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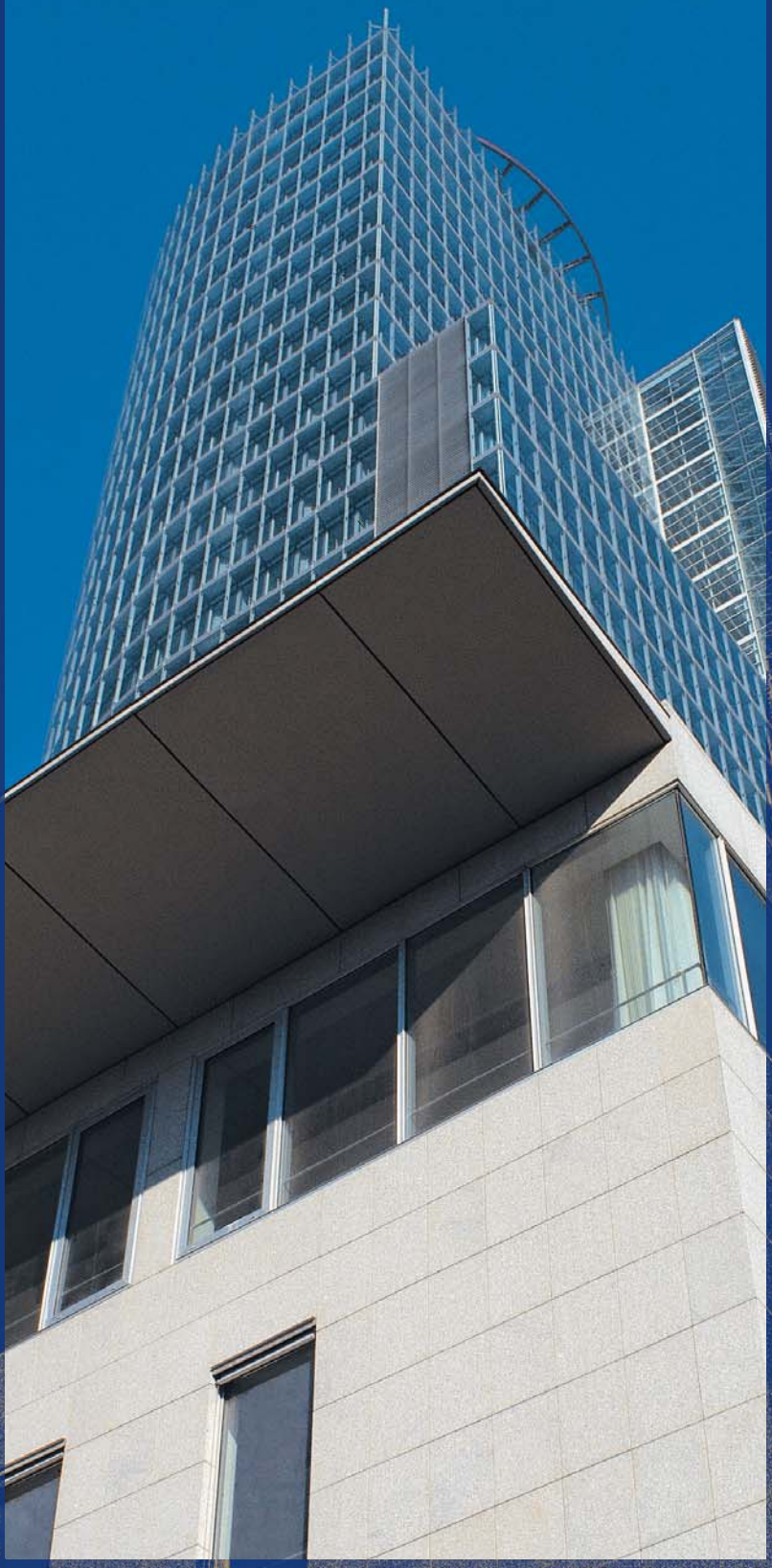

NÁRODNÁ BANKA SLOVENSKA

Commemorative Two-Euro Coin 17 November 1989 – 20th Anniversary

Ing. Dagmar Flaché

On 10 November the National Bank of Slovakia released into circulation a commemorative two-euro coin, dedicated to the twentieth anniversary of the events of 17 November 1989. This coin is intended for circulation; it has the same technical parameters and the same common side as the normal coins in circulation and it is legal tender in all the euro area countries. However, the national design of the coin displays another, commemorative motif.

Coin after a design by Pavol Károly

2nd prize – Karol Ličko

3rd prize – academic sculptor Vojtech Pohanka

Photo: Ing. Štefan Fröhlich

Seventeenth November 1989 is an important milestone in the socio-political, national-state, and economic and social development of Slovakia or Czecho-Slovakia. It signalled the start of the democratic revolution, by which the more than a forty-year rule of the communist regime was ended in Czecho-Slovakia. It brought about the fall of the communist regime and became one of the most important milestones in the modern history of Slovakia. In respect of its importance, this day became a national holiday of the Slovak Republic in 2001 and was declared to be the Day of the Fight for Freedom and Democracy.

The revolution, started on 17 November, is also designated by the name "Velvet" since, except for 17 November, when the public security forces violently suppressed the students' demonstration in Prague, it was free from any violence and casualties. November 1989, headed by Public Against Violence (Verejnosť proti násiliu) and Civic Forum (Občianske fórum), opened the way for the changes in society towards democracy, political and economic plurality, as well as the reform of ownership relationships, and the formation of a civil society. Extensive reforms altered the entire social system. A legally consistent state and new laws were codified.

The National Bank of Slovakia declared an anonymous tender for the national design of the coin, for which fourteen authors submitted twenty-five works. The design by the designer, Pavol Károly, was approved for the project and awarded the first prize in the tender. The Commission appreciated the apt and inventive presentation of the specified subject. The central motif is a bell made from a bunch of keys – symbol of the November events, which citizens jingled in meetings as a token of their disagreement with the social establishment. Their ringing merged into the voice of a bell, the symbol of freedom and democracy. The Commission appreciated the witty solution of the bell vibrating in motion and the use of the keys becoming its parts and heart. On a recommendation from the Commission and decision of the Bank Board of the NBS, the author abbreviated the original inscription "17 NOVEMBER" and "DAY OF THE FIGHT FOR FREEDOM AND DEMOCRACY" to "17 NOVEMBER", "FREEDOM" and "DEMOCRACY".

The second prize was awarded to Karol Ličko. The author addressed the Commission mainly by the artistic solution of the design, the central motif of which is a flaming heart, highlighted by the compositional arrangement of letters. The heart is a general and universal symbol of love and freedom and most appropriately expresses the mission of 17 November. The third prize was awarded to the academic sculptor, Vojtech Pohanka. His design was highlighted by the Commission due to the use of the barbed wire motif, representing, in a negative depiction, the symbol of a lack of freedom and, in its positive aspect, it indicates its termination.

The commemorative coin has been struck in the Kremnica Mint in the number of 1,000,000 pieces. Its edge is identical to that of the normal two-euro coin in circulation. It carries the inscription "SLOVENSKÁ REPUBLIKA". The beginning and end of the inscription are separated by two stars with a lime leaf in between. Given that the commemorative two-euro coins have become a sought-after collectors' item abroad, it may be assumed that we will only very rarely encounter this coin in circulation.

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Current and expected developments in residential property prices in Slovakia

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Questions seeking answers for the causes of the real estate boom over the last years have not yet been adequately answered; however, other questions are arising, which attempt to reveal the essence of the significant real estate market freeze in the last quarters. Despite the considerable heterogeneity of the estate markets, certain considerations can be made based on main factors affecting developments in real estate markets in general. Empirical analyses confirm the hypothesis that the determining factor of the real estate market development is the performance of the economy. This development is connected not only to the relations on demand side, but also to that on the supply side, which shape, in a concrete time and space, the local and global real estate markets and their developments.

The Slovak real estate market is only gradually becoming a standard market, considering its relatively late origination. This is one of the reasons why a cautious approach is required in making comparisons with, for instance, various standards of generally applicable indicators in countries with a developed market for houses and flats as well as housing as a whole. Such perspectives must be kept in mind also when comparing the development of prices for residential property in Slovakia with other countries.

General Relations of the Development of Residential Property Prices

Very turbulent development of residential property prices, not only in Europe but also on the world-wide scale, during recent years somewhat distracts attention from their similar development in the decade from the mid-80s to the mid-90s. In 1989, when average residential property prices were at the top within the framework of the euro area, their year-on-year growth represented roughly 13%; in 2005, at the time of the recent estate boom, the average prices of real estate in the euro area only increased on a year-on-year basis by less than 8% on average.

The euro area therefore recorded, in the second half of the 1980s, a significantly more dynamic growth than during recent years. The year-on-year dynamics of the growth of the average prices decelerated significantly after reaching its peak in 1989, and in 1995, it was only at a level of about one percent. This means that the year 19951 may be considered to be the beginning of the last development cycle of residential property prices in the euro area.

Several factors contributed to the dynamics of the growth in average residential property prices over the previous years. One of the important ones may probably be the crash in the share market in 2000, after which investors were trying to transfer a huge volume of funds from securities into safer assets while real estate is also considered to be such.

A more significant revival of the real estate market appears especially in the so-called good times, when economic growth brings not only a more favourable income situation for households but also positive expectations on the part of citizens towards the future, from which follow a more significant willingness and opportunity for individuals as well as households to enter into debt. The rapid growth in the demand for particular types of real estate has also been shown in growing prices of houses and flats, as well as of commercial real estate and office premises. The policy of a greater availability of credit adopted by the central banks of large countries in the interest of the creation of positive incentives for further economic growth has also clearly contributed to the significant growth of real estate prices after 2000.

During the growth trajectory of residential property prices from 1999 to 2005, their average year-on-year growth in the euro area was about 6.6%, even though, in most countries, this growth was stronger. The correction of the year-on-year dynamics of average residential property prices downwards for the euro area as a whole for this period was caused by their year-on-year decrease in Germany (-0.9%), which dominates in the calculation of the weighted scheme based on the economic performance of specific countries within the framework of the euro area.

According to available information, in most euro area countries there was a gradual deceleration of growth from 2006, and in 2008, there

1 *More information, for instance: Housing Market Developments in the Euro Area and in the US. ECB, January 2009.*

was already a year-on-year decrease in residential property prices in some countries (Ireland, Malta). This development has differed and still differs in particular countries. The new euro area member states, including Slovakia, showed, up to 2008, a significantly above-average growth in residential property prices. One of the reasons for this development is the fact that the real estate market started to function in these countries relatively late and the developers and sellers benefited thereby in recent years from the rapidly growing demand for housing, as well as from the significant growth in economic performance which followed after the entry of these countries into the EU. These real estate markets are, however, too small for their prices to be principally affected by the average prices of real estate for the euro area. These are affected, above all, by Germany, France, Italy, and Spain, which have the greatest share in the creation of the nominal GDP of the euro area (in 2006, more than 77%). The economic performance of countries is the basis for the construction of the weighting scheme for the calculation of the weighted average price of residential property within the whole euro area.

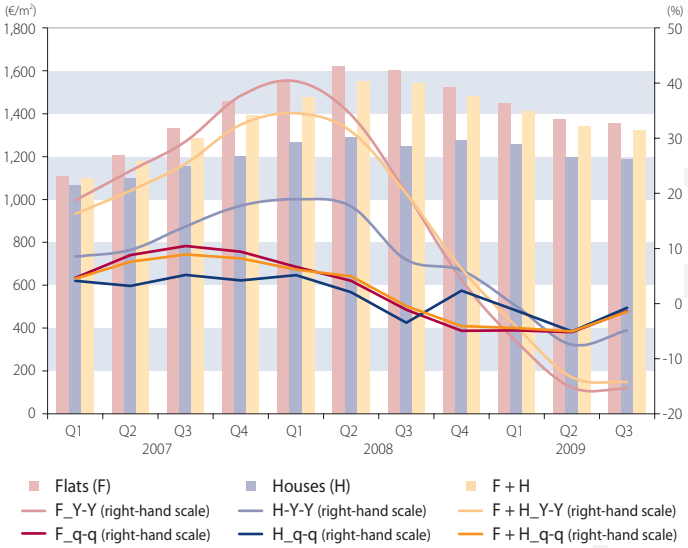
According to the data from particular countries and the considerations of the ECB from the beginning of 2009, a year-on-year decrease in average residential property prices was expected this year in most euro area countries and there was a similar outlook for 2010 as well. This consideration is based on the general assumption that a more permanent revival of economic activity in the euro area may be expected only in 2010, which may, however, more principally affect the real estate market and prices of houses and flats only with a certain time delay.

Current development of residential property prices in Slovakia

The trend for the absolute decreases in aggregate residential property prices from mid-2008 did not end in Slovakia in the third quarter of 2009 either. The average price per 1 m^2 of a residential area currently reached the value of €1,322, which represented roughly its level in the third quarter of 2007. The average residential property price thereby decreased in the third quarter of 2009 when compared to the second quarter of 2009 by 1.5% and by 14.3% on a year-on-year basis.

In the third quarter of 2009, when compared to the second quarter of 2009, the quarter-on-quarter decrease was attenuated but there was a further deepening of the decrease in average residential property prices on a year-on-year basis, even though slighter than in the previous quarter. This can be considered to be a certain indication of the gradual stabilisation of the Slovak real estate market as well as crystallisation of the equilibrium level of average residential property prices with regard to the development of basic economic fundamentals. The development in the Slovak real estate market in the next quarters will also depend on them to a decisive extent.

Chart 1 Development of prices of houses and flats in Slovakia in recent years



Source: NARKS, chart of the NBS.

The development of the average residential property prices in Slovakia is still being determined by the development in average prices of flats rather than of houses. In the third quarter of 2009, the average price per square metre of flats reached the value of €1,354 per m^2, which meant, when compared to the previous quarter, a decrease of 1.3% and of more than 15% on a year-on-year basis. The average price per square metre of houses reached €1,187 per m^2, which represented a quarter-on-quarter decrease of less than one percent and a year-on-year decrease of almost 5%.

The quarter-on-quarter but especially the year-on-year development of average prices for a square metre of residential area of flats was much more variable in recent years than the development of the average prices of houses. For instance, the variation range between the maximum year-on-year growth in average prices of flats (40.3% in the first quarter of 2008) and their current year-on-year decrease (-15.4% in the third quarter of 2009) is several times greater than the variation range of the year-on-year growth in average prices of houses (8.6% in the first quarter of 2008 and -4.9% in the third quarter of 2009). As a result of the current more equal development in the average prices of houses than flats, the relatively similar deceleration of the quarter-on-quarter decrease in average prices of houses and flats is currently demonstrated by a much more significant year-on-year decrease in the average prices of flats than houses.

According to available information, in the third quarter of 2009, when compared to the previous quarter, the decrease in average prices per 1 m^2 of a residential area of almost all types of flats decelerated; only the average prices of four-room flats increased on a year-on-year basis (2%). The average prices of small-scale flats decreased on

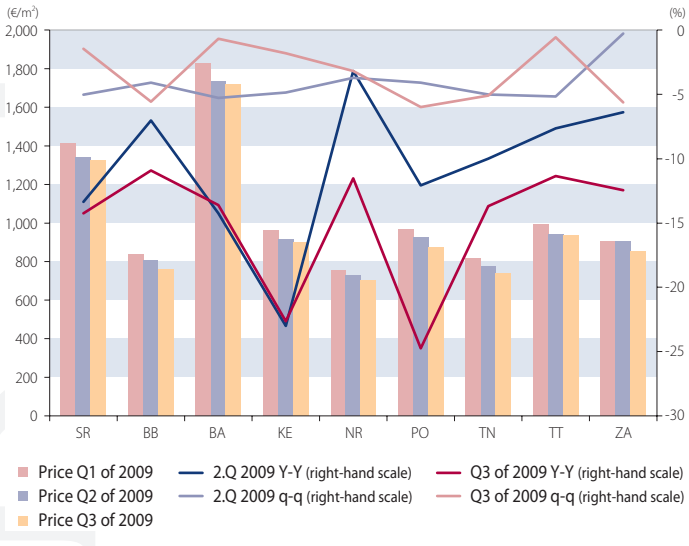
a uarter-on-quarter basis the least (-1.4%) and the average prices of five-room and larger flats the most (-5.6%). A comparison of the average prices of particular types of flats on a year-on-year basis signals the persistence of relatively more significant decreases, especially for smaller flats (one-room -20.2%, two-room -17.2%) when compared to larger flats (four-room -7.7%, five-room and larger -2.6%). This is largely the result of the fading of the basic effect of the more rapid growth in the average prices of smaller flats than of larger ones over the last few years.

For the development of average prices per 1 m^2 of residential area of houses, sales in standard houses rather than in villas are decisive, specifically with regard to the minimum share of transactions in villas in the total sales of houses. Even despite the growing average prices of villas in the third quarter of 2009, when compared to the previous quarter (6.8%), the aggregate quarter-on-quarter development of the average prices of houses was slightly negative (-0.7%) with a relative stagnation in the average prices of standard houses. On a year-on-year basis, in the third quarter of 2009, average prices of a square metre of a residential area of standard houses (-4.8%), as well as of villas (-3.9) thereby decreased.

From the beginning of 2004 to the third quarter of 2008, the values of indicators such as the population, total amount of credit provided to households, and the value of residential mortgages, volume of time deposits, and GDP value correlated most significantly to average residential property prices. Even after taking into account data for the next quarters, a strong dependence persists among the above variables, with the understanding that, while in the case of most of the indicators there has been a certain attenuation of the dependence monitored, but in the case of GDP, the rate of correlation with the average prices of houses and flats has remained unchanged (0.89).

The decelerated decrease in the average prices of houses and flats in the third quarter of 2009 when compared to the previous quarter was accompanied, on the one hand, also by a slower decrease in average prices of monthly rents, and, on the other hand, by a slower growth in average prices of building plots than in the second quarter of 2009. On a quarter-on-quarter basis, average prices of monthly rents of flats decreased more significantly (-4.0%) than for houses (-1.6%). On a year-on-year basis, prices of houses decreased by 16.0% on average and prices of flats by 8.4%. The average price per 1 m^2 of a building plot reached almost €115 per m^2 in the third quarter of 2009. When compared to the second quarter of 2009, it increased by less than 2% and on a year-on-year basis, by almost 29%. The development in the average prices of monthly rents as well as average prices of building plots is differentiated considerably from the regional perspective.

