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Financial Accounts in Hungary

Note by the Hungarian Central Statistical Office

Summary

Financial accounts are an important part of national accounts, presenting the stocks and the flows of financial assets and liabilities for the total economy and the institutional sectors. The present paper provides an overview of the methodological and practical aspects of the compilation of the Hungarian financial accounts.

I. Introduction

1. Financial accounts constitute a part of the national accounts, expressing the financial assets and liabilities of the total economy and the economic sectors in Hungarian forint (HUF) billions, their changes, and the components of these changes.

2. Based on the division of tasks between the statistical bodies, the Magyar Nemzeti Bank (MNB) is responsible for compiling financial accounts in Hungary. Since April 2003 the central bank has published financial account statistics relating to the financial worth of the national economy and of its individual sectors, as well as the components of its changes on a quarterly basis, with a 3 month time lag. The goal of the present paper is to give a short overview of the Hungarian financial accounts on methodological and practical sides.

3. In addition to financial account statistics, the MNB prepares and publishes balance of payments statistics, monetary statistics and securities statistics. All three statistical areas capture specific sections, sectors or instruments within the financial accounts which constitute the national accounts. In this context, the financial account data and stocks shown in the balance of payments statistics indicate the financial assets and liabilities of resident (domestic) economic sectors vis-à-vis the rest of the world, while monetary balance sheet statistics indicate financial assets and liabilities of monetary financial institutions (central bank, credit institutions, money market funds) vis-à-vis other sectors, and securities deposit statistics present the holder sector structure and flow data of major securities issued by residents. All three central bank statistics provide important data for financial accounts, and its products are comparable in content to the corresponding components of financial accounts.

II. Principles and practices

4. The list below presents the major principles applied in Hungarian financial account statistics in accordance with international regulations:

    (a) Priority of economic substance over legal or accounting content.

    (b) Enforcement of market valuation, accrual accounting.

    (c) Gross presentation of interest-bearing instruments increased with accrued interest.

    (d) Institutional principle for sector classification, sector classification according to principal activity.

    (e) Correspondence between assets and liabilities (selection of common data sources).

    (f) Sum of components of changes of stocks must equal changes in stocks.

    (g) Balances close with zero in a closed economy.

    (h) Consistency of consolidated and non-consolidated accounts.

    (i) Consistency of quarterly and annual accounts.

    (j) Continuous data revision, temporal consistency.

5. The objective of statistics is to provide analysts, researchers and decision-makers with an undistorted picture of the financial processes and state of the economy with the least amount of data reporting burden on economic participants. Statistics therefore strive to

utilise, to the extent it is possible, the available administrative records (corporate register, securities register, financial supervisory records, and tax returns) and accounting statements (annual reports, budget statements, business plans). However, legal and accounting regulations change periodically and may vary in different countries, while statistics must be comparable and consistent in time and space. It is therefore essential for statisticians to understand the administrative and accounting categories prevailing in the reference period, and to be able to translate them to the terminology of statistics and economics. Understanding the economic contents (event or behaviour) behind legal or accounting forms is vital for the selection of the appropriate statistical category.

6.   The main characteristics of the Hungarian Financial Accounts are the follows:

        (a)   Full sector (12) and instrument (20) approach;

        (b)   Full counterpart sector breakdown (whom to whom);

        (c)   Full decomposition of flows (transaction + revaluation + other changes in the volume of assets (OCV);

        (d)   Domestic and foreign currency breakdown;

        (e)   Accrued interest reinvested in the debt instruments;

        (f)   Additional nominal value to General Government debt instruments;

        (g)   Annual accounts come from the quarterly ones;

        (h)   Preliminary Households and General Government accounts with t+46 days lag;

        (i)   Full set of quarterly accounts with t+90 days time-lag;

        (j)   Long homogeneous time-series back to 1990Q1;

        (k)   Fulfilment of all international data-requirements.

7.   Based on the applied methodology, the stocks of financial assets and liabilities and the related operations and transactions must be recorded at market value in financial accounts (for all sectors and instruments). This valuation principle is fundamentally different from the general valuation principle adopted in business accounting, where accounting value is generally identical to purchase price or issue price. According to the approach applied for the preparation of national accounts, it is the market value that best reflects the actual financial wealth of individual economic participants and at the same time allows for data comparison. However, as the required source data are not always available, the principle of market valuation cannot always prevail in the compilation of financial accounts. This problem arises primarily in the case of instruments which are not traded on markets and are therefore difficult to price. Consequently, specific rules are defined in the methodological manuals of national accounts regarding the market valuation of instrument categories with no secondary market (loans, deposits, other equity and other claims).

