QUARTERLY FINANCIAL ACCOUNTS STATISTICS

METHODOLOGY

ČNB ČESKÁ NÁRODNÍ BANKA

Introduction

As an autonomous part of the national accounts, the quarterly financial accounts statistics provide a comprehensive overview of the financial situation and financial linkages in the economy, including external relations, broken down into economic sectors and financial instruments.

Analytical use of the financial accounts

The financial accounts supplement the picture of the economic activity by incorporating the data from financial sphere. The accounts aim to provide a better insight into the operation and structure of the financial system and to show the main channels used to obtain and invest financial funds. They are an important source of information with broad application in monetary policy analyses as well as financial stability and monitoring of the transmission mechanism. They can also play a supporting role in the general public's everyday investment decision-making. In addition to identifying financial risks and imbalances in individual sectors, the financial accounts can also be used in financial modelling and simulations (short-term inflation modelling, monitoring of market bubbles, simulation of financial flows during shocks).

Distribution of competences

Responsibility for compilation of the quarterly financial accounts in the Czech Republic rests with the Czech National Bank, while the Czech Statistical Office is responsible for compiling the annual financial accounts (and also the quarterly and annual non-financial accounts). Data from the quarterly financial accounts are released 110 days after the end of the relevant quarter. In addition to the data, a commentary summarising recent financial developments is published 120 days after the end of the quarter.

Definition of financial accounts within the system of national accounts

Characteristics of national accounting

The national accounts are a complete and closed system of accounts where flows and stocks are arranged so as to systematically describe the business cycle. They cover the generation, distribution and redistribution of income and its accumulation as non-financial and financial assets. They describe all material, income and monetary flows between economic agents within the national economy and vis-à-vis the external environment, as well as the impacts of these flows. The system is built around a sequence of inter-connected accounts, grouped into three categories according to their nature: current accounts, accumulation accounts and balance sheets.

Definition of the financial accounts

The quarterly financial accounts can be defined as that part of the balance sheets and accumulation accounts which relate to financial assets and liabilities.[1] More specifically, the quarterly financial accounts record the opening and closing balances of financial assets and liabilities and the individual components that affect those balances, namely: transactions (the financial account), nominal holding gains/losses (the revaluation account) and other changes in assets (the other changes in assets account).

1)The term "financial account" may have two different meanings. In the broader sense, the financial accounts describe the stocks of financial assets and liabilities, including the decomposition of the changes therein. In the narrower sense, it is one of accounts, following the capital account in the sequence of accounts, with its content indicating changes arising from transactions relating to financial assets and liabilities.

The decomposition into components is very important from analytical perspective, as it enables us to distinguish to what extent changes in financial assets and liabilities were intentional and to what extent they were a result of factors exogenous to the sector.

The system is comprehensive and closed with regard to both flows (i.e. the sum of transactions, revaluations and other changes) and stocks. This means that all changes in stocks are fully accounted for by recorded flows. Therefore, the following relationship between stock and flow variables holds for each instrument:

Fundamental relationship between stocks and flows

stock at the beginning of accounting period (opening balance sheet)
+ financial transactions (financial account)
+ revaluations (revaluation account)
+ other changes in assets (other changes in assets account)
= stock at the end of accounting period (closing balance sheet)

BOX 1: An outline of the individual accounts and groups of accounts

BOX 1

The current accounts (parts I and II) record the production of goods and services, the generation of income in production, and the distribution and redistribution of income and its use in the form of consumption and saving. They comprise a production account (I) and distribution and use of income accounts (II). The final balancing item is *saving*, which is the main source of accumulation.

The accumulation accounts (part III) record increases in financial and non-financial assets and their financing sources. The set of accumulation accounts consists of: the capital account (III.1), the financial account (III.2) and the other changes in assets accounts (III.3).

The capital account shows gross investment and its financing sources in the current period. It is linked to the current accounts through the balancing item *saving*. The final balancing item is *net lending* (+) / *net borrowing* (-), i.e. the amount the sector is able to lend to, or has to borrow from, other sectors in the current period.

The financial account records transactions relating to financial instruments. Its balancing item is *net lending* (+) / *net borrowing* (-).

