Outline

- Overview of Monetary and Financial Statistics
- Non-financial Corporations
- Households + NPISH
- Government and Public Sector Statistics
- Rest of the World
- Security Databases
Monetary and Financial Statistics
Financial Accounts Workshop
Data Sources: Monetary and Financial Statistics

SOURCE DATA

• Units report stock and flow data in accounting reports
• Compilation and presentation is based on unit’s financial reporting and accounting standards and practices

SECTORAL BALANCE SHEET

• Central Bank collects balance sheet (and flow) data through standardized report forms
• Accounting data is mapped to statistical concepts

SURVEYS

• Central Bank / IMF compile and publish surveys
• Data is reorganized into analytical presentations
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Data Sources: Monetary and Financial Statistics

DATA COLLECTION

All financial information should ideally be collected directly from individual financial institutions, but this is in practice associated with challenges for some units:

**Direct data collection should be the rule**

- **CENTRAL BANK**
- **OTHER DEPOSITORY CORPORATIONS**
  
  *call report forms or statistical returns*

**Direct data collection is not always feasible.**

- **OTHER FINANCIAL CORPORATIONS**
  
  If necessary, other data sources should be assessed (but apply cost-benefit analysis)
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Data Sources: Monetary and Financial Statistics

Data Sources: Central Bank

Reporting is comparatively easy, as the central bank forms a single institutional unit and there is direct access to underlying data.

Other Depository Corporations

Reporting format should allow full mapping to sectoral balance sheets.

Elements of the Reporting System

- Reporting Forms
- Reporting instructions and other documentation
- Training sessions
- Technical support

Other Financial Corporations

Challenges for data collection from other financial corporations:

- Diversity of OFCs: Non-uniform accounting presentation
- Different supervisory authorities (or none): Collaboration between compilers and supervisory agencies required
- Frequency and timeliness: Monthly data not always available - at a minimum: quarterly data
Differences / Exceptions

- Other depository corporations (ODCs) include money market funds and only offshore banks with broad money liabilities.

- Other financial corporations combine FCs subsectors separately identified in the 2008 SNA, except MMFs – 3 subsectors are recorded in the MFS whereas 9 is recorded in the SNA.

- Provisions for losses on assets recorded as liabilities in monetary statistics – Not recorded in SNA except in certain cases (those on non-performing loans, should be recorded as memorandum items).

- Equity liability recorded at book value in monetary statistics.
Non-Financial Corporations
The size, structure and variation of NFCs affect the data sources available to compile financial accounts and balance sheets.

- Four primary data sources:
  - Survey statistics
  - Taxation statistics
  - Publicly available corporate financial statements
  - Counterpart (indirect) data
## Financial Accounts Workshop
### NFC Data sources

<table>
<thead>
<tr>
<th>Data source/characteristics</th>
<th>Publicly available corporate balance sheets</th>
<th>Taxation statistics</th>
<th>Survey statistics</th>
<th>Counterpart (indirect) data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency</strong></td>
<td>Typically annual although with the increase in private sector databases, sub-annual information is becoming increasingly common on the Internet</td>
<td>Annual</td>
<td>Can be designed to be quarterly</td>
<td>Typically, quarterly</td>
</tr>
<tr>
<td><strong>Timeliness</strong></td>
<td>Varying lags, from medium to long lag (typically in excess of one year). With the increase in private sector databases, select information is becoming more timely</td>
<td>Long lag (often in excess of 1-2 years)</td>
<td>Can be designed to have an adequate lag</td>
<td>Typically, a short lag</td>
</tr>
<tr>
<td><strong>Detail</strong></td>
<td>Aggregated, such that only limited details may be available</td>
<td>Aggregated, such that only limited details may be available</td>
<td>Can be quite detailed, by design (taking into account response burden issues)</td>
<td>Instrument specific details</td>
</tr>
</tbody>
</table>
| **Consolidation**          | • Typically, global for complex MNEs  
• Domestic for others, based on legal entities | Domestic based on legal entities | • Domestically consolidated enterprises  
• Domestic legal entities | Reflection of domestically consolidated entities |
| **Universe coverage**      | Typically, not universe coverage | Yes, for legal entities | • No, if sample survey only  
• Yes, if other data (e.g. tax data) are used to estimate | Typically, yes |
Survey data sources typically cover income statements and balance sheets, which implies deriving transactions from positions and other sources. The survey design can allow for the configuration of corporate financial statements into SNA 2008 categories. Some considerations:

- The existence of a corporate survey for NFCs is not that common among countries, even among developed economies. The survey can be focused on companies (legal entities) or on statistical enterprises (consolidation of related legal entities, allocated to the dominant industry).

