Integrated Sector Accounts of Turkey

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Abstract:

Economic developments in production, income generation and redistribution, consumption and investment are better understood when analyzed in terms of institutional sectors. To extend this analysis one step further; one should analyze the integrated accounts. These accounts provide several key indicators for all institutional sectors.

Integrated Sectoral Accounts in this sense, present a breakdown of economic activity for all resident institutional sectors in a complete and consistent set of data. They provide comprehensive information on the economic activities of sectors as well as financial activities and interactions between resident sectors and the rest of the world. Thus, Integrated Sector Accounts consists of financial and non-financial accounts. They link financial and non-financial statistics, thereby allowing for an integrated analysis of non-financial economic activities and financial transactions. Applying a harmonized methodology ensures that the national accounts statistics are consistent, comparable and reliable. However, in practice integration of these accounts is a challenging task since it usually covers different data sources, scope and more than one compiling institution.

Within this context, Central Bank of Turkey (CBRT) and Turkish Statistical Office (Turkstat) have a joint project in order to produce Integrated Sector Accounts for Turkey, connecting financial and non-financial accounts, where financial accounts are compiled by CBRT and non-financial by Turkstat. The harmonized methodology applied is SNA 2008.

A working group of experts is studying and analyzing financial and non-financial accounts since 2018 in order to reach consistent integrated accounts. In this journey, key challenges faced are typical; such as differences in coverage and data sources. In this paper, we would like to share the key challenges in each sector and solutions to overcome. Main findings of the working group will be analyzed in detail and shared for comments and discussions.

Keywords: Integration, CBRT, Institutional Sector Accounts, Turkstat

1. Introduction:

Following the global financial crisis, G-20 countries endorsed the "Data Gaps Initiative" (DGI) in 2009 in order to implement the regular collection and dissemination of reliable and timely statistics for policy use. Twenty recommendations were identified and one of them has addressed the importance of integrated sectoral accounts in order to identify vulnerabilities, interconnections and spillovers in the economic sectors. According to recommendation of DGI, sectoral accounts flows and balance sheet data will be compiled by the G-20 economies by 2021. This issue has also been addressed at European level by the European Central Bank, which compiles and disseminates integrated sector accounts consisting of financial and non-financial accounts of euro area. They link both accounts, thereby allowing for an integrated analysis of non-financial economic activities (such as gross fixed capital formation) and financial transactions (such as the issuance of debt). On the other hand, Eurostat, Statistical Office for the European Communities, defines the consistency between nonfinancial and financial accounts indicating the need for integrated accounts.

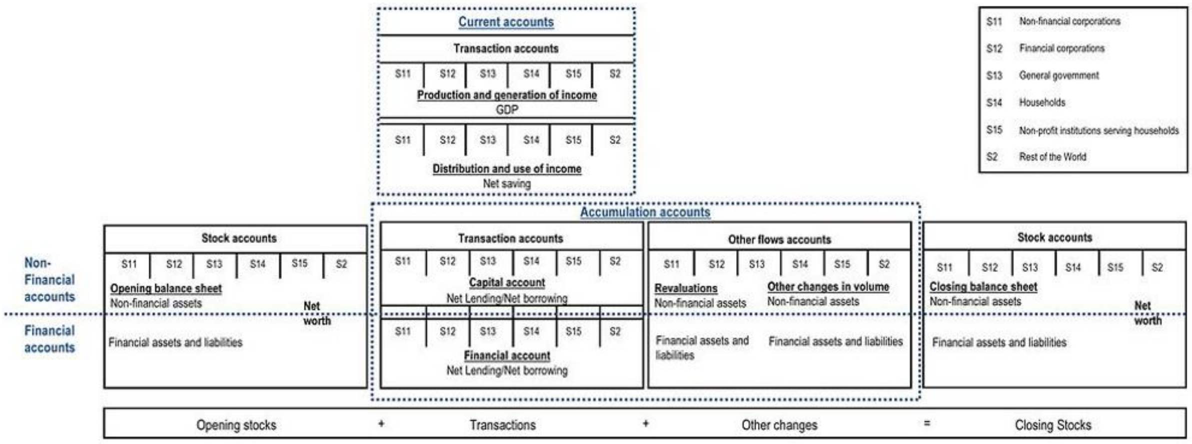
Integrated sector accounts consist of a sequence of accounts describing production, generation and distribution of income, use of income, and capital accumulation and financial accounts. Balancing items in the accounts include value added, disposable income, and net lending /net borrowing. They allow for an integrated analysis of non-financial economic activities and financial transactions showing how economic value is generated and distributed in the economy, how savings are invested and how investment is financed. They are based on institutional sectors following the methodological framework the SNA2008.

