Quarterly Financial Accounts in Slovak Republic

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Summary

This paper deals with methodological issues concerning the compilation of quarterly financial accounts (QFA) and with the economic and analytical view on data development in last years. As a part of the methodology, there is a description of a position of QFA in the European System of Accounts 95 (ESA 95) and the data coverage, consistency and compilation process of QFA in Slovak Republic. Analytically, very interesting are the recent trends in QFA data relating to financial and economic crisis and euro adoption in Slovakia since 2009. The financial behaviour of households, non-financial coroporations, general government and financial institutions has changed in the way of financing and investment and distribution of financial wealth across institutional sectors. The euro adoption in the financial crises environment has brought also interesting movements in the structure of financial flows between households, non-financial enterprises, financial corporations and rest of the world with changes in amount of cash in circulation, deposits and loans.

1. Introduction

Quarterly financial accounts (QFA) are an integral part of the European system of national accounts ESA 95 (European System of Accounts 1995). Their main role is to provide exhaustive information about financial flows between individual entities of national economy and between national and foreign entities, or about the volume (stocks) of financial assets available to these economic entities. Based on information thus obtained it is then possible to analyze in particular the transmission mechanism of the monetary policy adopted by the central bank and, using the volume and structure of owned financial assets and the volume and structure of financial indebtedness of economic entities, to monitor the rate of stability of the country's financial system.

The National Bank of Slovakia (NBS) is primarily responsible for compilation and publication of quarterly financial accounts of the entire economy, except for the general government sector that is managed by the Statistical Office of the Slovak Republic (SO SR). In preparing the QFA, the NBS closely cooperates also with the Ministry of Finance of the Slovak Republic (MFSR) and with financial sector entities. The NBS obtains data of non-financial entities from reports of the SO SR, from the balance of payments prepared by the NBS, or from the existing statistical reports, i.e. from data of counterparts[1] (e.g. details about household deposits with banks are not obtained directly from the households, but from the statistical reports of the banks).

2. QFA in the ESA 95 system

The ESA95 system records two basic kinds of information: flows and stocks[2]. Flows refer to actions and effects of events that took place within a given period of time (e.g. an increase of new household deposits in one quarter), while stocks refer to positions at a point of time (the total volume of all household deposits at the end of the specific quarter).

2.1. Flows of financial assets and liabilities

Flows reflect the creation, transformation, exchange, transfer or extinction of the financial asset or liability, and there are two kinds of economic flows: a) transactions, and b) other changes in assets.

a) transactions

Financial transactions represent transactions involving financial assets and liabilities which are made between the individual economic entities within one country and between the national and foreign entities, and which are recorded in a financial account[3]. They contain information about the actual acquisition and disposal of financial assets and liabilities, i.e. the financial transactions do not include changes in financial assets and liabilities resulting from a change in price, classification, and structure.

b) other changes in assets and liabilities

Other changes in assets and liabilities record changes that are not the result of transactions. They are either 1) other changes in the volume of assets and liabilities, or 2) holdings gains and losses

1) the given category includes changes resulting from reclassification and restructuring of institutional sectors or financial assets and liabilities, as well as unilateral cancellation of debt and uncompensated seizure of assets

[1] The method of collecting source data for the purpose of preparing the QFAs is given in chapter "Data sources for QFA compilation" on page 3.

[2] According to the ESA 95, flows and stocks explain economic processes in all types of economic assets and liabilities, i.e. both in financial and non-financial assets and liabilities.

[3] The term "financial account" according to the definition of the ESA 95 means, within the sequence of national accounts, one of the accumulation accounts which represents transactions involving financial assets and liabilities (the stocks of financial assets and liabilities are referred to as the "balance sheet"). In other words, the QFA as a whole are part of both accumulation accounts (transactions) and balance sheet accounts (stocks).

2) holdings gains and losses are the result of changes in the price of assets, i.e. they are experienced with all financial assets and liabilities in consequence of their holding without any transformation of the same

2.2. Stocks of financial assets and liabilities

Stocks are holdings of financial assets consisting of financial assets and liabilities at a point of time, and they are recorded at the beginning and end of each accounting period (opening and closing balance sheet). Within its boundaries, the ESA 95 system is exhaustive in respect of both flows and stock. This implies that all changes in stocks can be fully explained by recorded flows.

According to the above-mentioned description of the stocks and flows of financial assets, a complete financial account for national economy for the specific quarter would look like as follows:

the value of financial asset/liability in the opening balance sheet

\+ financial transaction: total value of acquired assets/liabilities less total value of sold assets/liabilities in the course of the accounting period
\+ other changes in the volume of assets and liabilities
\+ holdings gains and losses

= the value of financial asset/liability in the closing balance sheet

3. Data sources for QFA compilation

As already mentioned in the introduction, the main role of the QFA is to give a comprehensive picture of the financial flows within the national economy as well as in relation to foreign countries. In this regard it is important, in order to create top-quality data and analytical outputs, to provide for the maximum possible coverage through all available data as well as for comparability of such data in time.

3.1. QFA as compiled statistics

As the QFA represent all financial transactions between all entities in the national economy and in relation to foreign countries, it is necessary that various data sources be used in their compilation. The content of these data sources is either focused on the specific area of business activity (e.g. data from reports for institutional sectors S.121 and S.122 - monetary financial institutions), i.e. they are focused on economic activities and financial instruments related to the specific sector, or it is focused on a specific financial instrument type (e.g. data on securities obtained from the Central Depository's database). Data thus obtained are considered partial primary inputs and the QFA are, therefore, the secondary input from the given sources. The overall quality, time availability, and intercomparability depend to a great extent on such input statistics.

