NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM

FINANCIAL STABILITY REPORT 2008

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Financial Stability Report 2008

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PART A

SUMMARY

A

A Executive summary: Financial Stability in 2008 and Risks for the Near Future

The risks to domestic financial stability in 2008 were largely determined by the global financial crisis. This is by its nature a debt crisis – the global financial system has over several years (especially in the period 2004–2007) accumulated a sizeable debt and the financial risks associated with that. The causes of this situation lie in the liquidity surplus in international financial markets stemming from the accumulation of savings by certain countries, in the aggressive search for yield by financial institutions in conditions of generally low interest rates, and in unsound internal management systems (inappropriate incentive schemes, risk management errors), as well as in the weak regulation of financial markets. After originating as a local problem in the US mortgage market in the first half of 2007, the financial crisis rapidly spilled over to the money and interbank markets of advanced countries through the large claims and liabilities between international financial institutions. The flow of credit and capital all but seized up. The impact of mounting risk aversion among international investors was also felt in the stock markets of advanced countries, and subsequently in the markets of emerging economies, too. In an atmosphere of great uncertainty and mistrust, liquid markets and key financial institutions ceased to function and their roles had to be assumed by governments and central banks. The result was a collapse in international trade and contraction of global economic activity – the financial crisis had gradually blown up into a global economic crisis.

The Slovak financial sector and economy was largely unscathed by the international financial crisis. Since the banking sector had long been following a conservative business model (traditional commercial banking) and was focused mainly on the domestic economy, banks' balance sheets were not seriously hurt by the fall in asset prices on world financial markets. The financial crisis did have repercussions, however, firstly on the customers of certain financial institutions through the depreciation of their investments, and then on several financial institutions themselves, which either lost customers (mutual funds) or recorded lower profits on financial operations (insurance companies). These effects of the global financial crises in the domestic environment did not, though, undermine domestic financial stability. That the Slovak financial system withstood the turbulence in financial markets in the second half of 2008 was also because of the country's confirmed progress towards joining the euro area and the system's low dependence on short-term foreign funds.

Nevertheless, the highly open Slovak economy could not remain unaffected by the most severe global economic crisis in more than 70 years and the consequent decline in foreign demand. The impact was apparent in November and December 2008 when domestic industrial production and exports plunged. The macroeconomic stability and the economy's strong performance of the previous period helped to mitigate the effects of the crisis on Slovakia's real economy and domestic financial sector during 2008. The risks, however, are increasing, and banks can expect their capital to be squeezed still further in second half of 2009 as a result of rising loan impairments. This period is also likely to see enterprises exhaust their accumulated financial reserves. Although loans to households appear to be less risky, their quality, too, will ultimately hinge on the duration of the downturn in global demand, or on the shape of the curve taken by the global economy's revival. In this regard, however, great uncertainty and several risks persist despite the appearance of possible green shoots of recovery (e.g. a slower decline in new orders in euro area manufacturing and industrial production; rising commodity and stock-market prices, and so on).

EXTERNAL RISKS

The recovery of the global economy will be curbed by the adverse retroactive effect of the economic crisis on banks' balance sheets. Loan default rates in commercial banks are rising sharply. At the same time as banks are tightening credit standards, demand for credit is weak ow-

ing to stretched balance sheets of households (particularly in the USA) and enterprises and to the uncertain income outlook. The rate of bankruptcies in the USA and euro area is rising and is expected to continue rising. The capital of banks may therefore come under further pressure.[1]

Furthermore, real estate prices across the world continue to decline and those in the USA will probably not bottom out even in 2009. For these reasons, it may also be doubted whether some of the methods used to directly stimulate consumer demand (e.g. tax relief) are having the desired effect, considering that households are likely to prefer saving any additional surplus funds they may have. Moreover, the massive amount of deficit financing will have no more than temporary effects on the real economy given the limited scope for increasing fiscal deficits. Unless consumption revives in those countries with structurally weak consumer demand (China, Germany, Japan), it is difficult to see how the global economy can sustainably recover, and there is also a risk of deflation in advanced economies. The revival of global economic growth may also be negatively affected by the spread of protectionist sentiments as a result of the prevailing vertical specialization in international trade.

THE MACROECONOMIC SITUATION IN 2008 AND RISKS

The real economy in 2008 faced the worsening global financial crisis still without serious problems. The condition of the domestic economy was underpinned by several years of sustainable growth in economic activity, although Slovakia, as a small and highly open economy, was not able to remain unaffected by the adverse external developments.

The risks to domestic financial stability continue to have an increasing tendency, mainly because negative developments in the external environment are testing the economy's capacity to absorb external shocks. The expected decline in the domestic economy's performance should not, however, jeopardize the maintenance of financial stability. The principal risk to materialize in 2008 was the slide of euro area countries into recession and its gradual spillover to the domestic environment. Slovakia's development is threatened by uncertainties related to a possible delay of the expected recovery in the euro area.

The domestic environment has contributed positively to financial stability in recent years, although the generation of corporate profits has necessarily slowed down. This was not being notably reflected in household income by the end of 2008, since the labour market lags behind developments in the corporate sector. In the coming period, however, households, too, will be feeling constraints on income generation.

The economic crisis has revealed the risks that arise when real economic activity is concentrated in a relatively narrow range of export sectors. It is becoming evident that the sectors dependent on domestic demand are unable to offset the income losses of the export sector and that they too, with a certain lag, are impacted by the decline in economic activity. Furthermore, in the conditions of a small and open economy there is limited scope for using fiscal policy to stimulate domestic demand, and the multiplier effects of fiscal stimuli are relatively low. More substantial benefits can be expected only from structural policies focused on supporting the economy's growth potential.

Since the banking sector is heavily oriented towards financing of the domestic economy, the continuance of lending to the non-financial corporate and household sectors is making banks increasingly exposed to credit risk on these loans. The risks to financial stability from the non-financial corporate sector are tending to increase owing to its reduced scope for generating the balance sheet profits and provisions that determine the capacity of companies to absorb financial shocks. Another difficulty would be a continuing increase in wages and unit wage costs, since this restricts the competitiveness of the tradable sector in foreign markets.

