquidity and institutional factors that set a single delineation of money holding and money issuing sectors.

2.2 Scope

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

For the purpose of this assessment, the scope of the monetary statistics refers to the Depository Corporations Survey (DCS), rather than the complete financial system. According to the *MFSM* methodology, all resident corporations that issue deposits or deposit substitutes included in the national definition of broad money should be included in the institutional coverage of the DCS.

In Thailand, the institutional coverage of monetary statistics includes the financial institutions' domestic headquarters and all domestic branches, as recommended. As of October 2005, the financial sector of Thailand, consists of the (1) BOT, including the Exchange Equalization Fund (EEF); (2) ODCs, comprising 33 commercial banks, 2 offshore banks, 14 finance companies, 5 credit foncier companies, 6 specialized financial institutions, and 1,551 savings cooperatives; and (3) other financial corporations (OFCs), comprising 77 insurance companies, 14 asset management companies, 556 pension and provident funds, 665 mutual funds, and 1 Financial Institutions Development Fund (FIDF).

The central bank survey consolidates the BOT and the EEF, which performs some monetary authorities' functions. The scope of the DCS covers the financial institutions (1) and (2) except for the savings cooperatives. Most of the mutual fund's liabilities are illiquid or with limited liquidity, and all mutual funds are classified as other financial corporations. However, the total liabilities of the savings cooperatives and the mutual funds that take deposit-like instruments represent less than 4 percent of total deposits in Thailand, not diminishing the analytical usefulness of the monetary statistics compiled.

The coverage of the ODCs subsector is being expanded to include saving cooperatives, expected to start reporting in 2007. In addition, BOT plans to gradually expand the scope of the monetary statistics to the other financial corporations, to allow the compilation and dissemination of the Financial Corporations Survey (FCS), in the future. It is expected that the gradual expansion will start with the insurance corporations.

Recommendation: Include mutual funds that take deposit-like liabilities and savings cooperatives in the scope of the DCS.

2.3 Classification/sectorization

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

The sectorization first distinguishes between residents and nonresidents, and resident units are grouped into mutually exclusive institutional sectors in accordance with the *MFSM*. According to the *MFSM* methodology, all resident corporations that issue deposits or deposit

substitutes included in the national definition of broad money constitute depository corporations and are included in the institutional coverage of the DCS.

Deviations from the sectorization principles of the *MFSM* are negligible (e.g., inclusion of pawnshops in the OFCs) and are being reviewed in the context of the ongoing work to prepare a comprehensive register of all institutional units included in the institutional sectors and subsectors recommended in the macroeconomic statistics manuals. This register, to be used by all official data-producing agencies, is being prepared in coordination with the National Economic and Social Development Board (NESDB) and the MOF.

The classification scheme for financial instruments is based on the liquidity of financial instruments and the legal characteristics that describe the form of the underlying creditor/debtor relationship as specified in the *MFSM*. Except for financial derivatives, which are classified as off-balance sheet items, the classification of financial instruments is consistent with the *MFSM*, including the following broad categories: (1) monetary gold and SDRs, (2) currency and deposits; (3) securities other than shares, (4) loans, (5) insurance technical reserves, and (6) shares and equity.

Repos are treated as collateralized loans (or deposits if repurchase agreements are included in broad money), as recommended. In line with international guidelines, repurchase and reverse repurchase agreements with nonresidents are classified as foreign liabilities and foreign assets, respectively. Thai accounting standards provide for the recording of financial derivatives as off-balance sheet items, in deviation from the *MFSM* (see also 2.4.1). The BOT discloses monthly aggregate short and long positions in forwards and futures in foreign currencies vis-à-vis the domestic currency (including the forward leg of currency swaps) as required under the SDDS.

Gold swaps are to be recorded as collateralized loans when they involve the exchange of monetary gold for cash (in domestic or foreign currency). No gold swaps have ever been undertaken.

Recommendation: To fully comply with the MFSM, monetary statistics need to be adjusted to include the financial derivatives which are presently recorded as off-balance sheet positions.

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 based on market prices or market-priced equivalents (fair values). The only exception to this rule is that loans should be registered at their book values (i.e., outstanding principal plus any accrued interest) without adjustment for expected loan losses. Stocks and flows denominated in foreign currency should be converted to national currency values at the market exchange rate prevailing at the time they are recorded. Holding gains

and losses arising from changes in market values (or fair values) of financial assets and of outstanding liabilities should be recorded separately in a revaluation account.

The BOT values monetary gold holdings using the price of gold in the international market at the balance sheet closing date. All financial corporations value foreign currency denominated accounts at the weighted average of the interbank exchange rates prevailing on the balance sheet closing date, calculated by the BOT.

In compliance with the national accounting standard, securities held for trading purposes are valued at market or fair prices, and securities held for investment purposes are recorded at historical values. Holdings of securities issued by nonresidents and held for trading purposes are valued at market prices using quotations for the securities on the international markets. Securities issued by residents and held for trading purposes are valued at market price using quotations on the Stock Exchange of Thailand. In the absence of these quotations, securities are valued using the fair value method. Valuation changes are reported in a separate item, as recommended. Valuation principles of securities other than shares are regulated under BOT Notification No. 2837/2545, dated December 13, 2002, and the Thai Accounting Standards TAS 40. Held-to-maturity securities are not adjusted to market prices as recommended in the *MFSM*.

Loans are valued at current book value without adjustment for expected loan losses, also presented in a separate item, as recommended.

Financial derivatives, recorded as off-balance sheet positions, are valued at market prices or fair values based on internationally accepted valuation principles. Foreign currency denominated financial derivatives are converted into national currency at the weighted average of the interbank exchange rates prevailing on the balance sheet closing date, calculated by the BOT. Moreover, changes in the value of financial derivatives are treated as holding gains/losses in the balance sheet as recommended in the *MFSM*. Valuation principles of financial derivatives are regulated under BOT Notification No. 1974-2547, dated November 24, 2004.

Shares and other equity on the asset side of the balance sheet are valued at market prices or fair values, except those for which there is no supporting market, which are valued at their cost. The exceptions are rare. Shares and other equity on the liability side are valued at historical or book values, as recommended in the *MFSM*. Supplementary data on the market values of such shares and other equity are presented as memorandum items attached to the Central Bank Survey and Other Depository Corporations Survey. Valuation principles of shares and other equity are also regulated under BOT Notification No. 2837/2545.

Flow data are not available at the moment and are expected to be compiled once the fully computerized information system is expanded to include the monetary statistics data module, expected for 2007. However, aggregated data on revaluation changes are available.

Information identifying any departures from the International Accounting Standards (IAS) is disseminated on the BOT website and annotated in explanatory notes to the monetary statistics.

Recommendation: Adjust the valuation of held-to-maturity securities to market or fair prices in the monetary statistics compiled.

2.4.2 Recording is done on an accrual basis.

The accrual accounting principles recommended by *MFSM* specify that accrued interest on financial instruments be incorporated into the outstanding amount of the financial asset/liability, instead of recorded under other accounts receivable/payable. In addition, revenues and expenditures should be recorded in the period in which they occur or fall due.

The BOT and other reporting institutions implement an accrual basis of recording, as regulated under the BOT Notification on Accounting Procedures for the Accrual of Interest No. 2529–2541, dated December 24, 1998. Interest that is overdue for payment will be included in the value of the loan portfolio for three months and, after that, is no longer accrued. In the monetary statistics, interest is presented together with the underlying instrument, as recommended.

Arrears in the payment of fees or similar charges associated with off-balance-sheet financial instruments are included in accounts receivable/payable on the balance sheet of banks. As recommended by the *MFSM*, the claim for the overdue payments represents a financial asset, even though the underlying off-balance-sheet instrument does not qualify as a financial asset. In general, transactions are recorded when there is a change of ownership, on the basis of the market prices at which assets and liabilities are bought and sold, and when new securities are issued and securities are redeemed.

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

Data are collected on a gross basis; in particular, claims on a particular transactor or group of transactions are not netted against the liabilities to that transactor or group of transactions. For the central bank subsector and ODCs subsector, data on financial assets and liabilities are aggregated into major categories according to types of debtors or creditors. Where net data are shown, gross subaggregates are also shown. Flow data are not yet compiled.

3. Accuracy and reliability

3.1 Source data

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

Source data are obtained from a comprehensive and up-to-date register of all financial institutions. Register maintenance procedures are adequate for adding new units, deleting dead units, and monitoring mergers and other changes. The responsibility for maintaining the register for depository corporations is shared among the BOT (depository corporations), the Securities Exchange Commission (mutual funds), and the Ministry of Agriculture and Cooperatives (saving cooperatives).

The DMD collects balance sheet report forms from the central bank and other depository corporations. The report forms used by BOT for monetary statistics compilation are the same as those used for prudential supervision. The report forms solicit detailed information on financial institutions' holdings and issuance of financial instruments.

Institutional and geographic coverage is almost complete. The lack of coverage of the savings cooperatives and mutual funds at this stage does not lessen the analytical usefulness of the monetary statistics. The BOT monitors developments in the financial sector through periodic meetings with financial market participants, policymakers, and data users, and through the follow-up of the information provided by the media (internal and external).

