

and prices data. It would aid transparency if this pre-release were formally disclosed to the public.

- **Methodological soundness:** Azerbaijan has made great strides in producing statistics broadly in line with the *System of National Accounts 1993 (1993 SNA)*, the *Monetary and Financial Statistics Manual (MFSM)*, and the *Balance of Payments*, fifth edition (*BPM5*). Azerbaijan should complement these achievements by putting a high priority on adopting best practice methodology on the fiscal side, as set out in the *Government Financial Statistics Manual 2001 (GFSM 2001)*. Also national accounts could be improved, for instance, by producing subannual estimates as discrete quarterly values, and producing quarterly GDP volume figures using the same fixed base year. Classification of GFS and of selected components of the balance of payments should be brought into conformity with international guidelines.
- **Accuracy and reliability:** Source data are generally comprehensive, with elaborate data collection programs, and the statistical techniques employed mostly follow sound statistical procedures. National accounts would be improved by calculating volume figures for the oil industry using value added rather than production weights for the enterprises. The quality of the Consumer Price Index (CPI) is at present affected by the fact that no items have been added to the basket since 1993. Government operations data are becoming progressively more complete, with extrabudgetary funds excluding the SOF available since January 2002, and SOF funds also scheduled to be included. The International Transactions Reporting System (ITRS) for balance of payments statistics should be modified to ensure completeness of reporting.
- **Serviceability:** As noted above, periodicity and timeliness of dissemination are generally in line with GDDS recommendations, and in some cases meet the prescriptions of the SDDS. Datasets are generally consistent with each other. Consistency with past data is not always assured, in view of a number of statistical breaks that have occurred in recent years, for instance on government and monetary statistics. Also, presentation of sub-annual aggregates on a cumulative basis makes time series difficult to derive. The PPI series is new, so long time series are not yet available. National accounts clearly identify preliminary and revised data, while GFS and price indexes do not.
- **Accessibility:** Statistics are disseminated in a variety of forms, although in some areas presentations are not very detailed, and financial constraints seem to limit the availability of some publications. Non-government users are rarely formally consulted as to their needs. Metadata are not generally easily available. Websites, while a welcome and very important innovation, are in some cases still new, and their potential is not yet fully realized.

I. INTRODUCTION

1. The data module of this Report on the Observance of Standards and Codes (ROSC) provides a summary of Azerbaijan's practices on the coverage, periodicity, and timeliness of the data categories against the IMF's General Data Dissemination System (GDDS). It is complemented by an assessment of the quality of national accounts, consumer and producer price indexes, and government finance, monetary, and balance of payments statistics using the Data Quality Assessment Framework (DQAF) developed by the IMF's Statistics Department (STA). This report is based on information provided prior to and during a staff mission from April 8–23, 2002,¹ as well as publicly available information.
2. Section II includes an overview of the GDDS and an assessment of Azerbaijan's data dissemination practices against the GDDS. Reference is also made in cases where the authorities meet the requirements of the IMF's Special Data Dissemination Standard (SDDS). Section III presents a summary assessment of the quality of the principal macroeconomic datasets, following the dataset-specific assessment frameworks. Finally, Section IV sets out recommendations to achieve further improvements in Azerbaijan's statistics.

II. DATA DISSEMINATION PRACTICES AND GENERAL DATA DISSEMINATION SYSTEM

3. Azerbaijan's data dissemination practices are assessed against the GDDS. This section therefore reviews the coverage, periodicity and timeliness of core macroeconomic statistical frameworks and indicators disseminated by Azerbaijan (see Table 1). The plans for improvement posted on the IMF's Data Standards Bulletin Board (DSBB) as part of the GDDS are also reviewed. The other dimensions of the GDDS (quality, integrity, and access) are addressed through the DQAF in section III.

Data dimension: coverage, periodicity, and timeliness

4. Azerbaijan started posting its metadata on the IMF's DSBB in February 2001. Macroeconomic statistics are mainly produced by three institutions: the State Statistical Committee (SSC) is responsible for the compilation of the national accounts, prices and other economic statistics; the Ministry of Finance (MOF) is responsible for the compilation of government finance statistics; and the National Bank of Azerbaijan (NBA) is responsible for the compilation of monetary and balance of payments statistics.
5. Azerbaijan provides access to macroeconomic data through a variety of publications and the following Internet websites:

¹ The mission team was headed by Mr. Emmanuel Kumah and included Ms. Candida Andrade, Messrs. José María Cartas, Russel Freeman, and Ms. Nataliya Ivanyk (all STA), Mr. David Hughes (expert), and Ms. Petra Costolanski (STA-Administrative Assistant). Mr. Charles Enoch (STA) joined the mission for the period April 17–23.

- State Statistical Committee: <http://www.statcom.baku-az.com>
- Ministry of Finance: http://www.minfin_az.com
- National Bank of Azerbaijan: <http://www.nba.az>

6. Azerbaijan meets or exceeds the GDDS specifications for coverage, timeliness and periodicity of the main frameworks and indicators in all sectors, with the following exceptions:

- In the fiscal sector, there is not full coverage of the central government aggregates, in particular financing is not fully disseminated.
- In the external sector, Azerbaijan should disseminate the public and publicly guaranteed debt schedule at least twice a year, within three to six months of the reference period.