BANKING SECTOR PERFORMANCE IN 2008

The overall net profit of the banking sector for 2008 fell by almost 10% year-on-year. If, however, the net profit had excluded the loss reported by one particular bank, it would have risen by 6% year-on-year. The average ROE (weighted by the average amount of own funds) came to only

1 *According to the results of government stress testing of American banks (May 2009), total losses for the years 2009 and 2010 may reach USD 599 billion. Banks will need USD 75 billion in new capital in order to comply with the regulatory minimum.*

13.3%, representing a year-on-year decline of more than 4 percentage points. Only five banks recorded a year-on-year increase in ROE, and then only to a minimal extent. This was also affected, however, by the increase in own funds at several banks. In 2008, interest income continued to be the major source of income, and the most significant source of interest income continued to be the household sector (this income rose by 21%), closely followed by non-financial corporations (up by 17%). The rise in banks' interest income slowed down in the last quarter of 2008 owing to the decline in the amount of new loans to enterprises and the reduction in interest rates on customer loans, as well as to increasing interest expenses in the household sector. As for non-interest income, the main contributor to its positive development was trading income, which climbed by more than 19% year-on-year. Fee and commission income rose by more than 11% year-on-year. The rate of total profit growth was reduced mainly by the creation of provisions, which in some cases caused a loss. The net creation of provisions increased by more than 340% year-on-year, to EUR 311 million. Even though one bank's provisions accounted for almost 35% of this figure, the rest of the sector still created a far higher amount of provisions than it did in 2007. The sharp rise in the creation of provisions was a reaction to soaring loan default rates. By the end of 2008, the total amount of non-performing loans in the sector had climbed by 29% year-on-year. The ratio of operating expenses to gross income, i.e. the cost-to-income ratio, declined year-on-year from 59% to 55%, indicating an improvement in the sector's operating efficiency.

BANKING SECTOR RISKS AND THEIR COVERAGE BY CAPITAL

The decline in the loan-to-deposit ratio represented a favourable result in terms of financial stability. Banks held sufficient customer funds so as to be able to finance customers without being dependent on volatile financial markets. By the end of 2008, the loan-to-deposit ratio for the whole banking sector had fallen to 79%, with most of the decline attributable to the rise in customer deposits. The value of this ratio reflected mainly developments in November and December 2008, since at the end of October 2008 it was actually higher year-on-year. The growth in deposits, particularly in the last quarter, was boosted by preparations for the adoption of the euro as of 1 January 2009. Banks' customers deposited their surplus funds in bank accounts in order to have them automatically converted into euros following the changeover to the single currency. The continuing redemption of mutual funds also drove the increase in deposits. The negative developments in financial markets caused funds to become more expensive, and long-term funds to be less accessible, which in turn restricted the scope for funding through issuance of mortgage bonds. Banks had to adapt their new issues to the market conditions – not only did they issue securities in lower amounts, but also with shorter maturities. At the same time, however, mortgage lending slowed down.

The total amount of loans that banks lent to the retail sector increased by a quarter during 2008. But whereas net lending growth was rising in the first half of the year, it declined in the second half of the year, and new lending was already beginning to fall by the end of the first quarter of 2008. In November 2008, the amount of new consumer loans and housing loans was even lower than in the same period of 2007. The adverse trends in the economy and real estate market had reduced household demand for all types of loans. The increase in real estate prices, particularly in 2007 and the first quarter of 2008, sharply exceeded the rise in household net income. Demand in the real estate market subsequently declined, and the first fall in real estate prices was recorded in the second quarter of 2008. In the third quarter, the repercussions of the global economic crisis on the domestic economy were beginning to escalate. Amid diminished expectations and a negative situation in the real economy, residential real estate prices declined still further in the last quarter of the year. On the whole, the amount of lending was affected less by the tightening of credit standards than by the drop in demand.

Bank lending to the corporate sector as at December 2008 was higher year-on-year by almost 14%. There were increases in all the main aggregates of corporate loans – investment loans, operating loans, and current account credit facilities. Compared with previous years, however, the pace of lending growth slowed. The rate of growth in the first half of the year was increasing,

but in the third and fourth quarters, in respect of investment and operating loans, it declined or became negative year-on-year. Faced with an unfavourable outlook for economic development, banks took a far more cautious approach to lending in the second half of 2008, setting stricter standards in various credit agreement conditions. In the real estate sector, this was reflected mainly in requirements for the amount of the investor's capital interest, the contractual occupancy of premises, and so on. The overall decline in the pace of lending growth was also due in large part to the fall in demand for new loans from enterprises.

The own funds of the banking sector amounted to EUR 3.8 billion as at the end of 2008, representing an increase of EUR 0.66 billion year-on-year. Throughout 2008, all banks reported sufficient own funds to meet the capital requirement. By the end of 2008, the total capital requirement had increased by 27% year-on-year (by EUR 588 million, to EUR 2.77 billion), as had the requirement for all individual risks. The principal risk continued to be credit risk, which at the end of 2008 accounted for 83% of the capital requirement.

Although household indebtedness in Slovakia rose sharply, its relative rate is not high (19% of GDP). The debt burden of loan repayments is heaviest on lower-income households, though they account for a small share of total borrowing. Households that took out housing loans in 2007 and 2008 are also in a risky category in terms of debt repayments, largely because of the sharp rise in real estate prices during these years. The high risk attached to these households, or the loans arranged for them, is also reflected in loan-to-value (LTV) ratios. When real estate prices were rising rapidly in 2006, 2007 and the first quarter of 2008, banks were arranging new loans with high LTV ratios. Banks did not begin to change their approach until the second half of 2008 when, in response to the turnaround in the real estate market, they assessed this ratio more strictly and several of them recorded a decline in the average LTV ratio for new loans. Loans to households have become increasingly sensitive to interest rate movements, and the raising of interest rates over the medium-term horizon is increasing household credit risk. The proportion of lending in regions outside the capital city increased – such lending is deemed to be riskier in the current economic crisis. The ratio of household loans that are non-performing increased only slightly year-on-year, largely because lending growth still remained strong. In 2009, however, non-performing loan ratios are very likely to rise, owing to the expected decline in the pace of lending growth and, given the deteriorating economic situation, also to the higher amount of non-performing loans. This is also confirmed by stress scenarios in which it is assumed, inter alia, that real GDP will fall in 2009 by 4.3% and that the level of production will remain unchanged in the next two years. Assuming that the amount of lending stays constant during the given period, the loan default rate under this scenario would increase from 3% to 6%. Any reduction in lending would cause the loan default rate to exceed 6%.