3.2. Data coverage and sources for QFA compilation

The volume of available data for the needs of the QFA varies with the individual sectors and sub-sectors as well as with the individual financial instruments. In principal, the NBS uses two kinds of the source data: internal and external. The most reliable and the most complete are the internal data sources from which data for sectors S.12 Financial corporations and S.2 Rest of the world are withdrawn. This is because the NBS has, due to its supervision on financial markets, long-time experience in collecting data from financial institutions, and because it is possible to address and obtain data from all entities within the given sector. To be more concrete the relevant data sources for ESA 95 sectors and subsectors are as follows:

Sector	Source
S.121+S.122 Monetary financial institutions	Money and banking statistics
S.123 Other financial intermediaries	Statistics of financial intermediaries (leasing companies, factoring companies, and hire purchase companies) and statistics of mutual funds)
S.124 Financial Auxiliaries	Statistics of mutual fund management companies, security dealers, stock exchange and central depository, companies managing pension funds and supplementary pension funds
S.125 Insurance corporations and pension funds	Financial balance sheets and statistical data of insurance corporations, pension funds and supplementary pension funds
S.2 Rest of the world	Balance of payments and International investment position

Within the external source data, the most important role is played by the SO SR and MFSR in whose cooperation it is possible not only to compile the QFA but also to compare the QFA with quarterly non-financial accounts (QNFA) and with annual financial accounts (AFA) for which the SO SR is responsible.

Sector	Source
S.11 Non-financial corporations	Sample survey of selected companies (SOSR)
S.13 General Government	Financial balance sheets of general government entities (MFSR) and quarterly financial accounts of the government (SO SR), State final account (MFSR)
S.14,15 Households and NPISH[4]	Households sample survey (SO SR)

3.3. Data consistency

However, in many cases the data about the specific financial instrument are available from both sectors and sub-sectors concerned. Despite the fact that both parties report data about the same financial instrument (reported as an asset by one sector and as a liability by the other sector), it often happens that such data differ from each other. The given discrepancy is not necessarily a problem for the source sectors, but the identification and subsequent elimination of the identified differences is a key task of significant importance for the compilation of the QFA as a consistent system. The originated differences do not necessarily result from errors in one of the source statistics. There are several possible causes for that. One of the main reasons is a different methodology of data reporting in the individual sectors. It means, for example, different definition of the financial instrument or valuation of the same instrument in accounting and statistical reports of the individual sectors. Another source of differences can be, for example, different period of updating of the reported data or different moment of recording of a financial transaction (e.g. acquisition of shares dated 30/03 can be recorded in the reports of one sector as a transaction of 1Q and in the other sector as a transaction of 2Q of the specific year). With regard to the fact that account needs to be taken of possible mistakes, stricter requirements are imposed on data users who are to provide for reliable control mechanisms of the acquired data.

The principle of data consistency is given precedence over all other principles of the QFA compilation. It is particularly important in connection with the recording of the correct value of financial instruments, because the asset holder and the debtor (issuer) can perceive the price of one asset (it mainly refers to debt and equity securities) differently. Generally, the principle of market valuation can only be applied to financial assets that are publicly traded on the market; otherwise it is necessary to choose a different economic concept of the financial asset valuation.

[4] Non-profit institutions serving households

Table 1 Overview of the valuation of financial instruments in the QFA[5]

Financial instrument	Valuation method
Monetary gold and special drawing rights	
Monetary gold	Market price
Special drawing rights	Face value[6]
Currency and deposits	Face value
Securities other than shares	Face value + market price
Loans	Face value
Quoted shares	Market price
Unquoted shares	Share capital in book value
Other equity	Face value
Mutual funds shares	Market price
Insurance technical reserves	Market price
Other accounts receivable/payable	Book value

3.4. Counterparts

The QFA make it possible to monitor financial flows in economy using individual financial instruments, while in the case certain financial instrument is an asset of one sector, it must be automatically displayed as a liability of other sector. The given double-entry record of financial instruments makes it possible to collect data about one financial flow both from an entity holding certain financial asset and from an entity issuing the given asset, i.e. from the debtor (in the case of securities, for example, the issuer is a debtor in respect of the security holder). In the case of certain financial instruments, when data is available only from one of parties to the financial transaction, split out by counterparts, the other party to the financial transaction is determined automatically, i.e. from the counterpart. The given system of data collection from counterparts is mainly used in obtaining data about sectors from which it is impossible to collect the exact data (e.g. household sector).

3.5. QFA compilation process

The following factors play a key role in the QFA compilation process: time availability of data, quality within the meaning of methodological requirements, and required structure of the existing data. The "incoming" data need to be evaluated continuously in terms of their completeness, quality, and economic interpretability, and the asset and liability sides balanced continuously. In the event that different data regarding assets of one sector and liabilities of the other sector are reported between or within the sectors for a financial instrument, possible causes of discrepancies are analyzed and a consensus on "giving preference" to a data source of a higher quality to be used in equalizing the asset and liability counterparts reached. In certain cases, when it is possible to identify exactly the data source (in the case of the financial market and general government entities), consultations are made with the given entities of the source data regarding the check on the correctness of the reported data and the elimination of possible mistakes and inaccuracies.