Chart 2 Development of average residential property prices in the 2nd and 3rd quarters of 2009 by regions



Source: NARKS, chart of the NBS.

Regional view of the development of residential property prices in Slovakia

The nature of the Slovak estate market, as well as the calculation of average residential property prices, is determined, to a decisive extent, by their development in the Bratislava region. The growing supply and only slowly reviving real interest in satisfying the housing in this region are the causes of the persisting and fluctuating aggregate decrease in average prices for houses and flats during the last quarters for Slovakia as a whole. Average residential property prices in the Bratislava region decreased in the third quarter of 2009 to €1720 per m^2, which was the same value as reached in the third quarter of 2007. A similar more significant decrease in average prices of houses and flats was also recorded in the Košice region. In other regions, current average residential property prices are at the level of the turn of 2007 and 2008. Despite the more significant decrease, the average prices for a square metre of a residential area of residential property in the Bratislava region are still more than two times higher than in half of the other Slovak regions (except for the Trnava region, Košice region, and Prešov region).

From the regional perspective, the decrease in average residential property prices continued in the third quarter of 2009 in all the regions. When compared to the previous quarter, average prices per square metre of a residential area in the Bratislava and Trnava regions decreased the least. By contrast, average residential property prices in the regions of Banská Bystrica, Prešov, and Žilina decreased the most. The quarter-on-quarter decrease in average prices per 1 m^2 of a residential area of houses and flats was fairly variable in the last quarters in most of the Slovak regions. A relatively stable decrease in average residential property prices was recorded in the last two quarters only in the Nitra region and Trenčín region.

Given the significant variability of the quarter-on-quarter development of average residential property prices in individual Slovak regions in the last quarters, the current quarter-on-quarter deceleration of the decrease in average residential prices in most of the Slovak regions may not be considered to be a permanent sign of the stabilisation of their basic economic fundamentals yet. This also applies in full to the economically more developed regions, such as the Bratislava region, Trnava region, and Žilina region, where an important position is held by the automobile industry, monitored by the whole of society more closely.

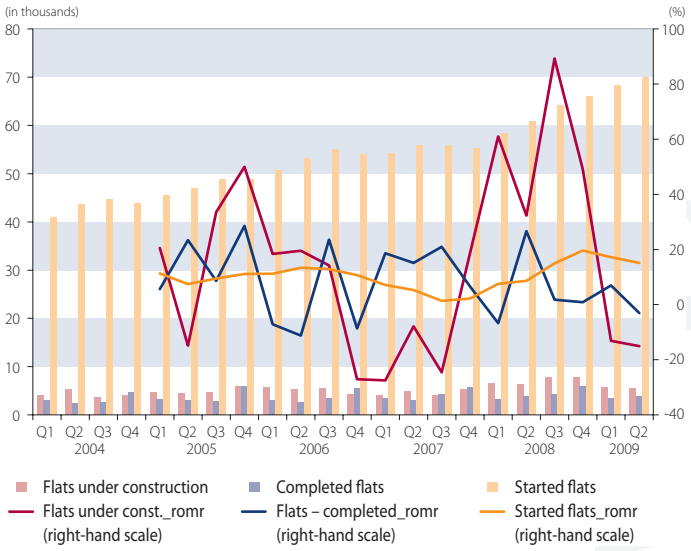
In the third quarter of 2009, when compared to the second quarter of 2009, the year-on-year decrease in residential property prices was deepened in most regions (excluding the Bratislava and Košice regions). One of the reasons is also the basic effect of the ongoing growth in average residential property prices in several regions in the third quarter of 2008, while in the Bratislava and Košice regions, there was already a more significant decrease in prices at that time. On a year-on-year basis, average residential property prices decreased in the third quarter of 2009 most in the Prešov region (-24.7%) and least in the Banská Bystrica region (-10.9%). In the case of the Prešov region, it is also largely a result of the basic effect of the continuing significant growth in average residential property prices one year ago.

Possible development of residential property prices in Slovakia

When considering the possible development of residential property prices within a short as well as longer time-horizon, it is necessary to take into account global external effects, as well as the whole range of domestic demand and supply factors which principally affect the nature of the current estate market in Slovakia.

A decisive general assumption for revival of the real estate market is the creation of the necessary conditions and provisions more permanently sustainable economic growth in the global sphere, which is of vital importance for the functioning of smaller, substantially open economies such as the Slovak economy. An essentially important condition for more permanently sustainable economic growth is generally a functional financial system, which helps in funding the economic activities of entrepreneurial entities as well as the objective needs of individuals and households. It was right in this part of the production chain, which used to be called the life-blood of economic growth, that serious discrepancies appeared over the last few years, which led to the global financial crisis and thereafter also to the strong economic depression. The situation thus incurred has resulted in the intensive attempts of world and European authorities to increase the regulation of the financial markets[2], which may ultimately result, in addition to the expected increase in their safety, in a complication for the availability of credit resources, and this may also lead to a certain inhibition of activities in the real estate market.

Chart 3 Development of residential construction in Slovakia



Source: Statistical Office of the SR, chart of NBS.

From among the domestic impacts, it is necessary to focus the attention, in addition to the weakened mutually linked demand factors related to the decreased performance of the Slovak economy, on the currently significantly growing demand as a result of cumulated reserves of available houses and flats over the last few quarters, in which there has been a relative freezing of the real estate market in Slovakia.

From the beginning of 2008, the number of started flats began to grow and the number of completed flats remained at the level of the previous year. For 2008 only, there was thereby a significant accumulation of under construction by almost 15,000 flats, representing a considerable potential for possible growth in the housing supply during the next quarters. This fact will clearly be beneficial, within a short-term horizon, for individuals and households interested in housing, in the form of the opportunity to select higher quality housing for relatively lower prices than one year ago, for instance.

The currently stagnating or slightly reviving demand for housing is not caused by an adequate satisfaction of housing needs in Slovakia but it is a result rather of a relatively significant deepening of the negative expectations of citizens mainly in the second half of 2008, related to the worsened performance of the economy and growing unemployment[3]. The demand for housing in Slovakia, thus temporarily postponed, primarily depends, therefore, on the rapidity of the consolidation of the Slovak economy and a more significant growth in the positive expectations of citizens, by which their potential and willingness to solve the their own housing needs through credit sources will grow.

The right credit sources and the significant improvement in their availability were the important factors which have contributed to the

2 One of the currently discussed measures is a substantial increase of the required share of own funds of interested parties in applying for credit sources for the procurement of residential property.

3 Even though the consumer confidence indicator (summary characteristics calculated as an arithmetic average of balances of the expected development of economy, unemployment, and expected development of the financial situation and savings in own household) slightly improves from the beginning of 2009, comparison with the same period of the last year sounds positively only for to the expected financial situation in households, while the other three components of the indicator recorded a negative development. In total, the consumer confidence indicator was, in September 2009, still by 14.8 percentage points less favourable than in September 2008.

4 More information in: National Bank of Slovakia: Slovak Financial Sector Analysis for the 1st Half-Year of 2009, p. 8-9.

huge dynamisation of the real estate market and growth in residential property prices in Slovakia in recent years. The gradual implementation of stricter standards for credit from 2007 has not discouraged the real estate parties interested in resolving their housing needs either. In the first half of 2009, the making of credit standards stricter gradually attenuated; however, they are also fixed quite strictly now, which contributes to the fact that acquiring credit for housing in Slovakia is relatively low risk[4].

A positive signal for the real estate market is the fact that, after the gradual reduction in the volume of new residential loans from mid-2008, from the second quarter of 2009, its resumed growth is recorded, even though the current volume is still at a level lower than one year ago. The low basic interest rate also creates a certain assumption for a potential improvement in credit conditions for parties interested in residential loans in commercial banks, which may contribute to a slight increase in the demand for housing. The truth, however, is that Slovak commercial banks have responded, for instance, to the last change in the basic interest rate roughly with a quarter-point shift when compared to other euro area countries and the prices of Slovak mortgages are currently two percentage points above the euro area average (about 4%). The current credit conditions in Slovakia are set for suitably solvent interested parties.

From the monitoring of the influence of the current development of selected demand and supply factors on the conditions and development of the Slovak real estate market and after taking into account professional opinions on the expected trend of the development of the real estate market and average residential property prices in the euro area, it may be expected during the coming quarters that the supply of houses and flats will in general exceed the demand for housing for a certain period of time.

In the last quarter of 2009, a slight decrease in prices for houses and flats should still continue with a high probability. With an increased attempt by developers to implement completed investments by the end of the calendar year, in the 4th quarter of 2009 there may be even a higher quarter-on-quarter decrease in average prices per 1 m^2 of a residential area of residential property than in the previous quarter. In relation with that, and based on the accepted assumption of a roughly three-percent average quarter-on-quarter decrease in average residential property prices, an average year-on-year decrease of more than 11% would be recorded in 2009, when compared to the previous year

Without the right to specify the exact number of the quarter-on-quarter development in individual quarters of 2010, the stagnation of average residential property prices may rather be assumed. Several reasons exist for this consideration. According to the latest prognosis of the EC and statements of other relevant international institutions, indications of an economic revival are apparent but, the instability rate still remains high. Even if the positive indications of the Slovak performance revival are confirmed at the end of 2009, it will be a signal for only a slight revival in the real estate market in the next months. Given the considerable potential reserve of houses and flats already mentioned, supply will dominate over the prudent demand; therefore stagnation in average housing prices may rather be assumed during 2010. 2010 will probably be the year for the principal crystallisation of the Slovak real estate market.

Summary

Significant turbulence in the world financial markets, accompanied by depression in most national economies, have also affected real estate markets with a significant force. The market in the segment of residential property in the euro area recorded its high point in 2005, when average residential property prices increased on a year-on-year basis by almost 8%. Since 2006, there has been a gradual deceleration in growth in the euro area and since 2008, also a year-on-year decrease in average residential property prices in certain countries (Ireland, Malta), while in particular countries, this development was and still is quite differentiated. Up to 2008, Slovakia, as a new member of the euro area, demonstrated, according to available information, a significantly above-average growth in residential property prices, also as a result of the relatively late formation of the real estate market.

With a certain time delay, there has been a gradual stagnation and even blockage of the real estate market also in Slovakia, which has been demonstrated in the rapid year-on-year decreases in average prices per 1 m^2 of a residential area of houses and flats during the last quarters. The average price per 1 m^2 of a residential area reached, in the third quarter of 2009, the value of €1,322, which represents roughly its level in the third quarter of 2007. The average residential property price in the third quarter of 2009 thereby decreased by 1.5% when compared to the second quarter of 2009 and by 14.3% on a year-on-year basis. While the quarter-on-quarter decrease has currently been attenuated, on a year-on-year basis, there has been another, even though already slighter, deepening of the decrease in average residential property prices than in the previous quarter. This can be considered as a certain indication of the beginning of a gradual stabilisation of the Slovak real estate market as well as a crystallisation of the equilibrium level of average residential property prices with regard to the development of basic economic fundamentals.

The reduced decrease in average prices of houses and flats in the third quarter of 2009 when compared to the previous quarter was also accompanied, on the one hand, by a slower decrease in average prices of monthly rents and, on the other hand, by a slower growth in the aver-

age prices of building plots than in the second quarter of 2009. On a quarter-on-quarter basis, average prices of monthly rents of flats decreased more significantly than those of houses, while on a year-on-year basis, the situation was the reverse. The average price per 1 m^2 of a building plot reached, in the third quarter of 2009, the value of almost €115 per m^2, which meant a quarter-on-quarter growth of less than 2% and growth of almost 29% on a year-on-year basis.

From the regional aspect, the decrease in average residential property prices continued in the third quarter of 2009 across all regions. When compared to the previous quarter, average prices for one square metre of a residential area in the Bratislava region and Trnava region decreased the least. By contrast, average residential property prices in the Banská Bystrica region, Prešov region, and Žilina region decreased the most. The quarter-on-quarter decrease in average prices per 1 m^2 of a residential area of houses and flats in the last quarters was quite variable in most of the Slovak regions. A relatively stable decrease in average residential property prices was recorded in the last two quarters in the Nitra region and Trenčín region only.

Following on from the development of the basic economic fundamentals and the effect of selected demand and supply factors on the condition and development of the Slovak estate market, and after taking into account professional opinions on the expected trend of the development of the real estate market and average residential property prices in the euro area, it may be expected in the next quarters that the supply of houses and flats will in general exceed, for a certain period of time, the demand for housing. Based on these assumptions, stagnation or even a slight decrease in average residential property prices may therefore be assumed for the next quarters also. Relative stabilisation of average residential property prices could, theoretically, occur in the second half of 2010, but the whole of 2010 will probably rather be a year for the principal crystallisation of the Slovak real estate market.

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Monetary aggregates development in the first half of 2009

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Analysis of monetary aggregates development is important from the perspective of monetary policy. The European Central Bank holds the opinion of the long-term neutrality of money, which means that, in the long-term horizon, changes in the stock of money in the economy should be reflected in the level of prices. The objective of this article is to briefly describe the basic trends in the development of the main components of the M3 monetary aggregate and its counterparts in the first half of 2009 in Slovakia in a manner similar to the analysis by the ECB for the whole euro area.

Main changes after entry into the euro area

As Slovakia became a member of the euro area from 1 January 2009, changes also occurred in statistical banking reporting and the related calculations of some indicators (including the monetary aggregate M3). In order to fulfil its needs, (especially the construction of consistent time-lines for analysis purposes) the ECB performs an aggregation of the data compiled and sent by the individual national central banks for the area of banking statistics. In order to perform the data aggregation correctly, the data for individual countries must be reported net of the relations among the individual Member States. This is achieved by applying a "resident" approach, by which residents refer to all the countries in the euro area. This change has been reflected across all the items of the monetary aggregates; however, the biggest changes have occurred with securities and net foreign assets[1]. The currency change has also affected currency in circulation. For these reasons, there are not longer consistent time-lines for monetary aggregates at its disposal (only from 2006). The individual national central banks only report the contributions of the country to the indicators for the whole euro area (e.g. contribution of consolidated balance, contribution of monetary aggregates, credits, etc.).

Development of monetary aggregates in the first half of 2009

In the first half of 2009, the falling trend of the monetary aggregate M3 development from the previous period continued, reflecting the gradually slowing economic activity. The contribution of the monetary aggregate M3 to the monetary aggregate M3 of the euro area slowed in June to 8.5%. When abstracting from the fluctuation the currency in circulation at the currency change in January this year, and applying the same methodology for dynamics calculation as in the former years, the M3 growth would achieve a negative value in June (-1.8%). There were several factors having an impact on the development of deposits in the first half of 2009. The most important factor was the economic development. The decrease in the key interest rates, the decrease in revenues, the relatively low growth of wages and dividends paid are among the main determinants influencing the development of deposits.

The monetary aggregate M1, comprising the currency in circulation and the most liquid deposits[2], recorded a slightly growing tendency in the first half of the year. This development was mainly affected by the currency conversion. Up to the end of 2008, the decrease in currency in circulation exceeded the growth of deposits on current accounts. In order to perform a simple conversion, households and non-financial corporations were getting rid of the currency in circula-

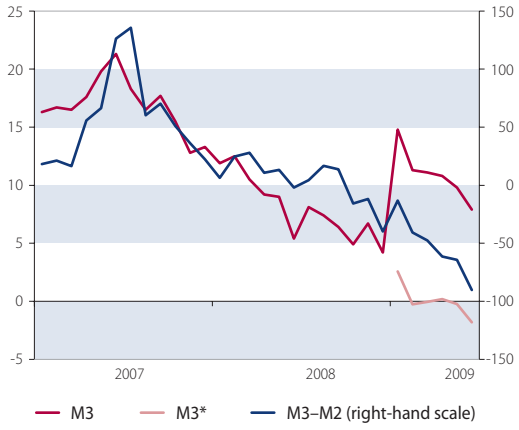
Chart 1 Year-on-year growth of most liquid M3 components (in %)

Source: NBS.

1 *The change in the resident approach was reflected in net foreign assets, which subsequently influenced the transfer within the M3 monetary aggregate and its counterparts. The decrease in net foreign assets resulted in changes in the category of debt securities issued with maturity of up to two years within M3 and also in the category of debt securities issued with maturity over two years within the counterparts of M3. This decrease in net foreign assets could also be accompanied by the growth of deposits, either within the individual M3 items or its counterparts (long-term deposits). On the part of the counterparts of M3, the change in the resident approach was most significantly reflected in credits, because among them credits from the euro area residents were also included (mostly the decrease in foreign assets was reflected in the increase of credits).*

2 *Overnight deposits comprise mainly current accounts and one day deposits.*

Chart 2 Year-on-year increase of less liquid components of M3 (in %)



Source: NBS.

tion to the banks. A converse development was recorded after 1 January 2009, when the currency in circulation increased more significantly. This influenced the development of the M1 aggregate in the first half of the year. Its year-on-year dynamics gradually stabilised at a level of about 18%. Deposits included in the category M2-M1[3] decreased more significantly over the first half of the year, which was largely caused by the decreased rate of return for these products in comparison with the end of 2008. At that time, banks were attracting clients by term deposits with relatively high interest rates. The difference between the interest rates of the shortest deposits and deposits with agreed maturity of up to two years was achieving quite high values. This effect diminished in the first half and interest on term deposits also decreased significantly. The year-on-year dynamics of M2 slowed down over the whole monitored period and in June 2009 achieved 5.4%.

Within the tradable instrument M3-M2, both money market funds as well as debt securities issued with maturity of up to two years decreased in the first half of the year. At the same time, the year-on-year dynamics of M3-M2 fell into negative figures. Except for a few months, the decreasing tendency of the year-on-year dynamics has continued from mid-2007. The main reason for the decreased investment into money market funds in the prior period (up to the third quarter of 2008) was the move to more profitable mutual funds (not included in the M3 monetary aggregate). In the fourth quarter of 2008, the perception of risk on the market began to grow and the attractiveness of term deposits improved. In the first half of 2009, the money market funds cumulatively achieved a net outflow of €80 million.

