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**A Data Collection Strategy:
Leveraging SDMX Standards**

**Prepared by the Statistics Department
International Monetary Fund**

I. INTRODUCTION

1. This note informs the IMF Committee on Balance of Payments Statistics of the latest developments in the Statistics Department (STA) strategy to improve the coverage and timeliness of the statistics it disseminates. The design and implementation of this strategy are made possible by the recent developments that took place within the Statistical Data and Metadata eXchange (SDMX) Initiative.¹
2. The SDMX standards have been developed with the objective of facilitating the automated exchange of data and metadata. During the last three years, enhancements in the technical aspects of the SDMX standards, the development of new encoding structures (called “data structure definitions” or DSDs), as well as the availability of free SDMX tools supported a larger scale implementation of the standards.

II. THE IMPLEMENTATION OF DSDS FOR GLOBAL USE

3. SDMX sponsoring organizations worked collaboratively with various inter-agency working groups and committees to develop DSDs that would meet the reporting requirements of international organizations (IOs). One of the key aspects of this work was to agree on common reporting templates that would meet the data requirements of many IOs. Thereby, data producing agencies adopting SDMX for the transmission of data to IOs could see immediate benefits in the production of a single data file to replace completing agency-specific report forms.
4. These efforts focused on two specific data domains; national accounts and *external sector statistics*. In the early phase of implementation, emphasis focused on European Union and euro area countries, which are required to implement the data provision regulations and requirements of Eurostat and European Central Bank, respectively. Notwithstanding the development of common encoding structures and reporting templates, data collection by IOs currently still follows the long-standing approach where a country transmits (reports) data to the receiving IO. As such, the availability of timely data within IOs presumes that countries report to all concerned IOs following a similar schedule.

III. COLLABORATION WITHIN THE INTER-AGENCY GROUP

5. The Inter-Agency Group on Economic and Financial Statistics (IAG) has established the Task Force on International Data Cooperation (TFIDC) to investigate best options for streamlining data reporting to IOs. The TFIDC is conducting two pilot projects on data sharing on GDP main aggregates and on the national accounts sectoral balance sheets. These

¹ The SDMX Sponsoring Organizations are the Bank for International Settlements, Eurostat, the Organization for Economic Co-operation and Development, the European Central Bank, the IMF, the United Nations, and the World Bank Group.

pilots aim at reducing reporting burden on countries while improving the timeliness and reliability of data available to IOs. The objective is to have the countries report the data a single time to one IO that would share them with other IOs involved in the pilots.

6. The pilots require participating IOs to develop and agree to a common reporting template, the validation procedures implemented by the data receiving agency, and the processes for sharing the data with participating IOs. TFIDC members are currently addressing various issues highlighted by the pilots with the objective to move the GDP main aggregates pilot in production in the course of 2015.

7. The project is leveraging the benefits of the DSDs for global use that were recently developed, which support and encourage the development of the common reporting templates. The data sharing approach paves the way to addressing the issue of IOs showing different values for countries' data while at the same time reducing the amount of duplication that exists in data collection by IOs. However, the timeliness of the data collected by some of the participating IOs may remain an issue to the extent that these data are collected without reliance on a legal obligation for the data provider to report to the requesting IO.

IV. SDDS PLUS: IMPROVING PUBLIC ACCESS TO DATA

8. The Special Data Dissemination Standard (SDDS) Plus is the most advanced tier of the IMF Data Standards Initiatives. Countries that adhere to the SDDS Plus must disseminate nine new data categories in addition to the data they disseminate under the SDDS. The IMF conducted extensive discussions with countries and got feedback on the SDDS Plus implementation strategy. Countries expressed concerns with the existing format of the "National Summary Data Page" (NSDP), which the IMF uses to monitor observance to the SDDS. They foresaw issues with the dissemination of the many prescribed components and long time series required by the SDDS Plus using the existing HTML format of the NSDP. Many countries proposed SDMX as a preferred format.

9. The IMF designed a new NSDP for SDDS Plus that is intended to reduce the dissemination burden of adhering countries, facilitate automation of SDDS Plus monitoring by the IMF, and greatly enhance access to SDDS Plus data (Figure 1). The new NSDP displays the list of SDDS Plus data categories and, for each, a link to the national webpage where these data are disseminated as well as a link to a file in SDMX format that contains, at a minimum, time series for the prescribed components for the data category. In order to produce data in SDMX format, countries are adapting their data production systems to automatically generate the required files or use the converter tool provided by the IMF.