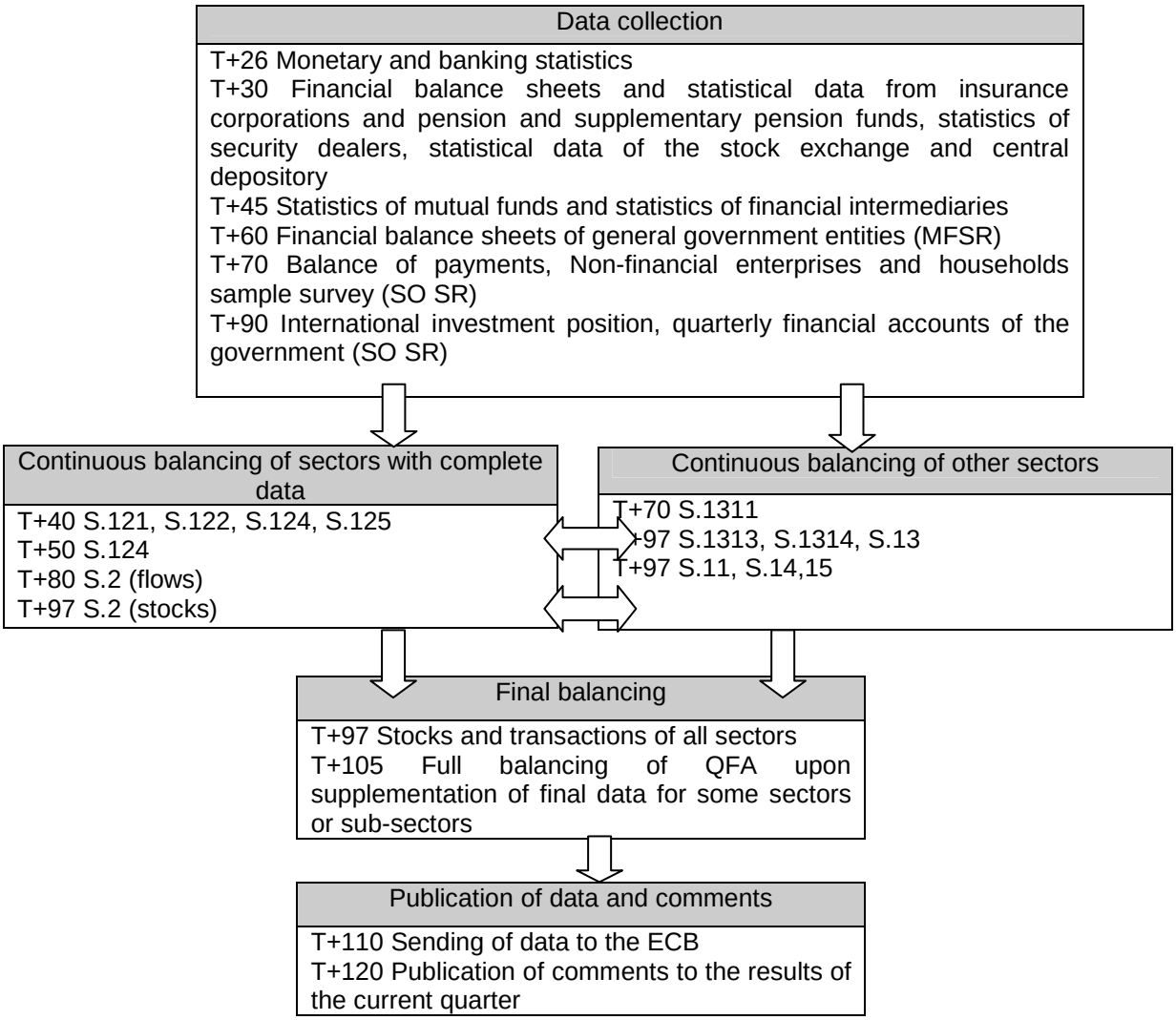
There exist certain differences in compiling and balancing the stocks and transactions in the QFA. Data concerning the stocks are generally more available and of a higher quality in the majority of the institutional sectors. Data concerning transactions are available in full or in part in the majority of sectors, except for the sector S.11 – non-financial institutions and S.14, 15 – households and non-profit institutions serving households. In the majority of sectors, full or partial availability of data concerning transactions is related to the fact that transaction data can be complied using two different methods. The first one is the so-called direct method, i.e. the individual sectors disclose data directly about transactions. The second method, the so-called indirect method, means at the first stage the collection of data about stocks, revaluations, reclassifications, and exchange rate differences of data

[5] Interests on financial assets and liabilities are recorded in the QFA in the respective financial instrument as if it was reinvested

[6] Face value is the price of financial instrument shown on the means of the payment or the sum in which the account receivables/payables are denomited

for the individual financial instruments, while the transaction data is obtained as a difference of stocks between two quarters less the values concerning other flows (revaluations, reclassifications, and exchange rate differences). Due to the fact that different types of data are used between and within the individual sectors for calculation of transactions[7], the transactions are calculated using a combination of the both methods.

The below scheme describes the procedure followed in compiling the QFA



4. Economic and financial crisis analysed in quarterly financial accounts

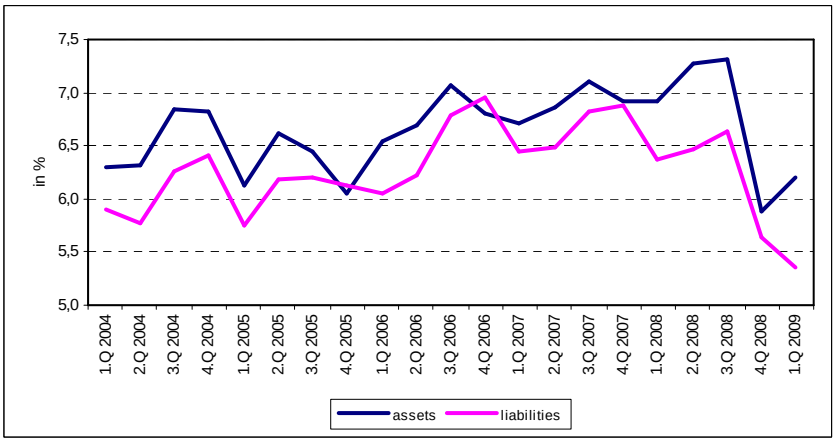
4.1. Trade credits and advances

The development of trade credits and advances is usually in line with economic and business cycle of the economy. When we look at the history of trade credits and advances (both assets and liabilities) we can see that it was also the case of Slovakia. In the years 2006 – 2008, the period of robust economic growth, the trade credits and advances reached the peak in their share on total assets and

[7] Data concerning exclusively transactions exist in some sectors, and data concerning exclusively other flows exist in the other sectors. There are also sectors in which some entities report data about transactions, while other entities of the same sector report exclusively data about non-transactions. There are also sectors that report no data necessary for the calculation of transactions. In such case the calculation of the difference in data about stocks between two consecutive quarters is combined with data obtained from counterparts.

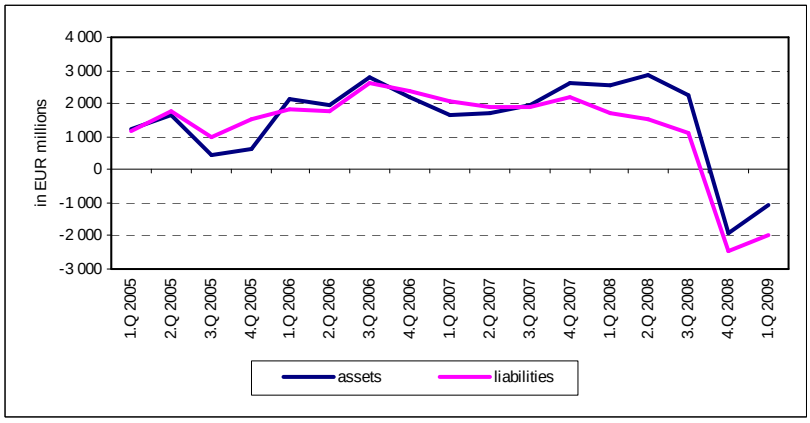
liabilities. Similarly, at the end of 2008 and beginning of 2009, when financial and economic crisis came in force in Slovakia, those financial accounts items declined rapidly.