Interaction between the capital and financial accounts is ensured by equality of their balancing items. The balancing item equals the amount not consumed or invested in real assets in the current period. It can thus be used to increase financial assets or reduce liabilities. The ability to finance, as indicated by the capital account, must be reflected in a rise in financial assets or a corresponding decrease in liabilities on the financial account. Conversely, a need for external financing must be reflected in a decrease in the financial assets or an increase in the financial liabilities of the sector vis-à-vis other sectors or the rest of the world.

The other changes in assets account consists of a revaluation account (III.3.1) and an other changes in volume of assets account (III.3.2).

The balance sheet (part IV) shows the stocks of financial and non-financial assets and liabilities at the start and end of the accounting period. The balance sheet is the last account in the sequence, as it shows the final result of the entries on the current and accumulation accounts. The classification of assets and liabilities in the balance sheet is identical to that used on the financial account. The balancing item is net worth.

Main principles and classifications

ESA 95 methodology

The ESA 95 (European System of Accounts) directive is a binding methodological basis for compiling the quarterly financial accounts in the Czech Republic. Compliance with the statistical standards and classifications ensures consistency with the overall system of national accounts, of which they are part, as well as international comparability. The following methodological principles and classifications are relevant to the production of the quarterly financial accounts:

Fundamental methodological principles

Accounting rules: National accounting is based on the double-entry accounting principle. Each transaction must be recorded twice, once as a resource (i.e. a change in liabilities) and once as a use (i.e. a change in assets). The total of transactions recorded as resources and the total of transactions recorded as uses must be equal, thus permitting a check on the consistency of the accounts.

Valuation: Financial assets and liabilities are valued at current market prices as of the balance sheet date. Where only nominal prices are available, these are converted to market prices using an estimate.

Consolidation: The financial accounts are compiled primarily as unconsolidated accounts. Therefore, all assets and liabilities must be recorded on the accounts regardless of whether they relate to transactions outside or within the sector monitored.

Timing: Records on the accounts are made on an *accrual* basis. The system records flows based on title, i.e. when claims and obligations arise, are transformed or are cancelled. Any flow should be recorded at the same point of time for all institutional units involved and in all accounts in question.

Classifications: As in the national accounts, institutional units and financial instruments are subject to unified classification to ensure greater clarity and broader analytical use of the financial accounts. Institutional sectors are the main economic units monitored in the national accounts. First of all, they are classified on a territorial basis (resident versus non-resident sectors). Resident units are subdivided into sectors and subsectors according to their economic behaviour, specified in terms of their principal economic function and type of activity. For the quarterly financial accounts, resident units are divided into five main sectors; the financial corporations and general government sectors are broken down into subsectors to allow a more detailed description.

The classification of financial instruments is based primarily on their liquidity and legal characteristics. Financial assets yield property income or holding gains and must have counterparts in the liabilities of other institutional sectors. Therefore, the same financial instruments feature on both sides of the accounts. The only exception is monetary gold and special drawing rights, which have no counterpart liabilities in the system of resident sectors.

At present, a new version of the national accounts methodology, ESA 2010, reacting to changes in the real economy and the financial markets in the last 15 years, is under preparation. The most significant changes include an increase in the number of institutional subsectors in the financial institutions sector and an increase in the number of financial instruments monitored. This methodology is expected to be put into practice in 2014.

Classification of economic sectors

National economy, total (Residents)	**(S.1)**
Non-financial corporations	**(S.11)**
Financial corporations	**(S.12)**
General government	**(S.13)**
Households	**(S.14)**
Non-profit institutions serving households	**(S.15)**
Non-residents	**(S.2)**
Financial corporations:	
Central bank	**(S.121)**
Other monetary financial institutions	**(S.122)**
Other financial intermediaries	**(S.123)**
Financial auxiliaries	**(S.124)**
Insurance corporations and pension funds	**(S.125)**
General government:	
Central government	**(S.1311)**
State government	**(S.1312)**
Local government	**(S.1313)**
Social security funds	**(S.1314)**