The balance sheet-based report forms are reviewed periodically to take into account changes in circumstances and data needs. The need for improvements of the report forms is extensively analyzed among the Data Management, Supervision, and Information Technology Groups to guarantee the most complete, relevant, and timely information, with the minimum response burden for data reporters. Other financial corporations are involved in the development of the report forms at an early stage. This allows financial corporations to provide comments and to more easily adapt their software to the new reporting requirements. Changes in report forms are field-tested and need approval from the Data Management Committee to be officially enforced.

Meetings with the Supervisory group and reporting institutions are held periodically to discuss reporting issues, identify emerging information needs, and explain new statistical requirements. Usually, new requirements or updating in data sources are gathered and developed no more than once a year.

In 2002, new and improved report forms for depository corporations were prepared in accordance with the *MFSM* as part of the DMS project. Data collected rely exclusively on accounting records and are sufficient to compile sectoral balance sheet-stock positions classified by financial instrument and economic sector as defined in the *MFSM*. Nevertheless, the DMS allows the collection of supplementary information (e.g., outside the

regular reporting schedule) to support the core compilation of monetary statistics, as needed. Flow data report forms are being developed in consultation with other financial institutions, and the compilation of complete stock and flow data recommended in the *MFSM* is expected to start in 2007.

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

The data sources generally provide sufficiently detailed and comprehensive information regarding definitions, scope, classification, valuation and time of recording consistent with the *MFSM*. The use of supplementary sources is mostly limited to information on the sectorization of securities, provided by the Thai Securities Deposit Company.

Accounting practices of publicly listed financial institutions follow the Thai Accounting Standards issued by the Institute of Certified Accounts and Auditors of Thailand (ICAAT), under the *Accounting Act, B.E. 2543 (2000)* and the *Accountants Profession Act, B.E. 2547 (2004)*. The national accounting standards adhere fully with IAS 32 and 39, and minor differences from IAS 30 are under consideration in order to eliminate them. Financial statements are audited by independent auditors.

Monetary statistics compilers are well aware of the IAS. The need to adjust source data is rare, as the financial institutions comply with the Thai Accounting Standard, closely aligned with the IAS.

3.1.3 Source data are timely.

Source data are timely and comply with the monthly reporting timetable, established as follows (in days following the reporting month): (1) BOT data within 20 days; (2) commercial, offshore banks, finance companies, and credit fonciers within 21 days; and, (3) all remaining depository corporations within 25 days. Biweekly data for all institutions must be provided within 10 days after the reporting period. The DMD maintains a report submission log to monitor financial institutions' observance of reporting requirements, including the timeliness of reporting.

3.2 Assessment of source data

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

The source data are routinely analyzed for accuracy by the DMD and the Supervision Department, and assessment procedures are sound.

The DMS provides automated (computerized) procedures to facilitate monitoring the accuracy of data reported by individual financial corporations. Automated cross-validations test the internal consistency of each institution's data submission. Monetary statistics compilers additionally validate and verify with respondents any data inconsistency or out-of-trend values. The ODCs are requested to provide explanations and, when needed, to resubmit the data with corrections to the BOT.

Procedures are in place for addressing data compilers' queries concerning source data. Normally, data compilers' queries are conveyed through the DMD contact person or the compliance officer of the Supervisory Department. If needed, compilers can also contact reporting institutions directly.

3.3 *Statistical techniques*

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

As BOT's monetary statistics are almost exclusively based on balance sheet data, they do not, by and large, rely on the use of statistical techniques. Automated (computerized) procedures minimize processing errors such as coding, editing, and tabulation errors. Usually data from reporting institutions are timely and complete, and procedures for imputation and adjustment for nonresponse are rarely required. In cases of nonresponse within the established timetable, the missing observation is estimated, based on the share of the reporting institution in the total aggregates and on the last balance data available for that institution. Once the missing data are received, the database is updated.

The accounting data on accrued interest that DMD receives from the BOT are not always disaggregated by sector and from the other reporting institutions are not disaggregated by financial instrument, as required in the *MFSM*. In these cases, compilers estimate interest accrued by each financial instrument based on the share of each instrument in total assets and liabilities. Consideration is being given to improving this estimation method.

Data sources for compiling monetary statistics are denominated in baht. To translate foreign currency-denominated accounts into baht, reporting institutions follow the national accounting standard and guidelines provided by the respective supervisory authority (see 2.4.1). Observance of these standards is subject to examination by the supervisory authorities.

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

Monetary statistics are based on complete balance sheet data rather than samples or estimates. New balance sheet data are cross-checked with past series to identify discrepancies or errors. If errors are large and cannot be accounted for, the source is contacted and requested to resubmit correct data. Resubmission, although rare, is normally done before the preliminary data are disseminated.

The BOT does not disseminate seasonally adjusted monetary statistics.

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

3.4.1 Intermediate results are validated against other information where applicable.

The DMD routinely uses other information to validate balance sheet data reported by BOT and ODCs. The DMD uses data from the BOT register on holders of government securities, the Thai Security Deposit Company on securities other than shares of the ODCs, and the Stock Exchange of Thailand on holdings of shares and other equities of the ODCs. The DMD also uses data from the MOF on the deposits placed at ODCs to cross-check the information reported.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

The DMD investigates statistical discrepancies regularly. The positions between the BOT and the ODCs and among ODCs are cross-checked, and the reasons that contribute to any discrepancies are investigated. When a large discrepancy is noted, the DMD contacts the financial corporation to seek an explanation and requests the resubmission of corrected data.

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

Reported balance sheet data on securities are regularly assessed in relation to the corresponding data in a securities database maintained at the central bank, or against administrative records maintained by Thailand Securities Depository Company (see 3.4.1).

The behavior of series is routinely assessed against related series, for example, growth on monetary aggregates and GDP growth rates. Currently the BOT compiles monetary statistics only in stock terms. The ongoing expansion of the DMS to include the compilation of flow data will allow the reconciliation between stock and flow data. Valuation changes will be reconciled also with the profit and loss statement, and some other changes in volume will be reconciled through supplementary data, namely, the loan classification and loss provision report to be prepared.

3.5 *Revision studies*

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

Revisions are carried out whenever new information becomes available, and findings are incorporated into data collection and the compilation process after an investigation has been completed. Revision studies are usually done on a case-by-case basis, as need arises.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

The Central Bank Survey (CBS) and DCS are disseminated on a monthly basis, consistent with the specifications of the SDDS. Major aggregates for the central bank and monetary and credit aggregates are disseminated on a weekly basis, surpassing the periodicity requirements of the SDDS.

4.1.2 Timeliness follows dissemination standards.

Timeliness of the CBS and DCS is consistent with the specifications of the SDDS. The monthly CBS is disseminated within two weeks after the end of the reference month, and the monthly DCS is disseminated within one month after the end of the reference month. Bi-weekly main aggregates for the BOT are disseminated by the end of the week following the reference week.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

In general, the monetary statistics are consistent within the dataset. The CBS presents details on assets and liabilities to the ODCs and vice-versa in the ODCs. Assets and liabilities with OFCs are clearly presented in the CBS and ODCs. Assets and liabilities of the BOT and ODCs within the DCS are consolidated, and any discrepancy is included in other items net. At times, discrepancies arise because of the lack of details on sectorization—particularly among commercial banks—and the recording of settlement accounts. A comparison of BOT data with the reported data for the ODCs indicates that positions are broadly consistent. The ODCs interbank position for current periods shows an acceptable level of discrepancy, explained by the difficulties in obtaining updated information on frequently traded securities. Statistics for the entire financial corporations sector and the flow-of-funds accounts are not compiled to allow further consistency checks.

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

Monetary statistics compiled in accordance with the *MFSM* are only available since January 2005. The DMD compilers are aware of the importance of disseminating consistent or reconcilable data for a reasonable period and are considering ways to reconstruct and disseminate the new series as far back as possible.

Time series based mostly on the *Draft Guide to Money and Banking Statistics in International Financial Statistics* (December 1984) are disseminated in the *Economic and Financial Statistics* since 1995 and in the BOT's website since 1976. Changes in the

definitions, concepts, and break in series are documented in methodological notes and/or footnotes disseminated in the BOT *Economic and Financial Statistics* and website.

The two series of monetary statistics are being disseminated in parallel, although main aggregates are not easily reconcilable.

Recommendation: Compile and disseminate monetary statistics reconcilable with the new data series as far back as possible.

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

Monetary and government finance statistics are largely consistent. Small differences are being addressed in the context of the ongoing work to ensure that the identification and coverage of the central government accounts is complete in ODCs data.

Monetary statistics are largely consistent with external sector statistics. Procedures exist to cross-check between monetary statistics and the international investment position (IIP) and balance of payments (BOP) statistics, and these data sets are largely consistent. The net foreign assets presented in the monetary statistics, particularly those of the BOT, are largely consistent with the corresponding measure derivable from the IIP.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

The revision cycle is predetermined, stable, and announced to users through the BOT *Economic and Financial Statistics* and website. The reason underlying the revision cycle (i.e., the availability of source data and the timing of revisions with related datasets) is explained to the public.

4.3.2 Preliminary and/or revised data are clearly identified.

At the time of data dissemination, users are informed whenever data are preliminary, which are clearly identified with a (P) sign, and are informed whenever data are revised with an (R) sign, for revised data. The revised data are disseminated with the same level of detail as previously published data being revised.