8.   Accrual accounting must be used in national accounts. In the case of financial accounts, this means that if a transaction in non-financial accounts (e.g. a transaction related to production, distribution of income, consumption or investment) is linked to a transaction affecting the financial accounts, the two transactions must be recorded simultaneously, at the point in time when the real economy transaction occurs. If no payment is effected when the non-financial transaction occurs, it is to be recorded under other receivables/payables in the financial accounts. As financial instruments establish a link between two institutional units (the creditor and the debtor), it is equally important that transactions affecting financial instruments be recorded by both units simultaneously. In practice, accrual accounting is applied for items relating to wages, taxes, social

contributions, transfers, and the provision of goods and services. Adjustments based on the accrual method are to be made for all purchase/sale transactions when a financial instrument (typically a security) is traded in the secondary market and the payment is made at a different time from that of the transfer of ownership.

9.   As property income, interest is subject to accrual accounting in the national accounts. Due to interest income receivable but yet unpaid for the period, the creditor accrues a claim against the debtor (while the debtor, for its part, accrues a liability in the same amount). As opposed to the rules of business accounting, which typically require that accrued interest be recorded as an accrued or deferred item, international methodological manuals recommend that accrued interest be added to the stock of instruments providing interest income (interest-bearing instruments). Therefore, in domestic financial accounts, the market value of loans and deposits with agreed maturity reflects the nominal value (the amount repayable under the contract) plus accrued interest, while the market value of securities other than shares reflects the net market value plus accrued interest (i.e. the gross market value). The property income not yet received from investment fund shares (regarded as interest) and technical provisions (regarded as other own assets) is also accrued in the stock of the above instruments. Regarding the presentation of securities at gross market value, the products of financial accounts are consistent with those of the security statistics prepared by the central bank. However, as they reflect accrued interest as well, deposits and loans are presented at higher values in the financial accounts than either in monetary balance sheets or accounting reports.

10.   The basic element of national accounts for the processing of economic actors is the institutional unit (company, non-profit institution, budgetary organisation, fund, household, other organisation). An institutional unit is an economic participant acting as an independent business entity with its own records and accounting. National account statistics classify economic participants into sectors on the basis of their behaviour and the role they play in the economy. Classification is based on institutional units, in consideration of their principal activity. In the case of multiple activities performed by the same organisation, its principal activity will be the one from which the organisation realises most of its revenues. Unless there are extremely compelling reasons to do so, institutional units cannot be divided into pieces, and their parts cannot be classified into different sectors. In particular, the branch office of a company which operates in a different country is considered an independent institutional unit. Similarly, statistics establish an independent institutional unit (quasi corporation) for resident real estate owned by non-residents, or for agricultural interventions conducted on behalf of the European Union.

11.   The methodological manuals of national accounts (System of National Accounts (SNA), European System of Accounts (ESA)) do not specify the data sources or the method to be used for the compilation of statistics. In most countries, accounts are broken down by sector, and are compiled from own data sources (data are collected from the sector itself), and differences (or a part of the differences) between the data are subsequently eliminated for the sector or instrument with the poorest quality data. In Hungarian practice, financial accounts are prepared in such a manner that for an instrument, the same data are recorded under the liabilities of the debtor sector as under the financial assets of the creditor sector. Data presented under the different sectors are therefore not independent of one another but derive from a common data source at the level of individual instruments, and this data source is the one which, based on the established data source hierarchy in statistics, is considered the more reliable of the data provided by the two relevant sectors (debtor, creditor) or an external participant (financial intermediary). This method ensures that the methodological rule regarding correspondence between financial assets and liabilities is satisfied in practice across the national economy.

12.   The Hungarian financial accounts present the opening and closing stocks of financial instruments and the components of changes in stocks, too. The stocks (balance sheets) indicate the value of the financial assets at a given point in time, while flows reflect changes (turnover data) relating to a specific period (quarter, year). Transactions play a prominent role in the components of flows, for they correspond to economic events over which institutional units have direct control.