As each nonfinancial transaction is mirrored by a financial transaction, the balancing item of the financial account (B9f) conceptually equals net lending/net borrowing as calculated from the capital account (B9). In addition, the financial transactions account and the balance sheet are presented, providing a picture of the financial wealth of each individual sector at a given point in time.

2. Institutional Sector Accounts and Integrated Accounts

Institutional sector accounts provide a complete set of accounts for each of the five domestic institutional sectors and the rest of the world (ROW) as defined in the SNA2008. The institutional sectors combine institutional units with broadly similar characteristics and behavior namely; non-financial corporations (S11), financial corporations (S12), general government (S13), households (S14), non-profit institutions serving households (S15), rest of the world (S2).

Figure 1. Sequence of Accounts in the SNA2008



Source: OECD, "Understanding Financial Accounts"

The sequence of accounts can be broken down into current and accumulation accounts. The current accounts show the transactions relating to production, income generated by production, the subsequent distribution and redistribution of incomes, and the use of income for consumption and saving purposes. The accumulation accounts record flows that affect the balance sheets and consist of the capital and financial account, which primarily record transactions and the other changes in assets account. Together these accounts represent the changes in the stock accounts or balance sheets (Figure 1).

The closing balance sheets show assets and liabilities at market prices at the end of each year for each of the five institutional sectors. The closing balance sheet for one year is equal to the opening balance sheets of next year. Two balancing items can be identified: net financial assets and net wealth.

The integrated economic accounts use the conceptual elements of the SNA (institutional units and sectors, transactions and assets and liabilities) together with the concept of the ROW to form a wide range of accounts. Therefore, it gives a concise overview of an economy; currents accounts, accumulation accounts and balance sheets. Conceptually, the link between non-financial and financial accounts is established by the balancing item “net lending and borrowing”.

These accounts are integrated in three dimensions; horizontal, vertical and in terms of stock-flow consistency. Horizontal consistency means that total uses equal total resources, and total financial assets equal total liabilities, for each (non-financial or financial) transaction category and each financial balance sheet category, when summed over all institutional sectors and the ROW. Vertical consistency requires that for each sector and the ROW, the balance of all current and capital transactions should be equal to the balance of all financial transactions. The change in a balance sheet is, for each asset category, equal to the sum of (i) transactions and (ii) other changes such as revaluations of assets, which gives stock-flow consistency.

3. Compilation of Integrated Sector Accounts for Turkey

In general, national sources and methods may differ between non-financial and financial accounts since they are mostly compiled by two different institutions. This results in discrepancies in net lending /net borrowing of each institutional sector in two sets of accounts; non-financial and financial. The discrepancy is used as a quality indicator. When significant discrepancies are observed, financial and non-financial transactions are inspected in more detail in terms of data availability and quality. Adjustments can be made either in financial or non-financial accounts.

As in the case in most of the countries, non-financial and financial sector accounts are also compiled separately in Turkey. While sectoral financial accounts (SFA) are compiled by the Central Bank of the Republic of Turkey (CBRT), annual non-financial institutional sector accounts (ANFISA) is compiled by the Turkish Statistical Institute (TurkStat). The legal framework for distribution of tasks are underlined in the Official Statistical Program of Turkey (OSP).