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

The DMD analyzes revisions mainly to inform the statistical process. Users are not informed of routine revisions to the data. However, in the rare cases when major revisions are made, users are informed about the reasons for the revisions to the monetary statistics, through footnotes of tables published in the *Economic and Financial Statistics* and on the website. Further details, including the analysis of differences between the revised and the preliminary

data, are provided upon request. Once the new module of the DMS is implemented, expected for 2007, revisions will be documented and explained in the electronic database accessible to users.

5. Accessibility

5.1 Data accessibility

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

The printed copy of the *Economic and Financial Statistics* presents monetary statistics monthly data, including several tables on the monetary and credit aggregates, with their components, on a monthly basis for the last two years and on an annual basis for the last five years. The monetary statistics are disseminated both in Thai and English in a clear tabulated format, and those disseminated on the website include time series available in excel files. Charts to facilitate analysis are available in the *Economic and Financial Statistics* for some monetary aggregates. A project is under way to upgrade the BOT website data retrieval tool with interactive capabilities to allow Internet users to conveniently convert tables into charts.

5.1.2 Dissemination media and format are adequate.

Dissemination is done through a variety of media forms, including (1) hard copies, such as the monthly press release and the quarterly *Economic and Financial Statistics*, (2) BOT press conferences and announcements, and (3) the BOT website. The parallel dissemination of the two sets of monetary statistics is done on the BOT website and in a supplement to the *Economic and Financial Statistics*. Users can also have free access to disseminated statistics (hard copy and BOT website) using the library open to the public at the BOT headquarters. Hard copy material can also be obtained from the Public Communications Office.

5.1.3 Statistics are released on a preannounced schedule.

Statistics are released on a preannounced schedule, following the recommendations of the SDDS. An advance release calendar that gives one-quarter-ahead notice of the precise release dates is disseminated on the BOT *Economic and Financial Statistics*, its website, and the IMF's Dissemination Standards Bulletin Board (<http://dsbb.imf.org>). A statement to this effect is published in the BOT's monthly *Economic and Financial Statistics*."

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

The monetary statistics are made available to all users simultaneously, as specified in the advance release calendar. The information released at the end-month press conferences (monetary base and monetary aggregates) is posted on the BOT website immediately after the press conference.

5.1.5 Statistics not routinely disseminated are made available upon request.

Upon request, the BOT provides unpublished and nonconfidential data free of charge. The users are aware that they may obtain this information by contacting the officer in charge of each dataset, whose contact details are published in the monthly economic and financial statistics report and BOT website. Customized tabulations are provided to meet the specific needs of 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.

Updated definitions, coverage, collection methods, and data sources are explained in the *Economic and Financial Statistics*, which also includes key symbols, abbreviations and acronyms to assist users. Comprehensive metadata are also disseminated on the IMF's DSBB. Detailed information comparing the Thai accounting standards and the IAS posted on the ICAAT website (www.icaat.or.th) can be accessible through a link to the BOT website.

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

Users are informed of compilation methods through explanations included in the statistical reports and BOT website, targeted to different audiences. Training sessions provided to targeted groups (e.g., teachers, students, and media representatives) are supported with specially designed explanatory material.

The BOT website contains a section with periodic publications from BOT staff and outside experts aimed at disseminated articles and technical notes on the economy, research papers, and other background information. For example, a background paper on the need to adopt a new monetary aggregate, M2A, is available (Thai version only) and made public in the "Report on Economic and Monetary Conditions," May 2000, and on the BOT website. A paper on the use of monetary statistics prior to inflation targeting, entitled "Monetary Policy Implementation of the Bank of Thailand," is available (Thai version only) also on the BOT website.

To raise awareness of the use of monetary statistics, BOT publications, such as the *Inflation Report* and the *Economic and Financial Statistics*, are routinely sent to universities and schools, distributed at seminars and conferences, as well as published on the BOT website along with other reports and research papers.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized.

Contact information (email addresses and telephone numbers) of compilers/analysts responsible for each data set is widely disseminated. The DMD also assists users in the clarification of statistics by providing explanation of important concepts and terms in the reports and also as footnotes for each data table. User surveys are conducted annually to gather feedback on data provision.

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

The BOT publishes statistical data through a variety of media, such as the monthly press releases and the *Economic and Financial Statistics*, the databank accessible on the BOT website, quarterly and annual economic reports, and press conferences/releases. A list of publications and schedule of dissemination is available on the BOT website, and knowledgeable staff is available to answer questions and assist users upon request. To receive hard copies of the publications on a regular basis, users can subscribe to the mailing list using the order form at the back of the quarterly statistical publications, or by direct request to the BOT. The price list is available on the form, and users from overseas are also welcome to make purchase orders. The availability of the mailing list is also publicized on the BOT's website.

Table 3. Thailand: Data Quality Assessment Framework (July 2003): Summary of Results for Monetary Statistics
(Compiling Agency: Bank of Thailand)

Element		NA	Assessment				Comments
			O	LO	LNO	NO	
0. Prerequisites of quality							
0.1	Legal and institutional environment		X				
0.2	Resources		X				
0.3	Relevance		X				
0.4	Other quality management		X				
1. Assurances of integrity							
1.1	Professionalism		X				
1.2	Transparency		X				
1.3	Ethical standards		X				
2. Methodological soundness							
2.1	Concepts and definitions		X				
2.2	Scope		X				
2.3	Classification/sectorization			X		Financial derivatives classified as off-balance-sheet positions.	
2.4	Basis for recording		X				
3. Accuracy and reliability							
3.1	Source data		X				
3.2	Assessment of source data		X				
3.3	Statistical techniques		X				
3.4	Assessment and validation of intermediate data and statistical outputs		X				
3.5	Revision studies		X				
4. Serviceability							
4.1	Periodicity and timeliness		X				
4.2	Consistency			X		No time series available for monetary statistics new series, and main aggregates are not easily reconcilable.	
4.3	Revision policy and practice		X				
5. Accessibility							
5.1	Data accessibility		X				
5.2	Metadata accessibility		X				
5.3	Assistance to users		X				

IV. BALANCE OF PAYMENTS STATISTICS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The balance of payments (BOP) statistics for Thailand are compiled and disseminated by the Data Management Department (DMD) of the Bank of Thailand (BOT). The BOT operates under the *Bank of Thailand Act B.E. 2485 (1942)* and the *Royal Decree Regulating the Affairs of the Bank of Thailand B.E. 2485 (1942)*. Other laws affecting data compilation include the *Exchange Control Act B.E. 2485 (1942)*, the *Commercial Banking Act B.E. 2505 (1962)*, and the *Act on the Authority concerning the International Monetary Fund and the International Bank for Reconstruction and Development B.E. 2494 (1951)*. A Memorandum of Understanding between the Customs Department of the Ministry of Finance (MOF) and the BOT provides for the reporting of import and export data by the Customs Department to the BOT.

The legal provisions do not explicitly mandate the BOT to compile and disseminate balance of payments statistics. According to the view of BOT management, the mandate is implicit in other duties and functions of the BOT. These include the BOT's responsibility to promote monetary stability and formulate monetary policies and to collect information to support such policy formulation. Further, section 28 of the *Bank of Thailand Act* states that "it shall transact such kinds of business as pertain to a central bank and are specified by Royal Decree"; section 23 establishes reporting requirements of banks to the BOT.

The BOT has compiled balance of payments statistics for about 40 years, and its authority to do so is, in practice, not challenged. However, since this authority is derived from general central bank and exchange control legislation, it is limited in its application (e.g., information outside the administrative data sources related to exchange controls is not covered) and subject to erosion in case of further exchange control liberalization. The legal provisions for the BOT are older than the concept of balance of payments statistics; therefore, the legal framework makes neither explicit reference to balance of payments statistics nor provides sufficient authority for their compilation.

Recommendation: Appropriate legal clarification should be sought that assigns responsibility to the BOT to compile and disseminate balance of payments statistics. This should also empower the BOT to access any information through reasonable means for this purpose (e.g., through surveys of entities it does not otherwise have authority over, such as nonbank companies) and specify penalties for noncompliance with data requests.

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

Data for balance of payments compilation are obtained from licensed foreign exchange dealers through their transactions reporting, from the MOF (Customs Department for trade in goods and Debt Management Office for official debt), the Ministry of Labor and the Tourism Authority of Thailand. Further, the DMD conducts surveys on debt and foreign assets and liabilities for compiling statistics on foreign debt and the international investment position (IIP). These data are used as additional input for balance of payments statistics. Additional ad hoc information is sourced from entities such as Thai Airways International Public Co. Ltd. (on revenue from foreign ticket offices).

Existing data-sharing arrangements with ministries and other data-producing agencies are adequate and work well. Contacts (e.g., through regular meetings) are maintained with other data-producing agencies to ensure proper understanding of data requirements, to avoid duplication of effort, and to take into account respondent burden. The BOT also provides the balance of payments data to the National Economic and Social Development Board (NESDB) to support their compilation of GDP.