The corporate loan portfolio of the banking sector is proving sensitive to the economic downturn. At the end of 2008, the sectors most sensitive to the downturn accounted for almost 60% of banks' corporate loan portfolios. The financial position of enterprises deteriorated in the last quarter of 2008. Despite experiencing negative trends in the second half of 2008, the sector was still generating profit and reporting a sufficiently liquid position at the year-end. The sector benefitted from the favourable period of the previous years, when enterprises created a sound financial position for themselves. This is also confirmed by data on the amount of non-performing bank loans, with the credit quality of the corporate loan portfolio remaining largely unchanged in 2008. If the negative trends become deeper and more prolonged, however, the cushion established by enterprises in the good times could be eroded relative quickly. As regards the stability of the sector as a whole, a key question is how loans arranged at earlier dates will behave. Stress testing has shown that corporate credit portfolios of several banks are highly sensitive to a deterioration in macroeconomic conditions. Under the mild scenario, the capital adequacy ratio in three banks would fall below 8%, and in all three cases this is largely due to the capital adequacy ratio being relatively low at present. Under the more severe stress scenario, several banks would fail to maintain their capital adequacy ratio above the minimum level of 8%. A decline in the ratio would be recorded by three banks in addition

to those whose ratio would fall under the mild scenario. If it is assumed that banks retain earnings from 2008, then under the mild scenario, only one bank would not achieve the 8% capital adequacy ratio, and under the severe scenario, a further three banks would fail to do so.

An analysis of the sensitivity of the credit risk of interbank deposits and loans has shown a low level of systemic risk in the domestic interbank market. In general, the low systemic risk in the Slovak interbank market is also a result of the relatively low amount of interbank deposits and loans.

Banks had negligible direct exposure to foreign exchange risk as at 31 December 2008, nor was the banking sector exposed to indirect foreign exchange risk. Only 2.1% of corporate loans and 0.2% of retail loans were denominated in non-euro currencies. Therefore Slovakia does not face an upside risk to loan repayments (and consequently to the loan default rate) from a weakening domestic currency, unlike several other countries of central and eastern Europe.

The profitability of most banks should not be seriously affected by interest rate movements in the short-term horizon. Only a small proportion of banks' assets and liabilities (approximately 10%) are revalued to fair value through profit and loss. An increase in rates would have an adverse effect, since these assets include bonds with a longer duration while the liabilities comprise mainly short-term deposits. A rise in interest rates would in the long-term horizon reduce the net financial worth of banks' balance sheets (the value of their total assets less total liabilities). In stress scenarios, a reduction in the ECB base rate and increase in credit spreads had a positive effect on the profitability of the banking sector.

Short-term liquidity in the sector as a whole rose in 2008, although the liquidity situation of certain banks deteriorated. For the majority of banks, the condition for maintaining a sound liquidity position is that a proportion of deposits continue to be held in the bank after they have matured. The stress scenario of a 20% decline in the amount of customer deposits caused declines in the median values of the 7-day liquidity ratio, from 97% to 79%, and the 3-month liquidity ratio, from 76% to 69%. The long-term outlook for liquidity risk was also relatively low at the end of 2008. The lending activities of most banks are financed by customer deposits or the issuance of longer-term securities, not by short-term funds from the interbank market.

CONDITIONS AND RISKS IN OTHER FINANCIAL INSTITUTIONS

The financial position of a majority of insurance companies deteriorated in 2008 in comparison with the previous year. The total profit of insurers fell by almost one half, to EUR 108 million, and return on equity declined from 18.8% in 2007 to 9.1%. Thus the marked rise in profitability seen since 2003 came to an end. The decline in profitability had three main contributing factors – a fall in the return on financial assets, a lower technical result in non-life insurance, and an increase in surrenders of life insurance contracts. All insurers met the statutory solvency requirements. The technical provisions of insurers maintained their rising trend of previous years and continued to be invested on a conservative basis. Market risk, which could have direct consequences on the reported profit or loss, is almost negligible in most insurers. The asset value of several insurance companies is, however, exposed to interest rate movements. The assets of insurance companies to a large extent comprise debt securities, and in several companies these have a relatively long duration. A parallel rise in interest rates of 1 percentage point would see the value of assets in the insurance sector fall by 4%. This loss would not, however, be entirely reflected in the reported profit or loss or in changes in equity; most of it would become apparent only gradually through a change in interest income. Taking into account only assets revalued to fair value through profit and loss or equity, the loss would represent 0.6% of assets.

The financial crisis has had a significant impact on the collective investment sector, which shrank in size by almost 30% in 2008. Equity funds recorded the largest decline in net asset value (NAV), while money market funds strengthened their position in the sector. The riskiness of investments in mutual funds reflected, on the one hand, the rising volatility in financial markets and, on the other hand, the prevalence of investments in low-risk funds.

The retirement pension saving system in 2008 was shaped by two events: the persisting and deepening global financial crisis and the opening of the system to voluntary joining and leaving of savers. Fund yields declined as a result of falling prices of certain types of fund assets. Consequently, the annual yield rate in Pillar II pension funds was positive only for conservative funds. As the crisis in financial markets continued throughout 2008, it brought about a marked change in the basic structure of the portfolio in terms of the constituent financial instruments. Most notably, the proportion of bonds increased at the expense of all other investment types. The total number of savers enrolled in the system fell by around 75,500 during 2008, to 1,483,124. The net asset value managed by pension fund management companies kept rising during 2008 and by the year-end stood at EUR 2.23 billion, representing a sharp slowdown in growth in comparison with 2007. Although this slowdown was largely attributable to the base effect, it was also caused by the disenrollment of a proportion of savers whose accumulated assets were transferred from pension funds to the Social Insurance Agency. As a consequence, even absolute growth in the net asset value slowed by a relatively sizeable margin in 2008 in comparison with the previous year, partly also due to the falling value of selected assets. As usual, the breakdown of net asset value between the three prescribed types of funds remained largely unchanged.

In Pillar III of pension insurance, the amount of assets managed by the five supplementary pension insurance companies (DDS) rose steadily throughout 2008. The net asset value in the system amounted to EUR 936 million at the end of the period under review. Fully 97% of this amount fell within the saving phase of the supplementary pension insurance cycle, i.e. within contributory funds. As in the Pillar II, the asset structure changed in favour of bonds. Yields on Pillar III funds were likewise affected by the crisis in financial markets. The average annual yield on contributory funds (weighted by NAV) represented -2% as at 31 December 2008.

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PART B

FINANCIAL STABILITY REPORT

B

CHAPTER 1

EXTERNAL CONDITIONS FOR FINANCIAL STABILITY

1

1 EXTERNAL CONDITIONS FOR FINANCIAL STABILITY

1.1 EXTERNAL ECONOMIC DEVELOPMENT

The performance of the global economy deteriorated rapidly in 2008, continuing a course that began in the last quarter of 2007. The turnaround in the global economic cycle was triggered by the US mortgage crisis, which in August 2007 spread to the banking systems of other advanced countries through international credit markets. Thus the financial crisis assumed global dimensions and its repercussions were gradually seen in various financial market segments and in several countries. As mistrust grew among financial market entities, many companies and markets ceased to function, and the roles of private financial institutions had to be assumed by governments. The global financial system in 2008 found itself in the worst crisis since 1929. Enormous financial losses and uncertainty ultimately paralysed international trade and brought about an unexpectedly rapid downturn in the global economy, particularly in the last months of 2008. As a consequence, global economic growth in 2009 is expected to be the weakest since the end of the Second World War.