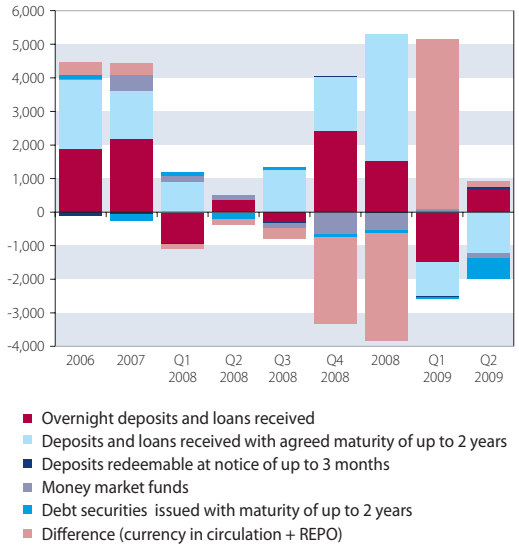
Charts 3 and 4 document the most important factors from the perspective of transfer of deposits within M3 from the perspective of their volume development. The currency change in January 2009 caused overnight deposits and deposits with the agreed maturity of up to two years to be compensated by the currency in circulation in the fourth quarter of 2008 and by the reverse effect in the first quarter of 2009.

Another factor is represented by the client interest rates or the difference between interest paid on the most liquid deposits and deposits with agreed maturity. These changes in interest rates are used in a wider scope, mainly by non-financial corporations. In the first half of the year, the difference between the interest on the shortest deposits and the deposits with an agreed maturity of up to two years reduced to 0.6 percentage points.

DEPOSITS FROM NON-FINANCIAL CORPORATIONS

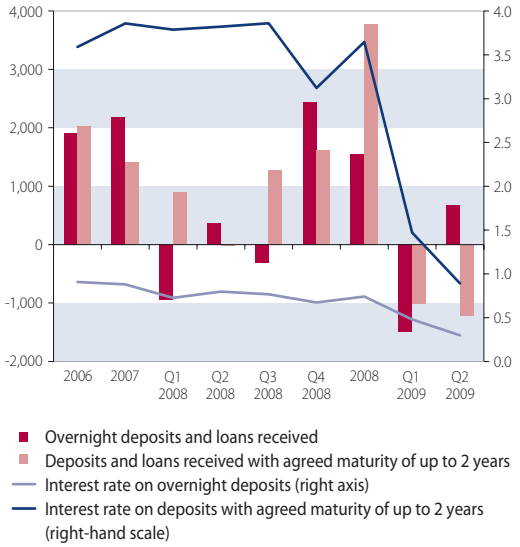
Deposits from non-financial corporations recorded a significant decrease in the first half of 2009.

Chart 3 Transactions of individual types of deposits in the stated year and quarter (€ millions)



Source: NBS.

Chart 4 Transactions of deposits in individual months and development of their interest rates (€ millions; %)

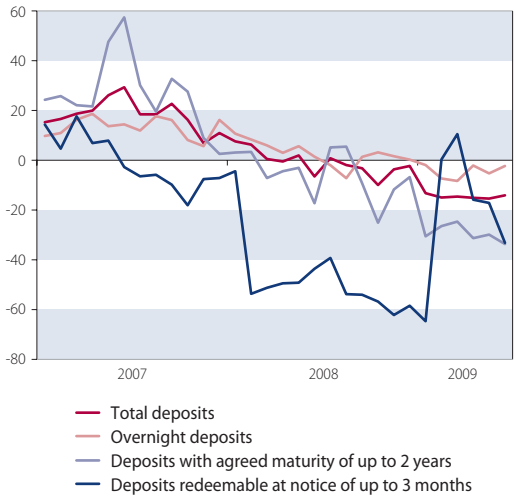


Source: NBS.

3 The category M2-M1 includes deposits with agreed maturity of up to two years and deposits redeemable at notice of up to three months.

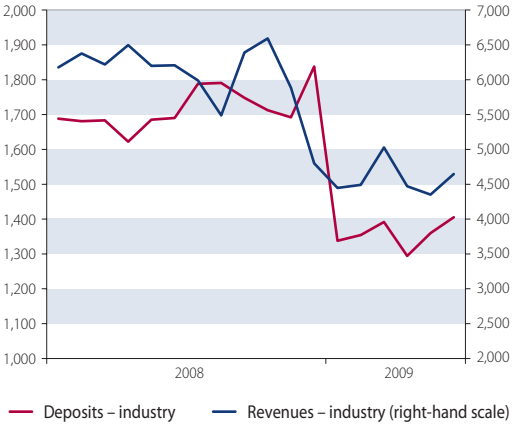
In comparison with December 2008, their volume fell by €2.4 billion which was caused by the seasonal nature of the high volume in December. However, the volume of deposits also decreased significantly in the same period in the prior year. It was reflected in the year-on-year dynamics of deposits which achieved a negative value of -13.9% in June. It can be stated, however, that the trend of the gradual slowdown in the dynamics of deposits from the second half of 2007 stopped in 2009 at values close to -15%. Within deposits from non-financial corporations, in the first half of 2009, in absolute numbers those deposits with an agreed maturity (€1.28 billion) fell most of all, followed by overnight deposits (€1.14 billion). The year-on-year dynamics fell most significantly for deposits with an agreed maturity. The volume of deposits from non-financial corporations was also affected in the second quarter by recurrent factors from every year, namely dividends payments and income tax levies.

Chart 5 Year-on-year increase in deposits from non-financial corporations included in M3 (in %)



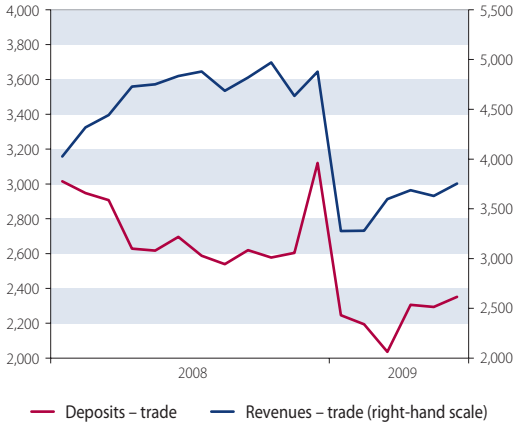
Source: NBS.

Chart 6 Development of deposits and revenues in industry in current prices (€ millions)



Source: NBS.

Chart 7 Development of deposits and revenues in retail and wholesale trade in current prices (€ millions)



Source: NBS.

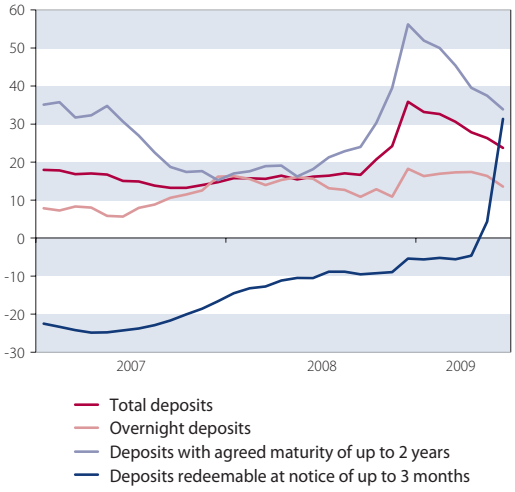
The share of deposits redeemable at notice of non-financial corporations in total deposits from non-financial corporations is negligible. As may be seen from Chart 5, their development is rather volatile. Even a small change in the volume of these deposits results in significant changes in the growth dynamics.[4]

The development of deposits from non-financial corporations depends on their economic position. The revenues of non-financial corporations represent the financial expression of their performance (goods and services). In a simplified view, they could represent money coming into the bank accounts of non-financial corporations. Charts 6 and 7 document the dependence of deposits and revenues in two decisive branches (industry and retail and wholesale trade). The more significant fall in both indicators in the first half of 2009 is caused not solely by the seasonal nature (significant decrease in January 2009). Even in the year-on-year comparison, the volume of revenues and deposits from non-financial corporations in nominal figures is at lower levels. Chart 6 documents the deteriorating payment discipline of companies in this branch. It shows the extending of the maturity periods of invoices, when the revenues were already recorded in the bookkeeping, but they were only paid subsequently (i.e. a corresponding increase in deposits on current accounts).

Another factor that could more significantly influence the development of deposits from non-financial corporations is the more complicated access to credit for entrepreneurs. The lack of external resources or their relatively high price force companies to fall back on using their cash flow i.e. also deposits in larger scope for their operations. In investment projects, greater demand has been made on financial involvement which has been presumably also reflected in the development of deposits.

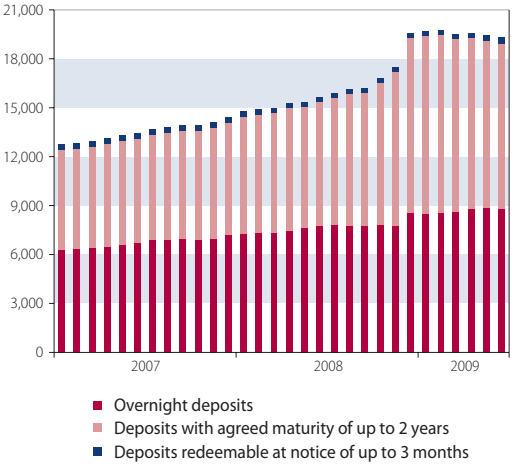
4 *Deposits from non-financial corporations redeemable at notice are part of the monetary aggregate M3, so they are not excluded from the result due to excessive volatile development.*

Chart 8 Year-on-year increase in households' deposits included in M3 (in %)



Source: NBS.

Chart 9 Development of households' deposits (€ millions)

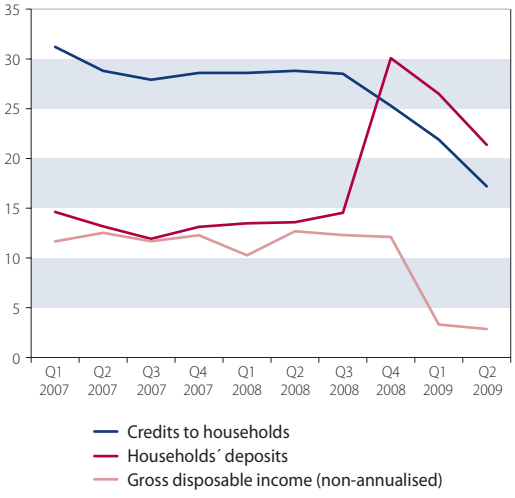


Source: NBS.

Development of deposits from households

In the second half of 2008 and subsequently also in the first half of 2009, households' deposits were influenced by euro introduction. While, in the former year, the volume of households' deposits increased significantly to the detriment of the currency in circulation (because with households the transaction motive of money holdings prevails), in 2009 the development was the adverse. The volume of currency in circulation increased to the detriment of deposits. In the first half of 2009, households' deposits fell in absolute numbers by €190 million. Within the households deposits, it was mostly those deposits with an agreed maturity which decreased (by €630 million), which was presumably a reflection of the termination of shorter term deposits from the end of 2008.

Chart 10 Development of deposits, credits and disposable income of households (year-on-year dynamics in %)



Source: NBS.

A different development was recorded with overnight deposits (current accounts), the volume of which increased slightly over the period under review. This reflected a slight increase in the disposable income of households. The volume of deposits redeemable at notice (passbooks) also increased slightly. As a result of euro introduction (high increase in the volume of deposits in the last quarter of 2008) the year-on-year dynamics in deposits by households was achieving quite high values up to June 2009 (over 20%), but with a slightly decreasing trend from January. This development should be maintained up to the forth quarter. One of the factors that could have an impact on the development of households' deposits was presumably the introduction of the "scrapping" subsidy. Households were purchasing cars not only from loan resources, but also from their savings in the form of deposits. Another reason mitigating the decrease in deposits in the first half could also be the transfer of funds from mutual funds in the first quarter to the deposit products of banks. In the first three months, investors withdrew over €230 million. Equally, this factor influenced the development of deposits in the second half of 2008, when funds with a total value of over €1,165 million were withdrawn from the mutual funds.

The development of deposits and loans over the first half of the year reflected the growth in the gross disposable income of households. It slowed significantly in the first half of the year when compared to the previous years, which was subsequently reflected in the slowing dynamics of growth in deposits and credits.[5]

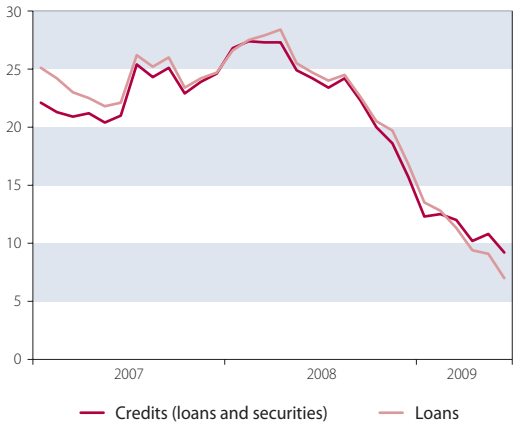
Development of monetary aggregate M3 counterparts in the first half of 2009

Within the counterparts of the monetary aggregate M3, it is necessary to analyse, from the perspective of the transmission mechanism of the

5 As referred to above, by the end of 2008, deposits from households were influenced by the introduction of euro, so it is quite a complicated process to analyse the development over a longer period of time. However, the decreasing trend in the first half documents a more significant slowing of growth in deposits here also.

6 Other financial intermediaries include leasing companies, companies providing hire purchase, factoring companies, mutual funds except for money market funds and securities dealers. All these companies are engaged in financial intermediation by incurring liabilities. Their business is based on external financing.

Chart 11 Development of dynamics of credits of MFI to the private sector (in %)



Source: NBS.

monetary policy in particular, the development of credits to the private sector. Credits include loans and also securities.

In the first half of 2009, the volume of credits to the private sector including securities increased by €1.0 billion, while in the same period of 2008 the increase was more than €2.5 billion. The development in the growth structure of credits in the first half of 2009 on the same period of 2008 was also different. The major part of the increase in credits in 2009 was created by securities, while in the first half of 2008 the entire increase was created by loans. Loans to the private sector increased in June 2009 by €0.2 billion in comparison with December 2008. Within the sectors, the outstanding amount of loans to households increased (by €0.68 billion) on the one hand; however, on the other hand, the outstanding amount of loans to non-financial corporations decreased (by €0.16 billion) and to other financial intermediaries (by €0.31 billion). The relatively low absolute growth in credits to the private sector was reflected in the falling dynamics over the whole of the monitored period. By the end of June, it achieved a value of 9.2%, or 7% when securities are abstracted.

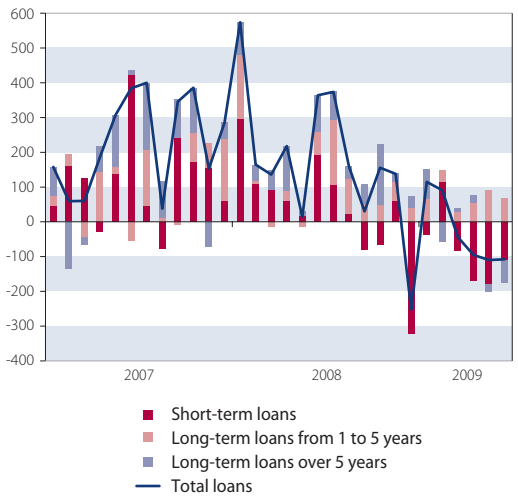
Loans to other financial intermediaries

The lower economic activity in comparison with former years was reflected initially in loans to other financial intermediaries. The decrease in loans to other financial intermediaries had already started in the second quarter of 2008. From that time, the outstanding amount fell by almost a third, while in the first half of 2009 the development accelerated further.[6] Because the majority of such companies are owned by financial institutions, their financial needs are also solved by financing on the inter-bank market. However, after the euro introduction, the sector recorded a significantly lower activity owing to of the outflow of liquidity surplus and a higher perception of risk on the part of the counterparties. The significant fall in the economy was reflected in these companies by the slowdown in financial intermediation, mostly in leasing companies.

Loans to non-financial corporations

The decrease in economic activity in the first half of the year was also reflected in credit to non-financial corporations. On the one hand, there are the worries of banks about further development being reflected in the lack of willingness to provide credit to businesses; on the other hand companies also do not show such a strong demand for credit as in the period of rapid economic growth. This is also attested by the results of a Bank lending survey in the first two quarters of 2009. The banks began to tighten credit standards in the last quarter of 2008, which also continued in 2009, when the credit standards were further made more tightened in every quarter. This was reflected in the increase in interest margins and also in the higher requirements placed by non-

Chart 12 Month-on-month changes in loans to non-financial corporations (€ millions)



Source: NBS.

Chart 13 Growth of loans to non-financial corporations (in %)

Source: NBS.

financial corporations on their own resources. According to the survey, from the perspective of the banks the companies did not need so many credit resources, because there are not as many external resources required as in the period of economic growth, which is caused by the reduction in both investment and consumer demand. This resulted in a more significant decrease in economic activity in the first half of the year.

In the first half, the outstanding amount of loans to non-financial corporations decreased by €164 million. Looking at the Chart 12, it was mostly the short-term loans that decreased. Banks reduced the agreed credit lines in the form of current account overdrafts, used mostly in business relations to overcome the maturity period of invoices. The provision of loans for investment projects, for which long-term credit lasting over five years was used, almost ceased. In the last three months, the month-on-month decrease has achieved the values of about €100 million. Decreasing the outstanding amount of loans to non-financial corporations caused that the year-on-year dynamics of the growth of loans to non-financial corporations continued to slow in the first half of the year and by the end of June it attained 3.1%.

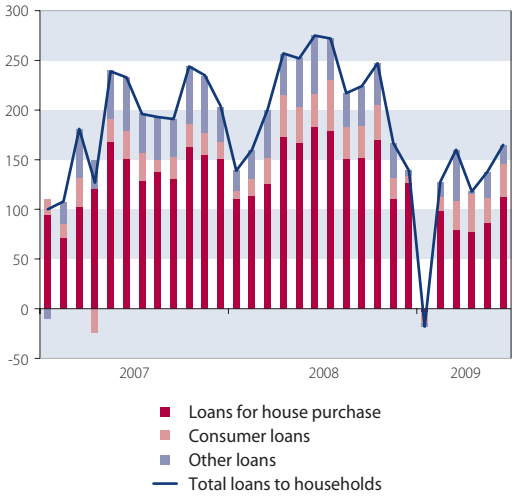
When looking at the development of credit to most significant branches, it is clear that the decrease in loans was recorded mainly in industry and retail and wholesale trade. These branches were affected by the crisis to a great extent. In the first half of the year, industrial production fell into negative numbers and retail and wholesale trade revenues fell more significantly. On the other hand, however, loans to the branches engaged in real estate activities increased slightly. This may be explained, however, by the fulfilment of credit contracts made in the former period at the completion of building projects.