13.   The equal size of financial assets and liabilities in financial accounts ensures that the sum of the balance indices computed as their difference is zero for the economy (taking account of the rest of the world sector in national accounts establishes the comprehensiveness of economic relations). In addition to financial assets and liabilities, the balance sheets of financial accounts also indicate the difference between assets and liabilities in the form of net financial worth. Net financial worth reveals the 'external financial position' of a sector, i.e. its position as a net lender or a net borrower. Naturally, changes affecting net financial worth may be divided into 3 types: flows resulting from transactions, revaluations and other changes in volume. Changes in net financial worth originating from transactions correspond with the narrow interpretation of the balance of financial accounts, net lending/net borrowing. Changes in net financial worth originating from revaluation or other changes in volume correspond with the balance of the revaluation and other changes in volume accounts calculated for their financial instruments.

14.   For national accounts, the principle of gross settlement is to be used. This means that in the case of financial accounts all assets and liabilities of institutional units must be taken into account, irrespective of whether they refer to a relationship inside or outside of a specific group. The smallest units of financial accounts are institutions (companies, general government institutions, households, other institutional units). On the level of institutional units, data are "consolidated" in all cases; any assets or liabilities of a company vis-à-vis itself are not interpreted in the statistics (hence, financial accounts do not indicate shares or bonds repurchased by the issuer). The difference between non-consolidated and consolidated data is reflected at the level of groups (sectors) created from institutional units. Elimination of financial relations within the group (consolidation) may be useful when the external financial positions of a specific group (such as a sector) or changes in those positions are to be presented. In Hungarian financial accounts, data of households and non-profit institutions serving households are always consolidated (even in non-consolidated tables), because the accounts of these two sectors are generated exclusively from external data sources (partner data), and thus the relationships within the sector are not known. The rest of the world and the central bank (MNB) sectors are inherently consolidated as well.

15.   In most countries only annual national accounts statistics existed for a long time; quarterly accounts were introduced later, as a separate statistical area. Quarterly accounts are generally based on other data sources; they contain more estimates and are finalised retrospectively, as they are adjusted to the annual accounts. In Hungary, quarterly financial accounts are generated, and annual figures are based on these statistics as well. This ensures the consistency of quarterly and annual data at all times. The data sources and estimation methods of quarterly statistics ensure that comprehensive and nearly finalised annual data are available at the first data report. Most products of the Hungarian financial accounts consist of quarterly tables, from which annual data are easy to extract. Yearly (end-of-year) stocks (stock of financial assets and liabilities, net financial worth) are equal to the stock data as of the last quarter of the year; while yearly flows (transactions, revaluations, net lending/borrowing) are the sum of the corresponding flow data for the four quarters.

16.   The objective of national account statistics is to provide users with a data set that is up-to-date and comparable in time and space. Complying with the international methodological standards allows for consistency in space (between countries or regions), while consistency in time is ensured by the relatively stable nature of standards and the

appropriate handling of methodological or technical breaks. One of the basic principles of domestic financial account statistics is that the time series emerging in the products must reflect the most current state of the data, and must be consistent in terms of contents. The area of statistics is continuously expanding and developing; new data sources and new estimation methods are being incorporated in data processing and the system of data compilation. Those preparing the financial accounts strive to ensure that any novelties and changes are updated across the time series, if there is no other way, through the use of estimates. This is done by extraordinary (unscheduled) data revision, and may impact data as far back as 5-10 years. Indeed, data of the current year and of the two calendar years preceding it may change any time when data reports are submitted due to data source changes and clarification of the contents of economic events, or corrections of their settlement. Scheduled revisions are performed when the announced data review process of balance of payment statistics takes place, during the compilation of electronic data processing (EDP) reports, and whenever the annual accounting reports and corporate tax returns become available. Revision policies relating to central bank statistics are available on the homepage of the MNB.

17.	The general government, financial corporations and non-residents are the economic sectors of national account statistics – and the financial accounts – for which the most extensive and best quality data are available. According to international experience, data for non-financial corporations and households are typically not available in the same quality due to the large number of participants they involve, and their extensive financial relationships outside the banking sector. In Hungary, the above statement primarily applies to the financial worth and financing relationships of corporations, while the financial accounts of households are traditionally of high quality, as the sector's investments and borrowings are largely related to financial intermediaries.