1.1.1 THE WORLD ECONOMY

The dynamics of economic growth in advanced countries deteriorated during 2008 and most of these countries fell into recession in the last quarter of 2008. Emerging economies did not begin to slow down significantly until the end of 2008

In the first half of 2008, the downturn in economic performance was most pronounced in advanced countries. The shocks they faced included falling property prices, rising inflation[2] and deepening of the financial crisis. In emerging economies, by contrast, production remained at, or above, the level of its potential, due in large part to strong domestic demand. It was even being said by some, controversially, that emerging countries had finally "decoupled" from advanced economies. These ultimately unfounded expectations were lent credibility by the marked improvements in the policies applied in emerging economies (which had led to a reduction in internal and external imbalances), the considerable progress in building key institutions, and a high amount of accumulated foreign exchange reserves. This view may also have been driven by unrealistic expectations that prices of food and raw materials – export articles representing a major source of income for several emerging countries – would continue to rise, or at least maintain their level. Furthermore, final consumption in this group of countries had been increasing over the previous 20 years amid sharp growth in productivity and real incomes.

Table 1 World output and world trade volume (year-on-year change in %)

	2007	2008	2009	2010
World output	5.2	3.2	-1.3	1.9
Advanced economies	2.7	0.9	-3.8	0.0
United States	2.0	1.1	-2.8	0.0
Euro area	2.7	0.9	-4.2	-0.4
Japan	2.4	-0.6	-6.2	0.5
Emerging economies	8.3	6.1	1.6	4.0
Central and eastern Europe	5.4	2.9	-3.7	0.8
Asia	10.6	7.7	4.8	6.1
China	13.0	9.0	6.5	7.5
World trade volume	7.2	3.3	-11.0	0.6

Source: IMF – World Economic Outlook, April 2009.
Note: Data for the years 2009 and 2010 are forecasts.

2 *According to calculations by Lombard Street Research, the speculative bubble in commodity prices caused the real income of global consumers to decline by around 2% between the third quarter of 2007 and the third quarter of 2008.*

Table 2 Quarterly GDP growth in 2008 (%)

	Change on the previous quarter				Change on the same period of the previous year			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
EU15	0.7	-0.3	-0.2	-1.5	2.1	1.4	0.6	-1.3
EU27	0.5	-0.1	-0.3	-1.5	2.4	1.7	0.7	-1.3
EA16	0.7	-0.2	-0.2	-1.5	2.2	1.5	0.6	-1.3
USA	0.2	0.7	-0.1	-1.6	2.5	2.1	0.7	-0.8
Japan	0.2	-0.9	-0.6	-3.3	1.4	0.6	-0.2	-4.6

Source: Eurostat.
Note: Changes on the previous quarter are seasonally adjusted.

The combination of these factors supported the view that many emerging countries would be able, through business ties, to react flexibly to the risks of the worsening economic situation. As time passed, however, and lending conditions in advanced countries deteriorated and financial asset values and property prices fell, the ever weaker demand from advanced countries began, in the fourth quarter of 2008, to hurt the performance of emerging economies, too.[3] This was confirmed by the still very strong dependence of value-added creation in emerging economies and regions on final consumption in advanced countries or other regions. In addition to weakening foreign demand, emerging countries were faced in the second half of 2008 with plunging commodity prices and an increase in global risk aversion.

1.1.2 The EU and euro area

The European Union went into recession in the second half of 2008

After being in relatively sound condition for the majority of 2007, the economies of the European Union (EU27) and euro area (EA15) experienced a severe slowdown in growth during 2008. The initial causes of this were mainly the deteriorating condition of the US economy, rising inflation, a strong euro, and falling real estate prices. But as panic gripped financial markets, it also contributed to a sudden downturn in economic performance in the last quarter of 2008 – household final consumption expenditure fell, and growth in fixed capital investments and particularly exports slowed down sharply. According to GDP data from Eurostat, both the EU27 and EA15 were already in a technical recession[4] in the second half of 2008. For the whole of 2008, the economies of the EU27 and EA15 grew by only 0.9% and 0.8%, respectively.

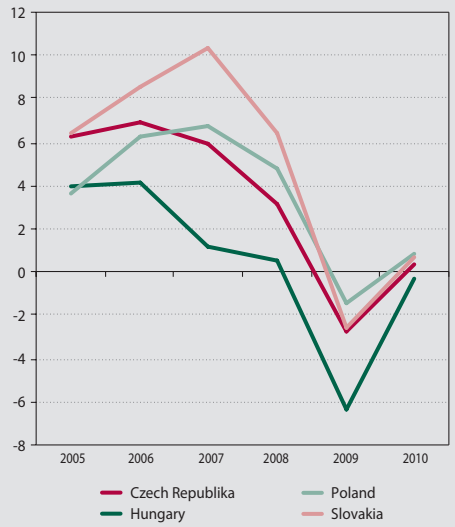
1.1.3 Visegrad–4 countries

The economic performance of V4 countries also slowed, its decline being particularly marked in the fourth quarter of 2008

Because of its strong commercial links in euro area, the V4 region also recorded declining dynamics of economic growth in 2008. The euro area recession was reflected in the pace of economic growth in the Czech Republic, Hungary and Poland,[5] which particularly in the fourth quarter of 2008 was far slower than the trend rate of previous years. Hungary fell into recession in the second half of 2008, the cause being not only the deterioration in external conditions, but also the negative effect of the government's stabilization measures on the consumption and investment sentiment of domestic economic entities. The financial crisis had an especially strong impact on the Hungarian economy in the fourth quarter, when the growth rate of loans to the private sector slowed sharply from its previously strong level. The Czech Republic, like other open economies in the region, was affected mainly by the poor economic situation of its major export partners. Commercial banks were also taking a noticeably more cautious approach when lending to enterprises and households. The fall in foreign demand had less of an impact on the more closed economy of Poland, whose weaker performance owed more to lower investment and a slowdown in lending growth.