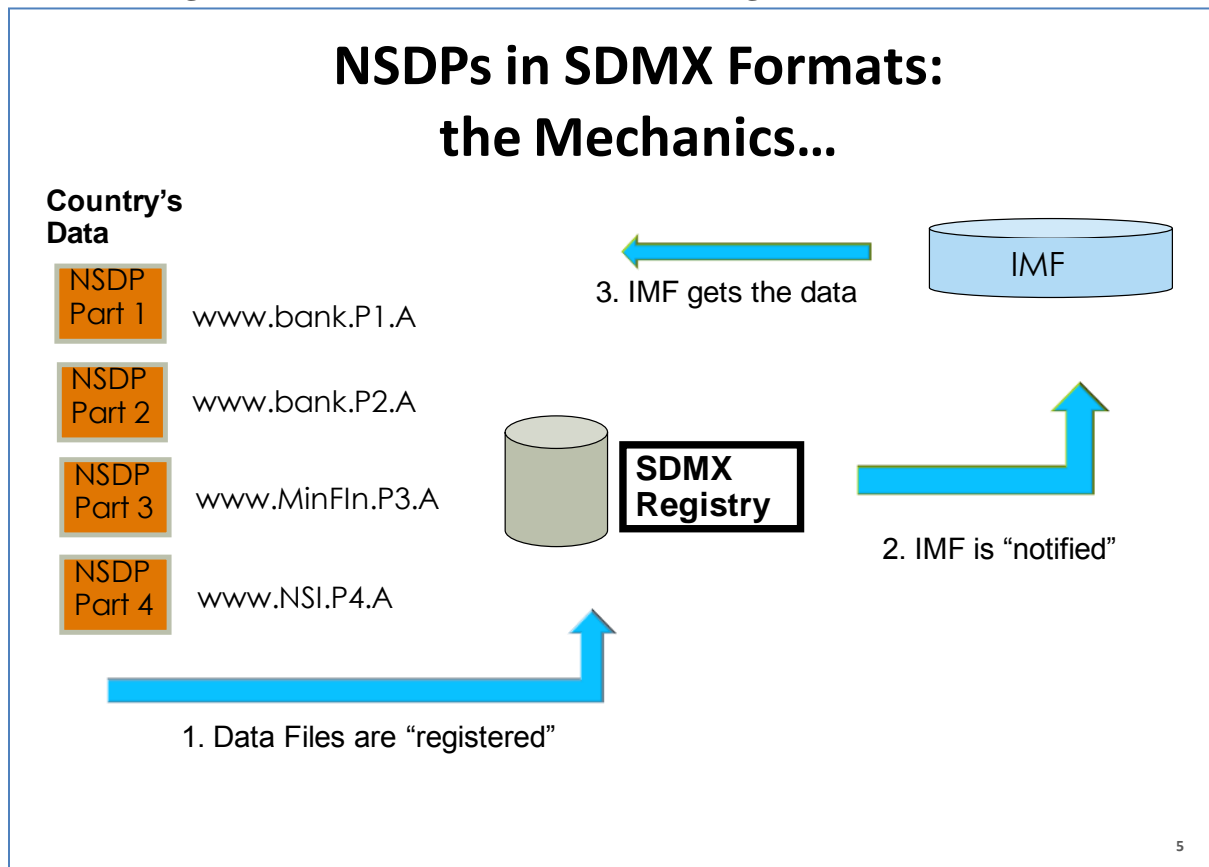
Figure 1. Sample NSDP for SDDS Plus

| SDDS Data Category and Component | Link to data in national presentation | Link to prescribed components in SDMX formats | Link to additional information |
|---|---------------------------------------|---|--------------------------------|
| United States National Summary Data Page (NSDP) | | | |
| Last Update Date : 01/16/2014 | | | |
| <i>Real Sector</i> | | | |
| National Accounts (NAG) | Link | http://sdmx.imf.org/nsdp/CL_NAG.xml | |
| Sectoral Balance Sheets (SBS) | Link | http://sdmx.imf.org/nsdp/CL_SBS.xml | |
| Production Index (IND) | Link | http://sdmx.imf.org/nsdp/CL_IND.xml | |
| Employment (EMP) | Link | http://sdmx.imf.org/nsdp/NLtestfiles/SDDS_NL_CPI_M.xml | |
| Unemployment (UEM) | Link | http://dsbb.imf.org/AR_NAG_TestDemoCopy.xml | |
| Wages/Earnings (WEG) | Link | http://sdmx.imf.org/nsdp/CL_WEG.xml | |
| Consumer Price Index (CPI) | Link | http://sdmx.imf.org/nsdp/CPI.xml | |
| Producer Price Index (PPI) | Link | http://sdmx.imf.org/nsdp/PPI.xml | |
| General Government Gross Debt (GGG) | Link | http://sdmx.imf.org/nsdp/GGG.xml | |
| General Government or Public Sector Operations (GGO) | Link | http://sdmx.imf.org/nsdp/GGO.xml | |
| Central Government Operations (CGO) | Link | http://sdmx.imf.org/nsdp/CGO.xml | |
| Central Government Debt (CGD) | Link | http://sdmx.imf.org/nsdp/CGD.xml | |
| <i>Financial Sector</i> | | | |
| Depository Corporations Survey (DCS) | Link | http://sdmx.imf.org/nsdp/DCS.xml | |
| Central Bank Survey (CBS) | Link | http://sdmx.imf.org/nsdp/CBS.xml | |
| Other Financial Corporations Survey (OFS) | Link | http://sdmx.imf.org/nsdp/OFS.xml | |
| Financial Soundness Indicators (FSI) | Link | http://sdmx.imf.org/nsdp/FSI.xml | |
| Debt Securities (DSE) | Link | http://sdmx.imf.org/nsdp/DSE.xml | |
| Interest Rates (IRA) | Link | http://sdmx.imf.org/nsdp/IRA.xml | |
| Stock Market: Share Price Index (SSP) | Link | http://sdmx.imf.org/nsdp/SSP.xml | |
| <i>External Sector</i> | | | |
| Balance of Payments (BOP) | Link | http://sdmx.imf.org/nsdp/BOP.xml | |