Loans to households

In the first half of 2009, loans to households recorded an increase of €0.68 billion which was much less than in the same period of 2008, when the volume of loans to households increased by €1.3 billion.

The main determinant was represented by loans for house purchase with the volume increasing by €0.45 billion. However, this volume was only a half when compared with the first half of 2008. Consumer and other loans also contributed to the increase in the total outstanding amount of loans in the first six months of 2009. These volumes of loans even recorded a higher increase in comparison with the same period one year ago. Month-on-month transactions in the first half of 2009 showed a slightly increasing tendency. In June, loans to households increased on a month-on-month basis by almost €0.17 billion. In comparison with 2008, the month-on-month changes are at lower levels. This resulted to the slow-down in the dynamics of loans growth, which still achieves quite high values when compared to other countries.

Chart 14 Month-on-month changes of loans to households (€ millions)



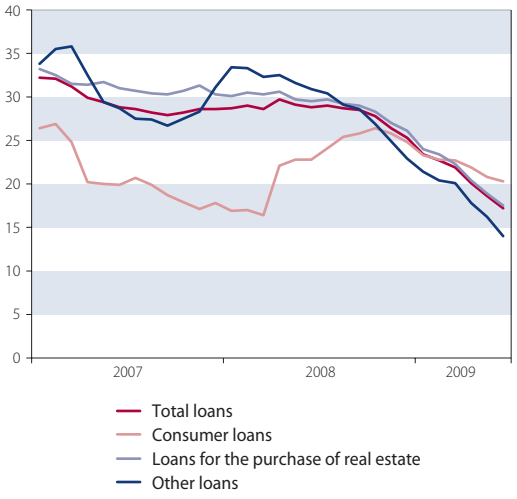
Source: NBS.

Similar to the non-financial corporations, loans standards for households were tightened, which probably affected the increase in loans. This took the form of increasing interest margins (much higher than with the non-financial corporations) and increased requirements on own resources. The lower increase in loans when compared to 2008 also resulted from the lower prices of real estate. The scrapping subsidy introduction had a positive effect with households taking out loans for new car purchases.

Is it possible to see the economic crisis in the development of monetary aggregates?

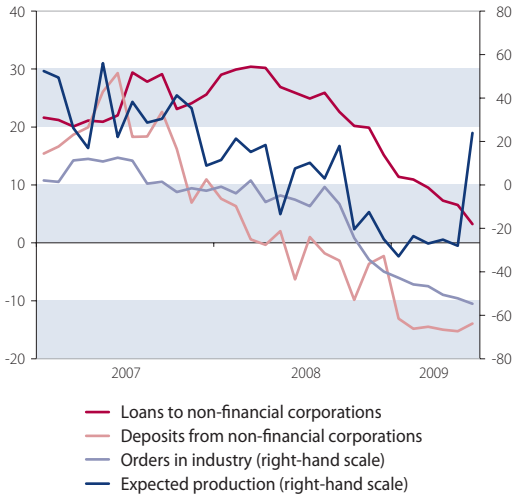
As described in the sections about deposits and loans, the slow-down in economic activity was also reflected in the development of monetary aggregates. In the first half of the year, this development was mostly seen in the non-financial corporations sector.

Chart 15 Growth of loans to households (in %)



Source: NBS.

Chart16 Year-on-year growth of loans and deposits, industrial orders and expected production



Source: NBS.

This is also documented by Chart 16. The data from conjectural research (a more significant decrease of orders in industry and the tendency to decrease expected production) indicates the impact of the economic crisis. In line with this, the growth of deposits and short-term loans fell to negative values. The growth of expected production in June resulted from a more optimistic mood in Europe and in Slovakia, which most probably reflects a cease in the decrease or a small sign of the production growth in some branches connected to government stimuli (e.g. the scrapping scheme in Europe).

The volume of deposits could start to grow after the renewal of demand for Slovak products abroad and a revival in domestic consumption.

Conclusion

From the perspective of the development of monetary aggregates and their counterparts, the impact of the economic crisis on businesses and households can be seen as a decrease in the growth dynamics of loans and deposits. Indicators of monetary development, such as deposits and loans, always lag slightly behind the economic development indicators. Due to that, we may presume that, in the upcoming period with the ongoing economic crisis (stagnation of economy reduction or its further deepening), this development will also be more significantly reflected in deposits and loans.

Change in the methodology of currency in circulation reporting and its effects on monetary aggregate M3

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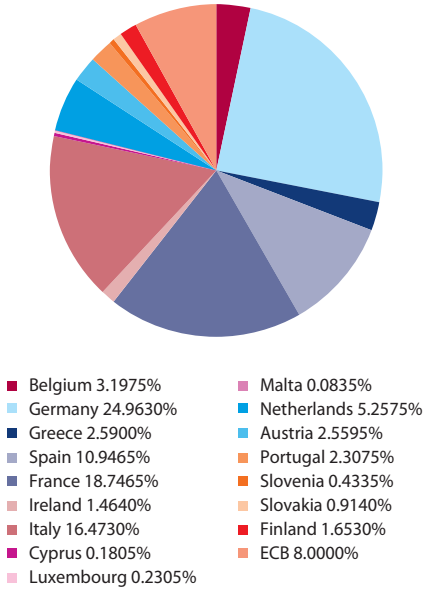
Národná banka Slovenska

On Slovakia's entry into the euro area, there has been a change in the methodology of the preparation of monetary aggregates and counterparts of monetary aggregate M3. Since 1 January 2009, they have assumed the nature of a national contribution on the part of Slovakia to the aggregate data for the entire euro area, published by the European Central Bank. The change has occurred mainly in the approach to the calculation of the currency in circulation item, which includes the share in euro banknotes issued by the Eurosystem.

ISSUE OF BANKNOTES IN THE EUROSYSTEM

Euro banknotes[1] represent a legal tender in all the participating member states; freely circulating within the euro area; they are reissued by members of the Eurosystem and also held or used outside the euro area. Liabilities arising out of the issue of the total value of euro banknotes in circulation are therefore divided among Eurosystem members in accordance with an objective criterion. A suitable criterion is the share of each national central bank in the capital of the ECB. The ECB´s capital comes from the national central banks of all EU member states and, as of 1 January 2009, it represented €5,760,652.58. The national central bank´s shares in the capital are determined on the basis of a key for the subscription of capital (*subscribed capital key*), which follows from the particular countries shares in the total population and gross domestic product of the EU (pursuant to Article 29 of the Protocol on the Statute of the European System of Central Banks[2] and European Central Bank). These weighted shares are adjusted (updated) based on information from the European Commission every five years and at each entry of a new member country into the EU and the entry of its national bank into the ESCB. Contributions in the ECB´s capital, transfers of foreign reserve assets of national central banks into the ECB, redistribution of monetary incomes of the national central banks and redistribution of profits and sharing of losses of the ECB are governed by them. The amount of the increase is determined by multiplying the current amount of the ECB´s subscribed capital and rate of the weight of the acceding national central banks to the weight of the national central banks that are already members of the ESCB, within the framework of an extended subscribed capital key. The adjusted key is used from the first day of the following year. Since the beginning of the third stage of the economic and monetary union on 1 January 1999, the subscribed capital key has been adjusted four times. The five-year adjustments were made on 1 January 2004 and 1 January 2009. Other adjustments were made on 1 May 2004 (on the entry of Cyprus, the Czech Republic, Estonia, Lithuania, Latvia, Hungary, Malta, Poland, Slovakia and Slovenia into the EU) and on 1 January 2007 (on the entry of Bulgaria and Romania into the EU). The national central banks of the Eurosystem are obliged to repay their share in the subscribed capital in full. National central banks which do not belong to the euro area must

Chart 1 Percentage shares of euro banknotes for particular euro area countries



Source: ECB.

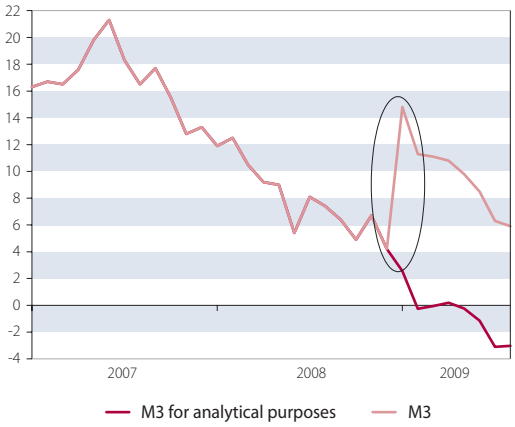
1 The minting of euro coins falls under the competence of particular countries, however, the ECB is responsible for the approval of the number of euro coins in circulation.
2 The European System of Central Banks (ESCB) consists of the European Central Bank (ECB) and national central banks (NCB) of all EU member states, regardless of whether or not they have adopted the Euro.

Table 1 Currency in circulation[1] in ECB methodology (as of 30 Sept. 2009)

Germany	193,069,662,535
France	143,463,116,715
Italy	126,029,066,395
Spain	82,803,668,735
ECB	61,401,120,000
Netherlands	40,179,954,215
Belgium	25,090,992,245
Greece	19,508,207,305
Austria	19,225,884,290
Portugal	17,279,017,965
Finland	12,752,657,040
Ireland	11,487,232,440
Slovakia	7,145,292,300
Slovenia	3,320,110,550
Luxembourg	2,415,956,210
Cyprus	1,370,423,175
Malta	639,785,145
Eurosystem	767,182,147,260

Source: National central banks, ECB.
1) According to the ECB methodology, currency in circulation includes euro banknotes only.

Chart 2 Monetary aggregate M3 (annual growth in %)



Source: NBS.

repay a certain minimum percentage (currently, 7%) of their share in the subscribed capital of the ECB as a contribution to cover the operational costs of the ECB.

Euro banknotes are issued by the ECB and the 16 national central banks of the euro area countries forming the Eurosystem, based on the Decision of the ECB dated 6 December 2001 (ECB/2001/15). The total value of euro banknotes in circulation is distributed among the central banks on the last business day of each month on the basis of a banknote allocation key, which represents the percentage shares arising out of taking the ECB´s share[3] in the total issue of euro banknotes and the application of the subscribed capital key to the share of the national central banks in this total issue.

The currency in circulation item of monetary aggregates therefore includes, in addition to the real issue of euro banknotes, also the receivable/payable[4] towards the ECB in the amount corresponding to the issue of euro banknotes by the national central bank below or above the volume which is determined each month based on the reallocation key for the issue of banknotes by the ECB. In addition, it also includes the liability arising to each country after taking into account the 8-percent share of the ECB in the total capital of the euro area (i.e. each country of the euro area is obliged to contribute, by the level of share determined, to the 8% of euro banknotes which have been allocated from the total volume of euro banknotes in the Eurosystem to the ECB. The ECB therefore has receivables within the Eurosystem towards the national central banks for the value equal to the value of euro banknotes being issued by it).

Effects of the change in methodology of currency in circulation reporting on monetary aggregate M3

In accordance with the banknote allocation key, a volume of currency in circulation higher than the actual cumulated issue accrues to Slovakia, by which, upon the transition to the new reporting methodology, there has been an increase in the volume of the monetary aggregate M1 as well as the monetary aggregate M3 as a whole. As of 31 December 2008, Slovak cash in the value of SKK 77.8 billion (€2,579.6 million) was in circulation, of which Slovak banknotes made up the value of SKK 75.5 billion (€2,505.2 million). As of 2 January 2009, the currency in circulation item showed the value of €6,980.5 million, of which the accumulated issue of banknotes formed €3,440.5 million only (€2,333.2 million Slovak banknotes; €1,107.3 million euro banknotes).

Since the quantification of the currency in circulation by the ECB methodology does not reflect the actual volume of cash in circulation, there is a significant distortion of the monetary aggregate M3 as a whole, especially in the first year of functioning within the euro area. Therefore, the NBS decided from January 2009 to prepare the so-called M3 for analytical purposes, where the currency in circulation item covers only the net accumulated issue of euro and Slovak

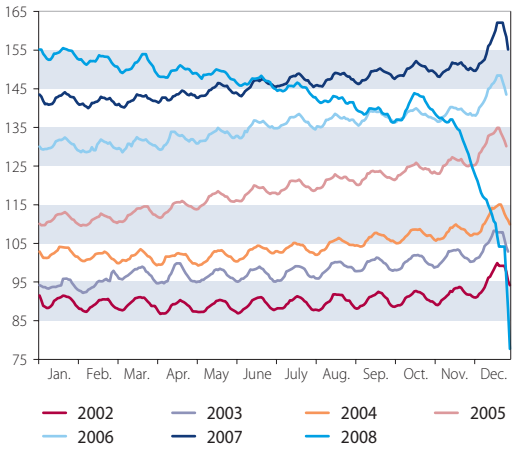
banknotes and euro and Slovak coins outside the cash desks of banks (i.e. on a similar basis as up to the end of 2008).[5] In this manner, it is still possible to retain the continuity of the M3 time sequence according to the methodology applicable up to the end of 2008.

Cash circulation in Slovakia in 2008 and after the introduction of euro

The gradual withdrawal of the Slovak cash from circulation in relation to the expected entry into the euro area was visible from the beginning of 2008. The currency in circulation volume began to be more significantly reduced in the second

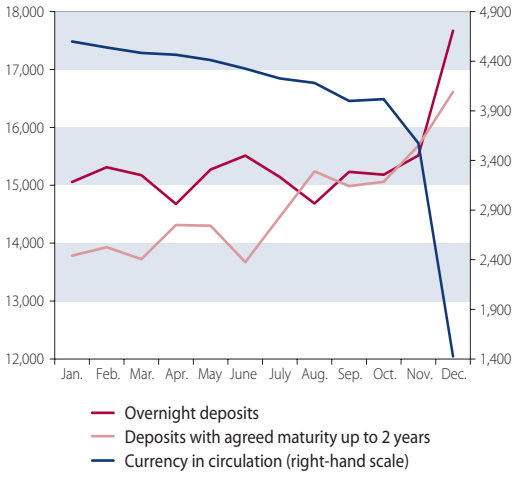
3 The ECB has been allocated by the Executive Council 8% of the total value of euro banknotes in circulation.
4 Interest is charged on a quarterly basis at the reference rate. In the case of the NBS, the real issue of euro banknotes is lower than the issue determined according to the banknote allocation key; therefore, the NBS has a receivable in the amount of this difference towards the Eurosystem. National central banks issuing above the level determined by the banknote allocation key have a payable towards the Eurosystem.
5 The M3 aggregate for analytical purposes =M3 by the ECB methodology – currency in circulation by the ECB methodology + cumulated net issue of euro and Slovak banknotes (unreturned from circulation) and euro and Slovak coins (unreturned from circulation) – banknotes and coins in the cash desks of banks. The Slovak cash will be a part of the currency in circulation item of monetary aggregates up to the end of 2009.

Chart 3 Currency in circulation development (SKK billions)



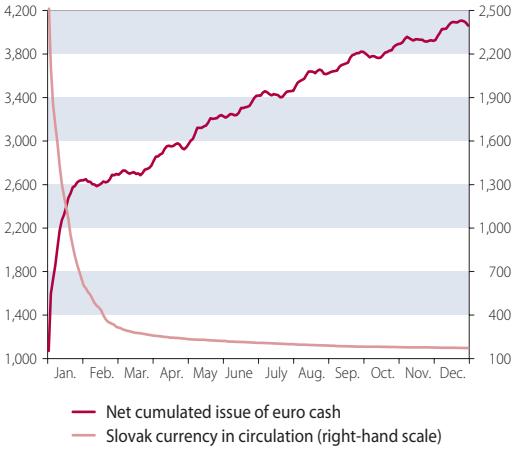
Source: NBS.

Chart 4 Development of currency in circulation and private sector´s deposits in 2008 (EUR billions)



Source: NBS.

Chart 5 Currency in circulation development in EUR millions (banknotes and coins)

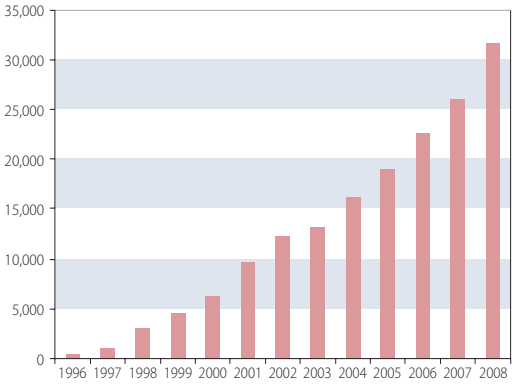


Source: NBS.
Notes: The issue of the euro currency as of 1 January 2009 corresponds to the frontloaded cash. The Slovak currency in circulation represents Slovak banknotes and coins unreturned from circulation.

Chart 6 Cumulated net issue of euro and Slovak cash in circulation (banknotes and coins)

Source: NBS
Notes: The issue of the euro currency as of 1 January 2009 corresponds to the frontloaded cash. The Slovak currency in circulation represents Slovak banknotes and coins unreturned from circulation.