Graph 1 Share of non-financial corporations trade credits and advances on total assets/liabilities



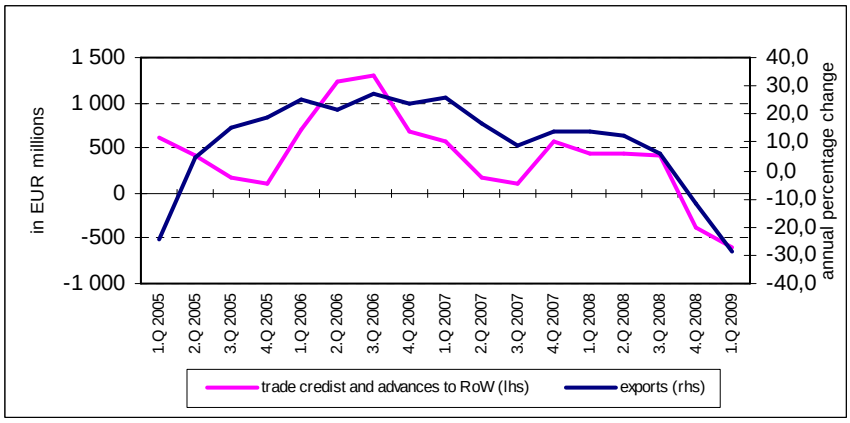
When we look at the develpoment of moving sum we will see that in first two or three quarters of 2008 the trade credits and advances on the assets side continued in slow growth which was different to move on the liabilities side. One of the reasons of that increasing gap could be that in the time of economic slowdown the payment conditions in purchasing the goods are becoming tougher in comparison with conditions in selling the goods. Another explanation is that in bad times the amount of goods sold sharply decreases and so the sum of money payable declines.

Graph 2 Develpoment in non-financial corporations trade credits and advances (4 quarter moving sum)

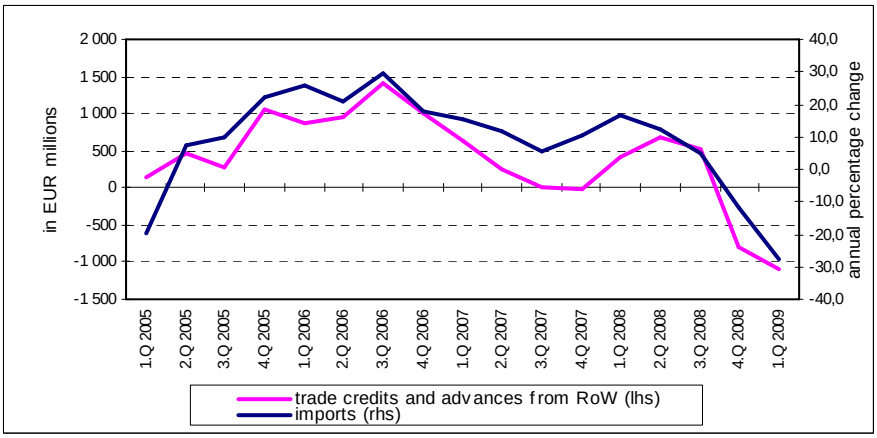


About one third of all trade credits and advances represents the relationship between domestic and foreign enterprises. In the years of improvement of trade balance in 2007 and 2008 it seems that improvement of net trade credits and advances was even higher. This can be interpreted as that in good times the payment discipline of both domestic and foreign firms is getting better. However, in the period of recession there is an evidence of common speed of decline between trade credits and advances on one side and exports and imports on the other side.

Graph 3 Trade credits and advances between Non-financial corporations and Rest of the World (4 quarter moving sum of trade credits and advances)



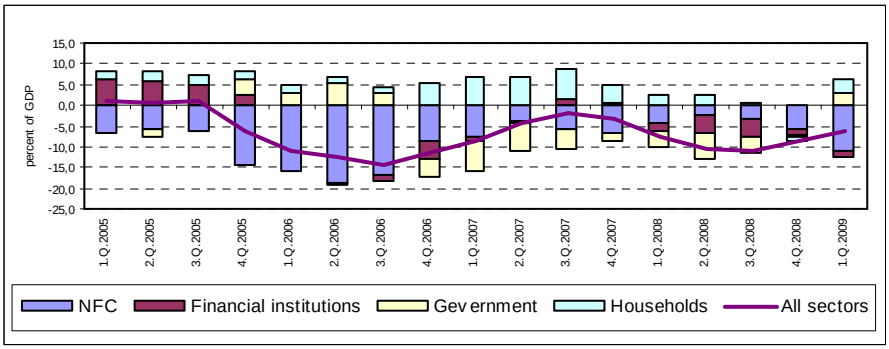
Graph 4 Trade credits and advances between Non-financial corporations and Rest of the World (4 quarter moving sum of trade credits and advances)



4.2. Net lending/net borrowing

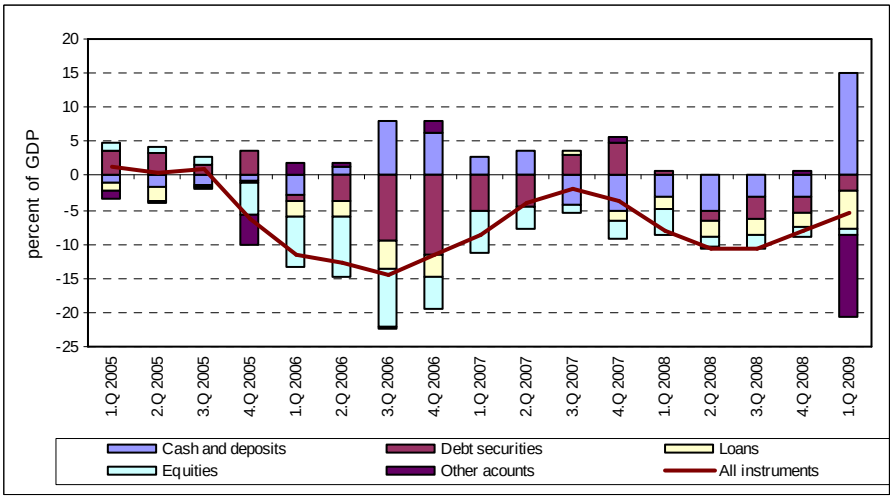
The Slovakia net lending/net borrowing development mirrors the current and capital accounts development. In the long run, the Slovakia experiences negative contributions of current and capital accounts to the GDP growth and thus the net lending/net borrowing deteriorates as well. As we can see from the followign graph, the main contribution to increasing net borrowing comes from Non-financial corporations and government sectors. The most dumpening effect have the financial flows of households.