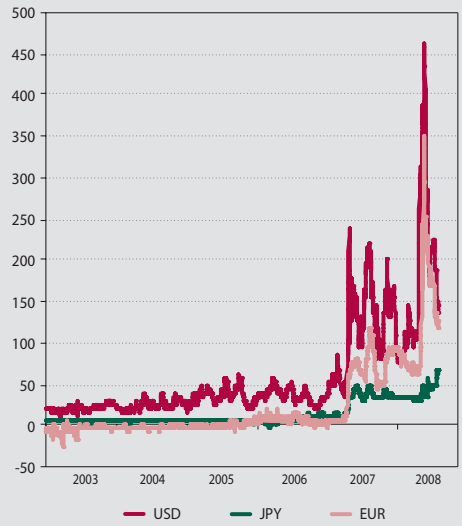
3 *A majority of advanced countries went into technical recession in the fourth quarter.*
4 *An economy is technically in recession when it records two successive quarters of declining growth.*
5 *A detailed analysis of economic developments in Slovakia is given in Chapter 2.*

Chart 1 Real GDP growth (year-on-year change in %)



Source: European Commission's Spring 2009 Economic Forecast, May 2009.
Note: Data for the years 2009 and 2010 are forecasts.

Chart 2 TED Spreads (basis points)



Source: IMF – World Economic Outlook, April 2009.
Note: The TED Spread represents the difference (spread) between the 3-month Libor rate (the rate at which 3-month funds in a given currency are borrowed in the London interbank market) and the 3-month government bond rate. The wider the spread, the greater is the perception of counterparty risk in the interbank market, i.e. the credit risk in the economy is generally higher.

After its period of strong growth, economic performance will decline sharply in 2009

The outlook for the performance of the V4 economies in 2009 is not very optimistic, owing to the very weak performance of euro area economies and to a dependence on foreign financing (particularly in Hungary) that is to be heavily reined in.

1.2 INTERNATIONAL FINANCIAL MARKETS

Financial markets in 2008 were marked by a very high degree of uncertainty. Credit and money markets were paralysed and stock markets plunged. Although stock markets in emerging countries had during 2007 successfully withstood the increasing risks and deteriorating outlook for the global economy, they were also affected.

1.2.1 Money markets

The functioning of money and interbank markets in major world currencies was severely restricted in 2008

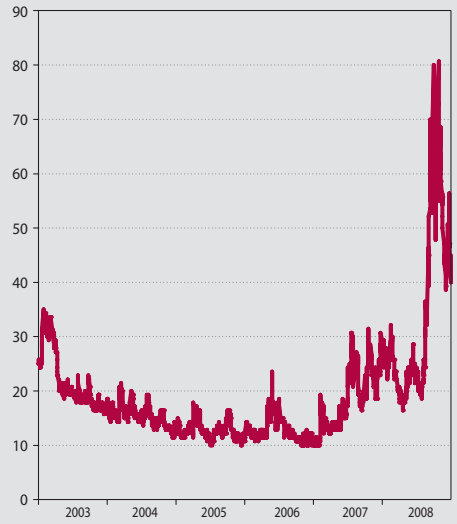
It was a year of rising tensions in major money and interbank markets (particularly in the USD, EUR and GBP currencies). The reason was the high demand for liquidity driven by the need of financial institutions to reduce financial leverage, the freezing of alternative financing markets (e.g. the US market in short-term corporate financing), and liquidity hoarding by financial institutions (an unwillingness to lend to each other, related to the strong perception of counterparty risk). The situation was severely complicated by the collapse and dire straits of several major financial institutions in the United States, United Kingdom and the euro area (for further details, see part 1.2.6). Tensions had a tendency to spill over from the US dollar money markets to the euro money markets by way of foreign exchange swap markets (hedged foreign exchange markets), with the swap rate rising amid mounting counterparty risks. Through foreign exchange swap markets, European financial institutions sought to secure dollar liquidity in order to refinance their exposures to dollar-denominated off-balance sheet structures used for asset securitization and to other assets denominated in US dollars.[6] Central banks came up with a palette

6 *From 2000 to 2008, the dollar assets of European banks increased from around USD 2.8 trillion to almost USD 9 trillion. Until the crash of Lehman Brothers, a major source of financing for these assets was US money market funds. For further reading, see: Baba, N., McCauley, R. N., Ramaswamy, S.: US dollar money market funds and non-US banks. BIS Quarterly Review, March 2009.*

Chart 3 Performance of developed stock markets (index, weekly data, 1. 1. 1990 = 100)

Source: IMF – Global Financial Stability Report, April 2009.

Chart 4 Implied volatility in stock markets, measured by the VIX index (daily data, %)



Source: CBOE.
Note: The VIX is an index of volatility that measures the implied volatility of stock markets from option prices on the S&P 500 index. The VIX expresses the size of investors' risk aversion – a value of more than 20 indicates a high aversion to risk and a value of more than 50 indicates that investors have very serious concerns.

of different programmes for supplying markets with liquidity in particular currencies. Furthermore, in order to improve dollar liquidity, swap lines were agreed between the Federal Reserve, ECB and Swiss National Bank (later joined by other central banks).[7]

Money markets will not function properly until the mistrust between market players abates

Although the liquidity-providing measures taken by central banks have to a certain extent eased tensions in money markets, the greatest problem continues to be the credit risks related to structured securities and the uncertainty about what is actually included in the portfolios of these instruments held by individual financial institutions. Until these instruments are valued realistically and their holdings made transparent, money markets are unlikely to function smoothly.

1.2.2 Stock markets

Stock markets in both advanced countries and emerging economies reported a strongly negative performance in 2008

The performance of global stock markets was strongly negative in 2008. The S&P 500 index, for example, shed 34% of its value. The slump in share prices was most pronounced in the last quarter of 2008, when it was accompanied by a sharp rise in price volatility. This development was driven by investors' growing fears about the soundness of financial institutions – which escalated in particular after Lehman Brothers, a US investment bank, collapsed in September 2008 (see part 1.2.6) – and by increasing concerns about economic developments and their impact on corporate profitability. In 2007, equity indices in emerging markets outperformed those in advanced markets,[8] but in 2008 this trend was reversed. Over the year as a whole, the MSCI Emerging Markets Index plunged by around 49%.

Stock markets are unlikely to make an early and lasting recovery

With share prices at all-time low levels, trading is strongly bullish and markets are gradually rebounding. Given, however, the gloomy outlook for the global economy and future growth in corporate income, it is expected[9] that stock markets will be highly volatile until the end of 2009. With

7 *The Fed's loans to European central banks amounted to as much as USD 600 billion. For European banks, access to dollar financing through markets had been severely restricted, particularly after the collapse of Lehman Brothers.*
8 *Whereas, for example, the S&P 500 index rose by only 3.7% in 2007, the MSCI Emerging Markets Index gained 36.5%.*
9 *UBS estimates that almost 50% of firms will pay no dividends in 2009. In 2008, that share was around 18%.*

Table 3 Stock market indices (average change on the previous period in %)

	2008				End of period					
	Q1	Q2	Q3	Q4	2003	2004	2005	2006	2007	2008
World	-9.5	-2.5	-15.7	-22.2	30.8	12.8	7.6	18	7.1	-42.1
Advanced markets	-9.1	-6.2	-24.1	-26.5	21.1	25.7	9.6	30.0	14.3	-52.1
Emerging markets	-11.3	-1.6	-27.6	-27.9	51.6	22.4	30.3	29.2	36.5	-54.5

Source: IMF – Global Financial Stability Report, April 2009.

