Twenty-Fourth Meeting of the
IMF Committee on Balance of Payments Statistics
Moscow, Russia
October 24–26, 2011

Cross–Sectoral Data Consistency

Prepared by the Statistics Department
International Monetary Fund

I. INTRODUCTION

1.   The paper informs the Committee members of the work by the IMF Statistics Department (STA) in the context of the Cross-Sectoral Data Consistency (CSDC) project[1]. The project aimed to assess data quality by reviewing and improving data consistency across economic sectors. Consistency is important for economic analysis in IMF member countries and to support the IMF's financial programming operations and surveillance work that is conducted primarily by the IMF's Area Departments (ADs).

2.   The paper presents the background and purpose of the project, its approach and main findings, and the work going forward.

II. BACKGROUND AND PURPOSE OF THE CSDC PROJECT

3.   Cross-sectoral data consistency (coherence), as promoted under STA's Data Quality Assessment Framework (DQAF) indicators 4.2.1-4.2.3, provides considerable analytical benefits to users; supports IMF surveillance as conducted within a financial programming framework that relies upon a set of coherent sectoral accounts; and improves data quality by having sufficient detail and metadata to identify sectoral inconsistencies.

4.   To enhance STA's support of ADs involved in surveillance work and to IMF member countries, STA has embarked on an assessment of STA data consistency. The project aims at identifying the current state of affairs in regard to data consistency, in order to identify what work is needed to produce coherent sectoral accounts. The project also aims to provide recommendations to address the data consistency issues.

III. APPROACH

5.   The CSDC project assessed cross-sectoral data consistency for a pilot set of data series considered to be important for the IMF surveillance work. The data series that were examined are:

- BP versus FI—Reserves, CB Foreign assets, CB Foreign liabilities, ODC Foreign assets, and ODC Foreign liabilities;[2]

- BP versus RE—Current account/saving/capital formation, Exports, and Imports. It should be noted that DOTS data may include some estimations, as well as definitional differences with BOP data;[3]

- FI versus GO—CB and ODC financing of CG.[4]

---

[1] The CSDC project was undertaken by the CSDC Working Group with representatives from most STA divisions.

[2] BP: Balance of Payments and International Investment Position Data; FI: Financial Institutions data; CB: Central Bank data; ODC: Other Depository Corporations data.

[3] RE: Real Sector data; DOTS: Direction of Trade Statistics.

[4] GO Government Finance data; CG Central Government data.

More detailed datasets that were compared in the context of the CSDC project are listed in Table 1 below.

Table 1. Datasets Compared by the CSDC Project

BP vs. RE

Sector	Description	Datasets
	National Savings	
BP	CURRENT ACCOUNT, N.I.E.	
RE	FOREIGN SAVING	(Gross saving - gross fixed capital formation - changes in inventories) / official rate, period average
	External Trade	
BP	GOODS EXPORTS: F.O.B.	
DOT	Exports to World	
RE	EXPORTS, F.O.B.	
BP	GOODS IMPORTS: F.O.B	
DOT	Imports from World	
RE	IMPORTS, C.I.F.	

FI vs. GO

Sector	Description	Datasets
	Depository Corporation Financing of CG	
GO	CENTRAL GOVNT FINANCING (CENTRAL BANK)	Central government net claims on the central bank
FI	NET CLAIMS ON CENTRAL GOVERNMENT	Central bank net claims on the central government
GO	CENTRAL GOVNT FINANCING (DEPOS CORP)	Central government net claims on the central bank + net claims on other depository corporations
FI	NET CLAIMS ON CENTRAL GOVERNMENT	Depository corporations net claims on the central government

BP vs. FI

Sector	Description	Datasets
	International Reserves	
FI (form 01R)	IIP RESERVE ASSETS	Total reserves + gold
FI (form 1SR)	RESERVES OF CENTRAL BANK	Official reserve assets / official rate, end of period
BP	RESERVE ASSETS: EPS	
	Central Bank Balance Sheet	
FI	CENTRAL BANK FOREIGN ASSETS	Central bank claims on nonresidents / official rate, end of period
BP	IIP--MONETARY AUTHORITIES ASSETS	Central bank portfolio investment assets + financial derivatives assets + other investment assets + reserve assets
FI	CENTRAL BANK FOREIGN LIABILITIES	Central bank liabilities to nonresidents / official rate, end of period
BP	IIP--MONETARY AUTHORITIES LIABILITIES	Central bank portfolio investment liabilities + financial derivatives liabilities + other investment liabilities
	ODC Balance Sheet	
FI	ODC FOREIGN ASSETS	Other depository corporations claims on nonresidents / official rate, end of period
BP	IIP--ODC ASSETS	Other depository corporations portfolio investment assets + financial derivatives assets + other investment assets
FI	ODCs FOREIGN LIABILITIES	Other depository corporations liabilities to nonresidents / official rate, end of period
BP	IIP--ODC LIABILITIES	Other depository corporations portfolio investment liabilities + financial derivatives liabilities + other investment liabilities

6.   The project was conducted as follows. First, five pilot countries (Brazil, Finland, Georgia, Mauritius, and Thailand) were chosen for the purpose of identifying inconsistencies, investigating possible reasons for inconsistencies, proposing possible actions, and estimating the effort needed to resolve the inconsistencies. In determining the pilot countries, a mix of advanced, emerging market and developing economies was chosen, with data availability also taken into consideration. The project encountered significant challenges associated with data gaps, which include limited time series availability and missing data observations in some STA databases.

7.   Second, to supplement the limited number of pilot countries, the project also aimed at achieving a broad–picture assessment and attempted to draw conclusions using G-20 country data.