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

The *Official Information Act B.E. 2540* (1997), Section 24 clearly states that individual responses are to be treated as confidential and shall not be disclosed or used for purposes other than statistical purposes, unless disclosure is agreed to in writing by the respondent. In surveys and other statistical inquiries, respondents are informed that the information they provide will be used for the purpose of producing statistics only. Procedures are in place to prevent the disclosure of individual residual data. Access to individual data is restricted to staff who require the information in the performance of their duties, and penalties apply to wrongful disclosure of confidential data. Appropriate safeguards apply to electronic data storage and access. The compliance with procedures to prevent disclosure of data is regularly audited by the Internal Audit Department of the BOT.

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

Various laws (*Exchange Control Act* and *Commercial Banking Act*) and other formal provisions (Exchange Regulations, Notifications, Circulars) mandate reporting of information used to compile the balance of payments statistics. However, the legal mandate for data reporters is derived from legislation not primarily passed for statistical application. As a result, reporting requirements are limited to foreign exchange transactions of licensed exchange dealers. Transactions not passing through the International Transactions Reporting System (ITRS) are not fully captured, and surveys are conducted on a voluntary basis. The Survey Division of the DMD at the BOT seeks to secure the cooperation of respondents by organizing annual seminars with data providers and achieves reasonably high response rates in its external debt and IIP surveys, but found further pilot surveys difficult to implement.

Recommendation: The legal mandate of the BOT should include a provision entitling it to source data from any source, including surveys of private companies and individuals. An explicit mandate will make the development of new data sources easier.

0.2 Resources

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

The balance of payments team comprises 19 staff members, excluding input and survey-related staff. Qualifications and training are adequate, and staff motivation appears high. Staff retention is good, particularly evidenced by the fact that six staff members received training in balance of payments statistics at IMF courses and subsequently remained on the team. Total staff numbers and capabilities are therefore adequate for the present compilation system; more and differently qualified staff will be required if survey work is to be expanded. Annually the staff is assessed against a competency list, and specific training needs are identified. The DMD has its own budget allocation for training purposes (in-house and outside Thailand). Financial resources are adequate, and staff's remuneration is competitive with comparable positions in the public sector.

Computer resources (hardware and software) used for compiling balance of payments statistics are adequate and regularly updated. Emphasis is placed on the use of computing technology, and staff are well trained in its use. Overall, sufficient resources are allocated, and best efforts are made to exploit the full potential of modern computing technology for compiling and disseminating statistical series. The DMD now uses the DMS-ECON system, in which data compilation, tabulation, and dissemination are integrated into a single system, with most tasks carried out automatically, including some data checks. Physical facilities and other resources are adequate. Budgets accommodate anticipated needs.

The BOT provides an office building with adequate working facilities (e.g., lighting and cooling). Office furniture and equipment are adequate for compiling and disseminating balance of payments statistics.

0.2.2 Measures to ensure efficient use of resources are implemented.

In general, all BOT programs are subject to budget considerations and performance assessments. A BOT strategic plan is to improve data management and organization efficiency. The DMD's vision of quality and up-to-standard data management is shared with the staff. Consistent concepts and methodologies are being put in place to ensure efficiency and internal coordination among different DMD teams. Errors are minimized through automatic cross-checks and validation procedures. Annual reviews of the work process and budget execution are also undertaken. Specialized ad hoc reviews take place when needed.

Computing technologies are continuously updated. The implementation of the DMS-ECON has also contributed to enhance efficiency, accuracy, and resource usage.

No specific provision exists to measure resources used to compile balance of payments statistics vis-à-vis those employed for other macroeconomic data produced by BOT. However, resources used to compile balance of payments statistics are monitored, and budgeting practices are in place to help the allocation of resources to priority areas. The operational audits of the statistical process undertaken within the BOT also aim at measuring the effectiveness of the use of resources in compiling balance of payments statistics.

0.3 Relevance

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

The DMD maintains a close dialogue with data users. It holds monthly meetings with users of macroeconomic data (including government and private sector users) and conducts a survey of data users every two years. Data users are kept informed on specific aspects of balance of payments statistics through metadata disseminated in the *Economic and Financial Statistics* and the Special Data Dissemination Standards (SDDS) webpage. Data publications identify a responsible staff member for each time series and encourage data users to send questions and comments. The BOT commits to answering such queries within three working days. Senior management in charge of balance of payments statistical compilation regularly participates in statistical meetings and seminars organized by international/regional organizations or by professional organizations. Staff who work on compiling balance of payments statistics occasionally participate in statistical meetings and seminars.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

The BOT is fully aware of the importance of having high-quality statistics for analyzing the external sector and formulating and implementing macroeconomic policy. This awareness is evidenced by the country's subscription to the SDDS in August 1996, and the establishment of the BOT Data Management Committee and DMD in 2000. The Committee, chaired by the governor and including the heads of the Supervision, Monetary Policy, Financial Markets, Financial Institutions, and Information Technology Groups, is responsible for formulating BOT statistical policy and monitoring its implementation. It regularly reviews issues pertaining to data quality.

Managers are sensitive to all dimensions of data quality, and the Statistical Code of Practice explicitly emphasizes a commitment to the quality and integrity of the data. The key principles of the BOT's Statistical Code of Practice present a comprehensive framework for producing and disseminating high-quality statistics. The Code is closely aligned with international standards and best practices and is organized around the following main

principles: relevance, integrity, quality, accessibility, confidentiality, and respondent burden. The key principles and associated detailed practices guide the qualitative assessments and internal audits of the BOT's statistical processes and products. Automatic data checks are used, unusual data developments are probed, and data quality issues are explored together with other compiling agencies. Quality awareness and processes for quality assurance are adequate.

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

Reviews are undertaken to identify problems at the various stages of collecting, processing, and disseminating of data. Periodic users' surveys or other processes exist to obtain feedback from users of statistics on data quality issues. Inputs are validated with regard to currency, amount, purpose of transaction, and other classification issues. Consistency is ensured across datasets (where applicable), and plausibility is monitored. On the output end, data of public and banking sectors and high-value transactions of nonbank corporations are regularly monitored. Inquiries are submitted to involved institutions for the case of doubtful transactions. Internal training emphasizes quality dimensions.

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

Management recognizes the trade-offs among the dimensions of data quality (e.g., between timeliness and accuracy/reliability). Both quality and timeliness of data are considered, but the accuracy aspect is of higher priority, although preliminary data are released in a timely fashion. The significance of the trade-offs among the dimensions of quality is communicated to users of statistics, and their views are taken into account. Meetings with internal data users (Monetary Policy Group) take place monthly to identify issues of concern as well as to obtain feedback.

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis.

Pursuant to the *Bank of Thailand Act*, the MOF oversees the overall affairs of the BOT. The tenure of the BOT Governor and management is not regulated by law. In practice the BOT is empowered to formulate the policies and procedures deemed necessary to carry out its central bank responsibilities. To formalize the BOT institutional independence, an amendment of the *Bank of Thailand Act* is under consideration to explicitly provide that undue influence and pressure may not be exerted over the organization's operations. The DMD is independent from the rest of BOT's operations (before April 17, 2000, it was part of the Economic Research Department). The head of the DMD is appointed by the Human Resources Committee, comprising the governor as chairman, deputy governors and assistant governors, and the senior director of the Human Resources Department. The DMD head

reports directly to the assistant governor of the Information Technology Group. The staff of the DMD feel that they are free from undue influence or pressure from upper management and outside agencies in the conduct of their duties in compiling statistics.

The DMD code of practice clearly addresses the need for professional independence with regard to performing statistical functions. It contains formal provision to ensure professionalism and the establishment of a culture of professionalism. Violations of the Code of Conduct and the Statistical Code of Practice are very rare and subject to strict penalties. Professional competency plays a key role in recruitment and promotion policies. Professionalism is also promoted by the publication of methodological papers (*Economic and Financial Statistics*) and by organizing lectures, conferences, and meetings with other professional groups. Formal and on-the-job training in balance of payments statistics methodology and compilation methods is provided to all staff involved. The BOT library and Internet service provide easy access to statistical-related research material.

Balance of payments statistics are compiled and disseminated independently. No interference occurs from other agencies nor from the management level within BOT itself.

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

The best data sources for each item in the balance of payments statistics are selected from the available data sources (including the ITRS, external debt and IIP surveys, reporting from Customs Department, other ministries, etc.). There is no interference from other agencies in the choice of data sources and compilation methods. The selection is based solely on data quality, availability, timeliness, cost, and data needs considerations, guided by the pursuit of international standards (particularly the SDDS). Users are informed in advance of the dissemination timetable of major aggregates through the Advance Release Calendar included in the SDDS metadata and of detailed data through the BOT's schedule of release (www.bot.or.th/bothomepage/Other/Schedule_E.htm). Decisions about the timing, methods, and other aspects of dissemination are based solely on statistical considerations without interference from other government agencies.

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

Normally, the BOT's Communications and Relations Office acts as a public relations center in the BOT. Its responsibilities include coordinating with the media to facilitate understanding and the buildup of trust and good relations. The staff in this office also follow closely the financial press, and when erroneous interpretation and misuse of statistics is detected, they inform and consult with the DMD. Comments and clarifications are then formulated by the DMD and made public through the Communications and Relations Office via press conferences/releases and attributed to the DMD. To prevent misinterpretation or misuse of statistics, the DMD provides explanations on the data disseminated in the *Economic and Statistics Bulletin* in its section on compilation methodology and in footnotes

to each table. Moreover, courses/lectures regarding the interpretation and use of balance of payments statistics are provided regularly by the Communications and Relations Office and the DMD (e.g., to media representatives, middle school teachers, and students).