Chart 7 Number of payment terminals

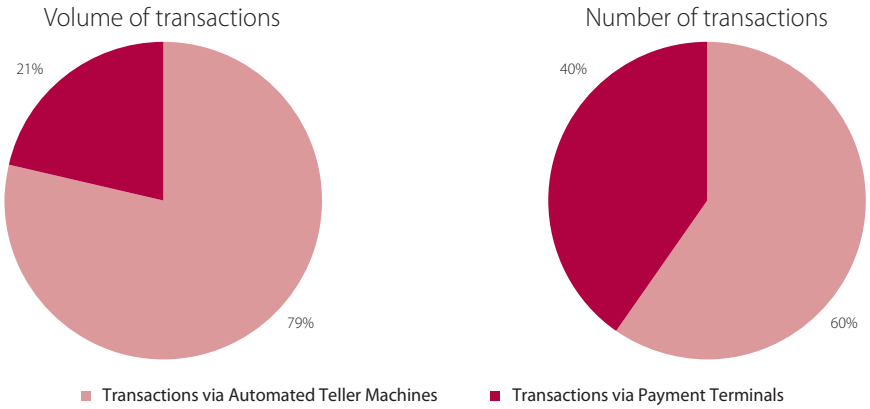


Source: Bank Card Association of the SR (www.zbk.sk).
Note: The statistical data are aggregated for all banks being members of the BCA of the SR and banks not being members of the BCA of the SR.

half of 2008 following the decision of the ECOFIN Council from 8 July 2008 on the Adoption of Euro in Slovakia as of 1 January 2009. In November 2008, the average monthly value of currency in circulation was approximately at the level of June 2006 and in December, when the largest volume of Slovak cash was withdrawn from circulation, the average monthly cash circulation was at the level of December 2004.

By the July decision of the ECOFIN Council on the adoption of the euro, the National Bank of Slovakia at the same time obtained the authorisation, within the framework of preparations for the introduction of the new currency, to borrow banknotes from the Eurosystem to cover the demand for banknotes in 2009 (196.2 million euro banknotes in a total value of €8.3 billion were borrowed). The initial reserve of euro coins (499 million

Chart 9 Volume and number of transactions via Automated Teller Machines and POS Terminals as of 31 December 2009



Source: Bank Card Association of the SR (www.zbk.sk).
Note: The statistical information is aggregated for all banks being members of the BCA of the SR and banks not being members of the BCA of the SR.

coins in the total value of €165.2 milion) have been stamped in the Mint of Kremnica, š. p.

In September and October, the process of the frontloading of financial institutions and enterprises with euro cash began; in November, frontloading of enterprises commenced. In addition, at the beginning of December, the National Bank of Slovakia, banks and post offices began to distribute euro coins starter kits to the public. The total value of the euro cash frontloading as of 1 January 2009 attained €1,070.8 million.

However, in terms of the impact on the monetary aggregate M3, significant surpluses of the currency in circulation in the second half of 2008 were, to a significant extent, compensated by an increase in deposits, where an increased deposition of funds in banks was recorded from the private sector due to the simplification of the Slovak currency conversion to euro.

Upon the gradual withdrawal of the Slovak cash from circulation prior to entry into the euro area, the current development of the issue is distinguished by the relatively high month-on-month increases in euro cash, which are related to the replacement of Slovak banknotes and coins in circulation. In the first nine months of 2009, the

Table 2 Net cumulated issue of Slovak cash unreturned from circulation as of 30 September 2009 and euro cash

Nominal Value	Number in PS	Value in SKK	Nominal Value	Number in PS	Value in EUR
5,000 Sk	225.150.50	1.125.752.500.00	500 EUR	2,369,277	1,184,638,500
1 000 Sk	1,335,865.50	1,335,865,500.00	200 EUR	988,386	197,677,200
500 Sk	615,761.75	307,880,875.00	100 EUR	11,232,791	1,123,279,100
200 Sk	1,175,820.25	235,164,050.00	50 EUR	21,962,108	1,098,105,400
100 Sk	3,855,471.50	385,547,150.00	20 EUR	12,373,584	247,471,680
50 Sk	3,482,362.00	174,118,100.00	10 EUR	9,732,316	97,323,160
20 Sk	10,725,653.25	214,513,065.00	5 EUR	6,478,372	32,391,860
Total banknotes	21,416,084.75	3,778,841,240.00	Total banknotes	65,136,834	3,980,886,900
10 Sk	25,866,967.00	258,669,670.00	2 EUR[1)]	19,463,032	38,926,064
5 Sk	31,427,877.00	157,139,385.00	1 EUR	19,466,377	19,466,377
2 Sk	65,547,788.00	131,095,576.00	50 cents	21,043,927	10,521,964
1 Sk	103,550,963.00	103,550,963.00	20 cents	27,636,668	5,527,334
50 hell.	46,384,839.00	23,192,419.50	10 cents	30,893,511	3,089,351
50 hell. II.	124,389,562.00	62,194,781.00	5 cents	34,320,683	1,716,034
20 hell.	0.00	0.00	2 cents	58,894,280	1,177,886
10 hell.	0.00	0.00	1 cent	55,076,732	550,767
Total coins in circulation	397,167,996.00	735,842,794.50	Total coins	266,795,210	80,975,776
Commemorative coins	935,129.00	699,487,170.00	Collector coins	45,492	676,970
Total	419,519,209.75	5,214,171,204.50	Total	331,977,536	4,062,539,646

Source: NBS.
1) Including two euro commemorative coins.

volume of the net cumulated issue of euro cash increased by almost four times and, as of the end of the third quarter of 2009, almost 97% of the value of the currency in circulation as of 31 December 2007 was returned from circulation, i.e. almost SKK150 billion.

In recent years, a gradual growth in the number of POS terminals has been observed, which confirms the widening use of non-cash payment systems by payment cards. However, despite the fact that, in 2008, the number of POS terminals increased by more than 21% on the previous year, citizens still, to a large extent, prefer to hold cash and prefer payments by cash over non-cash payments by payment cards.

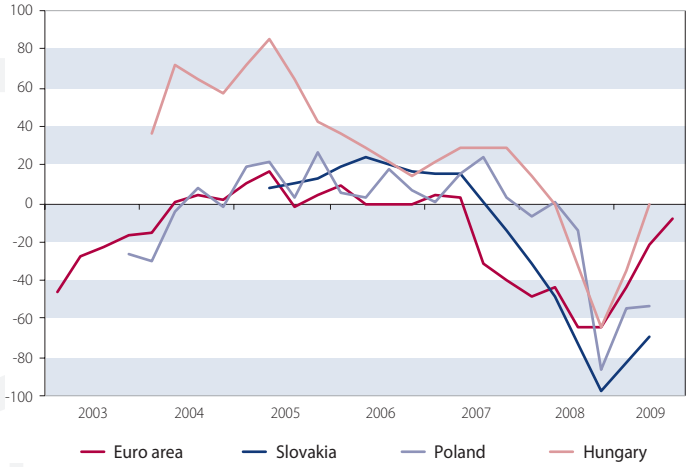
The value of the net cumulated issue of euro cash in Slovakia currently corresponds to the cash circulation from approximately mid-2006 (detailed information in Table 2). This fact, together with relatively low interest rates, leading to the preference for holding cash over deposits, as well as the preference for cash transactions by citizens, indicates that, in the coming months, the issue of euro banknotes may also significantly increase; however, a gradual reduction and subsequent stabilisation of its month-on-month additions is expected. Since Slovakia currently fulfils the banknote allocation key for approximately 57%, the NBS does not anticipate any exceeding of the determined volume of banknotes, which would lead to the creation of an obligation towards the ECB.

Developments in the Loan Market

Mgr. Ing. Pavol Jurča
Národná banka Slovenska

The development of loans depends on two basic factors: on client demand for loans and on the banks and their supply. The supply of loans is determined by price conditions, particularly interest rates and fees, and by non-price factors, which depend on the credit standards of banks. Determination of the factors resulting in a change in the volume of loans provided is needed for correct understanding of developments in the loan market, specifically, in terms of the functioning of the monetary policy transmission mechanism, as well as in terms of financial stability. In this analysis, we deal, therefore, with the development of credit standards and demand for loans in the Slovak banking sector over the past years.

Chart 1 Development of credit standards for loans to companies



Source: ECB, NBS, NBP, MNB.
The vertical scale shows the net percentage share of banks which have eased their credit standards for loans to companies.

Chart 2 Development of credit standards for loans to households

Source: ECB, NBS.
The left-hand vertical scale shows the net percentage share of banks which have eased credit standards for loans to households. The right-hand vertical scale shows the year-on-year change in residential property prices.

The NBS has information about supply and demand factors affecting development in the bank loan market since 2005. Even though this timeframe is quite short, it allows us to describe the basic details and differences in the development in the domestic loan market and in the loan market of the euro area as a whole, or the time lag, if any, in the development in the domestic market. This comparison is of interest mainly from the perspective of changes which have been influenced by the current economic and financial crisis. In addition, we will also identify certain macroeconomic variables, developments of which permit at least a partial explanation of the development of the loan market, or which, by contrast, may be affected by this development.

Information Used

The information used herein derives mainly from a questionnaire on the loan market, sent to banks by the NBS on a bi-annual basis since 2005. The questionnaire is usually completed by the head officers of the respective bank departments who have detailed knowledge of the loan market in Slovakia. All banks, as well as certain branches of foreign banks, are involved in this survey, so it covers more than 95 % of the loan market in terms of the volume of loans. In addition, since 2008 the three largest banks have taken part in this survey on a quarterly basis. These results then form a part of the bank lending survey in the euro area performed by the ECB.

Unless stated otherwise, the information in the charts is provided in the form of the so-called net percentage share. For instance, the net percentage share of banks which have eased their credit standards for the granting of loans to households is calculated as the difference between the percentage share of loans to households provided by banks which have stated an easing of their standards in total loans and the percentage share of loans to households provided by banks which have tightened their standards in total loans. Expressed in a simplified form, the particular responses of banks are weighted by the average

volume of loans of the respective type for the given half-year. The information is based on the opinions of individual banks and does not reflect the opinion of the NBS.

Since the questionnaire is evaluated bi-annually in Slovakia, we have obtained the information for the first and third quarters by interpolation.

Development of credit standards

The current financial crisis has contributed significantly to several negative trends in the loan market across the whole of the euro area. Banks have made the conditions for the provision of loans more restrictive and, at the same time, the demand for new loans has decreased. Only a gradual improvement of the situation may be recorded in 2009. Tightening the credit standards for the company sector may be recorded in Slovakia from the second half-year of 2007.

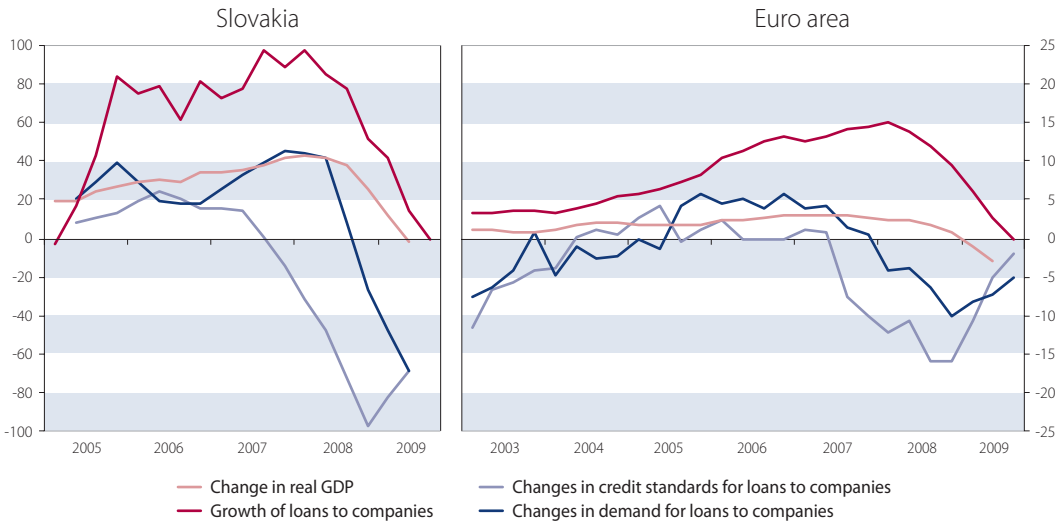
This development corresponds to the development across the whole of the euro area, which is caused by the Slovak economy having links abroad, as well by the relatively high sensitivity of Slovak companies to the economic cycle. As displayed in Chart 1, in Hungary and Poland, banks acceded to a restrictive development of conditions in the loan market only in the second half-year of 2008.

Unlike the supply conditions in the market of loans to companies, which have largely been in accord with the development within the framework for the whole of the euro area, the development of credit standards for housing loans to households has differed substantially. While banks in the euro area began to gradually tighten the credit standards in 2006, the Slovak banking sector only made the standards stricter in the second half-year of 2008. In addition, the previous years were characterized by a significant easing of standards. One of the reasons for these differences may arise from the different development in residential property prices. While prices in Slovakia grew at quite a high rate up to the first half-year of 2008, within the euro area, a slight year-on-year decrease in real estate prices could already be recorded in the first half-year of 2006. This divergence of the Slovak market caused Slovak banks, within the environment of a strong demand from households for housing loans, to increase the loan-to-value ratio.

Chart 3 Development of demand for loans to companies and households

Source: ECB, NBS.
The vertical scale shows a net percentage share of banks, which have recorded a growth of demand.

Chart 4 Comparison of changes in credit standards for loans to companies, changes in loans, changes in real GDP growth and changes in the volume of loans

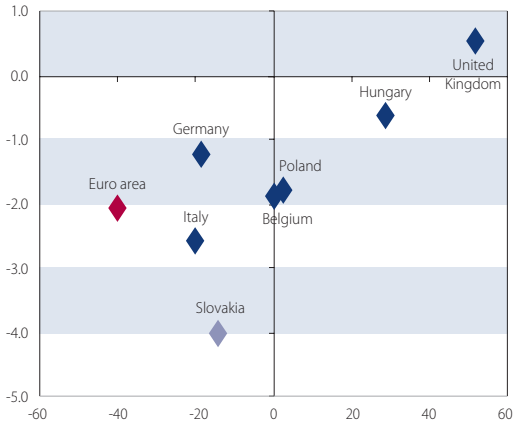


Source: NBS, ECB, Eurostat.
The left-hand vertical scale shows the net percentage share of banks which have eased credit standards for loans to companies or have recorded a growth in the demand of companies for loans. The right-hand vertical scale shows the year-on-year change in real GDP or year-on-year change in the volume of loans to non-financial companies.

Development of demand

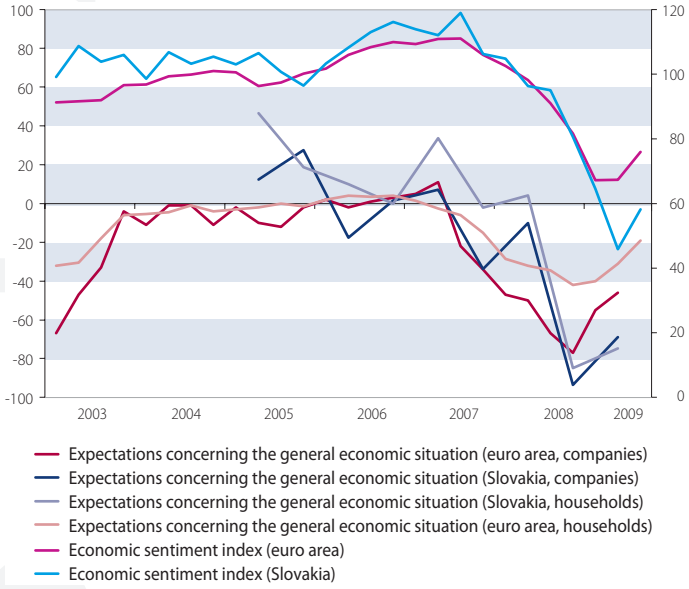
The Slovak banking sector only recorded a significant decrease in demand for loans from enterprises and households in the second half-year of 2008. However, within the framework of the euro area as a whole, this decrease occurred previously – in the case of companies by approximately one year and in the case of the provision of loans to households by even two years.

Chart 5 Comparison of changes in credit standards for loans to companies and changes in real GDP growth rate



Source: Eurostat, ECB, central banks.
The horizontal scale shows the net percentage share of banks which tightened credit standards in the fourth quarter of 2007. The vertical scale shows the change in year-on-year GDP growth rate between 2007 and 2008.

Chart 6 Comparison of effects of expectations concerning the economic situation on loan standards and economic sentiment index development



Source: ECB, NBS, Eurostat.
The left-hand vertical scale shows the net percentage share of banks which stated that expectations concerning the general economic situation have contributed positively to an easing of credit standards for loans to companies or households. The right-hand vertical scale shows the values of the economic sentiment index at the beginning of the relevant quarter.

The biggest difference in total may be recorded in the case of housing loans provided to households within the framework of the development in the Slovak loan market and in the market in the euro area, particularly in 2007 and in the first half of 2008. This largely derived from the relatively low indebtedness of Slovak households when compared to the average across the whole of the euro area.

Relationship between development in the loan market and macroeconomic indicators

This section deals with a review of the relation between certain factors affecting changes in the credit standards or demand and the corresponding macroeconomic quantities. The objective is to compare the nature of these relations in Slovakia and in the euro area or to define the time lag between the development in the loan market and the respective macroeconomic indices. Similar relations for the market development in the euro area are detailed, for instance, by Berg et al. (2005).

In terms of the impact on the economy, the relation between the change in credit standards, real GDP growth rate, and change in the volume of loans is most important. This is confirmed also by Lown and Morgan (2006), according to whom changes in credit standards have significantly predominated over other factors in explaining changes in the volume of company loans and total production. As demonstrated by Chart 4, in Slovakia, as well as across the whole of the euro area, the stricter conditions for the provision of loans by banks came first. This was then followed by a change in the trend of GDP growth rate and the volume of loans together with a reduction in the growth rate of the demand for loans.

A lag between tightening the credit conditions for companies and the decrease in GDP growth rate may be seen in Chart 5, in examples from certain countries. Slovakia, together with Italy and Germany, acceded to making the standards more restrictive in 2007, and they recorded a decrease in the economic growth rate in 2008. On the other hand, for instance, Hungary and Poland, which only made the standards stricter in 2008, recorded a decrease in GDP growth later than Slovakia.