18.	The main areas of origin of data sources are the follows:

(a)	Central bank statistics (balance of payments, monetary statistics, securities statistics);

(b)	Balance sheet data of the MNB (accounting statements);

(c)	Central bank data supplies of other financial institutions (insurance corporations, investment funds, Student Loan Company);

(d)	Supervisory reports of financial institutions (pension funds, financial and investment enterprises) (Hungarian Financial Supervisory Authority (PSZÁF) data);

(e)	Corporate balance sheet data contained in the tax returns of corporations (APEH database);

(f)	Data in annual reports of corporations and in the corporate register (data supplied by the Court of Registration and ministries);

(g)	General government, budgetary data (balance sheets, cash flow statements, debt);

(h)	Central bank reports of companies owned by the central government or local governments (public corporations);

(i)	Data on non-profit institutions (data from the Central Statistical Office);

(j)	Supplementary information (prices, exchange rates, price indices, interest rates, wages, etc.).

19.	From the overall data sources, only those data are utilised for the purposes of financial accounts, which may not be extracted from any other data source preceding them in the hierarchy. All of the selected data appear simultaneously in two places in the

financial accounts: under the assets of a certain sector, and under the liabilities of another sector. Any data not used directly for the purposes of financial accounts – i.e. those originating from a lower level of the hierarchy – are used for the validation of data used.

20.   The hierarchy of data sources is as follows:

    (a)   MNB securities statistics;

    (b)   MNB balance of payments statistics;

    (c)   The balance sheet of the MNB;

    (d)   Monetary statistics of the MNB (credit institutions);

    (e)   Data pertaining other financial organisations;

    (f)   Data pertaining the general government;

    (g)   Corporate data (Hungarian Tax and Financial Control Administration (APEH) and direct sources);

    (h)   Data on non-profit institutions.

21.   Regarding the extent of data source coverage of sectors and instruments in financial accounts, in most cases a comprehensive range of information on instruments may be typically extracted from the data provided by the relevant sector, or by a financial intermediary participating in the transaction. Source data are supplemented with estimates in relation to cash, loans, shares and other assets/liabilities. Despite the extensive scope of the utilised data and estimates, data pertaining to individual sectors with respect to cash, loans, insurance technical reserves, financial derivatives and other receivables are not complete in the financial accounts. Such data shortage is negligible in volume, and does not affect the usability of the statistics.

22.   Data gathered for the financial accounts primarily comprise stock (balance sheet) data. With the exception of flow data relating to the rest of the world (which are extracted from the balance of payments), transactions are typically calculated by means of estimates in the practice of the domestic financial account statistics. In order to formulate the estimate additional information is required to supplement stock data, from which transactions may be defined either directly, or – based on the known figure of other changes in volume – can be calculated as a residual value of stock changes. For cash, loans, shares and other assets/liabilities, the transactions or revaluations can be usually estimated based on the foreign exchange composition of stock data. In the case of securities, as a part of securities statistics, the central bank collects specific price and quantity information as well, which serves the purposes of market pricing and the breakdown of changes in volume into components.

23.   Information disclosed in financial accounts and balance sheets can be put to a wide range of uses, the most important being information on the net lending/net borrowing position of the individual sectors. Such information reflects the financial balance of a specific sector during a certain period. This balance takes the form of either net supply or demand in the financial market. As the net lending/net borrowing indicator in financial accounts is calculated from changes arising from transactions in financial instruments (from bottom to top), it can be used as a reliable guideline for evaluating the reliability of the net lending/net borrowing indicator calculated on the income and investment side (from the top to the bottom). The difference between the two indicators calculated from two directions may indicate potential shortcomings and errors in statistical processing. The net lending/net borrowing indicator is of the utmost importance in general government as it is the indicator to which the Maastricht criteria must be applied. The EDP Notification prepared in the framework of the excessive deficit procedure to measure the above, must present the

balance from top to bottom; moreover, the differences in net lending/net borrowing positions calculated from top to bottom and vice versa, must be reported as well.

24.   Data on the stocks of financial assets and liabilities describe the financial relations of the sectors at a specific moment in time, their financing patterns, the depth of financial intermediation, and the sum of gross and net assets and liabilities. The revaluation of financial assets and liabilities represents important contributory information for the analysis of the behaviour of institutional units, as real holding gains – revaluation adjusted for the effects of inflation – have similar characteristics as income: institutional units may spend it in a specific period without incurring a decline in their initial wealth.