For timeliness in particular, Azerbaijan in many areas already exceeds the GDDS specifications by a wide margin.

7. Plans for improvement form an integral part of the GDDS. The following plans are posted on the IMF's DSBB as of April 2002:

- **National accounts:** The plans for improvement are: (i) to bring the industrial classification into line with international standards; (ii) to improve the estimates for the oil industry; (iii) to estimate informal activities separately for each industry; (iv) to improve the estimates of inventory valuation adjustments; (v) to express quarterly GDP estimates as discrete values; (vi) to calculate constant price estimates at a more disaggregated level; (vii) to seasonally adjust the quarterly estimates; (viii) to produce financial accounts for each sector; (ix) to introduce consolidated report forms; (x) to introduce ad hoc surveys to improve the estimates for informal activities. Most of these plans have been implemented. However, discrete quarterly GDP estimates are still not being produced. Also, though improvements have been made to the value added estimates for the oil industry, further decomposition of the volume figures is required, and the authorities are treating this issue as a matter of urgency.
- **CPI:** The plans for improvement are: (i) to introduce the latest Classification of Industrial Consumption by Purpose (COICOP) into both the Household Budget Survey (HBS) and the CPI; (ii) to update the CPI item sample; (iii) to adopt a new index calculation system; and (iv) to introduce self correcting imputation procedures for seasonal and missing prices. The last has been introduced, and the HBS introduced the latest COICOP from the beginning of 2002. The introduction of this classification system to the CPI, the updating of items, and the new calculation system are planned to be completed during the August 2002 rebase.

- **GFS:** The MOF plans for improvement include setting up a new budget classification system in line with international standards, as part of the implementation of the new Treasury system. This project, to be implemented with technical and financial assistance from external partners, entails the full computerization of treasury operations. Improving the recording of the government debt (domestic and external) has already been implemented. The development of joint procedures with the NBA to estimate external private debt is yet to be undertaken.
- **Monetary Sector:** The plans for improvements are: (i) to introduce a new chart of accounts for the NBA that conforms to international accepted accounting standards; (ii) to expand the monetary statistics published in the monthly *Bulletin*; and (iii) to include the credit unions in the monetary survey. The NBA migrated fully to its new chart of accounts in January 2002. The *Bulletin* has been improved, but this is an on-going process that needs further development. Finally, there is no need to expand the coverage, because since August 2000 the credit unions have been restricted from taking deposits.
- **External Sector:** Plans for improvement are: (i) to prepare preliminary estimates of capital transfers of migrants from the information provided by the SSC on the number of migrants; (ii) to review data on international reserves for consistency with the international standard and to revise them where necessary; (iii) to undertake comparisons with the trade data of neighboring countries (mirror statistics); (iv) to extend the present list of currencies for which the exchange rates are calculated; (v) to prepare and disseminate a detailed methodology of compiling the exchange rate; and (vi) to initiate compilation of the international investment position. Starting from data for 1999, the international investment position is published in the IMF's *International Financial Statistics*.

8. Over the medium term, Azerbaijan may well aspire to subscribe to the IMF's SDDS. Current dissemination practices were therefore also reviewed against SDDS requirements. Amongst the issues that Azerbaijan would have to address before subscribing, in addition to those identified regarding the GDDS, are:

- On the **fiscal sector**, coverage and dissemination with the required detail need to be significantly improved.
- On the **external sector**, Azerbaijan needs to disseminate the reserves template and improve the timeliness of international reserves data.

Table 1. Azerbaijan: Overview of Current Practices Regarding Coverage, Periodicity, and Timeliness of Data Compared to the General Data Dissemination System