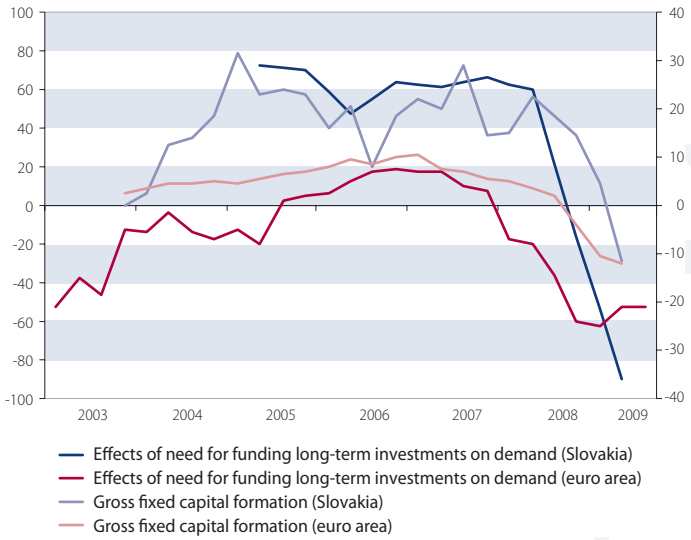
A significant factor which has largely contributed to tightening the credit standards for loans to companies and households is represented by expectations concerning the future economic situation. Chart 6 shows the quite significant correlation between the development of the influence of such expectations on changes in credit standards and the development of the economic sentiment index. For the period in question from 2003, this index reached its highest value in mid-2007, in Slovakia as well as in the euro area. Together with the change in the trend of this index towards a negative development, the negative impact of future economic situation expectations

on changes in credit standards could be recorded immediately, and this gradually deepened. This development may be observed up to the end of 2008, when the economic sentiment index overflow in the euro area ended. At the same time, Chart 6 indicates that banks are more optimistic with regard to credit standards for loans to households: in the euro area, the influence of negative expectations on the loan market has been recorded by a lower number of banks. In Slovakia, these expectations began to affect the process of tightening conditions in the retail loan market approximately one year later than in the market for loans to companies.

Where demand of companies for investment loans is concerned, an important role is being played by the need for funding for long-term investments.

As displayed in Chart 7, this influence may be significantly positive but it may also rapidly change into significantly negative. In Slovakia, the effect of this need for funds on the part of companies on their demand for loans was significant up to mid-2008. At the same time, this period was distinguished by the high (approximately 20%) year-on-year growth in gross fixed capital formation. On the other hand, after the alteration in the trend in the first half of 2009, companies have dramatically reduced their investments in long-term capital and, thereby, also the need to fund them. This relation between the development of gross fixed capital formation and the influence of the need to fund investments on demand for loans has applied across the whole of the euro area also, but with the difference that an inversion in the development of fixed capital formation occurred approximately one year earlier than in Slovakia. In addition, the influence on demand from companies for loans has been less significant.

Chart 7 Comparison of effects of the need for funding long-term investments on demand and changes in the gross fixed capital formation



Source: ECB, NBS, Eurostat.
The left-hand vertical scale shows the net percentage share of banks which stated that the need for funding long-term investments has positively contributed to the growth in demand from companies for loans. The right-hand vertical scale states the year-on-year changes in annual gross fixed capital formation.

Summary

The economic crisis over the past years has been related to tightening the credit standards and decreasing the demand in the market for loans to companies as well as to households. In the case of loans to the company sector, Slovak banks introduced more restrictive loan conditions at approximately the same time as banks within the framework of the euro area. This may be explained in part by a high correlation between the economic sentiment index in Slovakia and in the euro area as a whole. On the other hand, the decrease in demand from entrepreneurial entities for new loans occurred later in Slovakia. This is related in part to the later decrease in GDP growth rate and gross fixed capital formation in Slovakia when compared to the average across the whole of the euro area. The development in the market for loans to households for the purchase of real estate in Slovakia has differed significantly from the development within the framework of the entire euro area. This may result from the lower indebtedness of Slovak households and the different development of prices on the real estate market.

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Bank analysts on the current development in loans and deposits

As far as Slovakia is concerned, is the deceleration in loan dynamics caused, in your opinion, by a lack of interest (demand) as a result of the impacts of the economic crisis or does it rather concern greater vigilance on the part of the supply?

Michal Mušák, Slovenská sporiteľňa, a. s.
Both factors have been demonstrated in the market. Unemployment is on the increase and people have reduced expectations as regards future income growth, so it is a natural response when they are thinking more about whether they should save more rather than consume and thereby create a reserve for the future. In the case of residential housing loans, the demand has also been attenuated by the decrease in real estate prices. At the same time, banks have made conditions stricter which is related to a greater volume of failed loans as well as a decrease in the prices of properties which have served as collateral. The rate of making the conditions stricter on the part of banks also follows on from individual liquidity and capital sufficiency. For instance, in the first 9 months of this year, Slovenská sporiteľňa, having a good position in this respect, did not provide any fewer new loans to citizens than in the same period lasting the prior year.

Róbert Prega, Tatra banka, a. s.
At the end of last year, during the first phase of the crisis after the fall of Lehman Brothers, it could have mainly involved increased prudence on the part of banks. Over this year, the decrease, in the volume of the newly provided loans is, in our opinion, largely affected by reduced demand from companies. The reduction of interest in operating loans is a natural consequence of the significant decrease in revenues and a similar situation pertains for investment loans. The situation may be somewhat different in some selected industries which have a longer-term problem with their competitiveness (i.e. the textile industry) or industries where the overheating rate reached a higher level than the economy as a whole (e.g. the estate market).

Is there any difference between companies and households in terms of demand and supply?

Michal Mušák, Slovenská sporiteľňa, a. s.
In companies, a significant change in behaviour can be seen. The volume of new investment loans dropped to a half in the first quarters of this year on a year-on-year basis, while the volume of operating loans provided increased significantly. Even though the comparison is distorted in part by the differing maturity of loans (investment loans are longer than operating), the shift reflects the influence of the crisis on the behaviour of companies which, inter alia, by a postponement of investments, obtain funds for ordinary operations until there is resumed demand for their products or services.

Róbert Prega, Tatra banka, a. s.
There is a more significant overflow in demand for company loans, which is also related to a greater cyclic overflow especially in industry. This difference is also evident in the year-on-year comparison of the development in loans provided to the companies' sector and to citizens. In the category of loans to citizens, a still relatively strong growing trend is thereby evident, which is in contrast to the year-on-year decrease in loans to citizens across the whole of the euro area.

In the euro area, a greater problem in obtaining loans for small and medium-sized businesses can be observed. Is the situation similar in the SR?

Róbert Prega, Tatra banka, a. s.
Small and medium-sized companies have been affected by the crisis even more significantly than the large companies, which could have caused their risk profile to deteriorate and affected also the banks' approach to them. On the other hand, the segment of small and medium-sized businesses is, even from the banks' perspective, one with the greatest prospects. The conditions for obtaining a loan have, therefore, been made stricter when compared to the period before the crisis but the possibility of obtaining a loan remains good when compared to large companies.

How do you perceive the rapidity and scope of the the signals transmitted by the ECB (reduction of interest rates, non-standard measures) within the framework of the SR? Have these measures and activities been successful as regards the Slovak interbank market as well as from the perspective of the supply and demand for loans?

Michal Mušák, Slovenská sporiteľňa, a. s.
The reduction in ECB rates has supported the availability of loans in Slovakia. By contrast, other

factors have been developing in favour of higher rates, so the resulting decrease in interest rates has not been as significant as the reduction in the ECB rate. The opposite effects have mainly been those of the growth in risk costs with regard to the higher share of failed loans and expectations of their further growth. In addition, it is more difficult for banks to get capital or long-term liquidity (for instance, spreads in mortgage certificates have increased).

Róbert Prega, Tatra banka, a. s.
The situation in the Slovak financial and banking market differs significantly from the situation in most of the euro area countries. Most Slovak banks had, during the period of the outbreak of the crisis, and currently still have, the ratio of total loans to deposits of clients substantially below the level of 1.0. Therefore, the dependence of the sector on sources of external liquidity has been lower. However, the potential to use the refinancing instruments of the ECB has, of course, an additional stabilizing effect. The transmission of the decrease in interest rates into client rates has been rapid. The decrease in short-term risk-free rates has, however, been accompanied by a growth in risk and liquidity costs, which has limited the reduction in prices – especially long-term sources

How do you see future development in the area of loans within the context of the anticipated revival in global demand? Is it realistic to expect, within a relatively short time-horizon, a repeat of two-digit dynamics of loans (or above 20%)?

Michal Mušák, Slovenská sporiteľňa, a. s.
We assume that the pace of growth in loans will accelerate during the coming years, although not up to the level of 20%. In the case of loans to citizens, we expect growth in 2010-2012 at a level of 10-15% p.a. (mainly thanks to housing loans for households). In the case of corporate loans, we expect only slow growth in 2010 (up to 5 %) and a gradual acceleration in 2011-2012.

Róbert Prega, Tatra banka, a. s.
Next year, we also expect only a slight tempo in the growth of loans to clients, probably with single-digit year-on-year dynamics. When compared to 2009, we expect a slight revival in loans to the company sector. We regard growth in loans above a level of 20%, even on the medium-term horizon, as exceptional.

The loan expansion in 2006-2008 has led at least to partial saturation of the market and, even following a gradual revival of the economy, we do not expect any repetition of this development during the next years.

The ability of domestic commercial banks to fund the powerful growth in loans from their own funds will not occur as in the previous years either. We therefore assume that, during the coming years, the growth in loans will more significantly affect the tempo of growth in primary funds.

How has the decrease in real estate prices been reflected in the policy of banks in the SR as well as in the demand for loans?

Michal Mušák, Slovenská sporiteľňa, a. s.
While the growth of real estate prices formerly created a buffer in the event of a loan failure, during the last year banks could no longer rely upon this development. The greatest change when compared to the past is that, while banks have previously provided loans of up to 100 percent of the value of the real estate and on occasions even in excess of 100 percent, generally a greater co-participation is currently required from the debtor, by which the banks are safeguarded, inter alia, against any decrease in the value of the collateral below the outstanding loan amount. In addition, the decrease in prices has also changed the behaviour of loan applicants. While, in the past, many of them have relied upon a further growth in prices and have regarded the purchase of real estate as a "guaranteed investment", they are now more conservative in their expectations. Others, wanting to buy a flat for housing, are waiting for prices to bottom.

Róbert Prega, Tatra banka, a. s.
The trend for the price decrease in real estate and its expected continuation has led to a reduction in the maximum and average ***loan to value ratios,*** up to which commercial banks provide loans. However, at the same time the price reduction reduces the claim on the loan amount needed. The prevailing expectation of a further potential decrease in prices also motivates potential buyers to postpone their purchase decisions, which temporarily reduces the interest in residential housing loans and at the same time affects a further price decrease in real estate.

When is it possible to expect a repeat of real estate price growth? In your opinion, have the real estate prices in the SR been overvalued?

Michal Mušák, Slovenská sporiteľňa, a. s.
It seems that demand has revived in the real estate market in the last few months. When compared to the weak beginning of the year, the volume of new residential housing loans also increased (partially probably also due to refinancing growth). The revival in the economy and growth in the demand for loans should gradually also be demonstrated in real estate prices. We expect that they could stabilize in the next quarters and could gradually start to increase during 2010.

Róbert Prega, Tatra banka, a. s.
The overheating of the economy in the real estate segment has been greater than in other sectors

of the economy and real estate prices have, in our opinion, been overvalued. This is proved by the fact that prices already started to undergo a correction in the first half of the year, prior to the outbreak of the last phase of the financial crisis. Next year, we still rather anticipate a slight decrease in real estate prices. However, currently, there has been a significant restriction of funding for new projects. This may temporarily lead to a lack of new flats, which could accelerate the growth in prices. However, from the medium-term aspect, we also only count on a slight growth in prices.

Indicator of external balance of the economy and impact of the balance of payments methodology

Ing. Ľudmila Bartóková
Technical University in Košice

The current world economic development is characterised by the ever-increasing openness of economies. The importance of the question of external balance is therefore increasing. For a number of reasons, this trend is even more evident in small economies in which cross-border cooperation is necessary. This is due to the need for securing basic raw materials if the country does not have sufficient natural or other production resources at its disposal or because its climatic conditions restrict the possibilities of its agricultural production. Last but not least, it is usually the limited size of the domestic market which at the same time means limited sales possibilities, and thus the need to export a part of the production abroad.

The large volume of cross-border transactions currently performed by the majority of countries requires precise and detailed statistical monitoring. All these cross-border flows are recorded in balance of payment statistics as one of the statistical and accounting reports of the country monitoring the development of all the foreign transactions of the economy. Compilation of the balance of payments statistics follows the methodology developed by the International Monetary Fund, the Balance of Payments Manual. The IMF Manual is utilised by the majority of the world's central banks, which provides for a certain degree of comparability of the data reported. Because these are, first of all, financial statements, the basic principles of double-entry accounting such as making double entries, differentiating between credit and debit transactions and balancing the resulting balances to nil are followed in their compilation. However in reality the resulting part-balances of individual accounts of the balance of payments do not necessarily have to be reconciled to zero because mutual offsetting of balances between individual accounts: current, capital, financial accounts and the so-called balancing account of reserve assets is possible. In particular, the rapidly growing and developing transition economies often record a deficit on the current account and a surplus on the accounts recording capital inflow (financial and capital accounts). This development reflects the different needs of a country in the area of financial resources and products imported and the exports of final production.

CURRENT ACCOUNT DEFICIT AS THE INDICATOR OF EXTERNAL BALANCE

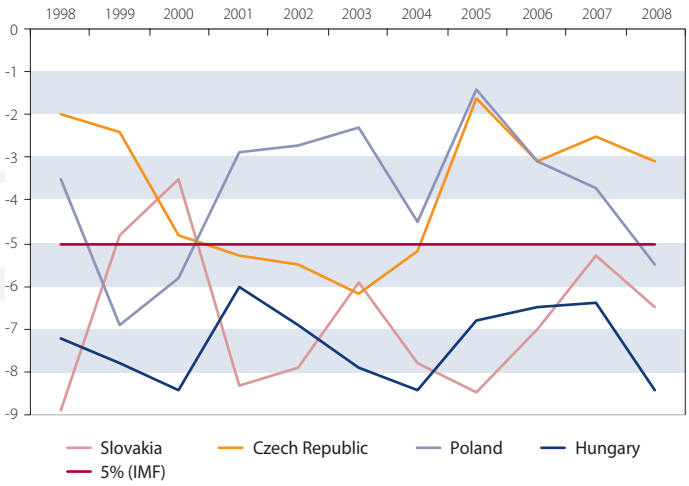
A current account deficit means that the country is using more than it is actually producing, which increases its foreign liabilities and creates the need for their later repayment. At the same time, the danger arises that the country will not be able to repay these liabilities in the future. A persistent and long-term imbalance in the balance of payments or its current account may therefore represent a serious threat to the overall macroeconomic stability and further economic development.

In this respect, the question arises as to how much of the current account deficit is sustainable, especially if the deficit is a long-term one and the foreign trade development does not indicate that this trend is likely to change. To quantify the development of an external balance or imbalance, we most frequently use the indicator of "the share of the current account balance to the country's GDP". The indicator compares the volume of the country's liabilities arising from cross-border transactions on the current account with the value of its GDP and is one of the indicators most frequently used when assessing the external balance.

CURRENT ACCOUNT DEFICIT AND ITS SUSTAINABILITY

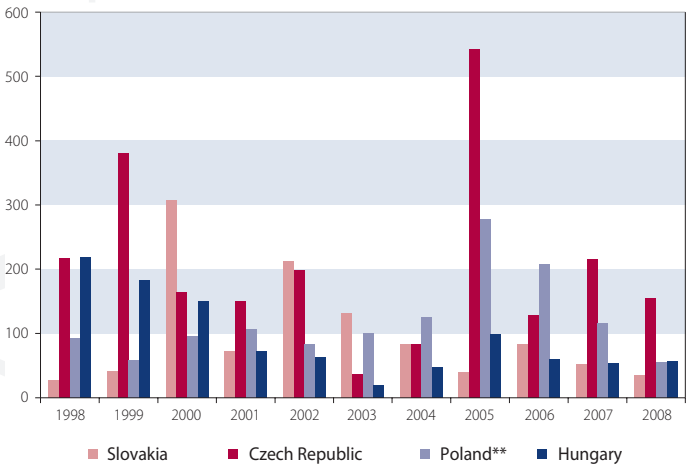
A higher consumption of resources when compared to their production requires additional, external resources, which makes this situation unsustainable in the long-term perspective. Both

Chart 1 Development of the indicator of CA /GDP (%) in comparison with the recommended threshold



Source: National banks and statistical offices of individual countries.

Chart 2 Development of % coverage of current account deficit by the inflow of FDI in V4 countries*



**FDI inflow – only equity capital and reinvested earnings*
*** More detailed structure of the FDI account to equity capital, reinvested earnings and other capital was not available for Poland*
Source: National banks of the individual countries.

the theory and the IMF speak of the lower sustainable threshold for the current account deficit to GDP ratio at the level of -5%. Many economies, especially the rapidly growing ones, often exceed this threshold which does not necessarily have to be perceived as a negative phenomenon. If these liabilities of are financed from non-debt resources e.g. foreign direct investments, the deficit exceeding the recommended threshold need not represent any serious threat from the perspective of the external balance of the economy.

A similar imbalanced development of foreign trade payments is more or less the rule in the majority of European transition economies, including also the so-called Visegrad Four, often called the V4 countries (Slovakia, the Czech Republic, Poland and Hungary). Some problems with the external balance have been a common feature of transition economies accompanying the transformation process. Because these are so-called catching-up countries with typically higher economic growth, the increase in domestic demand was practically satisfied from the start of the transformation process to a high degree by foreign production. The reasons for this were the limited capacities for domestic production not enabling the domestic supply to react with sufficient flexibility. Higher domestic demand and the gradually improving exchange rates of the domestic currencies (as the reflection of the ongoing convergence process) were supporting imports into these countries and at the same time contributed to deepening the current account deficits of their balance of payments. This development was common to Slovakia, the Czech Republic, and Poland as well as to Hungary.

Chart 1 illustrates the development of the current account as a share of GDP in the V4 countries in comparison with the recommended "safe" threshold determined by the IMF (in red).

We can see that the CA/GDP ratio was fluctuating in all four of the countries analysed beyond or above the recommended limit. In the period monitored, the most favourable development of the indicator was recorded by Poland with the deficit not exceeding -5% apart from the period of 1999 and 2000. In the Czech Republic, the external imbalance deepened in the period from 2000 to 2004. A slightly less favourable development was recorded on the current account of the SR, with the indicator – by contrast – exceeding the limit except for a brief period from 1999 to 2001. Hungary recorded more significant problems in maintaining the balance of the external economy, as the CA/GDP ratio over the entire monitored period was over -5%, which can be related also to the generally less stable domestic macroeconomic environment of the country.