Classification of financial instruments

Monetary gold and SDRs	**(AF.1)**
Monetary gold	**(AF.11)**
Special drawing rights	**(AF.12)**
Currency and deposits	**(AF.2)**
Currency	**(AF.21)**
Transferable deposits	**(AF.22)**
Other deposits	**(AF.29)**
Securities other than shares	**(AF.3)**
Securities other than shares, excluding financial derivatives	**(AF.33)**
Short-term securities other than shares, excluding financial derivatives	**(AF.331)**
Long-term securities other than shares, excluding financial derivatives	**(AF.332)**
Financial derivatives	**(AF.34)**
Loans	**(AF.4)**
Short-term loans	**(AF.41)**
Long-term loans	**(AF.42)**
Shares and other equity	**(AF.5)**
Shares and other equity, excluding mutual funds shares	**(AF.51)**
Quoted shares, excluding mutual funds shares	**(AF.511)**
Unquoted shares, excluding mutual funds shares	**(AF.512)**
Other equity	**(AF.513)**
Mutual funds shares	**(AF.52)**
Insurance technical reserves	**(AF.6)**
Net equity of households in life insurance reserves and in pension funds reserves	**(AF.61)**
Net equity of households in life insurance reserves	**(AF.611)**
Net equity of households in pension funds reserves	**(AF.612)**
Prepayments of insurance premiums and reserves for outstanding claims	**(AF.62)**
Other accounts receivable/payable	**(AF.7)**
Trade credits and advances	**(AF.71)**
Other accounts receivable/payable, excluding trade credits and advances	**(AF.79)**

Data sources

The quarterly financial accounts are compiled statistics

The main purpose of the financial accounts statistics is to provide a picture of the financial situation across economic sectors which is consistent in terms of methodology and data and which allows comparison and monitoring over time.

However, as in general there are no direct data sources collected exclusively for the financial accounts, detailed statistics covering selected areas of the financial system are used to compile the financial accounts. These may focus on the financial linkages of a selected set of institutional units with similar economic behaviour (e.g. banks) or on the use of financial instruments across the economy (e.g. securities statistics). In this sense, the primary input data are regarded as *partial* statistics and the quarterly financial accounts as secondary – compiled – statistics. The overall data quality, the level of detail and the time lag with which the data are made available depend fundamentally on the properties of the partial statistics.

Data coverage

The complexity of the financial accounts and the breadth of their coverage in the quarterly financial accounts statistics place considerable requirements on data sources. The high demand for input data can be covered largely by partial statistics or additional sources, but full coverage is impossible and estimates are to some extent unavoidable. Generally, the situation is most complicated as regards the links of economic sectors, such as non-financial corporations and households, i.e. sectors with the large number of entities, that are not subject to supervision. In this area, it is always necessary to assess carefully whether additional surveys place an excessive statistical burden on entities or whether they are efficient and provide relevant economic information.

Counterparty

The quarterly financial accounts statistics deal with the financial aspect of the economy from the point of view of financial instruments, i.e. instruments for which one entity's asset is always another entity's liability. This *mirror* feature offers the option of collecting data either from entities investing in financial assets or from issuers/debtors. If data are collected from at least one of these parties, the type of relationship and the counterparty are clearly identified. Information from *counterparties* thus makes it possible to cover data from sectors and areas where direct data collection is either difficult or impossible.

Ensuring consistency

The partial statistics overlap to some degree as a result of economic links, and in some cases the same information may be published under both partial statistics. A comparison of mirror data from the partial statistics reveals that the data very often differ. While such discrepancies do not usually need to be addressed within the partial statistics, identifying and eliminating them is a key task and a major aid in the compilation of the quarterly financial accounts as a consistent information system. Discrepancies between data do not necessarily imply that one of the statistics is wrong. There are several possible reasons for discrepancies. Besides methodological differences (such as different definitions or valuations of financial instruments across the statistics), discrepancies may be due to the use of different primary sources, different update frequencies of reporting entities or different transaction record times. However, genuine errors cannot be ruled out either. This places increased demands on data users as regards knowledge of the specific content and definition of financial instruments in the financial accounts.

In justified cases, and especially where it is impossible to ensure consistent and methodology-compliant data in any other way, none of the partial statistics is respected: an alternative approach is selected, resulting in data that are different but methodologically unified and sectorally consistent. The principle of consistent reporting is crucial and superior to the other principles within the quarterly financial accounts. Such cases relate mainly to problems with financial instrument valuation, as the price of an instrument can be viewed differently by holders in different sectors or by its holder and issuer (the debtor). The general principle of market price valuation can only be observed for financial instruments traded on a public market. In other cases, the market price is as a rule approximated using a complementary economic approach.