GDDS Data Category	Coverage (meets GDDS)	Periodicity		Timeliness	
		GDDS	Azerbaijan	GDDS	Azerbaijan
COMPREHENSIVE FRAMEWORK					
Real sector: National Accounts	Yes	A	Q	10-14 mths	2 weeks
Fiscal sector: Central govt. operations	Yes	A	Q	6-9 mths	4-6 weeks
<i>General govt. operations</i>	Yes	A	Q	6-9 mths	4-6 weeks
Central govt. debt	Yes	A	Q	6-9 mths	4-6 weeks
Financial sector: Broad money survey	Yes	M	M	2-3 mths	1 month
External sector: Balance of payments	Yes	A	Q	6-9 mths	75 days
DATA CATEGORIES AND INDICATORS					
Real Sector					
GDP (nominal and real)	Yes	M, Q, A	Q	6-9 mths	2 weeks
Gross national income, capital formation, saving	Yes	A	A	6-9 mths	12 months
Manufacturing or industrial production index/indices.	Yes	M	M	6 wks	2 weeks
Primary commodity, agricultural, or other indices, as relevant	No	As relevant		3 mths	2 weeks
Consumer price index	Yes	M	M	1-2 mths	15 days
<i>Producer price index</i>	Yes	M	M	1-2 mths	15 days
Employment	Yes	A	M	6-9 mths	2 months
Unemployment	Yes	A	M	6-9 mths	35 days
Wages/earnings (all sectors)	Yes	A	M	6-9 mths	35 days
Fiscal Sector					
Central govt. budgetary aggregates: revenue, expenditure, balance, and financing with breakdowns (debt holder, instrument, currency)	No	Q	Q	1 qtr	4-6 weeks
<i>Interest payments</i>	Yes	Q	Q	1 qtr	4-6 weeks
Central govt. debt: domestic and foreign debt, as relevant, with appropriate breakdowns (debt holder, instrument, currency)	Yes	Q, A	Q, A	1-2 qtrs	4-6 weeks
<i>Government guaranteed debt</i>	Yes	A	A	1-2 qtrs	4-6 weeks
Financial Sector					
Broad money and credit aggregates	Yes	M	M	1-3 mths	1 month
Central bank aggregates	Yes	M	M	1-2 mths	1 month
Short- and long-term govt. security rates, policy variable rate	Yes	M	M	In high-frequency publication	1 month
<i>Money or interbank market rates and a range of deposit and lending rates</i>	Yes	M	M	In high-frequency publication	1 month
<i>Share price index, as relevant</i>	N/A	M	N/A	In high-frequency publication	N/A
External Sector					
Balance of payments aggregates	Yes	Q, A	Q	6 mths	75 days
Public and publicly guaranteed external debt outstanding, with maturity breakdown	Yes	Q	Q	1-2 qtrs	1 month
Public and publicly guaranteed debt service schedule	N/A	Twice yearly	N/A	3-6 mths	N/A
<i>Private external debt not publicly guaranteed</i>	N/A	Annual	N/A	6-9 mths	N/A
Gross official reserves denominated in U.S. dollars	Yes	M	M	1-4 wks	1 month
<i>Reserve-related liabilities</i>	N/A	M	N/A	1-4 wks	N/A
Total exports and total imports	Yes	M	M	8 wks-3 mths	1 month
<i>Major commodity breakdowns with longer time lapse</i>	Yes	M	M	8 wks-3 mths	1 month
Exchange rates: spot rates	Yes	Daily	Daily	In high-frequency publication	Next business day

Italics indicate encouraged categories

III. SUMMARY ASSESSMENT OF DATA QUALITY

9. Interest in assessing the quality of data derives from the objectives of complementing the GDDS with a consideration of the quality of the data being disseminated and of focusing more closely on the quality of the data that underpin surveillance of countries' economic policies. Against this background, STA has developed a tool to provide a structure and a common language to assess data quality. The DQAF comprises a generic framework,² and a set of dataset-specific frameworks. The frameworks cover five dimensions of data quality—integrity, methodological soundness, accuracy and reliability, serviceability, and accessibility—and a set of prerequisites.³

10. An assessment of six macroeconomic datasets (national accounts, consumer price index (CPI), producer price index (PPI), government finance (GFS), monetary, and the balance of payments statistics) was conducted using the frame of reference provided by the dataset-specific DQAF. The information resulting from the application of this framework to the Azerbaijan statistical system is presented below, following the structure of the DQAF. Conclusions are also presented in the form of standardized summary tables in which the assessment of data practices is made on a qualitative basis, using a four-part scale (see Table 2).

11. The data provided to the Fund are considered by the Fund's European II Department broadly adequate to conduct effective surveillance. Nevertheless, the mission identified shortcomings in the quality of some of the statistics that have the potential for detracting from the accurate and timely analysis of economic and financial developments and the formulation of appropriate policies.

Prerequisites of quality

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

12. The SSC has the mandate, under the Law on Statistics (1994), to compile and disseminate real sector statistics. However, the Azerbaijan International Operating Company (AIOC) is not legally obliged to provide data. Resources are broadly adequate, but restrictions in finance mean that not enough copies of publications can be printed. The SSC recognizes the importance of quality, but some data suffer because of the requirement to publish early, way beyond the requirements of the SDDS.

² Information on data quality can be found at the IMF website on the "Data Quality Reference Site" (<http://dsbb.imf.org/dqrsindex.htm>).

³ See also the Generic Framework set out in Appendix II of the accompanying Detailed Assessments volume to this report.

13. Statistics on the government operations are produced by the Treasury Operations Department of the **MOF**. The collection of statistics is mandated by the Law on Statistics and the Law on the Budget System. Data sharing with the State Oil Fund (SOF) is regulated under the Presidential Decree No. 511 and the draft of the new Budget System Law (in discussion in Parliament in April 2002), but sharing arrangements are yet to be put in place. Staff and technological resources are broadly adequate to produce budget execution data, but may need to be supplemented to ensure the compilation of quarterly government finance statistics (GFS) according to international standards. Staff involved in compiling government finance statistics need substantial training in the GFS system set out in the *Government Financial Statistics Manual 2001 (GFSM 2001)*. Processes focus on the quality of the collection and processing of budget execution data, while processes to monitor dissemination aspects of government finance statistics are yet to be developed.