As demonstrated by the chart, transition economies often exceed the recommended threshold. On the other hand, they are typified by a significantly greater inflow of foreign capital in the form of foreign direct investments that can cover the increased need for financial means. The FDI, in addition to financing imports, can also extend the production capacities of the economy, increase the potential product and, at the same time, they improve the overall balance of the balance of payments because the production of these companies is usually directed towards export.

Chart 2 illustrates the development of percentage coverage of the current account deficits of the V4 countries by the FDI inflow (specifically by the non-debt component of the FDI– equity capital and re-invested earnings).

We can see that the inflow of non-debt resources in the form of foreign investments in some instances was more than twice the deficit on the current account, by which it could easily cover the need for outgoing means. It was particularly obvious in the years when large investment projects were announced, either in the form of

1 *Major investment projects in the SR: privatisation of banks and companies in the field of transportation and communications (2000), privatisation of Slovenský plynárenský priemysel and Slovenská energetika, on-going privatisation of banks, also the arrival of PSA Citroën-Peugeot (2002); in the CR: Toyota Peugeot Citroën (2002), Škoda Auto, Tivall, Faurecia or Sung Woo (2005); in Poland e.g. Cadbury Schweppes, Dell or Bridgestone (2005); and in Hungary e.g. Alcoa (2005).*

green-field investments, or in the form of privatisation of state enterprises.

In addition to non-debt financing by means of FDI, drawing of credits or loans from other countries and/or various international institutions can also be considered. This means of financing imports into the country is, however, perceived less positively than financing by foreign capital. Because the resources are returnable, their use increases the economy's indebtedness and regular repayments in the upcoming periods represent an annual outflow of resources. It is for this reason that financing by means of FDI is preferred.

Indicator of CA/GDP and misrepresenting methodology of balance of payments

As already mentioned, a high and persisting current account deficit may be a threat to the economy and from the long-term perspective it may cause significant problems. The largest portion of the deficit is usually represented by the balance of goods and/or services, although certain nationally specific features may be reflected in the foreign trade structure of any country. It is, therefore, interesting to monitor the structure of individual incoming and outgoing payments recorded on the current account, by which it is possible to find to what extent the individual components play a part in the current account deficit. A similar analysis is also justified in considering the methodology used in the compilation of the balance of payments. Not every transaction recorded on the current account and contributing to the „accounting" deepening of its deficit causes the actual operations on the foreign-exchange market. The issue of misrepresentative methodology applies to a great extent to transition economies, taking into consideration the fact that in recent years these countries have been enjoying a large FDI inflow. In the first years of operation, foreign companies commonly reinvest the profit achieved in the host country, the funds do not leave the economy and the original investment increases. However, this type of transaction is recorded as a cost transaction on the income accounts within the current account, as a result of which the current account deficit is increased artificially. This means that the impact on the current account is solely an accounting effect, not an actual one. With another item of the income accounts – income on equity – under which e.g. dividends are also recorded, often a real outflow of funds occurs, because these are mostly the means paid to non-residents.

The misrepresentation that is the consequence of the accounting methodology used in the compilation of the balance of payments is illustrated in Table 1. For each country, the share of the current account balance on GDP (in %) is indicated first. In the next line, this indicator is stated net of the cost item from the income account that may create the aforementioned accounting misrepresentation. It is the item of "reinvested earnings" reported within the FDI income. When comparing these two values, we can see that the net indicator is more favourable for all four countries, while in some instances the balance of the current account changed from minus values to a surplus, as a result of which the monitored indicator also improved.

Structure of current account from the perspective of outgoing payments

Because not all the items contributing to deepening the current account deficit create a real need for financing, it is important at the same time to monitor the deficit source. In other words, what accounts within the current account represent the highest inflow and outflow of resources.

Table 2 provides an overview of the main cost items of the current account together with their

Table 1 Development of the balance of CA/GDP and adjusted balance of CA/GDP

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Slovakia											
CA/GDP	-8.9	-4.8	-3.5	-8.3	-7.9	-5.9	-7.8	-8.5	-7.0	-5.3	-6.5
Adjustment by RE[1]	-8.6	-4.6	-3.3	-7.9	-7.3	-1.6	-4.0	-6.7	-5.7	-4.0	-5.6
Czech Republic											
CA/GDP	-2.0	-2.4	-4.8	-5.3	-5.5	-6.2	-5.2	-1.6	-3.1	-2.5	-3.1
Adjustment by RE	-1.7	-1.3	-3.1	-2.8	-2.9	-3.9	-2.5	1.3	0.2	0.8	0.3
Hungary											
CA/GDP	-7.2	-7.8	-8.4	-6.0	-6.9	-7.9	-8.4	-6.8	-6.5	-6.4	-8.4
Adjustment by RE	-2.6	-3.3	-4.3	-1.7	-2.2	-3.7	-3.2	-2.1	-1.0	0.7	-5.0
Poland[2]											
CA/GDP	-3.5	-6.9	-5.8	-2.9	-2.7	-2.3	-4.5	-1.4	-3.1	-3.7	-5.5
Adjustment by RE	-	-	-5.5	-2.6	-2.3	-1.3	-0.2	1.8	1.1	-0.3	-2.1

Source: Own calculations based on data from the individual national banks and statistical offices.

1 RE- reinvested earnings

2 More detailed structure of the FDI income was not available from Poland, so the balance of payments was indicated in an amount less the whole item of direct investment income.

Table 2 Share of cost items of the CA on total payments within the current account (%)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Slovakia											
Goods	80.6	80.8	82.8	83.4	82.9	78.7	79.8	79.1	80.2	80.1	78.4
Services	14.0	13.2	11.7	11.4	11.7	10.7	9.5	9.4	9.4	8.9	10.1
Incomes	3.7	4.1	4.0	3.6	4.0	9.6	8.8	8.3	8.3	7.6	7.3
Current transfers	1.7	1.9	1.5	1.6	1.4	1.0	2.0	3.2	3.1	3.4	4.2
Czech Republic											
Goods	75.8	74.2	77.5	77.7	76.4	76.9	76.9	76.2	76.3	76.1	74.6
Services	15.3	15.4	13.1	11.9	12.1	11.0	10.2	10.3	9.8	9.4	9.3
Incomes	7.4	8.5	8.0	9.4	10.5	10.4	10.8	10.5	11.3	11.7	13.4
Current transfers	1.5	1.9	1.4	1.0	1.0	1.7	2.1	2.9	2.5	2.8	2.7
Hungary											
Goods	74.7	76.4	78.2	76.7	75.1	75.1	75.3	74.6	75.9	74.1	76.1
Services	12.3	12.0	11.9	12.8	13.9	14.9	13.0	13.3	11.8	12.4	13.4
Incomes	12.3	10.4	9.2	9.6	9.9	9.0	11.0	11.3	11.8	12.9	9.0
Current transfers	0.7	1.2	0.9	0.9	1.0	1.1	0.6	0.8	0.5	0.5	1.4
Poland											
Goods	81.0	81.1	78.1	77.9	79.2	78.8	74.4	74.5	73.9	74.0	74.8
Services	11.8	12.5	14.6	14.2	13.6	12.9	11.4	11.7	11.8	11.0	11.3
Incomes	6.1	5.1	6.0	6.3	5.6	6.8	11.5	10.3	11.1	12.0	10.7
Current transfers	1.1	1.2	1.2	1.6	1.6	1.5	2.7	3.6	3.2	3.1	3.2

Source: Own calculations based on data from the individual national banks and statistical offices.

Table 3 Share of incoming payments of CA on total incomes of CA (%)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Slovakia											
Goods	75.3	78.5	80.6	79.2	80.0	82.1	83.1	81.2	82.0	83.5	83.0
Services	17.1	15.8	15.2	15.6	15.5	12.4	11.2	11.2	10.7	10.2	10.0
Incomes	3.1	2.0	1.8	2.0	1.9	3.5	3.0	4.1	4.1	3.4	4. 0
Current transfers	4.5	3.6	2.3	3.1	2.6	2.0	2.7	3.6	3.2	3.0	3.3
Czech Republic											
Goods	71.3	72.0	74.8	76.5	78.4	80.1	81.6	80.1	81.1	81.6	79.4
Services	21.1	19.3	17.7	16.2	14.5	12.8	11.8	12.1	11.9	11.4	13.5
Incomes	4.7	5.1	5.0	5.1	4.2	4.4	4.1	4.5	4.8	4.7	4.7
Current transfers	3.0	3.6	2.4	2.2	2.9	2.7	2.5	3.3	2.1	2.3	2.4
Hungary											
Goods	77.4	79.6	79.5	78.1	77.0	79.2	80.3	79.7	80.6	82.6	89.0
Services	17.7	16.2	16.3	17.6	16.4	17.0	15.6	16.6	14.7	13.5	16.8
Incomes	4.1	2.8	3.2	3.3	2.8	2.5	4.7	4.6	5.3	4.8	4.1
Current transfers	0.8	1.4	1.0	1.0	1.1	1.2	0.7	0.9	0.6	0.6	1.6
Poland											
Goods	66.2	69.7	69.9	72.6	74.6	77.0	76.2	73.5	73.9	72.9	73.7
Services	22.1	19.4	20.3	17.0	16.0	14.1	15.8	12.4	12.9	14.4	14.8
Incomes	4.5	4.3	5.8	5.9	4.4	4.1	6.2	5.4	5.7	5.0	4.7
Current transfers	7.2	6.7	4.0	4.4	4.9	4.8	8.0	7.4	7.5	7.6	6.8

Source: Own calculations based on data from the individual national banks and statistical offices.

percentage share on the total payments within the current account. We can see that the individual percentage shares of the V4 countries are quite similar. The almost equal structure of outgoing payments speaks of the similar structure of foreign trade in these Central European countries.

The lowest share of outgoing payments with goods was recorded in Hungary (on average

75.6%) and the highest in Slovakia (80.6%). In total, we can see that about 75 – 80% of all outgoing payments within the current account pertain to the import of goods. (Average share of outgoing payments with goods was 80.6% for the SR, 76.2% for the CR, 75.7% for Hungary and 77.1% for Poland.) The share of services fluctuated within the range of 9 – 15%. (The average share of outgoing payments with services was 10.9% for the SR, 11.6% for the CR, 12.9% for Hungary and 11.5% for Poland). The share of revenues has been gradually increasing in recent years to a level exceeding one tenth of the outgoing payments, especially in the Czech Republic and Hungary. The increase of payments on the income account relates to the inflow of foreign direct investments, an inflow that after some time starts to generate profits and these are subsequently either reinvested in the host country or distributed in the form of dividends.

Within the monitored period, in Slovakia, the Czech Republic and Hungary the share of this item practically doubled. The account of current transfers has not changed significantly since 1998, its share in the outgoing payments in all the countries has been the lowest, achieving 0.9% (Hungary) up to 2.3% (Slovakia).

Structure of current account from the perspective of incoming payments

The percentage shares of individual items of the current account were also calculated for their comparison with incoming payments. Here again, we can see a similar structure in the V4 countries. The export volumes of goods and services in these countries at the same time correspond to the similar percentage shares of imports within the range of 70 – 80%. (Average share of incoming payments with goods was 80.8% for the SR, 77.9% for the Czech Republic, 80.3% for Hungary and 72.7% for Poland.) With services, this share was in the range of 13 – 20%. (Average share of incoming payments with services was 13.2% for Slovakia, 14.8% for the Czech Republic, 16. 2% for Hungary and 16.3% for Poland.) However, in comparison with the outgoing revenues, the item of incoming revenues is significantly lower. This points to the fact that, although the V4 countries are the beneficiaries of direct and portfolio investments, their domestic companies do not yet make more significant volumes of investments abroad. Until these countries act as host countries and not investing ones, no significant change can be expected on this account. The development of incoming current transfers more or less corresponded to the development of paid current transfers, while this item was again significantly lower in comparison with the others. It is interesting to note that, while in the first three countries its share was lower than the share of incomes, in Poland in some years the volume of incoming current transfers exceeded the volume of incomes.

Conclusion

The countries selected for the comparison are quite similar from many aspects and it was expected that there would also be several common signs in the development of their payment balances, which the analysis has confirmed. Their current accounts were almost permanently in deficit and, with the translation to GDP, the resulting value exceeded the lower recommended threshold of -5%. However, this cannot be perceived as a wholly adverse phenomenon, because various economic theories also speak about an exception when the outflow of resources on the current account is compensated by the income of non-debt capital, e.g. in the form of FDI, which has applied for all the countries in question. Although the volumes of incoming FDI fluctuated on a year-on-year basis, in most of the years they were able to cover the deficits of their current accounts without problems, so they represented no significant threat to the macroeconomic stability.

The countries acquired the missing productive resources by means of foreign investments, as there was a lack of them in their domestic economies as a consequence of their transformation. The launch of production in the FDI companies helped to start up economic growth more significantly. It can be stated that the FDI form a positive item within the economy transformation. Firstly, they contribute to the growth of the economy and at the same time they improve the external balance of the country.

In most of the countries, approving similar foreign investment projects lies within the competence of government, which at the same time, by its selection of specific types of projects, determines the structure of its economy and also its orientation within foreign trade. A very narrow orientation introduces a significant risk which was also confirmed by the recent foreign trade developments in the V4 countries. It is especially true of small open economies exporting the greater part of their production. It is now in no way possible to prevent the openness or the mutual influencing of economies; therefore, countries should have sufficiently differentiated export markets, but also the structure of the production exported should encompass several branches. From the perspective of a balanced macroeconomic development for the country, it is preferable that there are several leading industries in the economy. This subsequently enables the avoidance of situations where an unfavourable development in one industry disturbs the stability of the whole economy.

The current account deficit is quite a frequent phenomenon and occurs in many countries. When analysing the current account and assessing its development, it is needful to consider also the methodology applied and the fact that the current account not only includes payments relating directly to the purchase/sale of goods or

the provision/rendering of services but also payments in which the funds do not actually leave the economy. For this reason, the current account was analysed also from the perspective of the percentage structure of incoming and outgoing payments. For the V4 countries, the share of the account of revenues (as the potential source of the largest misrepresentation) is almost one tenth of the volume of all payments. However, if we compare the indicator of CA/GDP ratio and the same indicator net of the distorting impact of the cost item of "reinvested earnings", a certain difference occurs. It may be stated that, when interpreting the share of the balance of the CA/GDP as indicator of the external balance, the specific structure of the current account should also be considered so that we know what components contribute most to its deficit. In other words, what part of the deficit is the accounting one and what the real one which may really represent a risk from the perspective of the macroeconomic balance of the economy.

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The fourth quantitative impact study of new regulation in the insurance sector

Part 2

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OWN FUNDS

Own funds represent the available funds of an insurance undertaking which are able to absorb financial losses and thereby protect the insurance undertaking and its clients. They are formed from basic own funds and ancillary own funds. The process of the determination of eligible own funds may be divided into three steps[1]:

1. determination of own funds;
2. classification of own funds;
3. eligibility of own funds.

Basic own funds are formed by balance-sheet items as a surplus of assets over liabilities (more information in Valuation of Assets and Liabilities in the previous issue) increased by subordinated liabilities upon a deduction of own shares held by the insurance undertaking. Ancillary own funds are formed by off-balance-sheet items (for instance, unpaid share capital and letters of credit) and the possibility to use them is conditioned on the prior approval of the supervisory authority. The reason for the prior approval consists mainly in the fact that the valuation rules do not relate to them and are determined as a nominal value or value determined on the basis of prudent and realistic prognoses. Own funds are classified in terms of quality into three classes based on qualitative characteristics (Article 93 of the Solvency II Directive), while the extent by which they correspond to these characteristics is decisive for their categorisation into a class.

To cover the minimum capital requirement (MCR), it is possible to use only basic own funds, while class 1 must be larger than a half of basic own funds or class 2 must be smaller than class 1.

To cover the solvency capital requirement, it is possible to use basic as well as ancillary own funds, while class 1 must be larger than one third of total eligible own funds or the sum of class 2 and class 3 must be smaller than twice the class 1 and class 3 must be smaller than one third of the total eligible own funds, or class 3 must be smaller than a half of the sum of class 1 and class 2.

The basic goal of the quantitative impact study, QIS 4, has been to determine the amount of own funds eligible to cover two Solvency II capital requirements (SCR and MCR). The technical specification of QIS 4 has preliminarily determined a list of possible items of own funds.

In the opinion of the insurance undertakings in the SR which participated in the quantitative impact study, QIS 4, own funds are adequately specified. None of the insurance undertakings has had more serious problems when classifying own funds. One insurance undertaking stated that it started to manage its own funds for its internal needs on a basis similar to Solvency II.

All the components of insurance undertakings own funds have been classified as class 1. Please note that insurance undertakings in Slovakia currently do not, to any great extent, use active capital management. When compared to Solvency I, there has been a significant growth in own funds (approx. 68%), which has resulted from valuation, especially the release of technical provisions. None of the insurance undertakings has used subordinated liabilities or hybrid capital as a component of its own funds. For this reason, we have not received more than one item of feedback from the insurance undertakings. One insurance undertaking stated that it prefers the classification of hybrid capital into a single class, since a potential division could be quite complicated. None of the insurance undertakings has shown ancillary own funds.

Since the capital used by the insurance undertakings to cover the solvency capital requirement and minimum capital requirement has been classified as class 1, the insurance undertakings have

1 *Explanatory report to directive of the European Parliament and of the Council on the taking-up and pursuit of the business of insurance and reinsurance, Version COM(2008) 119 final.*

Table 2 Classification of own funds

Nature/quality	Basic own funds	Ancillary own funds
High	Class 1	Class 2
Medium	Class 2	Class 3
Low	Class 3	–

Source: Explanatory report to directive of the European Parliament and of the Council on the taking-up and pursuit of the business of tnsurance and reinsurance, Version COM(2008) 119 final.

Table 3 Comparison of all insurance undertakings' own funds according to Solvency II and QIS 4

	Solvency I	QIS 4 Total	QIS 4 Class 1	QIS 4 Class 2	QIS 4 Class 3
Total own funds (in EUR millions)	798	1,344	1,344	0	0
Total own funds (in %)	–	100.0	100.0	0.0	0.0

Source: NBS.