1.2 Transparency

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

The BOT, through its Communications and Relations Office and the DMD, makes an active and ongoing effort to inform the public about the terms and conditions under which it operates during press releases, meetings, lectures, and conferences. Names of contact persons for each subject field, their phone numbers, and mailing and e-mail addresses are also published both in the BOT *Economic and Financial Statistics* and on the website. Metadata on statistics produced by the DMD are also publicly available. The Statistical Code of Practice is available on the BOT website. The DMD is involved in active outreach efforts to educate the public about the availability of data, its meaning and interpretation, and the methods of accessing it with a particular focus on Internet publication.

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

There is no internal government access prior to published release dates. This fact is clearly stated in SDDS metadata posted on the DSBB.

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

Data released to the public are clearly identified as the product of the DMD of the BOT. A product catalog is available on the website and in the *Economic and Financial Statistics*. The DMD requests attribution when its statistics are used or reproduced.

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

Announcements are made prior to the release of data, including justifications for changes and details of new methodologies, as well as their impact on data series. Information is available in press releases, printed publications, and through the website. When accessing data online, users will be informed about updates and changes through pop-ups relevant to the specific series.

1.3 Ethical standards

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

Clear and enforceable guidelines (including the Employee's Guideline Manual, the Statistical Code of Practice for DMD staff, and the Code of Conduct for all BOT staff) outline correct behavior in cases where the agency or its staff could be conceived of confronting potential

conflict-of-interest situations. New staff are made aware of the guidelines when they join the organization, while training courses and seminars for existing staff cover updates and reminders of the guidelines. The guidelines for BOT staff also cover potential misuse and misinterpretation of statistics and private information. Independence from political interference is one of the themes strongly supported by the BOT's ethical guidelines.

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 structure, concepts, and definitions of the balance of payments statistics follow the *Balance of Payments Manual*, fifth edition (*BPM5*) guidelines. A double-entry system is applied as the basic principle, with the statistical discrepancies recorded in errors and omissions.

In principle, data clearly distinguish between income components and goods and services components. Owing to weaknesses in source data from the ITRS, difficulties arise in separating income and service components related to short-term workers.

The financial account separately records transactions in foreign financial assets and liabilities. Direct investment is recorded on a directional basis, but no record is made of reinvested earnings (although annual data on reinvested earnings are included in the IIP).

Resident institutional units are defined in conformity with the *BPM5* and relate to those that have a center of economic interest in Thailand. The one-year rule is applied in assessing the residence status of individuals. The classification of types of transactions follows the *BPM5* concepts. Balance of payments transactions are defined in principle as all transactions by resident economic entities with nonresidents.

The compilation methods of the BOT do not deviate from the concepts and definitions of *BPM5* in principle. However, some weaknesses and deviations in classification are due to the incompatibly classified raw data. The effects of this and any resulting deviations are understood and under review by DMD staff.

2.2 Scope

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

The balance of payments statistics cover most transactions between residents and nonresidents. Not covered are trade in goods not reported by customs, such as shuttle trade, Internet commerce, and smuggling, and no adjustments are made for them. For some other

foreign trade data that bypass customs reporting—in particular, trade in electricity with neighboring countries and military hardware—direct reports are received from relevant ministries, and appropriate adjustments are made. Data on some types of transactions, including goods for processing, repairs on goods, purchase of computer software, and e-commerce transactions, are difficult (and costly) to obtain, and management of the DMD holds the view that these should not constitute a priority.

The ITRS covers cash transactions involving foreign exchange. It neither ensures that all reported transactions are between residents and nonresidents nor ensures that all resident-nonresident transactions are reported. In particular, transactions not involving monetary flows through the Thai banking system will not be captured. The foreign exchange regulations seek to ensure that all balance of payments transactions are routed through licensed foreign exchange dealers and therefore are adequately covered. However, this assurance is inadequate at present and will become weaker with further exchange control liberalization.

Data on services, income, and transfers, largely obtained from the ITRS, are inadequate in ensuring that all resident-nonresident transactions are covered. For example, there is neither information directly on compensation of employees (credit and debit) nor a sufficient proxy. Only equity and reinvested earnings of the private nonbank sector are not reconciled with the IIP survey. No data on reinvested earnings (nor the contra-entry in investment income) are presently disseminated in balance of payments statistics.

Recommendation: The DMD should expand the scope of its balance of payments data to include all transactions between residents and nonresidents. This requires exploring data sources for unrecorded trade and ensuring better coverage in the areas of services, income, and transfers.

Recommendation: It should develop alternative data sources on services, income, and financial account items that are not at present reconciled with survey data. This requires data sourcing directly from transactors as well as enhanced and better coordinated surveys to cover all items related to foreign investment (including investment income and reinvested earnings). Estimates and proxies are preferable to omissions of relevant transactions from balance of payments data.

2.3 Classification/sectorization

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

Institutional units are classified according to the *BPM5*. Transactions are classified to relevant items, with sectoral breakdown in accordance with the sector of the transactor. However, there is no separation of current and capital transfers, and all transfers are classified as current. Other classification problems arise from data sources, such as

classification by reporters in the ITRS. Deviation from the above classification systems are kept under review.

Recommendation: The DMD should develop methods to compile capital transfers separately from current transfers. Other data sources should be used to complement ITRS data and allow adequate classification of data. Estimates and proxies may be used where necessary.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

The principle of market valuation specified in the *BPM5* is used to value transactions. In instances where no market prices are observed, prices of similar transactions or best estimates are used as a proxy. The value of transactions is reported separately from related charges, fees, and transaction services. In cases where transactions are calculated from changes in stocks, calculations are made to exclude valuation and other changes. Import values are reported in customs data on a c.i.f. basis and adjusted to f.o.b. values (but balance of payments data published in the *Economic and Financial Statistics* and on the website value imports c.i.f.). Barter trade is valued at approximated market prices obtained from the Customs Department. Transactions between affiliated enterprises are recorded at the value provided by data providers.

Survey forms clearly state the procedure for market-value estimation in the case where no actual market value are available. As specified in *BPM5*, transactions in foreign currency are converted using the midpoint exchange rate prevailing in the market on the transaction date. When the transaction date cannot be determined precisely, the average midpoint exchange rate for the reporting month is used. Transaction estimates derived from stock data are valued in their original currencies and then converted to domestic currency at the average exchange rate for the applicable period. Deviations from the above classification systems are minor and kept under review.

Recommendation: The DMD should seek direct reporting of actual f.o.b. import values from the Customs Department. If these cannot be obtained, a frequent review of the benchmark values for freight and insurance should be conducted.

2.4.2 Recording is done on an accrual basis.

Generally, accrual accounting is used for recording balance of payments transactions. Items obtained solely from the ITRS are cash-based, but an attempt is made to incorporate supplementary data such as surveys to allow necessary adjustments and take account of noncash transactions.

As a result, services (except travel receipts), income, and transfers are cash-based, as are equity and reinvested earnings of the private nonbank sector that presently are not reconciled with data from the IIP survey. Overall, efforts are made to use the accrual principle.

Recommendation: As new data sources become available, the DMD should continue to change items from cash to accrual accounting.

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

Grossing and netting procedures broadly follow international guidelines. Current account transactions are generally recorded on a gross basis, while financial account transactions are recorded on a net basis, separately for the individual asset and liability components. Deviations exist in several data categories, including services, income, and transfers where source data do not allow a sufficiently detailed classification on a gross basis. In particular, transportation companies (airlines, freight, and shipping companies) do not report revenue and expenditure items to the BOT. Instead, their net transactions as reported by the ITRS are included in the current account. The DMD keeps this under review and is planning to address weaknesses through the establishment of additional data sources, in particular a survey on services.

Recommendation: Additional data sources on services (especially transport), income (labor), and transfers should be developed. Transportation companies (both Thai companies and branches of foreign companies in Thailand) should be requested to report on receipts and payments. Income of short-term and seasonal workers should be estimated and not reported from the ITRS. The same applies to transfers, in particular workers' remittances.

3. Accuracy and reliability

3.1 Source data

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

The composition of data sources includes the ITRS, selected surveys, direct reporting by government ministries, agencies, and public enterprises, as well as limited private enterprises. Data on almost all items in the balance of payments statistics are available (the exceptions include reinvested earnings and unrecorded trade). These data sources provide broad, but not fully sufficient, coverage for the recording of balance of payments transactions.

Data from the Customs Department on trade in goods are supplemented by data from relevant ministries on direct imports. There are no data sources or estimates at present for unrecorded trade. Data on services, income, and transfers from the ITRS are supplemented by data obtained from Thai Airways International Public Co. Ltd. and the Tourism Authority of Thailand. The ITRS is the main data source for the financial account, but it is supplemented by data obtained from government agencies and the IIP and external debt surveys.