TABLE I

TABLE I

Overview of valuation methods for financial instruments

Instrument	Valuation method
Monetary gold and SDRs	Current market value
Currency and deposits	Book value
Securities other than shares	Book value
Loans	Book value (recorded on a gross basis)
Quoted shares	Current market value
Unquoted shares	Own funds at book value
Other equity	Nominal value
Mutual funds shares	Current market value
Insurance technical reserves	Book value
Other accounts receivable/payable	Book value

Note: Book values may be identical to current market values

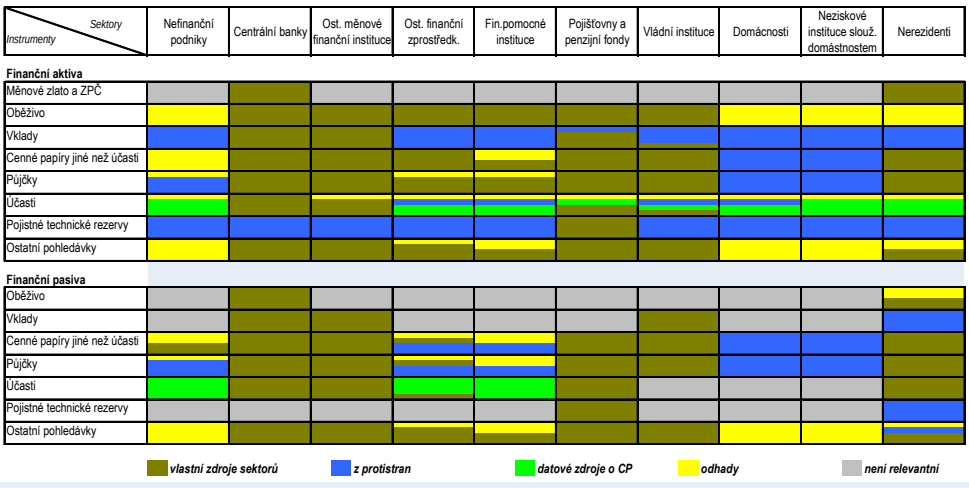
Use of estimates

Financial relationships not covered by data from the relevant sector or counterparty are subject to estimates. The economic purpose of estimates is not to establish an exact value but to provide representative and up-to-date information that can be used to identify the strength of financial links and any financial risks relatively reliably.

TABLE II

TABLE II

Coverage of financial accounts by data sources by sector and instrument



Data sources

The most frequently used techniques involve temporal dissagregation of annual time series and grossing up based on balance sheet identities (*residual* grossing up), but other approaches are used as well. Where a financial account item can be estimated by different methods, these estimates are compared and their economic relevance assessed.

The compilation of the quarterly financial accounts depends on dozens of primary sources, some of which are internal and some of which are from external data providers. The Czech Statistical Office (CZSO) is the key partner as regards data sources and elaboration of financial accounts methodology. The statistical areas where primary sources originate and which the quarterly financial accounts draw on include the following:

Internal sources:

- Banking statistics
- International investment position
- Financial balance sheets of insurance corporations and pension funds
- Statistics on financial corporations engaged in lending (FLC)
- Statistics on collective investment funds (CIF)
- Additional information (prices, exchange rate lists, etc.)

External sources:

- General government balance sheets and the quarterly financial accounts of general government (source: CZSO)
- Quarterly household sector non-financial accounts (source: CZSO)
- Balance sheets of non-financial corporations and other survey indicators (source: CZSO)
- Annual financial accounts (source: CZSO)
- Securities Register (source: Securities Centre, Central Securities Depository)
- Information on securities (source: commercial data providers)
- Additional information on collective investment funds (source: Czech Capital Market Association)
- Additional information (annual and half-yearly reports of institutions, Internet sources)

Revisions policy

Partial statistics entering the compilation process as primary data have various publication times after the end of the reference period and also different revisions policies. This in turn affects the revisions to and publication of the quarterly financial accounts data. Generally speaking, efforts are made to use the latest available information for already released quarters. Revisions to the previous quarter's data based on revisions to individual source statistics are therefore released together with the data for the current quarter. In the longer term, the whole time series is revised where appropriate (e.g. due to changes in methodology).

Process of compilation of the quarterly financial accounts

The compilation of the financial accounts is based on hierarchization of data sources. Input data may differ in quality, availability at the required time and

degree of detail. In addition to accuracy, data quality means compliance with the ESA 95 methodology. Setting priorities on data sources allows the use of a lower quality data source only if data are not available from sources higher up in the hierarchy. However, sources not used during compilation have a supportive and checking function.