25.   A number of restricting factors should be taken into consideration when using the financial accounts. As the compilation of the financial accounts is primarily based on stock data, and transactions are often not directly observed but are calculated from the stock data using estimates, the transaction data are less reliable than the stock data. At the same time, this means that the transaction balance generated for a financial account (net lending/borrowing position calculated from bottom to top) is theoretically less precise than the transaction balance based on observed economic events (net lending/borrowing position calculated from top to bottom) rather than calculated from the direction of financial accounts.

26.   Through its effect on the value of stocks of financial assets and liabilities, inflation may distort interest income and revaluation significantly, especially if those stocks are large (relative to gross domestic product (GDP), for instance). Obviously, these distorting effects are reflected in transactions and revaluations in the financial accounts, making it considerably more difficult to perform economically reasonable comparisons between data both over time and on an international scale. Indeed, when analysing net lending/borrowing positions and revaluations, the relevant inflation levels and interest rates of interest-bearing stocks are worth considering as well. Operational balances provide assistance to the users in addressing this issue; they reflect net lending/borrowing positions excluding the distorting effect of inflation on interest.

27.   As the document mentioned before, in Hungary two institutions are responsible for the compilation of national accounts: non-financial accounts are prepared by the Central Statistical Office (CSO), and financial accounts are prepared by the MNB.

28.   Financial and non-financial accounts are connected by net lending/borrowing, which is presented as the balancing item of the capital account and the financial account (for more information, see Section 1.1). The net lending/borrowing indicators presented in the financial and non-financial accounts of the sectors should be theoretically identical, as they indicate the same economic phenomenon measured by different methods.

29.   In practice, however, errors of statistical observation lead to differences between the net lending/borrowing indicators calculated from top to bottom (from the perspective of non-financial accounts) and those calculated from bottom to top (from the perspective of financial accounts). The size of the difference (i.e. the statistical error) is a measure of the reliability of national accounts. Obviously, for this to be true statisticians must not incorporate the difference in any rows in the financial or non-financial accounts. Indeed, according to Hungarian practice, the differences are released in publications to assist users in their judgement of the reliability of national accounts.

30.   As of 2008, the CSO publishes comprehensive national accounts for the years 2004, 2005 and 2006, allowing a comparison of net lending/borrowing indicators calculated from bottom to top and vice-versa broken down by sectors for these years. Following the publication of national accounts in May 2008, the differences (between the CSO balance and the MNB balance) for the period of 2004-2006 expressed as a percentage of GDP were as follows:

    (a)   Non-financial corporations: 2.0 per cent

    (b)   Financial corporations: 0.7 per cent

    (c)   General government sector: 0.3 per cent

    (d)   Households: -1.4 per cent

    (e)   Non-profit institutions serving households (NPISH): 0.0 per cent

    (f)   Rest of the world: -2.7 per cent

31.   The positive amount of the differences indicate that the net lending/borrowing indicator calculated for the non-financial accounts (by the CSO) is higher, while a negative prefix indicates that the value calculated (by the MNB) for the financial accounts is higher.

32.   The size of the differences indicate that the annual accounts of the general government sector are relatively well harmonised, while for all other sectors (except for non-profit institutions serving households where the difference between the balances and the sector itself are negligible from an economic perspective) they reached such an extent that statisticians preparing the statistics are required to work together in an effort to reduce them.

33.   The CSO and the MNB have regular consultations to facilitate the harmonisation of national accounts. In 2008, as a result of methodological consultations, the two institutions succeeded in significantly reducing the difference between the net lending/borrowing indicators calculated from top to bottom and vice-versa. Primarily due to the standardisation of interest accounting and the harmonised classification of those corporations, which are registered abroad and whose obligations in Hungary are limited to the submission of VAT returns, in October 2008 the differences between the balances (CSO balance - MNB balance) of individual sectors expressed as a percentage of GDP for the period of 2004-2006 were as follows, according to the calculations of the MNB:

    (a)   Non-financial corporations: 0.6 per cent

    (b)   Financial corporations: 0.5 per cent

    (c)   General government sector: 0.3 per cent

    (d)   Households: -0.8 per cent

    (e)   NPISH: 0.0 per cent

    (f)   Rest of the world: -1.8 per cent

34.   The results of the harmonisation, i.e. the smaller differences between the balances, were released in the comprehensive publications of the national accounts from the spring of 2009.

III.   References

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