IV. MAIN FINDINGS

8.   Data inconsistencies exist for most countries. Inconsistencies occur across small and large countries, as well as across developing, emerging and developed economies, indicating that inconsistencies are not confined to countries with less elaborate statistical frameworks.

- Among the three sets of cross domain data comparisons involving 16 data series, the following comparisons had the highest incidence of large differences:

    - ODC foreign liabilities (FI/BP comparison)
    - CB foreign liabilities (FI/BP)
    - CB financing of CG deficit (FI/GO)
    - Depository Corporations financing of CG deficit (FI/GO)

- The inconsistencies were smaller for:

    - International reserves and foreign assets data (BP/FI)
    - External trade data (BP/RE)

9.   Table 2 below presents the summary of findings among five pilot countries and the G-20 countries. The table reports the number of countries with differences of at least five percent and at least 25 percent by data pair. For example, four out of five pilot countries have a large number of observations with data differences of 25 percent or more for CB foreign liabilities when comparing monetary data and international investment position (IIP) data. The table presents a similar presentation for the G-20 countries, with many data comparisons showing significant inconsistencies. Differences could be due to coverage, valuation, and/or methodological differences and different data vintages.

Table 2. Cross-Sector Data Comparison for the Period 2002–09

Cross Sector Data Comparison: 2002-2009						
	Pilot Countries (5 countries)			G20 (19 countries)*		
	Data Gaps**	Discrepancies > 5%	Discrepancies > 25%	Data Gaps**	Discrepancies > 5%	Discrepancies > 25%
BP vs FI						
Reserves	0 (0%)	0 (0%)	0 (0%)	0 (0%)	5(26%)	3(16%)
CB Foreign Assets	0 (0%)	2(40%)	1(20%)	1(5%)	7(37%)	5(26%)
CB Foreign Liabilities	0 (0%)	4(80%)	4(80%)	2(11%)	16(84%)	14(74%)
ODC Foreign Assets	0 (0%)	3(60%)	3(60%)	3(16%)	10(53%)	7(37%)
ODC Foreign Liabilities	0 (0%)	5(100%)	5(100%)	2(11%)	16(84%)	11(58%)
BP vs RE						
Foreign Saving	4 (80%)	1(20%)	0 (0%)	11(58%)	6(32%)	5(26%)
Exports	0 (0%)	2(40%)	1(20%)	0 (0%)	4(21%)	0 (0%)
Imports	0 (0%)	4(80%)	0 (0%)	0 (0%)	11(58%)	2(11%)
FI vs GO						
CB Financing of CG	0 (0%)	5(100%)	4(80%)	18(95%)	1(5%)	1(5%)
ODC Financing of CG	0 (0%)	5(100%)	5(100%)	18(95%)	1(5%)	1(5%)

*Does not include Euro Area

**A data gap exists when more than half of the observations are missing

10.   The work involving the five pilot countries indicated a resource demanding exercise, and the need for coordination across divisions in STA and with country authorities. It also became clear that many of STA's data series are incomplete. Both missing data series, and missing data observations, prevented some consistency checks from being performed.

V.   THE WORK GOING FORWARD

11.   The CSDC Working Group recommended that the work be pursued on an incremental basis given the potential workload and the need to learn by experience. Also, an STA governance structure is needed. As noted, it is clear from the project exercise that efforts to identify and resolve data inconsistencies needs to involve countries directly. Country authorities have detailed knowledge of their methodologies and are in the best position to address data inconsistencies, with STA providing a supporting role in identifying inconsistencies and providing guidance on statistical methodologies, classification questions, and related questions. For countries with technical assistance (TA) programs, STA is considering developing a plan to address data inconsistencies with the authorities.

12.   In regard to countries with TA programs, beginning August 2011, STA has implemented the Mission Data Initiative. The purpose of this initiative is to utilize missions to (1) raise the awareness of, and to aid in the resolution of, data submission and data consistency issues, (2) confirm contacts, and (3) highlight and discuss the data consistency issues with the authorities.

There are three levels of tasks: Level A focuses on confirming official contact persons for various datasets; Level B raises data issues within a single domain, such as external sector or national accounts; and Level C raises cross-sector data consistency issues. An example of a Level C task would be to bring to the attention of the authorities and try to resolve a difference in the data on holdings of SDRs as reported to the Balance of Payments Division (IIP data), and as reported to the Financial Institutions Division (balance sheet of the central bank) and Government Finance Division (balance sheet of the general government). Six pilot countries—Armenia, Brunei Darussalam, Bulgaria, Colombia, Montenegro, and Ukraine—will undertake all three levels of tasks, including C. Guidelines for this initiative are being developed.

13.   Providing training to country authorities on cross-sectoral data consistency matters is a further way to avoid or address data inconsistencies. STA has developed a pamphlet entitled The System of macroeconomic Accounts Statistics—An Overview" and a training course on the system of macroeconomic statistics "Linkages Among Systems of Macroeconomic Statistics." The first course is scheduled during October 2011, at the Singapore Regional Training Institute.

14.   The way forward also encompasses collaboration with ADs, to ensure that data are useful for AD surveillance work.

Questions for the Committee:

Do members of the Committee support STA's efforts to raise awareness of inter-sectoral inconsistencies?

What efforts are being undertaken in Committee member countries to support data consistency across the various sectoral domains? Could experiences be shared?

In addition to technical assistance and training, do Committee members have any views on other ways in which the IMF could raise issue of data inconsistencies?

Do members of the Committee have any comments on the CSDC Project?