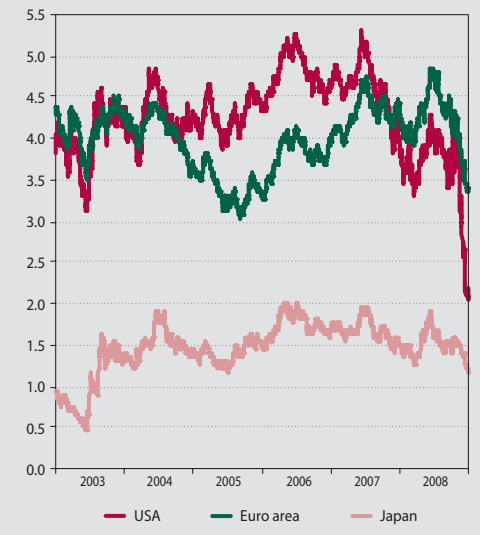
banks facing stretched balance sheets and with leveraged positions having to be unwound, there will be less appetite for capital flows to emerging countries and this will also be reflected in the performance of local stock markets. Investors will for the foreseeable future prefer high-quality and liquid assets.

1.2.3 Bond markets

Government bond yields were very volatile in 2008

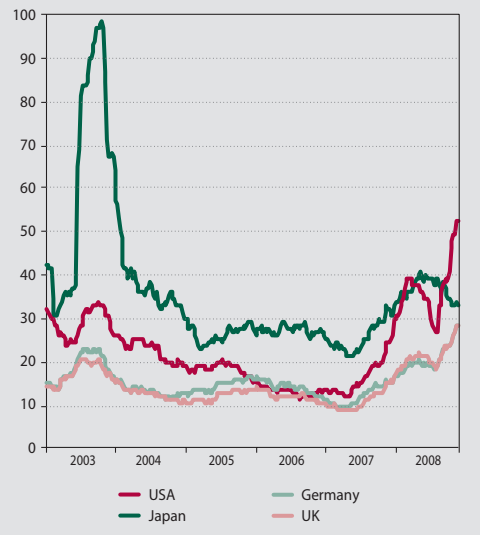
Government bonds of advanced countries (particularly the US and Germany) are generally seen by investors as a safe haven at times of market turbulence. Yields on US and euro area government bonds reflected this fact, especially in last two months of 2008. In the first half of the year, yield curve slopes steepened amid inflation fears, but in July 2008 long-term rates began a downward trend that contributed to a flattening of yield curves. In autumn, the US yield curve steepened again, in response to the Fed's decision to cut key rates. From November, however, long-term yields fell sharply as a result of serious concerns about the financial sector and the global economy's development. That the year-end fall in government bond yields was greater in the United States than in the euro area could be related to the Fed's announcement that it was ready to buy long-term government debt. This represents a less standard way of stimulating the economy through monetary means (also known as quantitative easing).

Chart 5 10-year government bond yields (daily data, in %)



Source: IMF – World Economic Outlook, April 2009.

Chart 6 Historical volatility of government bond yields (weekly data, in %)

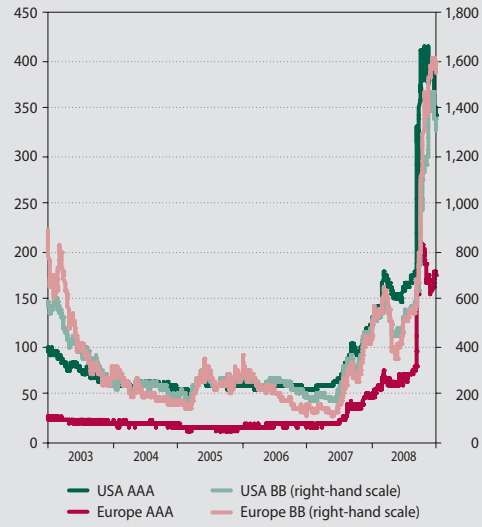


Source: IMF – Global Financial Stability Report, April 2009.
Note: Volatility is calculated as a rolling 100-day annualized standard deviation of changes in yields on 10-year government bonds.

Chart 7 Interest spreads in emerging markets (basis points)

Source: IMF – World Economic Outlook, April 2009.
Note: The JP Morgan EMBI Global Index captures the spread between the yields on USD-denominated debt instruments issued by governments of emerging countries and the yield on US government bonds with a comparable maturity. The JP Morgan CEMBI Broad Index shows the spread between the yields on USD-denominated corporate bonds issued by emerging countries and the yield on US government bonds with a comparable maturity.

Chart 8 Corporate bond spreads (basis points)



Source: IMF – World Economic Outlook, April 2009.

The surge in risk aversion led to a marked increase in yield spreads on government bonds of emerging countries

Risk premiums on government bonds of emerging countries, as measured by the EMBI Global index, maintained a rising trend that dated back to mid-2007, when their level was at an historic low of around 200 basis points. In autumn 2008, these spreads stood at around 400 basis points, but by the year-end they had soared to levels of more than 900 points, as a consequence of the panic and strong rise in risk aversion generated by the collapse of Lehman Brothers and a series of rescue takeovers in September 2008.

The repricing of corporate credit risk that began in mid-2007 continued in 2008

In March 2008, spreads on corporate bonds declined slightly following the rescue of the investment bank Bear Stearns, but in September 2008 credit markets were again strongly shaken. Indeed, CDS indices covering all risk categories for financial and non-financial corporations ended September at all-time high levels.[10] Faced with major systemic risk, investors lost all confidence in debt securities. The US government reacted by approving a financial bailout package – TARP (see part 1.2.6 for further details) – with the aim of restoring confidence in credit markets, and this helped to reduce the perceived risk of further bankruptcies. Although the measure triggered a slight decline in bank CDS spreads, CDS premiums for global banking groups remained relatively high.

Bond and credit markets will continue to be marked by high risk aversion in the near term

Given the global economic downturn and the high degree of perceived risk in financial markets, the coming period is likely to see credit spreads maintained at their current high levels. Structured credit markets, in particular, will continue to be subdued. Markets in more complex and hard-to-price structured instruments (e.g. CDOs) may remain frozen until investor confidence in them is restored (until better models for pricing them emerge and they become more transparent).