14. The Law on the National Bank (1996) and the Law on Banks and Banking Activity (1996) provide the **NBA** with the legal framework for the collection and dissemination of monetary statistics. Reporting is mandatory and subject to penalties in case of noncompliance, and the confidentiality of data is guaranteed by the Law on Statistics and the Law on the National Bank. The basic sources of information are the balance sheets of the commercial banks and the NBA, which comply with international accounting standards. Through regular contacts with other central banks, the NBA looks for guidance to improve the data collection process. Its staff are highly qualified and with a long experience in monetary statistics. Through its annual tactical plans, drawn within the framework of a long term strategic plan, the Statistics Department (SD) aims at the efficient use of its resources. The NBA plans to introduce by the fourth quarter of 2002 a fully automated statistical system, and to concentrate all activities related to the compilation and dissemination of monetary statistics in the SD.

15. The Resolution of the Cabinet of Ministers No. 25 of February 8, 1995 “Compilation of the Balance of Payments Statistics of the Azerbaijan Republic” designated the **NBA** as the compiling and disseminating agency for the balance of payments statistics, with power and functions that are stipulated in the Law on the National Bank and the Law on Statistics. Data sharing and coordination among the data producing agencies are adequate and confidentiality provisions are sound. Staff are experienced and highly qualified. However, in view of the tasks to improve the quality of the balance of payments and international investment position statistics, the staff resources and computing technology support of the Balance of Payments Division (BPD) are not entirely adequate. Recently, within the framework of the strategic development plan for 2001–2004, the NBA’s senior management endorsed the implementation of advanced computing technology for data processing that will achieve resource savings and data quality improvements.

Integrity

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

16. The statistical policies and practices of the **SSC** are guided by professional and ethical standards. Sources are selected and data compiled on an impartial basis. Procedures are generally transparent, although there is some limited pre-release access to statistics, which is not publicly announced. Also, no advance notification is given of major changes in methodology, though they are clearly identified when implemented.

17. The **MOF** compiles treasury data on an impartial basis, but choices of sources are not informed solely by statistical considerations, in particular at present with regard to revenue invested in the SOF. Internal governmental access to data prior to public release is not fully disclosed. Staff are professional and guided by ethical standards. The Law on Public Servants, approved in July 2000 provides formal ethical guidelines for the MOF staff. Professionalism of the staff compiling government finance statistics is actively encouraged.

18. The Law on the National Bank guarantees the independence of the **NBA**. The staff of the Economic Information Division (EID) work in an environment that fosters the integrity of the statistics. Ethical standards are set high, and are well known by the staff. The laws on Statistics, the National Bank, and the Banks and Banking Activities are broadly disseminated and posted on the internet. However, the NBA's website (www.nba.az) does not contain specific information on the terms and conditions under which monetary statistics are compiled. The Board of the NBA and the SSC have access to monetary data prior to their general dissemination, but the public is not aware of it.

19. The **NBA** is governed by the Law on the National Bank, which guarantees the independence of the institution. The NBA does not provide balance of payments statistics to any government authorities prior to their publication. Professionalism of balance of payments compilers is actively promoted. Procedures are in place at the NBA to ensure transparency of policies and practices. The NBA's *Bulletin* and its *Annual Report*, in which balance of payments statistics are published, are clearly identified as products of the NBA.

Methodological soundness

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

20. The **national accounts** are firmly based on the *System of National Accounts 1993 (1993 SNA)*. However, the published constant price estimates are measured cumulatively at the prices of the same period of the previous year. The expenditure estimates are derived using 1995 as the base year. It is also planned to use a fixed base year for the production estimates; however the base year will be 1997. Financial accounts are not yet published, but are being developed. Classifications and sectorization conform to international standards. Most flows and stocks are recorded at market prices, but imports and exports are converted from US dollars using average quarterly exchange rates rather than actual transaction rates. All government transactions, including taxes and subsidies, are recorded on a cash basis.

21. The concepts and definitions used in the **CPI** are generally in line with international standards. The weights are derived from data consistent with household final consumption in the national accounts, and prices collected have good geographical coverage. Market prices are collected with the required frequency, and grossing and netting procedures are followed where applicable.

22. The **PPI** follows international guidelines using weights that are generally consistent with the *1993 SNA*, and prices that are at basic market producers' values. These indexes are based on a modified Laspeyres formula and use the standard European systems for industry and product classification. Both economic activity-based indexes and product-based indexes are produced, covering mining and quarrying, manufacturing and electricity production as of April 2002, with plans to extend the coverage to include agriculture, transport, construction and distribution. These are chain indexes, using December of the previous year as a base, and are rebased annually.