- Coverage is often an issue. Some countries may only survey or sample large corporations.
  - Under-estimation of the sector is quite common in these situations.
  - A business list approach may lead to biases.
  - Sampling errors can be an issue if the universe is not known, since a representative sample cannot be drawn

- In these situations, statisticians must rely on other sources, often a mixture of sources, to complete the coverage.
FINANCIAL ACCOUNTS WORKSHOP
ADMINISTRATIVE TAX DATA

OPPORTUNITIES

• Reliable Data Source
• Can be used in Conjunction with Corporate Balance Sheets (survey data)
• Great Source for Benchmarking Estimates and Improving Coverage for NFCs

CHALLENGES

• May Require an MOU to Access Data
• Annual Frequency (with lags)
• No Detailed Breakdown and Mapping with Required SNA Categories
Annual (and sometimes less detailed sub-annual) reports for large corporations, especially listed corporations, are increasingly available and increasingly timely and frequent. Some financial firms (third party providers) specialize in providing such information to the markets.

- Challenges:
  - For MNEs, may not reflect domestic consolidation of the enterprise
  - Coverage of large entities only
  - Data generally aggregated over financial instruments

- Main use:
  - Supplementary information on new funds raised, mergers and acquisitions, etc. … volume changes…
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NFC statistical challenges

Summary

• This sector is a challenge in many countries, with various approaches to generating estimates based on the source data available

• Direct source data is often not available or imperfect

• Compilation challenges will be evident in both annual and quarterly spaces

• The estimates for this sector will rely to the extent possible on counterpart entries for financial assets and liabilities

• Transactions may have to largely be derived from positions
Households
Financial Accounts Workshop
Data sources – Households

• This sector also presents a challenge in many countries, as there is little recourse to using survey data for the complete sequence of sector accounts

• SURVEY: For the financial account and balance sheet account, household asset and debt surveys, where these exist, are infrequent and require a sufficient sample size to be representative and an adjustment to obtain a universe estimate. The estimates are better for asset composition than for control totals.

• Administrative data
  • For certain categories, administrative data may exist – property assessment records, land registry data, financial data….

• OTHER METHODS:
  • This leaves two basic approaches for these accounts:
    • Counterpart entry source data for the most important components, which do not typically supply transactions’ estimates
    • Residual derivation for certain components, which relies on data quality of these items in the other sectors

• Given this situation, balancing the sector and the matrix can be challenging
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Data sources – Households and NPISHs

• NPISHs
  • This sector mainly relies on counter-part entries (deposits and loans) and securities data (bonds of some private hospitals and universities). The sector is relatively small, and therefore the data gaps present less of an issue
  
  • Sometimes, in certain countries, the Financial Account and Balance Sheet are included in households

• Small businesses included in the sector (no separate set of financial statements)
  
  • Unincorporated businesses (associated with mixed income estimates) in this sector may be captured with counterpart data on deposit and loans. Challenges may arise in identifying the individual from the business activity
  
  • Informal activities may or may not be covered. To the extent that they generate saving (covered in non-financial accounts), there is likely no way of generating the corresponding financial statistics and an imputation would be required to balance the sector.
Indirect Data

Indirect source data plays an important role in generating the estimates for this sector. For households, financial assets are typically much larger than liabilities. Counterpart data can provide up to 70-90% of the financial assets (depending on asset composition) and from 70-90% of liabilities (depending on liability composition).

Data sources and approaches:

- Counterpart data from financial corporations: Deposit assets; Loan liabilities: Life insurance assets and pension assets; investment fund assets; and, sometimes, financial derivatives. Typically, stock data.

- Securities’ databases: Can provide flow and stock data for debt securities (sometimes assets available or derived) corporate shares (sometimes assets available or derived)

- Non-data approach: The vertical and horizontal rules of the Capital Account, Financial Account and Balance Sheet Account can permit the residual derivation of some financial instruments. The most problematic one (in terms of size) can be F5.1 (listed and unlisted equity)
Government and Public Sector Statistics
COVERAGE AND SUB-SECTORS OF GFS

Government Finance Statistics (GFS) can be applied to the whole Public Sector:
GFSM 2014 STATEMENTS

The GFSM 2014 framework comprises four core statements:
While government (and public sector) balance sheets offer rich data for analysis, there are some (typical) challenges associated with their compilation:

- Due to major investment required, currently only few countries record their stock of non-financial assets.
- Valuation and interpretation of government non-financial assets raises special difficulties (e.g. existence sector-specific assets that by definition do not have a market).

While these challenges exist, partial balance sheets can still provide highly relevant information:

- Setting up a balance sheet for financial assets and liabilities is typically easier → allows the analysis of net financial worth the stock equivalent to NLB (financial assets – liabilities) which is referred to as net financial worth in GFS.
- For non-financial assets sometimes registries can be compiled, and even those can be prioritized for assets above a value threshold and where information can be sensibly used for decision making. Valuation of those assets can then be prioritized for areas, where value-added of data is the highest.
Rest of the World
**Financial Accounts Workshop**

**Data Sources: External Sector Statistics**

**INTRODUCTION: THE REST OF THE WORLD ACCOUNT (S.2)**

The Rest of the World Sector (National Accounts - S.2)

- consists of non-resident units insofar as they are engaged in transactions with resident institutional units, or have other economic links with resident units