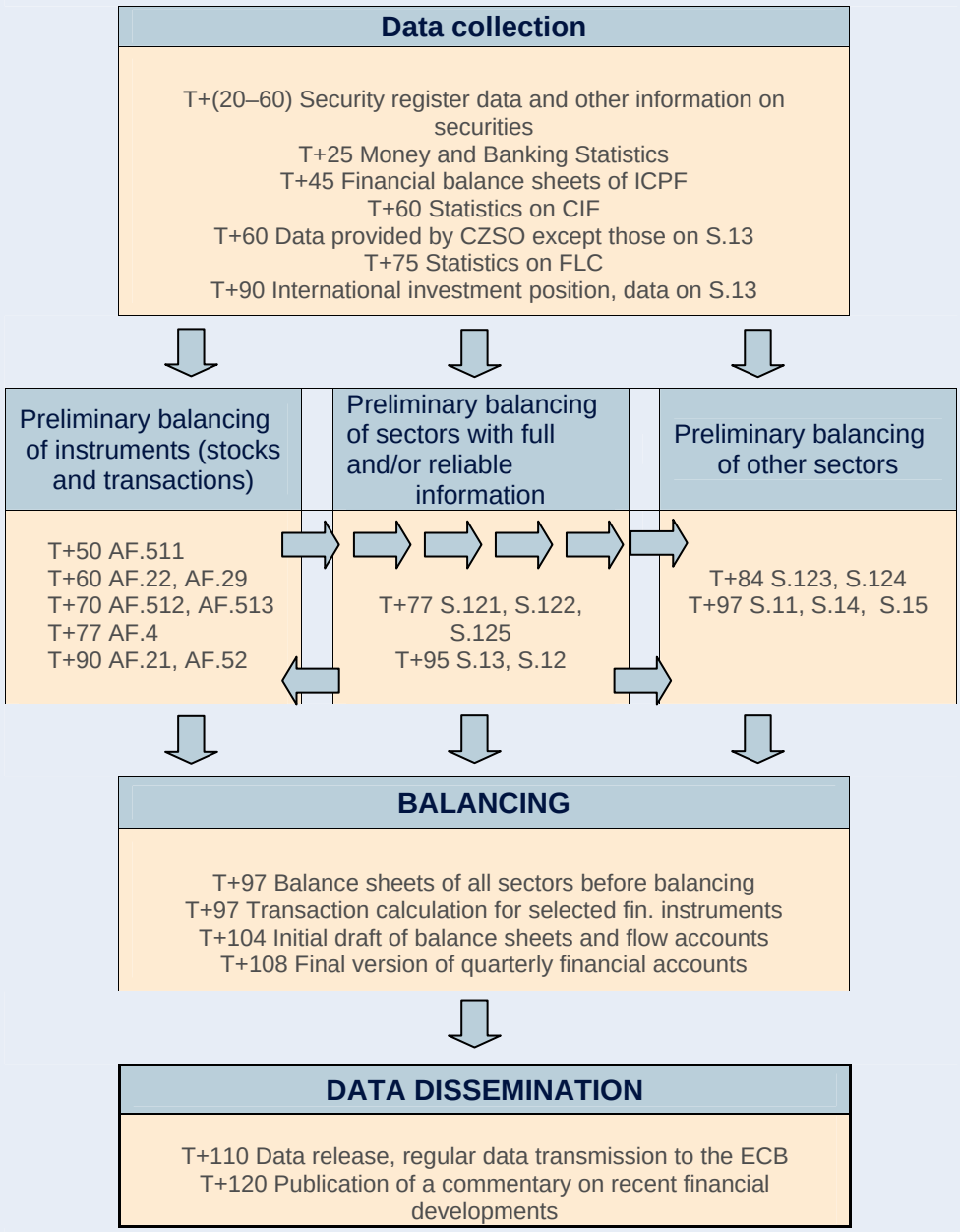
The hierarchy of primary sources is not identical across all instruments and sectors and can change over time. The need for a data hierarchy is due among other things to discrepancies in partial statistics.

Data source hierarchisation

CHART I

CHART I

The compilation process



Balancing	During the compilation period, the balance sheets for sectors and financial instruments, or parts thereof, are compiled on an ongoing basis as the source data become available. This allows us to assess the economic content of the data and deal in advance with any new discrepancies between the primary sources. Parallel balance sheet compilation by sector and financial instrument and the interaction between these approaches enhance the system's economic relevance and create a framework for better integration of the items estimated.