23. The overall structure of **budget execution data** approximates international guidelines recommended in the *Manual of Government Finance Statistics 1986 (GFSM 1986)*. However, country-specific concepts and definitions, particularly those included in the budget, differ from international guidelines. The scope of the data is not comprehensive because it does not yet cover part of the oil revenues invested in the SOF. Given the importance of these revenues in the total government operations, the non-coverage of these operations is a significant departure from international guidelines. Also, until the end of 2001, some subsidies were netted out against tax liabilities. The MOF intends to prepare the budget for 2003 including all extrabudgetary funds, according to the Budget System Law under discussion by Parliament. Execution data prepared by the Treasury for 2002 already include all extrabudgetary funds except for the SOF and all taxes and subsidies on gross basis. The budget classification of expenditure is a mix of functional, economic and administrative classification and does not allow the compilation of expenditures by function as recommended in international guidelines. The MOF plans to set up a new budget classification system which has already been drafted in line with the recommendations of the *Manual on Government Finance Statistics 2001*, as part of the implementation of the new Treasury Information Management System. This project, to be implemented with technical and financial assistance from external partners, entails the full computerization of treasury operations.

24. The EID prepares a monthly monetary survey that consolidates the balance sheet of the **NBA** and the consolidated balance sheet of the 53 commercial banks operating in the country. Not included in the survey are 63 credit unions, which since August 2000 are restricted from taking deposits and participation of which in the total volume of loans is less than one percent. The principles underlying the classification of financial instruments and the sectorization of institutional units follow the recommendations of the Fund's *Monetary and Financial Statistics Manual (MFSM)*. The distinction between residents and nonresidents agrees with the concept of "center of economic interest" recommended by the *MFSM*. Both the NBA and the commercial banks apply market prices when valuing financial assets and liabilities, record on an accrual basis, and present assets and liabilities on a gross basis.

25. The overall structure of the **balance of payments** statistics is in broad conformity with the guidelines presented in the *BPM5*, except for some deviations from the definitions of the foreign direct investment component, international reserves, and the treatment of net errors and omissions. In principle, all transactions with nonresidents are covered. The main source for the balance of payments statistics is the International Transactions Reporting System (ITRS) that aggregates reports from all the commercial banks and from enterprises with foreign accounts abroad. However, some transactions, such as repairs on goods and migrants' transfers (not included in customs statistics), and reinvested earnings are not covered. Some components, such as goods for processing, and subcomponents of reserve assets are not identified separately. Under the current ITRS arrangements, banks have to classify transactions in accordance with instructions modeled along the classification framework recommended by the *BPM5*. Loans guaranteed by the government should be reclassified to the relevant sectors. Transactions are, where possible, valued at market prices at the time that legal ownership changes. In general, balance of payments data are recorded on an accrual basis.

Accuracy and reliability

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

26. Source data are generally comprehensive and meet the needs of the **national accounts**. However, data for the SOF are not currently collected, although this is unlikely to have a significant impact on GDP, and a questionnaire is being developed. Data are generally recorded cumulatively during the year, but the quarterly enterprise surveys collect revised figures up to the end of the previous quarter. Appropriate statistical techniques are usually employed. One exception is that the volume figures for the oil industry should be calculated using value added rather than production weights for the enterprises. Also, imputed rent for owner-occupied dwellings is derived using national aggregate data, which may overstate the result. There are some limitations in the deflation of production data for services. Taxes and subsidies at constant prices are obtained using the implicit value added deflator, which could give an inaccurate result. Currently, estimates for informal activity are based on expert

knowledge, but undertaken separately for each industry. However, a more reliable methodology, based on data from the labor force survey, is being developed. Checks are made of all data and the statistical discrepancy between the production and expenditure data is published. Revision studies are made and any identified biases are applied in correcting the preliminary figures.

27. The **CPI** weights are derived from an annual household budget survey (HBS) covering Azeri households, and include production for own consumption, other than owner-occupied dwellings. The classification system is being updated to the most recent Classification of Individual Consumption by Purpose (COICOP), and prices are measured weekly for all food items and otherwise mostly monthly. Arithmetical price averaging is used in the calculations and the index formula is a modified Laspeyres. There is a need to include new items and to cross check weighting data against other sources. The conversion of HBS data to CPI weights is flawed, and this issue needs to be addressed during the August 2002 revision.

28. The **PPI** weights are derived from the annual business surveys which are both timely and achieve coverage in the order of some ninety five percent of in-scope businesses. The compilation is statistically sound, with missing prices being estimated using price changes of similar products and new items being introduced at the beginning of each year. Prices are carefully checked for unusual movements and against the CPI. There is a problem with measuring oil prices in an accurate and timely manner, and this leads to an annual revision in the oil sector index, but efforts are being made to solve this problem.

29. Detailed and timely monthly **government operations data** are available for the budget sector, and, since January 2002, for extrabudgetary funds, excluding the SOF. Debt data are available on a quarterly basis. These data would also be available for compiling annual and quarterly GFS covering the general government, but quarterly GFS are not compiled. Annual GFS are compiled with a substantial lag owing to the low priority assigned to this task. No estimation of missing data is undertaken in the compilation of annual GFS. Government operations data are revised as needed, by incorporating revisions detected in the cumulative data produced. Preliminary annual data are replaced by actual data, following the approval of the budget execution report data by Parliament (about six months after the end of the fiscal year). No formal studies are made of such revisions.