The primary data source, the ITRS, is used as the main data source for the services, income, and transfer items in the current account, as well as all items in the capital and financial account not covered by surveys. For all other items, including trade in goods and many financial account items, data obtained from the ITRS are used as a secondary data source for cross-checking against the relevant primary source. The ITRS relies on reporting by all licensed foreign exchange dealers who report aggregated transaction data classified by purpose, currency, and country for all transactions up to the threshold (US\$20,000) and itemized transactions above, including purpose, transactor, country, currency, and date. Data are reported to the BOT daily, with a maximum lag of seven days, and automatic data checks are run by the IT system that identify potential data problems before the download process is complete. The ITRS system provides adequate coverage and detail on international transactions routed through the banking system, but transactions carried out by money transfer companies (such as Western Union) are not reported. Therefore, only their net settlements will be captured when sent through the banking system.

The two main surveys conducted by the DMD are the annual IIP survey and the quarterly external debt survey. Both focus on stock, not flow data, but are useful in complementing the compilation of financial account data. They cover the private nonbank sector, since government and banking sector information is obtained from government (mostly the MOF) and the banking sector directly. The surveys are conducted in a well-planned manner, with adequate sample frames. Response rates are high (about 85 percent) for the two main surveys, but good response rates were more difficult to achieve for other, exploratory surveys. Survey questionnaires are adequately designed.

Data obtained from the IIP and external debt surveys are used to support the compilation of items not captured by the ITRS. Data from primary data sources are supplemented with information from secondary data sources, including the ITRS.

In summary, data sources cover most items of the balance of payments framework, but accuracy and reliability are compromised in important parts. In particular, data from the ITRS are likely to show coverage and classification weaknesses. On items such as services, income, and parts of the financial account where no second data source exists, and cross-checks are therefore not possible, accuracy and reliability are not fully assured.

Recommendation: DMD should develop data sources to cover those items where the ITRS is the only source of information to allow cross-checking of volume and classification. It should also develop data sources for unrecorded trade, including shuttle trade and smuggling. Estimates for these items probably exist in police reports or other studies.

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

Data obtained from customs reports, surveys, and the ITRS are broadly consistent with the compilation guidelines of the *BPM5*. Specific procedures have been developed to adjust data

from various data sources to improve coverage, classification, and valuation to conform with the guidelines set out in the *BPM5*. For example, data on travel receipts and payments obtained from the Tourism Authority of Thailand are adjusted to comply with residency concepts stated in the *BPM5* (i.e., the one-year rule and applicable exceptions).

Administrative records used to compile balance of payments statistics reasonably approximate the methodological requirements of the balance of payments. Adjustments are made where necessary, for example, with regard to residence and currency valuation in official debt data obtained from the MOF. Definitional deficiencies in data obtained from the ITRS, such as timing and classification errors, are addressed through supplementary data where possible.

In general, compilers are aware of differences between source data definitions and those required for balance of payments compilation and make necessary adjustment as far as possible.

Recommendation: Additional data sources are required to complement the ITRS where administrative foreign exchange data are an inadequate proxy for transactions, particularly for services, transfers, and financial account items.

3.1.3 Source data are timely.

Data collection and processing is generally accomplished within tight timeframes, and the requirements for timeliness and periodicity are met. The DMD frequently contacts private and public sector reporters to emphasize the importance of timely reporting. Banks obliged to report ITRS data are subject to penalties for late reporting.

3.2 Assessment of source data

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

Sampling errors in the two surveys (external debt and IIP) are probably small, owing to the selection of sampling units. For the external debt survey, the population list is mainly derived from the ITRS, but for the IIP survey, the list was originally derived from the Department of Business Development (under the Ministry of Commerce) business registration records, then further updated by other sources such as the ITRS, newspaper, etc. In the debt survey, all companies with recent debt transactions are surveyed; in the IIP survey, all large contributors (accounting for more than 90 percent of direct investment liability) are included, in addition to a random sampling of smaller companies. Nevertheless, the DMD monitors sampling and nonsampling errors. Since the inception of the current system, only minor changes were made to the survey forms. Therefore, the relationship between survey form changes and survey results is not substantial. A verification system is in place to detect such changes.

Survey responses are individually checked; inconsistent or implausible data are followed up with the data reporter.

Data obtained from the ITRS are closely monitored for the purpose of foreign exchange control as well as balance of payments compilation. Both automated and manual checks are employed, and data are verified with the reporting bank as necessary. ITRS transactions that are not of a balance of payments nature are not identified and, therefore, not canceled.

Other administrative and supplementary data are monitored primarily by the compiling agency (i.e., the Customs Department, Debt Management Office). However, DMD monitors and occasionally questions data when appropriate.

3.3 *Statistical techniques*

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

The DMD employs automated data entry and processing, as well as data checks, to minimize human error in data entry, coding, editing, and tabulation. Imputation and adjustments for nonresponse are limited since most data sources provide nearly complete coverage. Missing observations are filled with precalculated proxy figures imputed from related observations with similar characteristics and size. Benchmark and supplementary information is used appropriately.

Data obtained from the ITRS provide a detailed breakdown, and unspecified items are minimal. When necessary, they will be classified under “other investment/other capital” or “other services.” Annual stock data from the IIP and monthly balance of payments data are reconciled for major items.

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

Data adjustments are done using mostly appropriate procedures. The value adjustment to f.o.b. prices for imports is done using an older benchmark. No adjustments are made to account for unrecorded trade and illicit activities. Data from alternative sources are used to complement main data sources, for example on the earnings of unskilled nonresident workers in Thailand. A freight and insurance survey is being prepared to update the benchmark for estimating the freight and insurance component of imports valued c.i.f.

Recommendation: Benchmarks should be reviewed regularly, particularly for valuation adjustments to imports. Household data may be used to estimate the receipt of workers' remittances.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information where applicable.

Intermediate results are cross-checked with related datasets as well as other data sources. However, for numerous data items, no alternative data set exists, and validations are not conducted. Reconciliation of the IIP and the financial account is undertaken, with the exception of equity and reinvested earnings of the private nonbank sector. All preliminary data are based on actual data, not estimates.

Recommendation: All data should be verified, and, where necessary, new data sources should be developed.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Related data series are checked against each other. For example, financial account data are checked against stock data; investment income and investment stock data are compared; and trade data from the ITRS and Customs are cross-checked. Data from the ITRS are used to verify series where alternative sources exist.

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

Errors and omissions are monitored in size and direction to detect any pattern. Errors and omissions are also used as indicators helping to flag missing and overstated transactions.

No reconciliation of bilateral data with major trading partners is made. However, in the past, reconciliation of bilateral data with major trading partners found that differences exist in concepts and compilation methods used by each country, such as time lag in recording imports and exports between trading partners. The DMD has investigated discrepancies between its external debt data and the relevant data obtained from the Bank for International Settlements (BIS). The investigation identified differences in coverage as the likely cause. The DMD is committed to investigating any other significant discrepancies that may be found.

3.5 Revision studies

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

The revision cycle is determined by the availability of revised source data. All balance of payments data are revised according to a preset schedule disseminated on the website and in the *Economic and Financial Statistics*. For debt items under liabilities, revisions are made quarterly once the quarterly external debt survey results become available. For the remaining items, revisions are made annually in September, when revised trade data, travel receipts and

payments, and IIP survey results become available. Data from other sources, particularly the ITRS, rarely require revisions. No long-term trends of discrepancies in the financial account between flow data derived from stock surveys and ITRS-based transactions data have yet been identified.

The DMD monitors the direction and magnitude of revisions and studies the effect of revisions on selected items and periods (including seasonal effects). Documentation on major revisions is maintained, with detailed information on causes of revision. Adjustments to data compilation are made on the basis of the findings of revision studies for most items, with the important exception of trade data. Since trade data are also released by other government agencies, consistency across those agencies is considered more important than the minimization of expected revisions.

Recommendation: The DMD should consider appropriately adjusting preliminary data to minimize expected revisions, or, as an alternative, publish the findings of its revision study.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

Balance of payments dissemination meets, and in part, exceeds SDDS standards. Summary data are published monthly and full balance of payments data quarterly; both are disseminated on the BOT website and in the *Economic and Financial Statistics*.

4.1.2 Timeliness follows dissemination standards.

Balance of payments statistics are disseminated within one quarter after the reference period, therefore satisfying applicable standards.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

Concepts, definitions, and classifications for producing monthly, quarterly, and annual statistics are the same. Annual statistics are the sum of quarterly statistics, and annual data are allocated to quarterly data using appropriate methods. Over the long run, the net errors and omissions item has been at an acceptable level (+/- 5 percent of trade volume).

Many items of the financial account are reconciled with changes in the IIP. Also, a table detailing transactions, changes due to exchange rates, prices, and other changes is disseminated regularly on the website and in statistical publications.

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

For most items, consistent time series are available for an adequate period (at least five years). Changes in source data for a few items under other investment may cause a series break. When changes in source data, methodology, or techniques are introduced, historical series are reconstructed as far back as reasonably possible.

Detailed methodological notes are published in the *Economic and Financial Statistics* and posted on the website. Main breaks and discontinuities in the balance of payments component time series are explained in the footnotes in publications, and Internet users are alerted through pop-ups when accessing the affected data series online. Unusual changes in economic trends are explained in monthly press releases by the Monetary Policy Group and are posted on the BOT's website.