Since SFA is secondary statistics compiled from various macroeconomic data as well as balance sheet data, strong cooperation is needed between the institutions. The distribution of tasks in the OSP required the general government accounts and insurance sector balance sheets from Ministry of Treasury and Finance (MoTF). Turkstat has a role in the SFA both in terms of data provider for financial corporations' and NPISH balance sheets and also for the consistency issues with ANFISA.

The compilation journey of the SFA in the CBRT Statistics Department first started in 2006 by pilot reporting of banking sector to OECD. A sector wise approach is followed and each of the institutional sectors are analyzed in terms of data availability, coverage and methodological soundness. By setting up of the Working Group of Turkish Financial Accounts (WGFTA) in 2008, the compilation process has accelerated. The WGTFA is coordinated by the CBRT and consisted of representatives of TurkStat and MOFT, discussed the conceptual and methodological issues in order to have data sets to be in harmony with SNA2008 and also consistency checks have been made for data sets of different institutions. SNA2008 had been the anchor for different data sets in different institutions. The goal is to diminish differences and to explain the reasons for them.

In 2012 the first national dissemination of annual SFA is made by CBRT for financial corporations (S11) and all of its subsectors along with central and local government. SFA for all sectors both in stocks and flows, non-consolidated and consolidated level is compiled at quarterly frequency in 2015. Transition to SNA2008 is made in 2016.

On the other hand, compilation of ANFISA is organized in the National Accounts Department at Turkstat, based on the international guidelines as stated in the SNA 2008. The estimation of ANFISA in Turkey started under the project of “Updating the Statistical System in Turkey” (USST) phase II, carried out during 2007-2009. The production and generation of income accounts are compiled for all institutional sectors for the year 2002. The estimations had an experimental character; due to lack of administrative data, especially for non-financial, households and non-profit institutions serving households (NPISH) sectors, data from supply and use tables of 2002 are used.

National project realized under the USST phase III and the project finished at the end of 2014 and one of the objectives in national accounts field was the development of institutional sectors accounts. Turkstat compiled non-financial institutional sector accounts and estimations for 2010 had been realized. Finally, ANFISA of Turkey were compiled on 12 December 2016 for the first time for the years 2009-2015. The most recent data is for 2017-2018 and 2018-2019 figures will be disseminated in October 2020.

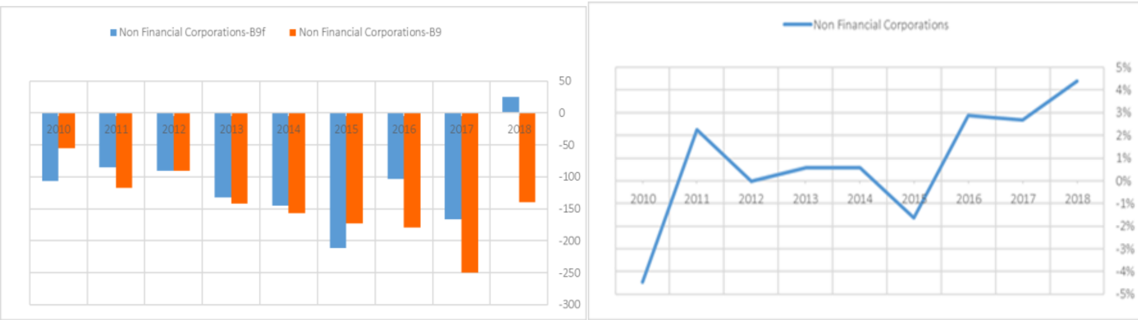
When ANFISA first disseminated by Turkstat in 2016, it was the time to compare and start integration of two accounts; non-financial and financial. Thus, the WGTFA is evolved to Integrated Accounts Working Group (IAWG) in 2017. Since then, annual workshops are held in order to discuss the consistency issues between accounts. The method preferred is first to compare the data sources for each institutional sector, then classifications, accounting rules and methodology.