Graph 5 Slovakia net lending/net borrowing by sectors



As regards the financial instruments structure, the main contributor to negative net financial flows are the equities, loans and debt securities. There was a specific development at the end of 2008 and beginning of 2009 when the amount of deposits rocketed and the other liabilities declined sharply. Both movements were connected with the adoption of common currency euro, when before the euro changeover mainly households and non-financial corporations deposited their money to banks and the central bank increased their liabilities connected with the payment system TARGET.

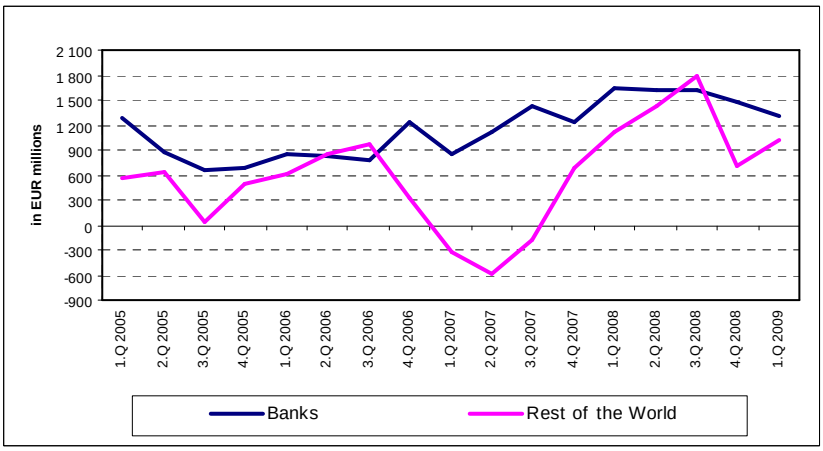
Graph 6 Slovakia net lending/net borrowing by instruments



4.3. Others forms of financing

When we make a comparison between the opportunity of non-financial corporations to be financed by trade credits and bank loans we can see that in the contrast with trade credits there was no actual decline in loans granted to non-financial corporation in the end of 2008. There was only decline in the growth pace of them. More volatile was the development of loans granted by rest of the world. Until the 2nd quarter 2007 the trend in loans granted from RoW had been in line with foreign direct investment to Slovakia. Since then however, the amount of foreign investment started to decline but the loans inflow had been steeply increasing up to 3th quarter 2008. In the end of 2008 the cummulative amount of loans from RoW has lowered.

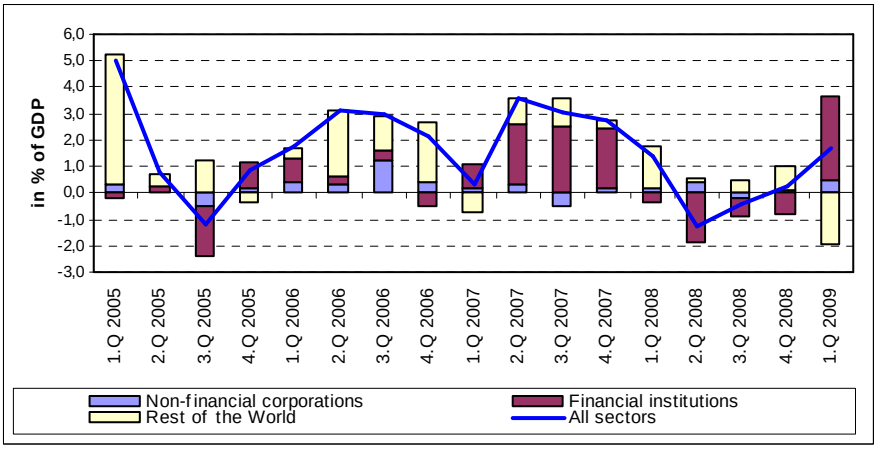
Graph 7 Non-financial corporations financing through long-term loans (4 quarter moving sum)



One of the main instruments in fighting with results of financial and economic crisis are the large expenditures of government. There is some trend, for the last four quarters, in revival of government expenditures in Slovakia as well. The speed of it, however, does not prove substantial flow of funds from government to other sectors of economy. At least not as much as expected. One of the reasons

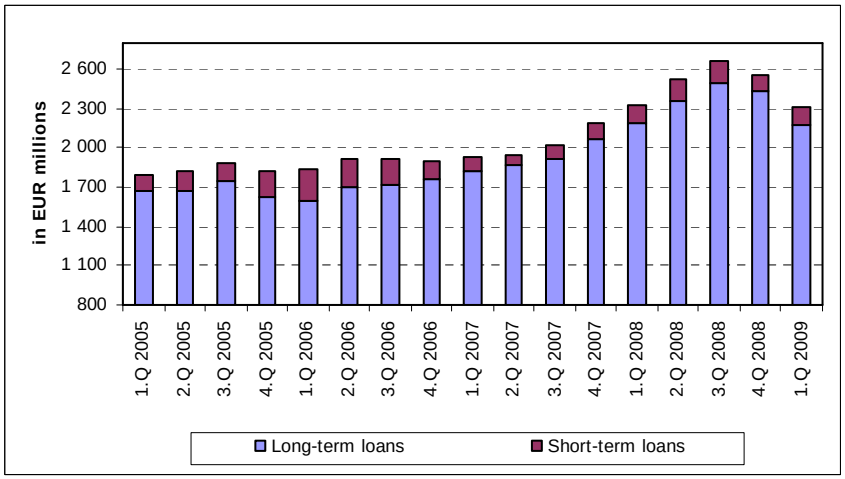
of little evidence of support is that the largest government bonds issue has been done in the second quarter of 2009. There is also very hard to show the structure of government help to economy. From the data available, the largest amount of government assets consist of other accounts receivable, which means that there has been inrease in government claims on taxes, dividends, social contributions and other items connected with time delay of expacted payments. These data, however, are expected to be revised with the publication of 2nd quarter 2009 data and thus the exact structure of government expenditures will be known in October 2009.