Table 4 Coverage of solvency capital requirement (in EUR millions)

All insurance undertakings	Total	1/3 SCR	Surplus
Class 1	1,344	145	1,198
Class 2	0	145	–
Class 3	0	145	–

Source: NBS.

Table 5 Coverage of minimum capital requirement (MCR) (in EUR millions)

All insurance undertakings	Total	1/2 MCR	Surplus
Class 1 – Basic basic Own own Funds funds	1,344	69	1,275
Class 1 – Basic basic Own own Funds funds	0	69	–

Source: NBS.

Table 6 Class 1 composition

All insurance undertakings	in EUR millions	%
Share capital	321	23.9%
Valuation adjustments (assets upon deduction of liabilities)	526	39.2%
Funds with a limited capacity to absorb losses	4	0.3%
Others	492	36.6%

Source: NBS.

had no problem in fulfilling the requirements with regard to the structure of own funds. This status will, in our opinion, probably create quite a significant area in the future for increasing the effectiveness of insurance undertakings' funding.

The composition of class 1 confirms that the growth of own funds in comparison with Solvency I is related to valuation adjustments. Despite this, when compared to other European countries, the share of share capital in class 1 may be regarded as being relatively high (higher by 7 percentage points).

Minimum capital requirement

The aim of the minimum capital requirement is determination of the capital required for an insurance undertaking to prevent the excessive exposure of the insurance undertaking's clients to risk. The minimum capital requirement represents the level of capital below which an insurance undertaking's own funds should not decrease. Any decrease in eligible own funds below the MCR level may, in the event that the insurance undertaking is unable, within the framework of a short time interval, to increase its own funds, cause the supervisory authority to withdraw the undertaking's licence to perform insurance business.

The Solvency II Directive provides that it is necessary to calculate the minimum capital requirement by a simple formula from auditable information within the coridor which is derived from the solvency capital requirement. At the same time there is the absolute minimum for the MCR, which may be considered as minimum required capital necessary for performance of the insurance business. The starting point for the determination of the MCR absolute minimum has been the amount of the minimum Guarantee Fund for Solvency I at the time of the adoption of the Solvency II Directive. The MCR calculation is based on technical provisions, written premium, sum at risk, deferred tax and administrative costs, where all the quantities used are determined, excluding the share of reinsurers.

The main goal of the quantitative impact study, QIS 4, in testing the minimum capital requirement has been to evaluate whether the proposed linear MCR approach combined with a cap of 50% and a floor of 20% of the SCR (this approach to the MCR is sometimes refer to as the "combined MCR") is applicable in practice and whether it provides a sufficient ladder for potential supervisory action.

The linear MCR to the SCR ratio was in the 10% to 41% range in the SR and the median value of this ratio was 29%. In the case of the combined MCR, the range of the result has narrowed to 20-41%, since the floor has been used in the case of three participants. The median value of this ratio remained unchanged.

The ratio of the linear MCR and SCR based on results of Slovak insurance undertakings has, in our opinion, been sufficient for an on-time intervention of the supervisory authority and, when determining it, the insurance undertakings did not identify any serious problems. However, within the framework of the European market, the impact study, QIS 4, has confirmed the need for the existence of corridor for the MCR in relation to the SCR. The reason consisted, for instance, in situations where the MCR has been higher than the SCR[2]. The application of the corridor approach will be however complicated by the fact that the

2 The cause of the higher MCR than the SCR was a different methodology in the calculation, reduced scope of risk entering the MCR and certain approaches making the SCR more realistic, for instance, the ability of future profit sharing to absorb losses.
3 Consultation Paper No. 55, Draft CEIOPS' Advice for Level 2 Implementing Measures on Solvency II: Article 128 Calculation of the MCR, CEIOPS-CP-55/09.

solvency capital requirement is calculated once per year and the minimum capital requirement once per quarter. The consultation paper, CEIOPS-CP-55/09[3], concerning the calculation of the MCR, tries to resolve this problem by simplifying the SCR calculation on a quarterly basis. On the other hand, the corridor approach will provide for a certain rate of sensitivity to risk for the MCR.

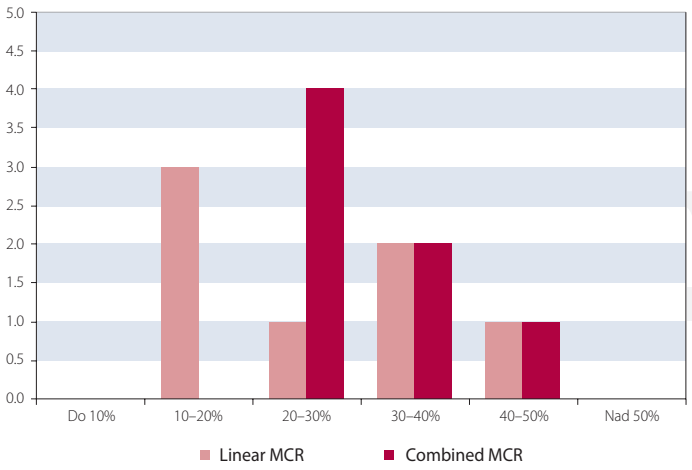
Proving the justifiability of the corridor approach in the European context when determining the MCR has led to the determination of MCR corridor in relation to the SCR within the framework of Solvency II Directive, while the corridor has been reduced to 25-45% (Article 127, Section 1b of Solvency II Directive). The reason for the increase in the floor of the MCR was mainly to provide a prudent capital minimum as per the role of the MCR. The cap of the MCR has been decreased to provide for sufficient ladder of intervention of the supervisory authority. The increase in the floor of the corridor will, in our opinion, contribute to the fact that the MCR will provide for such a level of capital to allow, in the event of an insurance undertaking encountering problems, the transfer of the portfolio of its insurance policies to another insurance undertaking. The reduction of the cap of the corridor may "undermine" this which, in our opinion, is a key goal of the MCR

Solvency Capital Requirement

The solvency capital requirement corresponds to such capital that will allow an insurance undertaking to avoid bankruptcy over the period of the next 12 months with a probability of 99.5%. The criteria determined in this manner may also be interpreted in such a manner that, over the next twelve months, bankruptcy or default should not occur in more than one in 200 insurance undertakings. The SCR is calculated either by a standard formula, which uses the prescribed parameters and factors, or by using an internal model which should most closely reflect the insurance undertaking's risk profile. Insurance undertakings may combine these two approaches and determine the SCR by a standard formula with the use of a partial internal model. Due to a limited database, insufficient practical experience, and potential ineffectiveness (benefits versus costs), the standard formula will be the practical alternative for most of the insurance undertakings in the Slovak market. The SCR should reflect the actual risk profile of an insurance undertaking, while taking into account all quantifiable risks and risk mitigating instruments, which, in the case of insurance undertakings, is especially represented by reinsurance. If an insurance undertaking's risk profile is altered significantly over a year, it will be necessary to recalculate the SCR annually. An exception will probably be the determination of the SCR for the requirements of the MCR determination.

Standard SCR equals the sum of the basic capital requirement (BSCR), operational risk capital requirement[4], adjustment for the loss-absorbing capacity of technical provisions[5], and deferred taxes. The BSCR covers the underwriting risk[6] of non-life, life, and health insurance, market risk[7] and counterparty default risk[8]. The BSCR calculation itself is divided into calculations of particular modules and sub-modules, which are subsequently aggregated by an estimate of the mutual linear dependences the so-called correlation matrices, as determined by Annex IV of the Solvency II Directive.

Chart 6 Division of MCR and SCR rate



Source: NBS.

According to the quantitative impact study, QIS 4, the basic capital requirement, BSCR, has had the largest share in the SCR. The operational risk capital requirement has formed the share in the SCR of 8% in median, however, this value does not reflect, in our opinion, the real operational risk, to which insurance undertakings are exposed, especially in case of the calculation, which is based on volume quantities and does not take into account the real level of the operational risk management quality in an insurance undertakings. This opinion has also been confirmed by statements from the insurance undertakings concerned, which, in addition, have considered the cap of the capital requirement in the amount of 30% of the BSCR to be too high. A part of QIS 4 has been a questionnaire in which the level and quality of the operational risk management in insurance undertakings have been ascertained. Responses were provided by four insurance undertakings. In the implementation of QIS 4, only one insurance undertaking devoted itself, to a certain extent, to operational risk management in association with its parent undertaking. Other insurance undertakings were, at that time, still in the planning phase.

The biggest share in the BSCR has been that of market risk, life underwriting risk and non-life underwriting risk. By contrast, according to results of QIS 4, the counterparty default risk has had only a small share in the BSCR.

Within the framework of the market risk module, the most significant have been interest rate risk, equity risk, and credit spread risk. Other risks (property risk, concentration risk, and exchange

4 Risk of a loss arising from inadequate or failed internal processes, or from personnel and systems, or from external events except for the risk arising out of strategic decisions and reputation loss risk (Article 13, Section 27 of Solvency II Directive).
5 Potential reduction of future discretionary benefits of insurance contracts e.g., by decreasing future profit sharing and a simultaneous decrease in technical provisions (Article 107 of Solvency II Directive).
6 Risk of loss or adverse change in the value of insurance liabilities, due to inadequate pricing and provisioning assumptions (Article 13, Section 24 of Solvency II Directive).
7 Risk of loss or adverse change in a financial situation, directly or indirectly arising out of a fluctuation in the level and volatility of market prices of assets, liabilities, and financial instruments (Article 13, Section 25 of Solvency II Directive).
8 The counterparty default risk covers risk-mitigating contracts, such as reinsurance arrangements, securitisations and derivatives, and receivables from intermediaries, as well as any other credit exposures which are not covered in the spread risk sub-module (Article 105, Section 6 of Solvency II Directive).

Table 7 SCR composition

	Median (in %)
BSCR	92.0
Operational risk	8.0
Risk-absorbing effect of future profit sharing and deferred tax liabilities in SCR calculation	0.0

Source: NBS.

Table 8 BSCR composition

	Median (in %)
Market risk	43.8
Exchange rate risk	24.3
Equity risk	8.6
Property risk	0.0
Credit spread risk	7.8
Concentration risk	0.8
Exchange rate risk	1.2
Counterparty defaul risk	0.6
Life insurance underwriting risk	45.5
Mortality risk	4.0
Longevity risk	0.1
Disability risk	2.3
Lapse risk	26.6
Expenses risk	11.3
Revision risk	0.0
Catastrophic risk	3.8
Health insurance underwriting risk	0.6
Accident and health short term risk	0.6
Premium and reserve risk	0.5
Catastrophic risk	0.3
Non-life insurance underwriting risk	56.1
Premium and reserve risk	46.3
Catastrophic risk	27.6

Source: NBS.

rate risk) seem, on the basis of the standard formula results, to be insignificant for the insurance undertakings concerned. The loss-absorbing capacity of technical provisions has not been tested in Slovakia, due to the complexity of the calculation and also due to the fact that, according to the statement of the insurance undertakings concerned, any potential decrease in the SCR would be insignificant. In Slovakia, the so-called equity dampener has not been tested, which consists of a symmetric arrangement mechanism, i.e., scenario adjustment depending on the economic cycle and duration dampener, i.e. scenario adjustment depending on a typical period of holding of investments in shares. Some insurance undertakings have cited their disagreement with this approach as a reason for inability to test the equity dampener. The effect of the equity dampener may be quite important, since a 10% reduction in the equity risk capital requirement has been demonstrated from the European results

Participants have criticized the approach of the determination of the capital requirement of the market risk of mutual funds, since the stress scenarios have been set discriminatorily in relation to other investments if an insurance undertaking has been unable to identify financial instruments composing the fund and has thereby been unable to apply the so-called *look-through* approach. In addition, this approach to mutual funds has been found to be demanding and impractical.

When calculating the life underwriting risk, there have been obscurities in the allocation of insurance products to life, non-life, and health insurance modules. One of the proposals of insurance undertakings has been to create a separate sub-module regardless of the type of insurance for health risk and disability risk. The most important share in the capital requirement for life insurance underwriting risk has been that of the lapses of an insurance policy, with payment of the surrender value and expense risk. Participants have considered a stress scenario of the increase in the lapse rate at the level of 30% to be little probable.

In the case of the non-life underwriting risk, the capital requirement has followed from three risk sources: premium risk, reserve risk, and catastrophic risk. The calculation of the capital requirement of the non-life underwriting risk and the completion of tables for the purposes of QIS 4 has been quite easy. However, a problem has arisen in the lack of information for the preparation of scenarios of catastrophic events in the SR. For this reason, all the insurance undertakings concerned could use only a factor calculation for the catastrophic risk, which, however, does not reflect the actual risk to which they are exposed.

QIS 4 has allowed (or tested, in order to make the SCR, which may not consist of a single universal approach, more realistic) for several arrangements and alternatives in the standard formula calculation (the capacity of technical provisions to absorb losses, deferred tax liabilities, equity dampener). Within the framework of QIS 4, we have not identified any interest of insurance undertakings in these possibilities, for which the reason has probably been the difficulty of application or disagreement with the theoretical assumptions of these approaches.

The calibration of the SCR standard formula, including the assumed linear dependences among particular modules and sub-modules, was criticised by participants in the SR as well as the EU. They reproached it in particular for the lack of transparency in their determination.

Internal models and SCR

We found from the questionnaire mapping the situation in the area of internal models that 43% of participants (3 out of 7) are currently actively working on the development of an internal model, while 29% of participants (2 out of 7) plan to use the internal model at least for the calculation

Table 9 Financial position of insurance undertakings which participated in QIS 4, by Solvency I and Solvency II

	Median	All insurance undertakings		Median	All insurance undertakings	Change	
						Median	All insurance undertakings
Solvency I margin	242%	258%	Solvency II margin	208%	309%	-34%	51%
Available solvency margin	21	532	Own funds	120	1344	-	153%
Required solvency margin	13	206	SCR	40	435	-	111%
Guarantee Fund	6	76	MCR	12	137	-	81%
Surplus of available solvency margin	12	326	Surplus of own funds	61	908	-	179%

Source: NBS a výpočty autorov.
Note: Values in the absolute amount are in EUR millions.

of the partial SCR and 71% of participants (5 out of 7) have not yet decided whether they will use the internal model for the calculation of the SCR. As per our information, internal models are not developed by particular insurance undertakings individually, which would not probably have any great importance either, but are developed at the level of whole insurance (or financial) groups. Within the framework of QIS 4, the capital requirement determined on the basis of an internal model has been provided by one insurance undertaking only and an output of a partial internal model for several sub-modules of market risk and life underwriting risk and operational risk module has been provided by one insurance undertaking.

Conclusion

From the perspective of the Slovak Republic, testing the quantitative requirements according to Solvency II within the framework of QIS 4 has proved that the insurance undertakings which participated in QIS 4, have a capital base for a new regulation. When analyzing the information from QIS 4, we identified two primary effects on the financial position of insurance undertakings, namely, an increase in the capital requirement, which was caused by taking into account all the quantifiable risks and capital release, which was caused by not taking into account the prudent aspect in the valuation of technical provisions. Since the release of technical provisions has been much higher than the increase in the capital requirement, the financial position of the insurance undertakings has improved. Please note that QIS 4 has followed from the figures for 2007, i.e., before the outbreak of the financial and economic crisis, which has caused a fall in prices, and an increase in the volatility and loss of liquidity in regulated markets. There is a high probability that these facts would have an impact on own funds of insurance undertakings, since there would probably be losses in the valuation of financial instruments to an economic value.

The solvency capital requirement compared to the required solvency margin in accordance with Solvency I has increased in the absolute value; however, upon elimination of the effects of valuation adjustments, there has been a real decrease in the regulatory capital requirement. When comparing the capital requirement, which would include the regulatory amount of technical provisions and required amount of own funds, the regulatory capital would be decreased in accordance with Solvency I.

As regards the minimum capital requirement, despite the combined approach to the MCR and the related existence of the cap, in accordance with Solvency II, there would, except for one case, be an increase (for almost 86% of the insurance undertakings concerned). We have not identified any reasons for the increase in the minimum capital requirement. Since the increase in the solvency capital requirement has been higher than the increase in the minimum capital requirement, a larger scope has been created for interventions, if any, on the part of the supervisory authority. In the conditions pertaining in the SR, one of the goals of Solvency II has thereby been confirmed, namely, the provision of sufficient scope for the supervisory authority so that it could undertake remedial action to recover an insurance undertaking, and thereby provide for the financial stability and protection of the eligible interests of its clients.

In terms of the financial stability of the Slovak insurance sector as a whole, it will be needed to analyse more specifically the robustness of the market capital capacity and its resistance to shocks, e.g., as a result of socio-economic and demographic changes since, by the introduction of Solvency II, there will probably be an overall decrease in the regulatory requirement for capital for insurance undertakings in the Slovak Republic.

Source:
1. Completed questionnaires sent by insurance undertakings to the National Bank of Slovakia within the framework of the ascertainment of the fourth quantitative impact study.
2. QIS4 Technical Specifications (MARKT/2505/08).
3. CEIOPS' Report on its fourth Quantitative Impact Study (QIS4) for Solvency II, CEIOPS-SEC-82/08.
4. Call for Advice from CEIOPS (Fourth Quantitative Impact Study) MARKT/2504/08.
5. Consultation Paper No. 35, Draft CEIOPS" Advice for Level 2 Implementing Measures on Solvency II: Valuation of Assets and "Other Liabilities", CEIOPS-CP-35/09.
6. Consultation Paper No. 41, Draft CEIOPS Advice for Level 2 Implementing Measures on Solvency II: Technical Provisions – Article 85 c Circumstances in which technical provisions shall be calculated as a whole, CEIOPS-CP-41/09.
7. Consultation Paper No. 55, Draft CEIOPS' Advice for Level 2 Implementing Measures on Solvency II: Article 128 Calculation of the MCR, CEIOPS-CP-55/09.
8. Directive of the European Parliament and of the Council on the taking-up and pursuit of the business of insurance and reinsurance, Version COM(2008) 119 final.
9. Directive of the European Parliament and of the Council on the taking-up and pursuit of the business of insurance and reinsurance, Version adopted at the first reading by the European Parliament.
10. First Council Directive of 24 July 1973 on the coordination of laws, regulations and administrative provisions relating to the taking-up and pursuit of the business of direct insurance other than life assurance Directive 2002/83/EC of the European Parliament and of the Council of 5 November 2002 concerning life assurance.

B I A T E C