4. Results of IAWG Workshops

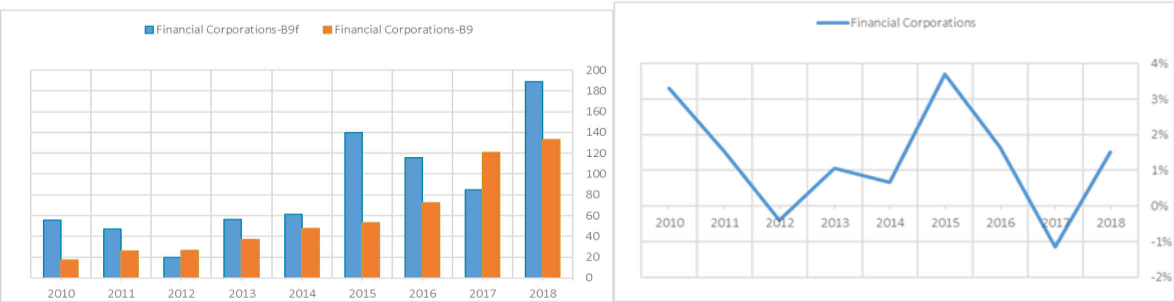
The first workshop is held in 2017 and four teams are setup for harmonization; financial corporations, general government, non-financial corporations and households and the ROW. Each team analyzed the data sources and coverage of institutional sectors in source institutions. The first findings indicated that for general government sector, although the data source, Government Finance Statistics (GFS) compiled by MoFT, is the same for all of the three institutions, GFS instrument and sector classification should be compared. For financial corporations and the ROW, the data sources are different. Multiple and different data sources exist in non-financial corporations, while household is residual sector and consistency will be fulfilled after all sectors are in full harmony. In 2018 workshop, many findings of 2017 workshop is realized.

In order to identify the convergence level of net lending / net borrowing both in non-financial (B9) and financial accounts (B9f) for institutional sectors, a coherence indicator is calculated which is formulated as the difference between B9f and B9 divided by the GDP. The figures below indicate the coherence level for each of the sectors.

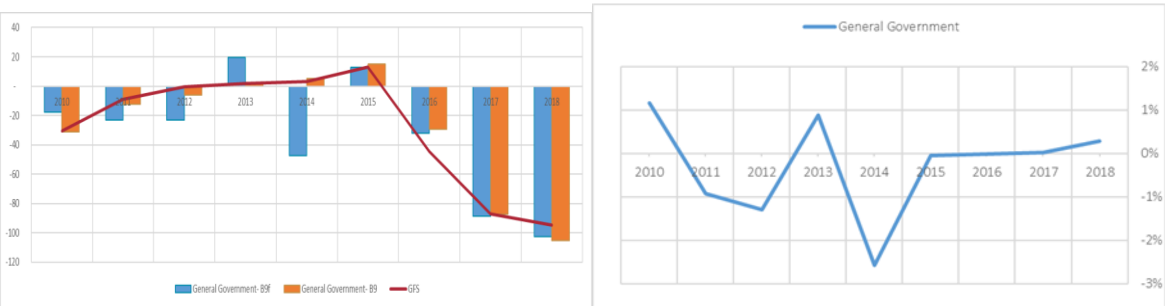
Graph1: Net lending borrowing of non-financial corporations in non-financial and financial accounts of Turkey and the coherence indicator, billion TRY, % of GDP