Graph 8 Central government bond issues (net change)

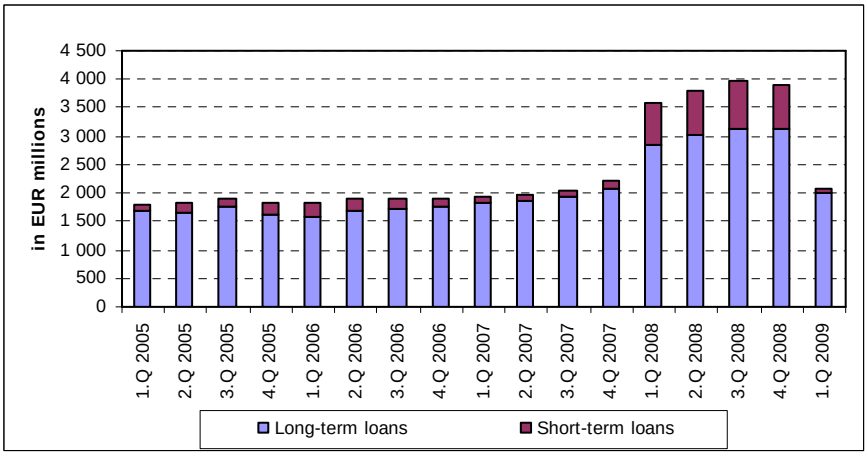


Loans represent almost 88% of households financing in Slovakia and most of them are long-term loans and are financed by banks. The main increase in the amounts of long-term loans granted started to be performed in the period of dynamic growth of purchasing power of households, increase of real-estates prices and high demand for them in the years 2007 and 2008. In that period not only the amount of long-term loans from banks increased, but also the loans (both long-term and short-term) granted by hire purchase and leasing companies which can be seen in the graph 10. At the beginning of 2009 the pace of growth of this sort of loans returned back to the period before 2008. In the case of long-term loans from banks, their contribution to growth started to descend in the second half of 2008 with further expected continuation of decline in 2009.

Graph 9 Households financing from banks (4 quarter moving sum)



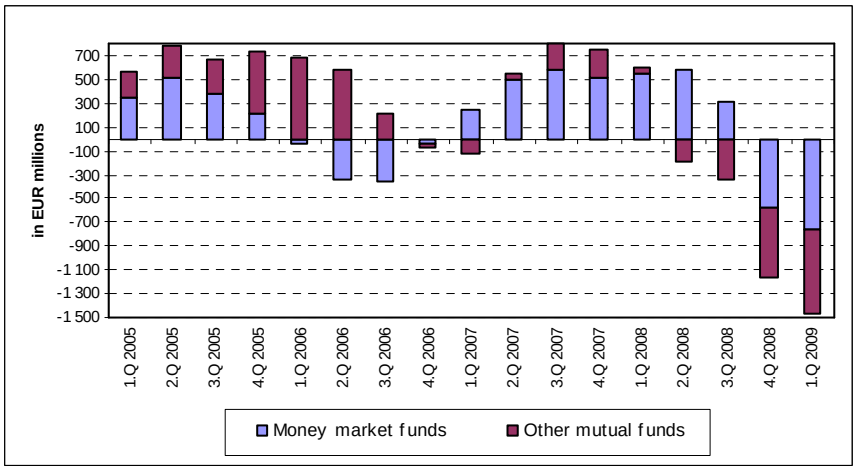
Graph 10 Households financing from all financial institutions (4 quarter moving sum)



4.4. Households investments

One of the clear influences of crisis on households behaviour on financial markets in Slovakia was the huge sale of money market and other mutual funds investments. Other mutual funds investments started do outflow already at the beginning of 2008, the money markets funds have joined the trend in the second half of 2008. The Slovak households have reduced their investment to open funds to almost one half of the amount invested until the end of 2007.

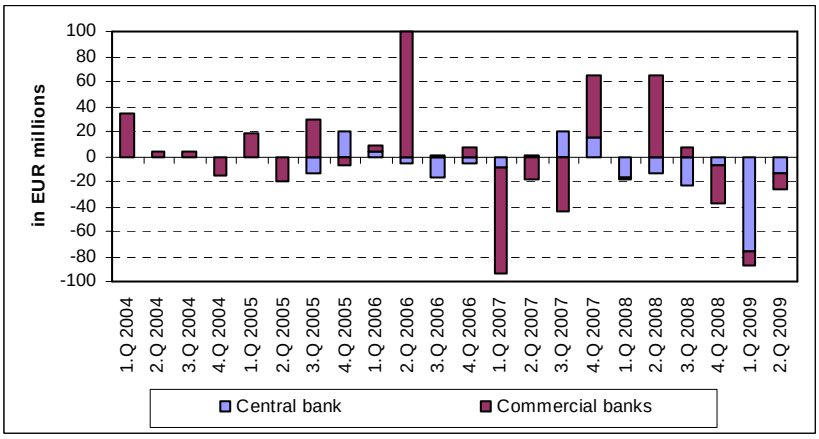
Graph 11 Households investments in mutual funds (4 quarter moving sum)



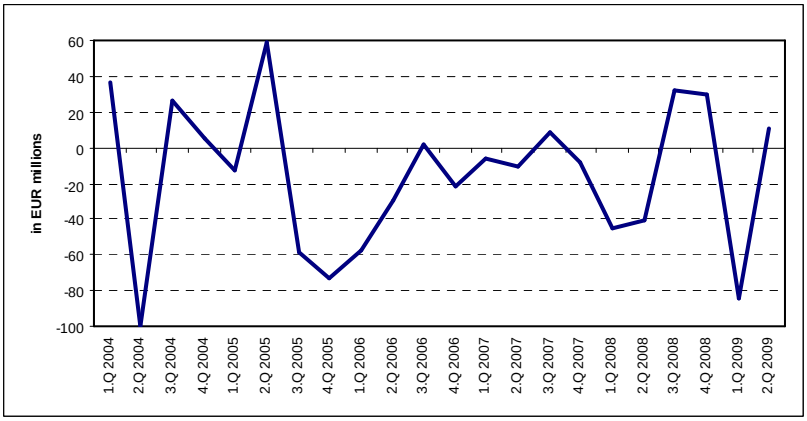
4.5. Revaluations

One sort of information that can be withdrawn from financial accounts is the information on revaluation of financial instruments. The most precise and with high quality is the data on revaluations of banks as this data report all commercial banks together with central bank directly. When we look at the data on revaluations on derivatives, long-term debt securities and loans, we can see at the end of 2008 and beginning of 2009 there have been large negative revaluations mainly on derivatives and long-term debt securities of central bank. The commercial banks experienced at the end of 2008 large write-offs and write-downs of their loans.