| International Reserves (FLI) | Link | http://sdmx.imf.org/nsdp/FLI.xml | |
| Template on International Reserves and Foreign Currency Liquidity (TIR) | Link | http://sdmx.imf.org/nsdp/TIR.xml | |
| Merchandise Trade (MTS) | Link | http://sdmx.imf.org/nsdp/MTS.xml | |
| International investment position (IIP) | Link | http://sdmx.imf.org/nsdp/IIP.xml | |
| External Debt (EDT) | Link | http://sdmx.imf.org/nsdp/EDT.xml | |
| Coordinated Portfolio Investment Survey (CPS) | Link | http://sdmx.imf.org/nsdp/CPS.xml | |
| Coordinated Direct Investment Survey (CDS) | Link | http://sdmx.imf.org/nsdp/CDS.xml | |
| Currency Composition of Foreign Exchange Reserves (CCE) | Link | http://sdmx.imf.org/nsdp/CCE.xml | |
| Exchange Rates (EXR) | Link | http://sdmx.imf.org/nsdp/EXR.xml | |

10. STA visited many countries to explain in detail the SDDS Plus dissemination requirements. It received strong support for the new NSDP. Countries observed that it would require setting up new, or adapting existing, infrastructure but that it would reduce their medium-term costs for adhering to the standard. Furthermore, most had existing SDMX implementation plans and simply adapted them to the production of SDDS Plus data.

11. The new NSDP has a number of side benefits. Countries that already report data in SDMX formats to ECB or Eurostat can simply reuse the files they prepare for these institutions. The availability of data in electronic format will allow the IMF to develop a data hub for SDDS Plus adherents. The hub would provide access to data across time, countries, and concepts, thereby significantly enhancing access to comparable data for SDDS Plus adherents. Finally, many countries indicated a preference to go beyond the minimum coverage requirements of SDDS Plus and include in the SDMX files all the data needed to meet the reporting requirements of the IMF. Countries would therefore automate making available these data to the IMF and the general public in machine-readable format on the day of their first dissemination to the public. Figure 2 shows how the data are immediately brought into the IMF databases upon their dissemination to the public.