1.2.4 Foreign exchange markets

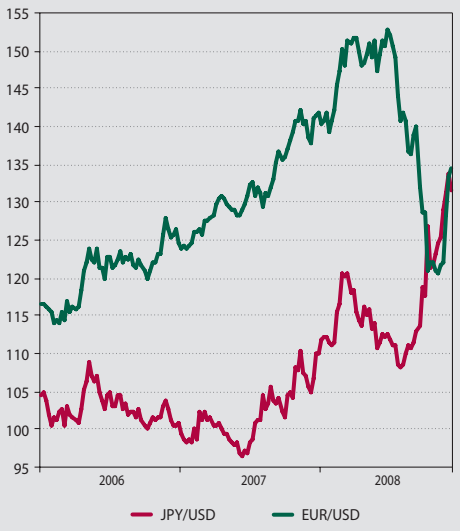
The exchange rate of the euro vis-à-vis US dollar recorded record levels of volatility; the high un-

10 *A credit default swap (CDS) is a credit derivative contract between two counterparties. The buyer makes periodic payments to the seller, and in return receives a payoff (insurance protection) if an underlying debt instrument defaults or a third party (reference entity) does not meet its obligation. The CDS indices capture movements in the insurance price for different debt obligations according to their rating grade, and so they indirectly indicate the size of credit risk perceived by the market.*

Chart 9 Bank CDS spreads CDS (10-year, median, in basis points)

Source: IMF – World Economic Outlook, April 2009.

Chart 10 Bilateral nominal exchange rates (weekly data, index, 3.1.2003 = 100)



Source: Eurostat.
Note: A rise/fall in the index represents appreciation/depreciation of the given currency against the US dollar.

certainty in foreign exchange markets is set to persist

The US dollar continued to weaken against the euro during the first half of 2008, albeit at a somewhat slower pace than in 2007. In July 2008, however, this trend was reversed, and by the end of October the dollar had appreciated sharply against the euro. At first, the reason for this turnaround was the downward revision of investors' expectations regarding the impact of the crisis on the euro area economy; later on, however, the rapid strengthening of the dollar was caused by the extensive repatriation of foreign investments by US investors. In autumn 2008, the dollar was also being supported by dollar demand from international banks, which needed to refinance huge investments in illiquid structured securities. In December, the dollar weakened sharply against the euro after the Federal Reserve rapidly cut key rates down to zero. The relative strength of the dollar against the euro will, however, persist for as long as there is a shortfall in dollar funds in global interbank markets. In the longer-term horizon, as the great uncertainty in international financial markets abates, it may be expected that the value of the dollar will decline owing to the diminution of its role as a safe haven for investors. Towards the end of 2008, uncertainty about the EUR/USD exchange rate, measured in terms of its volatility, was as high as it had ever been. The volatility implied at the year-end for the one-month and three-month horizon indicated the persistence of strong short-term fluctuations (high uncertainty) in the exchange rate's level.

1.2.5 Commodity markets

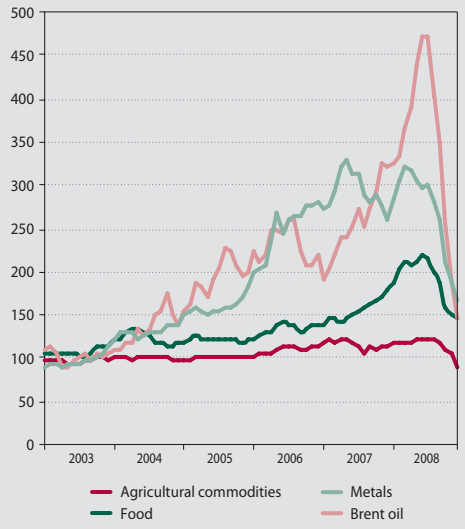
Commodity prices rose in the first half of 2008, driven up by speculative buying, but then turned downwards in the second half of the year. The perceived uncertainty about oil prices will remain high.

Commodity prices continued to rise sharply during the first half of 2008. Oil prices – which had already soared in 2007 – peaked at almost USD 150 per barrel at the beginning of July 2008.[11] The subsequent plunge in prices, down to around USD 40 per barrel by the end of December 2008, was largely due to a general slump in demand for oil stemming from the unfavourable outlook for the global economy, as well as to changes in the business strategies of many financial institutions.[12] The fall in oil prices was not even halted by two decisions of the OPEC cartel to slash oil production. The reason for this may also have been the expected launch of operations at new extraction facilities in 2009 and 2010. Oil prices were highly volatile in 2008 and this

11 *This sharp rise in prices of raw materials (including metals and energy raw materials) and agricultural commodities was driven by investors, who in summer 2007 had begun to unload dollar financial assets to a great extent and invested the surplus funds mainly in commodity derivatives. Their speculative behaviour in this regard was probably attributable to the US Federal Reserve's rapid cutting of key interest rates as a response to the problems in financial markets.*

12 *Given the high uncertainty in financial markets and the general need to reduce financial leverage owing to large losses, banks began aggressively to limit riskier investments, which in turn saw the bearish mood spread to markets in oil derivative contracts.*

Chart 11 Commodity price indices (USD, 2000 = 100)



Source: International Financial Statistics.

volatility is expected to continue in the coming period. The great uncertainty about oil prices among investors is generally caused by high risk aversion and the uncertain outlook for the global economy. Prices of most base metals also declined in the second half of the year as a result of weak demand, but prices of precious metals stayed high owing to their role as a safe haven for investors at times of tensions in financial markets. Prices of so-called soft commodities (agricultural commodities, food), whose prices are far less sensitive to business cycle developments than are, for example, prices of raw materials, will likely be affected by supply-side constraints – notwithstanding the dampening of demand – and this will put them under upward pressure.

1.2.6 The exceptional situation in financial markets in autumn 2008

The radical escalation of the financial and commodity market turmoil in September was largely related to certain exceptional events in the United States.