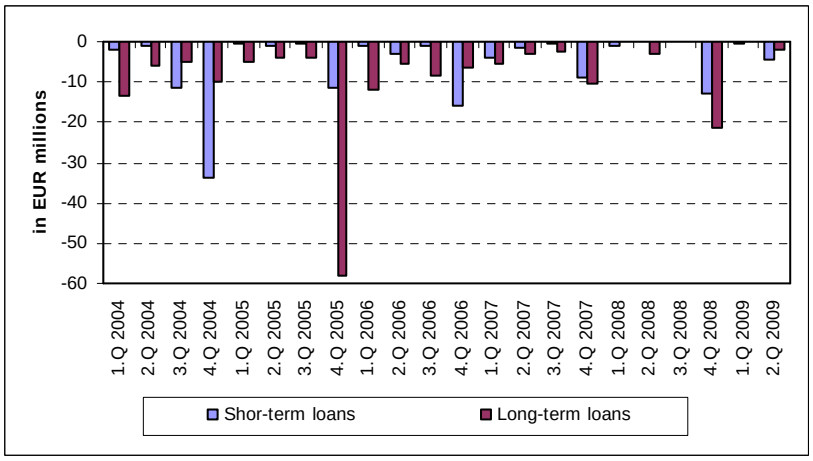
Graph 12 Revaluations of financial derivatives (net value)



Graph 13 Revaluations of long-term debt securities in portfolio of central bank



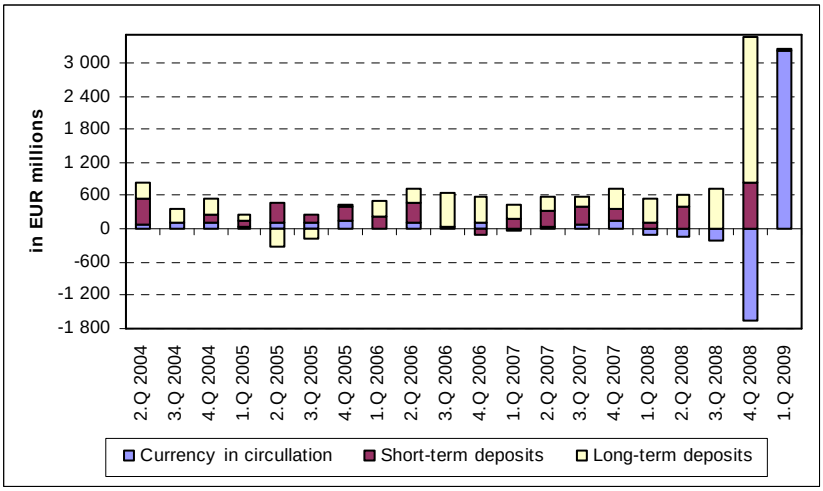
Graph 14 Loans revaluations granted by banks



5. Euro adoption in Slovak Repupblic

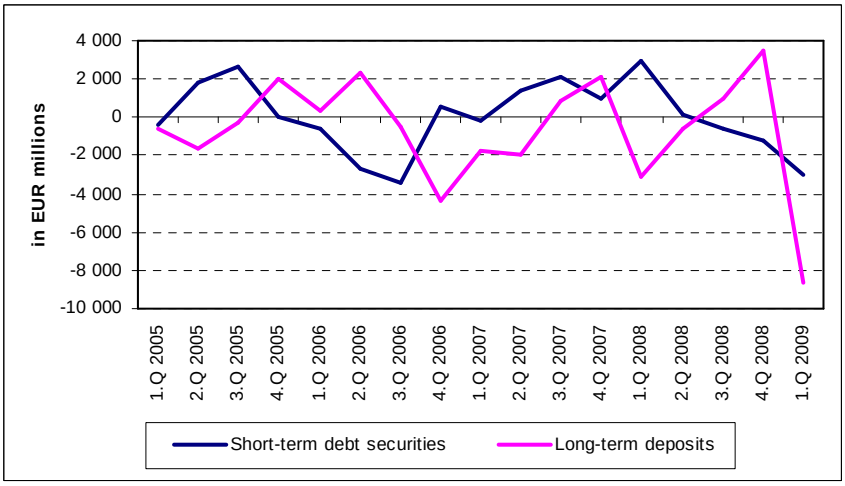
On January 1, 2009 the Slovak Republic has adopted the common currency euro. Before the changover, the situation on financial markets had been quite hectic. There is an evidence, on graph 15, what has happened with currency in circulation in hands of households and their deposits. In order to smoothly change the slovak koruna for euro the households started to deposit all their available money in banks. Then, in the 1st quarter of 2009 a new release of euro banknotes and coins occurred with amount above EUR 3 bn.