Figure 2. Automated Process for Collecting Data from the NSDP

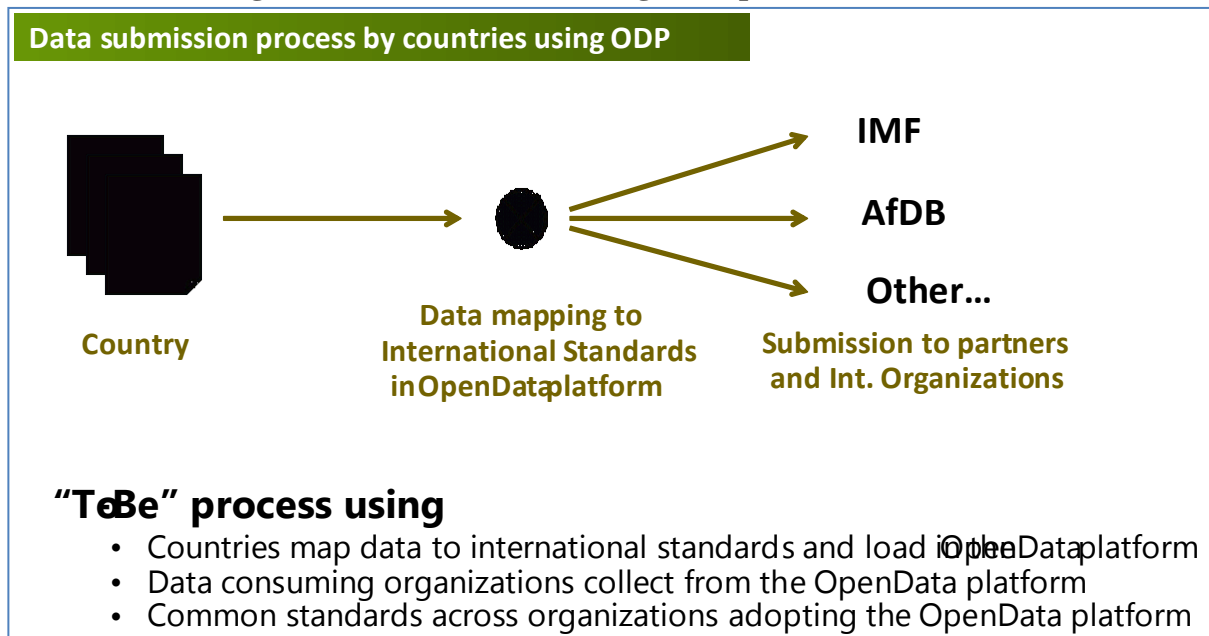


V. THE OPEN DATA PLATFORM FOR AFRICA

12. STA and the African Development Bank (AfDB) are rolling out a cloud-based data submission tool to African countries. The tool provides country authorities a one-click process for submitting data uploaded to the AfDB's Open Data Platform. So far, sixteen countries have adopted the platform following joint missions from STA and the AfDB, making over 100 datasets available for countries to submit. STA has also introduced other international agencies to the Open Data Platform. Once multiple agencies come on board, countries will only need to upload data once for many agencies to consume, greatly reducing countries' reporting burden (Figure 3).

13. With the Open Data Platform, STA is striving to change the current process where countries must report the same data to many different IOs. The existing process imposes substantial reporting burden, as countries submit the same data multiple times using presentations, codifications, and formats decided by the data-requesting IOs.

Figure 3. Data Collection using the Open Data Platform



14. The SDMX standards facilitate the implementation of the Open Data Platform by providing the answers to the following questions: how should we automate the transmission of data; which data format should we adopt; how should we construct the coding structure? STA is taking the lead in deciding the presentations for the data under its areas of responsibility. In that process, STA is guided by the international guidelines setting the standards for the compilation and dissemination of macroeconomic statistics. Countries visited by STA have been very supportive of the initiative and look forward for IOs to further collaborate in harmonizing the data collection templates.

VI. CONCLUSION

15. In the coming months, STA will leverage the synergies from these various initiatives to further reduce the reporting burden imposed on countries while increasing the timeliness, coverage, and reliability of the data it provides to the public. The approaches adopted for SDDS Plus and the Open Data Platform are conceptually identical; data are made available using common machine-readable formats, the approaches support centralized as well as decentralized data production systems, and the tool-kits available minimize the barrier-to-entry.

16. The future success of these initiatives lies in the ability of STA in partnering with as many IOs as possible to continue developing and agreeing to common reporting templates. This is an important feature for countries to realize the value of adopting the proposed dissemination approach that is based on the data sharing model that has been part of the SDMX vision of data exchange.