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

Balance of payments data on trade in goods are obtained from the Customs Department, then adjusted to comply with balance of payments concepts. The adjustments are documented and published so that full consistency is achieved. Balance of payments statistics are also consistent with national accounts statistics, except for a small discrepancy in the item of "government transfers," which is of negligible amount. The BOT is currently working with NESDB on plans to reconcile this discrepancy. Balance of payments statistics are largely consistent with monetary and financial statistics, with the exception of securities issued abroad and held by Thai residents which are recorded in the balance of payments. The balance of payments components comprising external debt data are consistent with the corresponding debt stock. Reconciliation between stock and flow of debt items is carried out regularly.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

Revisions are carried out quarterly for debt items under liabilities, while the remaining financial account, merchandise trade, and service account items are revised annually (in September). Footnotes explaining the revisions are provided where applicable. Significant revisions (e.g., changes in methodology) are also announced in press releases. The schedule is announced in the *Economic and Financial Statistics* and on the DMD website. The reasons underlying the cycle are explained in the published revision policy. In exceptional circumstances, revisions outside the regular cycle are made if the new data are significant. Such exceptional revisions, as well as any affected data publications, are made known to the public through the *Economic and Financial Statistics* and website.

4.3.2 Preliminary and/or revised data are clearly identified.

Preliminary monthly data for the current account are published with a lag of up to one month and two months for the financial account. These preliminary data are identified by a “P” superscript. The superscript is removed once revised figures are available. Data are revised according to the announced revision schedule. Following unscheduled, extraordinary revisions, data are denoted by an “R” superscript. Such revisions are accompanied by a separate explanation of reasons for the revisions.

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

Magnitude and direction of revisions are constantly monitored. The results of revision studies are used primarily for projection and for fine-tuning future preliminary figures for items in the financial account. However, the results of this process are not published.

Recommendation: DMD should make the results of its revision study public.

5. Accessibility

5.1 Data accessibility

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

The presentation of balance of payments data is commensurate with users’ needs. Balance of payments statistics are published according to the standard components of the *BPM5*, and with time series. Some additional series are published to meet users’ needs, and datasets are published with various levels of detail (disaggregation).

Balance of payments statistics are published in a clear manner. Charts and tables are disseminated with the data to facilitate analysis. Most data can be downloaded from the DMD website. Commentaries on the current-period developments are available through press releases and the *Economic and Financial Statistics*. International trade indices are also published in a seasonally adjusted form.

5.1.2 Dissemination media and format are adequate.

Data are made available in the form of press releases, formal publication of monthly reports, quarterly reports, and annual reports. They are also accessible on the DMD website. Online release facilitates good data access because data can be downloaded, and this reduces the costs of re-release and revision. Statistics and data series that are more detailed and comprehensive, including trade indices, are available on the DMD website in Excel format. Recently released data and longer time series can be accessed through an electronic database maintained by DMD.

5.1.3 Statistics are released on a preannounced schedule.

The schedule announcing in advance the dates of data releases is available from the DMD website. Data are published, in various formats, punctually on the predetermined date.

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

The public is informed of the statistics being released and the channel through which they are released. The data are released simultaneously to all interested users on the date and time specified in the preannounced schedule. There is no prior access to balance of payments data by senior BOT management, government, or any other party not involved in the compilation, verification, and dissemination of the data.

5.1.5 Statistics not routinely disseminated are made available upon request.

In addition to the balance of payments statistics and related data routinely published, such as trade indices, some further series are made available upon request. Unpublished (but nonconfidential) specialized tabulations can be provided. Users are informed of the relevant contact information (name of contact person, telephone number, e-mail address) if more detailed information is required.

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.

Balance of payments statistics metadata provide data users with adequate information about data sources and methods, pointing out limitations and deviations from international statistical guidelines. Metadata are posted on the website and printed in the *Economic and Financial Statistics*. SDDS summary methodologies are available from the SDDS website. They are reviewed and updated regularly.

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

General use information about the balance of payments and other external sector statistics is disseminated on the DMD website and in the *Economic and Financial Statistics*. Different levels of detail are made available to meet users' requirements. Specialized information is available from the same sources. It includes compilation methodology for trade indices, articles on foreign direct investment, and survey methodology.

Outreach publications aimed at nonspecialist audiences are also available from the BOT. The DMD acts as an access point for users to obtain further information on statistics and their use and role in a modern economy. Outreach efforts include road shows at Money Expo and Red Cross fairs, billboards, a countrywide economic quiz and competition for secondary school

students, libraries for schools in rural areas, and other initiatives for raising the awareness about economic data in the country.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized.

The DMD publishes the names and contact information of staff responsible for each data series who can be contacted by mail, telephone, and email. The DMD commits to responding to all requests within three working days. The assistance provided to data users is regularly monitored through surveys of users.

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

The DMD provides a list of publications, documents, and other services and updates it each year. A list of publications is available from its website. The prices of the statistical products and services are clearly disclosed, and assistance is provided in placing orders. Most products are available at no cost through the DMD website.

Table 4. Thailand: Data Quality Assessment Framework (July 2003): Summary of Results for Balance of Payments Statistics
(Compiling Agency: Bank of Thailand)

Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment			X			There is no legal mandate for BOP compilation. It is entirely based on general central bank and exchange control legislation.
0.2 Resources		X				
0.3 Relevance		X				
0.4 Other quality management		X				
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions						
2.2 Scope		X	X			The compilation process is built on foreign exchange controls. Conceptual independence from exchange controls needs to be developed.
2.3 Classification/sectorization			X			There is no separation between current and capital transfers. Other classification problems arise from weaknesses in source data.
2.4 Basis for recording			X			A mix of accrual and cash principles is employed.
3. Accuracy and reliability						
3.1 Source data			X			Source data is deficient owing to the reliance on the ITRS and the absence of secondary data in important areas, such as services, income, transfers, and parts of the financial account. New data sources need to be developed.
3.2 Assessment of source data		X				
3.3 Statistical techniques		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies			X			Revision studies are carried out, but their results are neither used to improve all relevant data nor made public.
4. Serviceability						
4.1 Periodicity and timeliness		X				
4.2 Consistency		X				
4.3 Revision policy and practice			X			Revision studies are not made public.
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

Summary of the Special Data Dissemination Standard (SDDS)

The SDDS prescribes the following practices under each of the identified dimensions:

Data dimension (coverage, periodicity, and timeliness)

- the dissemination of 18 data categories, including component detail, covering the four main sectors (real, fiscal, financial, and external) of the economy, with prescribed periodicity and timeliness.

Access dimension

- the dissemination of advance release calendars providing at least one-quarter advance notice of approximate release dates, and at least a one-week advance notice of the precise release dates; and
- the simultaneous release of data to all users.

Integrity dimension

- the dissemination of the terms and conditions under which official statistics are produced and disseminated;
- the identification of internal government access to data before release;
- the identification of ministerial commentary on the occasion of statistical release; and
- the provision of information about revision and advance notice of major changes in methodology.

Quality dimension

- the dissemination of documentation on statistical methodology and sources used in preparing statistics; and
- dissemination of component detail and/or additional data series that make possible cross-checks and checks of reasonableness.

SDDS subscribers are required to:

- post descriptions of their data dissemination practices (metadata) on the IMF's Dissemination Standards Bulletin Board (DSBB). Summary methodologies, which describe data compilation practices in some detail, are also disseminated on the DSBB; and

- maintain an Internet website, referred to as the National Summary Data Page (NSDP), which contains the actual data described in the metadata and to which the DSBB is electronically linked.

The IMF staff is monitoring observance of the standard through NSDPs maintained on the Internet. Monitoring is limited to the coverage, periodicity, and timeliness of the data and to the dissemination of advance release calendars.

Source: <http://dsbb.imf.org>

**Data Quality Assessment Framework—Generic Framework
(July 2003 Framework)**

Quality Dimensions	Elements	Indicators
<p>0. Prerequisites of quality</p>	<p>0.1 Legal and institutional environment—<i>The environment is supportive of statistics</i></p> <p>0.2 Resources—<i>Resources are commensurate with needs of statistical programs.</i></p> <p>0.3 Relevance—<i>Statistics cover relevant information on the subject field.</i></p> <p>0.4 Other quality management—<i>Quality is a cornerstone of statistical work.</i></p>	<p>0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified.</p> <p>0.1.2 Data sharing and coordination among data-producing agencies are adequate.</p> <p>0.1.3 Individual reporters' data are to be kept confidential and used for statistical purposes only.</p> <p>0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.</p> <p>0.2.1 Staff, facilities, computing resources, and financing are commensurate with statistical programs.</p> <p>0.2.2 Measures to ensure efficient use of resources are implemented.</p> <p>0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.</p> <p>0.4.1 Processes are in place to focus on quality.</p> <p>0.4.2 Processes are in place to monitor the quality of the statistical program.</p> <p>0.4.3 Processes are in place to deal with quality considerations in planning the statistical program.</p>
<p>1. Assurances of integrity</p> <p><i>The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.</i></p>	<p>1.1 Professionalism—<i>Statistical policies and practices are guided by professional principles.</i></p> <p>1.2 Transparency—<i>Statistical policies and practices are transparent.</i></p> <p>1.3 Ethical standards—<i>Policies and practices are guided by ethical standards.</i></p>	<p>1.1.1 Statistics are produced on an impartial basis.</p> <p>1.1.2 Choices of sources and statistical techniques as well as decisions about dissemination are informed solely by statistical considerations.</p> <p>1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.</p> <p>1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.</p> <p>1.2.2 Internal governmental access to statistics prior to their release is publicly identified.</p> <p>1.2.3 Products of statistical agencies/units are clearly identified as such.</p> <p>1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.</p> <p>1.3.1 Guidelines for staff behavior are in place and are well known to the staff.</p>