30. **Monetary statistics** are compiled on the basis of the balance sheets of the NBA and the commercial banks. Commercial banks report their monthly data within ten days after month-end. The Accounting Department of the NBA produces its balance sheet on a daily basis and transmits it to the SD the following day. The chart of accounts of the banking system, the basis for the production of the balance sheet, has been revised three times during the last five years, to adapt it from the old Gosbank system to internationally accepted accounting standards. Most consistency checks are performed manually by the EID, comparing aggregated balance sheet data with the sectoral distribution of loans and deposits, checking the net position with the central government, and also the consistency with balance

of payments statistics. The EID does not receive information that would permit cross checking of individual interbank positions.

31. The NBA employs an elaborate data collection program for the **balance of payments** statistics that is comprised of the ITRS and a survey of the oil sector enterprises. These sources are supplemented with customs information from the State Customs Committee (SCC), data on the international services and foreign direct investment (FDI) in the non-oil sector that are derived from surveys conducted by the SSC, and data on the external loan liabilities from the MOF. In general, the ITRS conducted by the NBA is dependable. Errors, inconsistencies, and large or unusual transactions are identified and followed up with the respondents or with the agency responsible for the data. However, the open-type ITRS report form does not provide a check of the completeness of reporting, and should be substantially modified. In addition, sound validation procedures should be developed for the SSC surveys on foreign trade in services and FDI. The NBA has developed specific procedures to adjust data from various sources. In general, the estimates conducted by the NBA, notably on shuttle trade, freight, and direct investment income in the oil sector, employ sound statistical techniques. However, the detail provided by the AIOC is insufficient to permit an appropriate estimation of direct investment income flows. The data received from the various sources are timely.

Serviceability

Serviceability focuses on practical aspects of how well a dataset meet users' needs. Elements refer to the extent to which data are relevant, produced, and disseminated in a timely fashion with appropriate periodicity, are consistent internally and with other datasets, and follow a predictable revisions policy.

32. There is a user group to support the **national accounts** program, but it has not met for a year. Timeliness and periodicity follow GDDS recommendations and, in fact, conform to the requirements of the SDDS. The GDP estimates are reasonably consistent, with the statistical discrepancy between production and expenditure generally being less than three percent. Consistent national accounts are available since 1990 and are reconcilable with other datasets. The estimates are generally only revised once when the annual figures are first produced, and this is well known to users. Preliminary and revised data are clearly identified in the publications. The results of revision studies are not made public.

33. The **CPI** is available monthly and by the middle of the following month. A consistent series is available back to 1995 and revisions are not normally undertaken. The figures are consistent with other datasets such as the national accounts.

34. The primary users of the **PPI** are the national accounts and other divisions within the SSC, but the needs of a broader group of users are not directly addressed, although the series are published in considerable detail. The data on the economic activity-based indexes and product prices are available monthly, and by the middle of the following month. The series is new, so no long term consistent data are available yet, and the revisions policy is still being

established. The figures are consistent, both within the PPI framework and with other datasets such as the national accounts.

35. **Government finance statistics** are not disseminated in sufficient detail for fiscal policy analysis. Statistics are mainly produced for the government's use, and there are no processes to seek the views of users on the practical utility and the analytical usefulness of the data disseminated. Data periodicity and timeliness meet and, in the case of central government debt, exceed the GDDS recommendations. However, data on financing are not disseminated with the recommended breakdowns (by currency, maturity, debt holder, or instrument, as relevant). Automated checks are undertaken to assess the internal consistency of the statistics produced. However, improvements in coverage and classifications in recent years make reconciliation of historical series very difficult. Statistics are consistent with monetary and balance of payments statistics. Revisions to monthly data are not made known to the public, since data are published on a cumulative basis.

36. The NBA does not have an active policy of regular consultation with users on the quality and relevance of its **monetary statistics**. Monetary data are disseminated on a monthly basis, and posted on the NBA's website before the end of the following month. Monetary statistics are consistent within the dataset. Data published tend to be of a final nature but, if needed, revisions are carried out, although the public does not have access to documentation on these revisions. The *Bulletin* does not indicate either breaks in time series or changes in methodology.

37. Data on the **balance of payments** are disseminated quarterly within 75 days following the reference period, which exceeds the GDDS timeliness and periodicity recommendation. While the NBA monitors closely the government's needs in the balance of payments statistics, there is no established process of consultation with broader group of users. Annual balance of payments statistics dating from 1995 and quarterly data for 2001 are available in time series format, utilizing *BPM5* classifications. There is consistency with monetary and financial statistics, merchandise trade statistics, and government external debt data, which are used as data sources. The current account data are consistent with the rest of the world account in the national accounts. All disseminated data are considered to be final and there is no written policy on revisions.