<table>
<thead>
<tr>
<th>Balance of Payments</th>
<th>International Investment Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Summarizes transactions (flows) between residents and nonresidents during a period.</td>
<td></td>
</tr>
<tr>
<td>• Consists of the goods and services account, the primary income account, the secondary income account, the capital account, and the financial account</td>
<td></td>
</tr>
</tbody>
</table>

The IIP is a statistical statement that shows at a point in time the value of (stocks):

- financial assets of residents of an economy that are claims on nonresidents or are gold bullion held as reserve assets; and
- the liabilities of residents of an economy to nonresidents

(BPM6 - §2.12)
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Data Sources: External Sector Statistics

COMPARISON OF ROW AND ESS – DIFFERENT PERSPECTIVES

**ROW** is recorded from the perspective of **non-residents** (with the counterparty in the domestic economy)

**BOP / IIP (ESS)** is recorded from the perspective of the **resident sectors** (with the counterparty abroad)
COMPARISON OF ROW AND ESS – DIFFERENT PERSPECTIVES

REST OF THE WORLD (ROW)  

NONRESIDENT UNITS  

EXTERNAL SECTOR STATISTICS (ESS)  

TOTAL ECONOMY

A **resource** for ROW is a **use** for the resident Economy  
An **asset** for ROW is a **liability** for the resident Economy  
A ROW **deficit** is a **surplus** for the resident Economy  

...and vice versa
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Data Sources: External Sector Statistics

**ESS Functional Categories and Row Financial Instruments**

<table>
<thead>
<tr>
<th>Category (ESS)</th>
<th>Covered Financial Instruments (ROW)</th>
</tr>
</thead>
</table>
| Direct Investment       | • Equity (listed, unlisted, other equity)  
|                         | • Debt: can be all debt instruments but usually mainly loans, other accounts receivable/payable (including trade credit)                                          |
| Portfolio Investment    | • Equity: usually only listed but may have some unlisted  
|                         | • Debt securities: long-term and short-term                                                                                                                       |
| Financial Derivatives/ ESO | • Forward-type financial derivatives  
|                         | • Options  
|                         | • SEOs                                                                                                                                                           |
| Other Investment        | • Other equity (non-tradable)  
|                         | • Currency and deposits  
|                         | • Loans  
|                         | • Other account receivable/payable (including trade credit)                                                                                                        |
| Reserve Assets          | • Usually monetary gold, SDRs, currency and deposits, debt securities but can also include equities and loans (but liquidity essential).  
|                         | • May include financial derivatives if used as part of management of reserve position                                                                                   |
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Data Sources: External Sector Statistics

ESS FUNCTIONAL CATEGORIES AND ROW FINANCIAL INSTRUMENTS

<table>
<thead>
<tr>
<th>ESS Functional Categories</th>
<th>Direct Investment</th>
<th>Portfolio Investment</th>
<th>Financial Derivatives/ESO</th>
<th>Other Investment</th>
<th>Reserve Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monetary Gold / SDR (F1)</td>
<td>☒</td>
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<tr>
<td>Currency and Deposits (F2)</td>
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<td>Debt Securities (F3)</td>
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<td>Loans (F4)</td>
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<td>Equity and Investment Fund Shares (F5)</td>
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<tr>
<td>Insurance/Pension/Std. Guarantees (F6)</td>
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<tr>
<td>Financial Derivatives and ESO (F7)</td>
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<tr>
<td>Other Accounts Receivable/Payable (F8)</td>
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Security Database
FINANCIAL ACCOUNTS WORKSHOP
DATA SOURCES: EXTERNAL SECTOR STATISTICS

SECURITY-BY-SECURITY DATABASE - OVERVIEW

Coverage
Database with information on each individual security
• Reporting FCs provide granular data on securities
• Compilers calculate balance sheet totals and breakdowns

Benefits
• Common methodology for statistical classification
• Valuation adjustments and transactions harmonized
• Flexible options for data aggregation
• Simplification of reporting

Challenges
Large up-front investment for system set-up
• Decision on IT
• Costs for compiling institution/agency
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Data Sources: External Sector Statistics

SECURITY-BY-SECURITY DATABASE - CONTENT

Reference information
Security ID
- International Securities Identification Number (ISIN)
- Short name
- Other codes

Security classification
- Asset classification (ESA2010, CSDB, etc.)
- Location
- Fund type

Security features
- Currency
- Issue date
- Maturity date
- Coupon info

Quantitative information
- Amount outstanding
- Market capitalization
- Issue price
- Market price

Issuer ID
- Data provider codes
- Issuer name
- Legal entity identifier (LEI)

Issuer classification
- Economic sector (2008 SNA, ESA 2010, NACE)
- Country of residence
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Data Sources: External Sector Statistics

SECURITY-BY-SECURITY DATABASE

Features of s-b-s database development process:
• Iterative incremental approach
• Technical guidance
• Integration of several data sources
• Data quality management

Main Data Processes

- Data Capturing
- Unification
- Grouping
- Enrichment
- Database Population