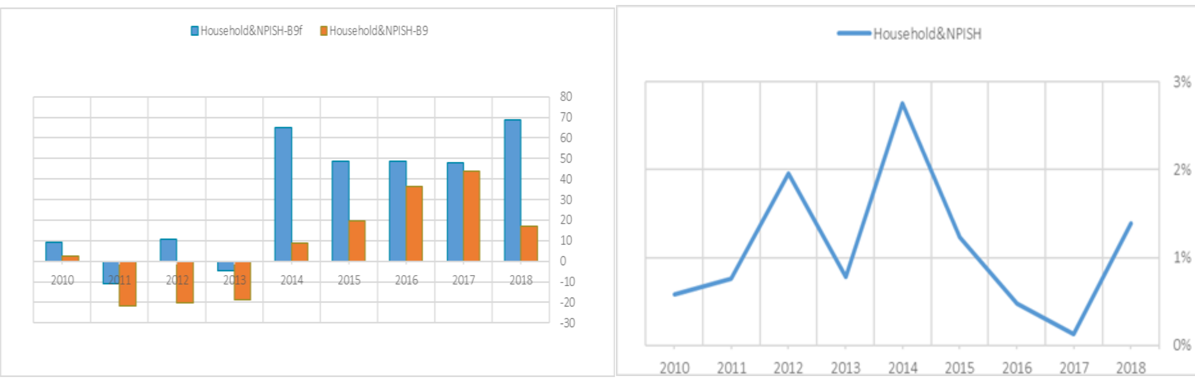
Graph 2: Net lending borrowing of financial corporations in non-financial and financial accounts of Turkey and the coherence indicator, billion TRY, % of GDP



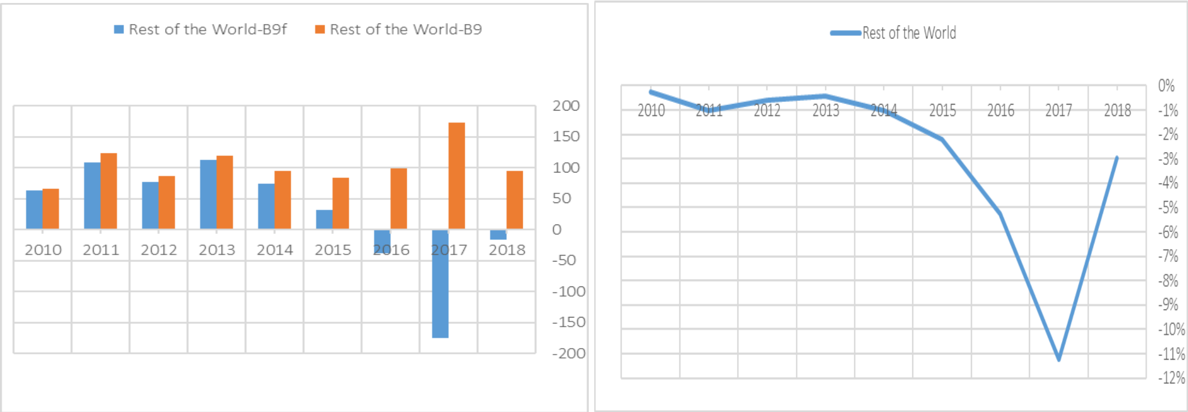
Graph 3: Net lending borrowing of general government in non-financial and financial accounts of Turkey and the coherence indicator, billion TRY, % of GDP



Graph 4: Net lending borrowing of households and NPISH in non-financial and financial accounts of Turkey and the coherence indicator, billion TRY, % of GDP



Graph 5: Net lending borrowing of ROW in non-financial and financial accounts of Turkey and the coherence indicator, billion TRY, % of GDP



5. Discussion, Conclusion and Recommendations

The studies highlighted that main reasons for discrepancy lies in different data sources, differences in coverage of sectors and time lag in implementing major revisions in source data. Thus, data sources are converged in some areas. Balance of payments and international investment position data is fully adopted for ROW in SFA. As a result, improvement in coherence indicator of ROW is observed in 2018. Differences in coverage mostly found out in financial corporations sector; some subsectors may not be fully covered in both institutions. Therefore, convergence studies are detailed at subsector level of financial corporations. In terms of time lag in implementation of revisions, it is noted that GFS revisions are not implemented in Turkstat and CBRT simultaneously. MoTF initiated a data sharing platform in order to have revisions more timely by two institutions. Timeliness of GFS data is also enhanced to meet the requirements of SFA and ANFISA.

TurkStat and CBRT concentrated on eliminating the discrepancies at a reasonable level and explain the reasons behind it. The plan is to produce integrated institutional sector accounts for Turkey and make a joint publication.

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