Quality Dimensions	Elements	Indicators
<p>2. Methodological soundness</p> <p><i>The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.</i></p>	<p>2.1 Concepts and definitions—<i>Concepts and definitions used are in accord with internationally accepted statistical frameworks.</i></p> <p>2.2 Scope—<i>The scope is in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p>2.3 Classification/sectorization—<i>Classification and sectorization systems are in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p>2.4 Basis for recording—<i>Flows and stocks are valued and recorded according to internationally accepted standards, guidelines, or good practices</i></p>	<p>2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.</p> <p>2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices.</p> <p>2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices.</p> <p>2.4.1 Market prices are used to value flows and stocks.</p> <p>2.4.2 Recording is done on an accrual basis.</p> <p>2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.</p>
<p>3. Accuracy and reliability</p> <p><i>Source data and statistical techniques are sound and statistical outputs sufficiently portray reality</i></p>	<p>3.1 Source data – <i>Source data available provide an adequate basis to compile statistics.</i></p> <p>3.2 Assessment of source data—<i>Source data are regularly assessed.</i></p> <p>3.3 Statistical techniques—<i>Statistical techniques employed conform to sound statistical procedures</i></p> <p>3.4 Assessment and validation of intermediate data and statistical outputs—<i>Intermediate results and statistical outputs are regularly assessed and validated.</i></p> <p>3.5 Revision studies—<i>Revisions, as a gauge of reliability, are tracked and mined for the information they may provide.</i></p>	<p>3.1.1 Source data are obtained from comprehensive data collection programs that take into account country-specific conditions.</p> <p>3.1.2 Source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required.</p> <p>3.1.3 Source data are timely.</p> <p>3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide statistical processes.</p> <p>3.3.1 Data compilation employs sound statistical techniques to deal with data sources.</p> <p>3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.</p> <p>3.4.1 Intermediate results are validated against other information where applicable.</p> <p>3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.</p> <p>3.4.3 Statistical discrepancies and other potential indicators or problems in statistical outputs are investigated.</p> <p>3.5.1 Studies and analyses of revisions are carried out routinely and used internally to inform statistical processes (see also 4.3.3).</p>

Quality Dimensions	Elements	Indicators
<p>4. Serviceability <i>Statistics, with adequate periodicity and timeliness, are consistent and follow a predictable revisions policy.</i></p>	<p>4.1 Periodicity and timeliness— <i>Periodicity and timeliness follow internationally accepted dissemination standards.</i></p> <p>4.2 Consistency— <i>Statistics are consistent within the dataset, over time, and with major datasets.</i></p> <p>4.3 Revision policy and practice—<i>Data revisions follow a regular and publicized procedure.</i></p>	<p>4.1.1 Periodicity follows dissemination standards. 4.1.2 Timeliness follows dissemination standards.</p> <p>4.2.1 Statistics are consistent within the dataset. 4.2.2 Statistics are consistent or reconcilable over a reasonable period of time. 4.2.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.</p> <p>4.3.1 Revisions follow a regular and transparent schedule. 4.3.2 Preliminary and/or revised data are clearly identified. 4.3.3 Studies and analyses of revisions are made public (see also 3.5.1).</p>
<p>5. Accessibility <i>Data and metadata are easily available and assistance to users is adequate.</i></p>	<p>5.1 Data accessibility— <i>Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.</i></p> <p>5.2 Metadata accessibility— <i>Up-to-date and pertinent metadata are made available.</i></p> <p>5.3 Assistance to users— <i>Prompt and knowledgeable support service is available.</i></p>	<p>5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts). 5.1.2 Dissemination media and format are adequate. 5.1.3 Statistics are released on a preannounced schedule. 5.1.4 Statistics are made available to all users at the same time. 5.1.5 Statistics not routinely disseminated are made available upon request.</p> <p>5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated. 5.2.2 Levels of detail are adapted to the needs of the intended audience.</p> <p>5.3.1 Contact points for each subject field are publicized. 5.3.2 Catalogs of publications, documents, and other services, including information on any charges, are widely available.</p>

**Results of Thailand's User Survey
October 11, 2005**

Table 5. Thailand: Questionnaire Results Analyzed by Type of User
October 16, 2005

Type of Respondent	Total Sent	Total Received	In % Received
Academic and Research	17	17	100
Banks and Business	20	19	95
International Community	15	10	67
Government Agencies	24	23	96
Others	19	18	95
Total	95	87	92

Table 6. General Information About Uses of Official Macroeconomic Statistics of Thailand

	Total Number of Responses
1. Which official statistics do you use regularly?	
a. National accounts	69
b. Prices	71
c. Government finance statistics	61
d. Monetary statistics	77
e. Balance of payments	74
f. Other:	
• Production indices	59
• Labor market	49
• Merchandise trade	46
• International reserves and foreign currency liquidity	58
• External debt	53
• International investment position	47
• Other	12
2. Where do you obtain the official statistics?	
a. Official press releases and publications on macroeconomic statistics	78
b. Private sector summaries and analyses	46
c. Official policy papers	42
d. Publications from international organizations about the country	43
e. Other sources	18
3. Do you refer to official descriptions of the sources and methods that were used to compile the official statistics?	
• Yes	72
• No	13
4. For what purposes do you use the official statistics?	
a. Analysis of current developments for short-term decision making	56
b. Analysis of trends for longer-term policy formulation?	50
c. Econometric model building and forecasting	38
d. Economic research	56
e. Comparison with economic developments in other countries	46
f. General economic background	66
g. Other	12

Table 6. General Information About Uses of Official
Macroeconomic Statistics of Thailand

	NA	Prices	GFS	Monetary	BOP	Other
5. Coverage and detail						
5.1 In general, are you satisfied with the coverage of official statistics?						
• Yes	65	72	62	73	73	4
• No	3	6	8	3	3	2
5.2 In general, are you satisfied with the official statistics in terms of their level of detail?						
• Yes	57	68	56	70	70	5
• No	9	6	10	6	7	4
6. Periodicity and timeliness						
6.1 Are you satisfied with the frequency of compilation of the official statistics (e.g., weekly, monthly, quarterly, annual)?						
• Yes	60	74	65	70	72	7
• No	6	1	2	3	3	1
6.2. In general, do you consider that the official statistics are disseminated with the appropriate timeliness (the time lag after the period to which they pertain, e.g., 60 days after the reference period)?						
• Yes	42	66	53	62	63	5
• No	22	6	12	10	11	3
7. Other dissemination practices						
7.1 Do you know if there is a publicly disseminated calendar that announces in advance the dates on which the various official statistics will be disseminated?						
• Yes	48	53	40	50	53	3
• No	19	21	27	25	21	5
7.2 If there is a calendar of release dates, in your experience, are the official statistics released on the dates announced?						
• Yes	48	54	42	53	54	4
• No	6	7	7	5	6	1
7.3 Is there enough information about revisions to official statistics?						
• Yes	47	60	45	54	56	4
• No	14	7	13	10	9	0
8. Accessibility						
8.1 Can you easily access the official statistics?						
• Yes	74	72	61	72	74	4
• No	5	4	8	2	3	0

Table 6. General Information About Uses of Official Macroeconomic Statistics of Thailand

	NA	Prices	GFS	Monetary	BOP	Other
8.2 Can you easily access information pertaining to official statistics you use (explanatory notes, methodological descriptions, reference concerning concepts, classification, statistical practice)?						
• Yes	54	61	50	63	64	3
• No	9	8	12	6	8	0
					Yes	No
8.3 Is the above information on methodology sufficiently clear and at an adequate level of detail to be useful to you?					48	13
8.4 How do you get access to official statistics?						
• Official releases					43	
• Hard copy publications					47	
• Data specifically requested					15	
• Official website					80	
• Other					12	
• E-mail requests					19	
	NA	Prices	GFS	Monetary	BOP	Other
9. Overall assessment						
9.1 In your opinion, is the underlying methodology of official statistics sound and appropriate?						
• Yes	59	68	60	69	70	4
• No	3	4	4	2	3	0
9.2 In general, do you consider the official statistics to be unbiased and accurate?						
• Yes	58	64	54	68	67	5
• No	4	8	9	5	6	0
9.3 How would you compare the quality of official statistics of the country with those of other countries in the region?						
• Better	18	25	19	23	25	3
• Same	33	36	37	40	37	2
• Worse	3	2	3	1	2	0
9.4 How do you assess the overall quality of the official statistics? (1 rated as poor and 5 as excellent)						
	3.5	3.8	3.5	3.9	4.0	4.1

NA = National Accounts; Prices refers to: CPI (Consumer Price Index) and PPI (Producer Price Index); GFS = Government Finance Statistics; Monetary = Monetary Statistics; and BOP = Balance of Payments Statistics