Accessibility

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

38. The publication of the quarterly **national accounts** is not very detailed, but the annual publication, in Azeri and English, is clear and comprehensive. Only a printed publication of the quarterly estimates is produced, even though there is strong user demand for these data to be put on the website. There is no preannounced release schedule and the monthly GDP total is given to the Prime Minister in advance of other users. Unpublished, but nonconfidential,

data can be supplied on request. There is comprehensive metadata on the GDP estimates and there are plans to produce metadata for the rest of the figures. Shorter descriptions of the accounts are also published. All publications identify appropriate contact persons and there is an annual catalogue.

39. Although the **CPI** and **PPI** are published in a regular and timely manner, the general public have a problem accessing these data on a monthly basis as the monthly publication has restricted circulation. Sources and methods documentation on the CPI and summary metadata are available on the IMF website, but need to be updated to include recent improvements. Metadata and sources and methods documentation for the PPI need to be completed as soon as possible.

40. The **MOF** publishes monthly data on the budget execution (revenues and expenditure) in its bulletin *Finance and Accounting* in Azeri, with an English table of contents. Only the cumulative latest month's data are published in this bulletin, with historical data published in the SSC quarterly and yearly publications. The MOF website was set up in early 2002, in Azeri and English, and includes annual data on budget revenue and expenditure, following the budget classification. There is no preannounced schedule for the release of budget execution data. Detailed documentation of concepts, scope, classifications, basis of recording, data sources, and statistical techniques do not exist. Information in this regard is only available—in summary format—on the DSBB. Contact persons are identified on the IMF website and in the bulletin.

41. **Monetary statistics** are accessible in Azeri and English through the NBA's monthly *Bulletin* and its *Annual Report*, which are also posted on the NBA's website. Additionally, the EID produces a *Quarterly Economic Survey*, which is intended for internal use only. There is a deadline for the production and publication of the *Bulletin*, but the public is not aware of it. Nonpublished but nonconfidential data are available upon request. The methodological notes contained in the *Bulletin* need to be reviewed in order to better meet users' needs. Metadata with contact persons on monetary statistics are available on the Fund's website, but the NBA's *Bulletin* only lists as a contact the bank's central telephone number and an extension.

42. The dissemination format for the **balance of payments** statistics is adequate. Publications in NBA's monthly *Bulletin* and NBA's *Annual Report* include an analysis of balance of payments data; charts and tables are disseminated with the data to facilitate analysis. Current period developments are compared with the relevant period of previous year. Various levels of detail are available. The data are released simultaneously to all interested parties through the publication on the website and of the hardcopy edition. Documentation of the methods used for compiling the balance of payments statistics is published in the *IMF Balance of Payments Statistics Yearbook*, and in the GDDS metadata posted on the DSBB. However, the needs of users for more comprehensive document on sources and methods are not being met at present.

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

Element	National Accounts (NAS)	Consumer Price Index (CPI)	Producer Price Index (PPI)	Government Finance Statistics (GFS)	Monetary Statistics (MS)	Balance of Payments Statistics (BPS)	Comment: Para. No. *	Plans for Improvement**
0. Prerequisites of quality								
0.1 Legal and institutional environment	O	O	O	LO	O	O	13, 16	0.1 GFS: Put in place procedures of the Memorandum of Understanding between the MOF and SOF starting with data for the first quarter of 2002. 0.2 MS: Introduction of a fully automated statistical system and concentration of all activities related to compilation and dissemination of monetary statistics in the Statistics Department. (by the fourth quarter of 2002).
0.2 Resources	LO	O	O	LO	O	LO	13, 15	
0.3 Quality awareness	LO	O	O	LO	O	O	13	
1. Integrity								
1.1 Professionalism	O	O	O	LO	O	O	17	
1.2 Transparency	LO	LO	LO	LO	LO	O	17, 18	
1.3 Ethical standards	O	O	O	O	O	O	16	
2. Methodological soundness								
2.1 Concepts and definitions	O	O	O	LO	O	LO	23, 25	2.1 GFS: Approve new budget classification system in line with international guidelines by end 2002. BOP: The data on international reserves will be reviewed for consistency with the international standards and revised where necessary. 2.2 NAS: Sector financial accounts are currently being developed. PPI: Scope to be extended to include agriculture, transport, construction and distribution. GFS: Include all extrabudgetary funds in the budget law for 2003. BOP: Medium-term plans to prepare preliminary estimates of capital transfers of migrants, from the information provided by the SSC on the number of migrants and on average prices of apartments sold in different cities and regions. 2.3 GFS: (See above on new classification system). 2.4 GFS: Explicitly include all subsidies explicitly in the 2003 state budget.
2.2 Scope	LO	O	O	LNO	O	LO	20, 23, 25	
2.3 Classification/sectorization	O	O	O	LNO	O	LO	23, 25	
2.4 Basis for recording	LO	O	O	LO	O	LO	20, 25	