Graph 15 Currency in circulation and deposits of households (4 quarter moving sum)



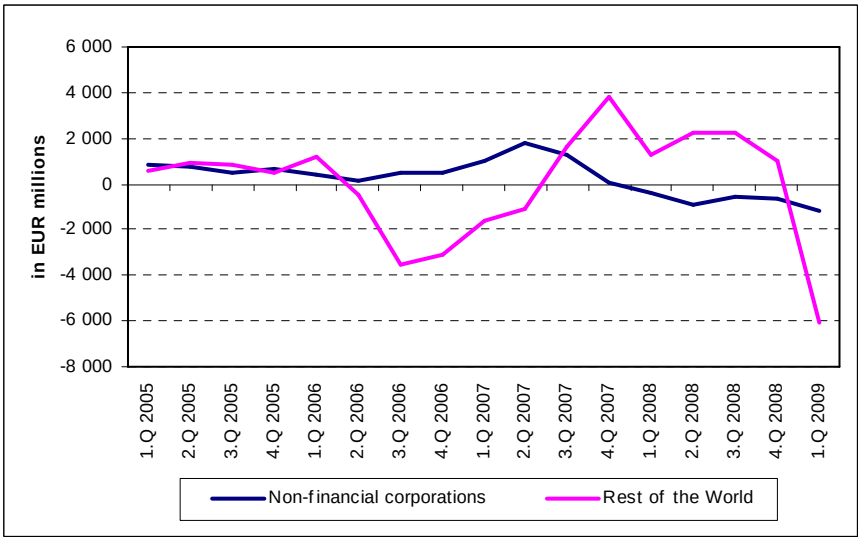
During the whole year 2008 the central bank started the process of repayment of all short-term debt securities owned by commercial banks. Besides the short-term debt securities, the main asset of the commercial banks with central bank represented the deposits connected with sterilisation of excessive banks liquidity at central bank. With the change of the institution responsible for the monetary policy implementation in Slovakia, the banks decided to withdrow their money from accounts with central bank altogether in amount of about 13 billion euro.

Graph 16 Liabilities of central bank vis-a-vis commercial banks (4 quarter moving sum)



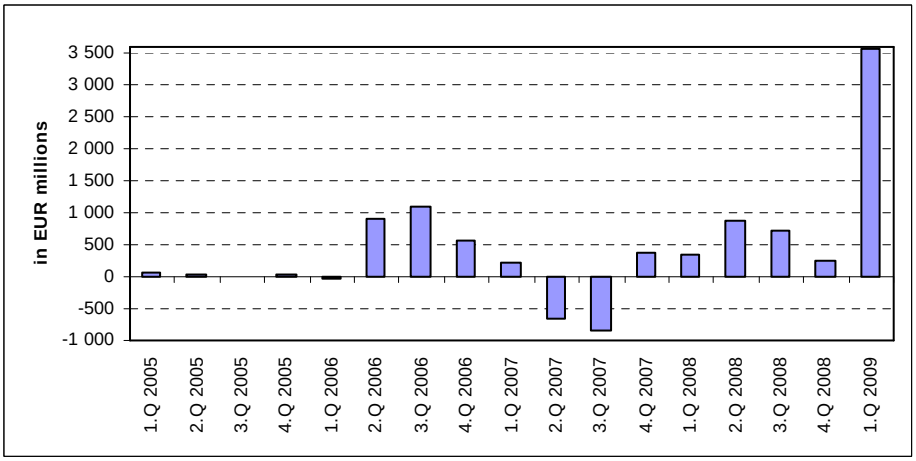
The large part of that sum the banks have used for repayment of deposits of non-financial corporations and entitites from the rest of the world. The non-financial corporations had been withdrawing their money gradually since the beginning of 2008. In the case of rest of the world, there was one-off outflow of deposits in the 1st quarter of 2009 done mainly by parent banking institutions located predominantly in eurozone.

Graph 17 Commercial banks long-term deposits from NFCs and Rest of the World



After all those above mentioned operations the commercial banks retained some amount of available sources which was deposited at banks abroad. Almost 95% of them are located in European Union of which two thirds are located in economic and monetary area.

Graph 18 Banks long-term deposits in the Rest of the World



6. Conclusion

The main aim of this paper was to give basic information on methodology concerning the process of compilation of QFA in Slovakia and their use for analytical purposes.

The QFA are an integral part of balance sheet and accumulation accounts in the European System of Accounts 95 (ESA 95) that give information on financial stocks and transactions between individual entities of national economy and between national and foreign entities. The financial stocks represent holdings of financial assets and liabilities at a point of time and they are recorded at the beginning and end of each accounting period. Financial transactions represent transactions involving financial assets and liabilities and contain the information about the actual acquisition and disposal of financial assets and liabilities, i.e. the financial transactions do not include changes in resulting from change in price, classification and structure. These changes are part of other changes in volume and holding gains and losses.

The NBS uses two kinds of the source data in the process of QFA compilation: internal and external. The internal sources comprise from statistics gathered from all entities operating in financial market and from balance of payment statistics. External sources comprise the SOSR and MFSR data about non-financial corporations, government and households and NPISH. The key role in the QFA compilation process represent the time availability, quality and required structure of collected data. The whole process of QFA compilation, transmission to the ECB and presentation on the NBS web site take approximately 120 days. For the purpose of converging the publication dates of data on GDP and QFA, there are plans for shortening the whole process to T+80 days till the end of 2010.

The analysis of QFA data made in this paper was aimed at the changes in financial flows connected with world financial and economic crisis and with the process of euro adoption in Slovakia. The main results of the analysis show that in the period of worsening economic and financial enviroment the non-financial corporations have significantly reduced the amount of trade credits as important source of financing during the domestic and foreign trade operations. Also the amount of granted loans, as other possible source of financing, declined somewhat, but to the lesser extent than trade credits. Connected with the reduction of foreign trade turnover, the net lending/net borrowing of Slovakia continued in deteriorating trend with slihgt signs of revival at the beginning of 2009. Besides the non-financial corporations, the subjects of general government sector contributed to this situation by increasing their long-term indebtness. Regarding the households, the amount of long-term loans granted as their main source of financial sources has started do decline gradually in the second half of 2008 with no expectations for changing trend in 2009 and 2010. With reducing the opportunities to get finances from banks and with the aim to keep unchanged living standard as long as possible, the households started during the 2008 to withdraw their invested sources in money market mutual funds and other mutual funds.

On January 1, 2009 the Slovak Republic has adopted the common currency euro. As a part of preparation to that, the households and companies started to deposit all their available financial sources to banks in order to make the process of currency changeover as smooth as possible. With the slovak koruna in circulation the domestic banks used to sterilize a huge amount of available sources in the central bank. However, with the expected change in the monetary policy implementation system, they decided to withdraw most of their finances from the central bank and deposit part of them in banks abroad. Subsequently, after the withdrawal the money from central bank by domestic banks, their parent organisation have taken out their financial sources from doughter banks in order to partially cover their expanses connected with crisis and to invest them in different ways.