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Element	National Accounts (NAS)	Consumer Price Index (CPI)	Producer Price Index (PPI)	Government Finance Statistics (GFS)	Monetary Statistics (MS)	Balance of Payments Statistics (BPS)	Comments : Para. No. *	Plans for Improvement**
3. Accuracy and Reliability								
3.1 Source data	LO	O	O	LO	O	O	26, 29	3.1: NAS: Discussions are underway with the AIOC to improve the reported data. GFS: (See above on SOF-related operations). BOP: Implement the new Treasury Information Management System. 3.2 NAS: Improved estimates for informal activities will be introduced with the publication of the 2001 accounts. CPI: Improvements will be made during August 2002. GFS: Put in place a fully automated data processing system as part of the Treasury Information Management System. BOP: Medium-term plan to implement advanced computing technology for data processing that will improve resource savings.
3.2 Statistical techniques	LNO	LO	O	LO	O	LO	26, 27, 29, 31	
3.3 Assessment and validation of source data	O	O	O	O	O	LO	31	
3.4 Assessment and validation of intermediate data and statistical outputs	O	O	O	O	O	O	27	
3.5 Revision studies	O	O	O	LO	LO	LO	29	
4. Serviceability								
4.1 Relevance	LO	LO	LO	LNO	LO	LO	32, 33, 34, 35, 36, 37	4.1 GFS: Align budget classification with international guidelines as a step towards meeting the needs of a broad spectrum of users. 4.3 BOP: Quality of merchandise trade data will be further improved by undertaking comparison with the trade data of neighboring countries (mirror statistics).
4.2 Timeliness and periodicity	O	O	O	O	O	O	35	
4.3 Consistency	O	O	O	LO	O	O		
4.4 Revision policy and practice	O	O	LO	LO	LNO	LNO	34, 35, 36, 37	
5. Accessibility								
5.1 Data accessibility	LO	LNO	LNO	LNO	LO	O	38, 39, 40, 41	5.1 GFS: Continue improvements on recently established website of the MOF.
5.2 Metadata accessibility	O	O	LNO	LNO	LNO	LO	39, 40, 41, 42	
5.3 Assistance to users	O	O	O	LO	LO	LO	39, 40, 41, 42	

* Paragraph numbers refer to Section III, Summary Assessment of Data Quality, in the present document.

** Authorities' plans as of April 23, 2002.

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

IV. STAFF'S RECOMMENDATIONS

43. Based on the results of the data quality assessment, discussions with the Azerbaijan authorities in the statistics-compiling agencies, and responses from data users, the following measures are proposed to increase further Azerbaijan's adherence to international statistical standards. Recommendations are subdivided into "short term" and "medium term."

General Recommendations

Short term

- Formalize interaction with a broad spectrum of users.
- Update metadata on IMF's DSBB and link to national websites. Give all users advance notification of early data release and major changes in methodology, e.g., the revised estimates for informal activities. Expand the use of the institutions' websites to disseminate data on a timely basis.

Medium term

- Work toward SDDS subscription.

National Accounts

Short term

- Express the sub-annual estimates as discrete quarterly values, using the revised figures reported in the enterprise surveys for the next quarter.
- Publish quarterly real GDP estimates using the same fixed base year, e.g., 1995, and change the base every five years.
- Use value added as weights for estimating the value of production at constant prices, whenever available, e.g., for the oil producing enterprises.
- Improve the estimates of intermediate consumption for AIOC by obtaining reliable data from the company or using what they do report as an indicator of growth, if it is representative of the total.

Medium term

- Review the methodologies used to derive volume estimates for the service industries.
- Investigate the feasibility of calculating imputed rent for owner-occupied dwellings using data for regions/districts.

Consumer Price Index

Short term

- Incorporate the required methodological improvements in conjunction with the next rebase which should, for example, include the introduction of new items and the correct use of HBS data.

Producer Price Index

Short term

- Prepare and disseminate documentation on sources and methods.

Medium term

- In line with SSC plans, continue to expand the scope of the PPI, taking account of the needs of users.

Government Finance Statistics

Short term

- Expand the coverage of government statistics by including all the operations already recorded by the Treasury Operations Department (budget and extrabudgetary). Publish details of domestic and foreign financing, and of debt outstanding, as recommended in the GDDS. Dissemination of quarterly data is strongly encouraged.
- Clearly assign the responsibility and authority for collecting, processing, and disseminating government finance statistics (GFS), along with staff and computer resources.
- Implement the new budget classification system currently under discussion, in order to comply with the recommendations of the *GFSM 2001*.
- Further expand the coverage of government statistics to include the oil revenues collected and invested in the SOF, starting with data for 2003.

Medium term

- Develop a medium-term plan for adopting the framework and classification system recommended in the *GFSM 2001*. Ensure that the new Treasury Information Management System has the capability of generating comprehensive GFS.
- Disseminate all fiscal data in a single publication, with tables showing budget (and extrabudgetary) and GFS presentations. Relevant annotations should be included to facilitate reconciliation and to identify breaks in the time series.

Monetary Statistics

Short term

- Increase quality controls in the processing of the data reported by the commercial banks.
- In the publications of the NBA, and on its website, indicate the name and telephone number of a contact persons for monetary statistics.

Medium term

- Introduce automatic consistency checks and flaggings, seasonal adjustment of series, and other quality controls of source and intermediary data.