Although the mood in global financial markets improved in the second half of March 2008 – after the Federal Reserve saved the investment bank Bear Stearns[13] from bankruptcy – this revival lasted only until the middle of May. New concerns about the effect that rising oil prices and persisting financial sector problems would have on economic growth and inflation resulted in financial markets becoming increasingly risk averse again. The situation, however, took a highly dramatic turn in September when, largely because of negative developments in listed financial companies, global stock markets plunged and in some cases recorded their highest-ever daily loss. Government bond yields hit record lows, and the flow of liquidity in money markets all but seized up owing to the sharp rise in counterparty risk. Volatility in the oil market soared and the price of gold shot up. These dra-

Table 4 Comparison of volatility in commodity prices (weekly data, in %)

	6-month change			Standard deviation			
	Largest 6-month decline in 2008	Largest 6- month decline between 1970–2007		2008	Largest between 1970–2007		Average between 1970–2007
Oil (WTI)	-76.8	-60.1	(1986)	18.4	16.1	(1999)	8.5
Aluminium	-52.9	-33.4	(1991)	12.1	8.9	(1994)	5.6
Copper	-54.8	-52.6	(1974)	12.2	13.0	(1974)	6.7
Nickel	-68.0	-49.0	(1990)	23.6	17.7	(2006)	9.2
Gold	-25.4	-30.1	(1981)	8.7	13.3	(1979)	5.1
Maize	-52.4	-51.8	(1997)	13.9	13.6	(1988)	7.6
Wheat	-45.2	-38.0	(1996)	16.0	12.9	(2007)	6.4
Soya	-44.1	-51.3	(2004)	12.8	15.5	(2004)	6.3

Source: IMF – World Economic Outlook, April 2009.
Note: Standard deviation of weekly changes in commodity prices over 12 months. Prices for oil start in 1983, prices for aluminium in 1988, and prices for nickel, maize, soya and wheat in 1979.

13 *The fifth-largest investment bank in the world at the time, Bear Stearns ended its 85-year history as an independent institution in May 2008 when it was purchased for USD 2.2 billion (USD 10 per share) by rival company J.P. Morgan Chase. Bear Stearns faced heavy losses from its exposure to the US mortgage market, ultimately leading to a massive outflow of its funds. As part of a deal struck in March, the Fed guaranteed USD 30 billion of Bear Stearns' least liquid assets. In order to prevent the further spread of panic, the Fed in fact helped prevent the bank from going bankrupt and protected the bank's creditors by assuming part of its risks – even though Bear Stearns was not subject to Fed regulation.*

Box 1

CHRONOLOGICAL SUMMARY OF THE STAGES OF THE FINANCIAL CRISIS: 2006–2009

2006 – Summer 2007	Rising defaults in US subprime and Alt-A loans. Expectations of property prices fall in the US.
Summer – Autumn 2007	Failure of two large hedge funds (in the Bear Stearns group) that were extensively exposed to the real estate market. Spreads in interbank funding and other credit products rise sharply. RMBS funding and interbank funding for second tier (riskier) banks dries up. The UK bank Northern Rock faces retail run.
Autumn 2007 – Early Summer 2008	Severe mark-to-market losses in banks' trading books. Collapse of commercial paper market (money market for short-term, unsecured financing of highest-rated companies) – banks are unable to refinance their off-balance sheet structured investment vehicles (SIVs) and are forced to bring them back on balance sheet. Funding strains in the secured financing market. Worries about liquidity of major financial institutions. US Government assists the rescue of the investment bank Bear Stearns.
Summer 2008	Mark-to-market losses and liquidity strains continue to escalate. Fannie Mae and Freddie Mac increasingly reliant on financial support from the US Government. Funding problems of UK mortgage banks intensify.
September 2008	Bankruptcy of Lehman Brothers breaks confidence that major institutions are too big to fail. Credit downgrade of the insurer AIG triggers rising collateral calls. AIG, facing a liquidity shortfall, is brought under government control. Mix of credit problems, wholesale deposit runs and retail deposit runs lead to the collapse of Washington Mutual, Bradford & Bingley and the three largest Icelandic banks.
October 2008	In order to prevent the collapse of major banks in several advanced countries, governments take unprecedentedly extensive measures and central banks deploy unconventional instruments. Governments make explicit commitments that systemically important banks will not be allowed to fail.
November 2008	Impaired bank ability to extend credit produced globally synchronized economic downturn. Economic crisis threatens further credit losses which might further impair bank capital. Further essential government measures to offset risk of feedback loops between the real economy and financial sector (cleansing banks' balance sheets of bad assets).

Source: Financial Services Authority – The Turner Review, March 2009 (amended).

matic developments were directly related to several exceptional events in the Untied States.

Fannie Mae and Freddie Mac placed into conservatorship

On the first weekend in September 2008, Fannie Mae and Freddie Mac[14] were taken over by the federal government by being placed into conservatorship, a move made in response to investors' strong fears about the insolvency of these government sponsored enterprises (GSEs). As a result, the agencies' creditors were protected. This measure was seen by many observers as the largest government intervention in the functioning of private markets for several decades, and it was essential for ensuring market stability since the liabilities of these GSEs to other financial institutions are in the range of trillions of dollars.

The end of independent investment banks in the United States

Confidence in markets was also shaken to the

14 *GSEs were established by the US Government in the 1970s as a way of supporting home ownership. These agencies had private shareholders and their activities were supervised by a separate institution. The GSEs are mainly concerned with purchasing residential mortgages from various mortgage lenders, securitizing these mortgages ("packaging" the loans into securities), and then selling them on to investors in the financial market. The GSEs guarantee payment of the principal and interest to the holders of the mortgage backed securities that they issue. The secondary mortgage market created in this way generates additional funds for mortgage lending. Originally, GSEs were required by law to invest only in the highest-quality mortgages, but the legislative conditions regarding investments were later eased, and the drop in property prices led to huge losses at these institutions. GSE also had very little own capital relative to the size of their total assets.*

core by developments on Wall Street, specifically, a series of events that resulted in the end of independent investment banks in the United States. On 14 September 2008, Lehman Brothers Holdings Inc., a 158-year-old global investment company, filed for bankruptcy protection in response to its insolvency. With total debts of USD 613 billion and total assets of USD 639 billion, Lehman Brothers was the largest company to go bankrupt in the history of the United States.[15] Its insolvency arose from a series of bad investment decisions that left the bank heavily exposed to the US mortgage market and commercial real estate market. After seeing its capital decimated by huge financial losses, the bank failed to find new investors for raising capital. Though the US government and Fed responded, they stopped short of saving the company given the toxicity of its assets, the very short time window, and that they had no statutory mandate to take such a step if there was no interested buyer. The next day, the value of Lehman Brothers debt securities in the Reserve Primary Fund, a money market fund, fell to zero, dragging the fund's net asset value to below the constant level of USD 1 per share. The upshot was an immediate flight of hundreds of billions of dollars from money market funds used for the short-term financing of banks and enterprises. The money markets remained practically illiquid. Another major investment bank with a global operation, Merrill Lynch & Co., Inc., was saved through being acquired by Bank of America,[16] a commercial bank, in an all-stock transaction. The snap deal, for a price of USD 29 per share (a 70% premium on the market price), was announced on the day that Lehman Brothers collapsed. In the wake of these exceptional events, only two pure investment banks remained on Wall Street. At the same time, the market was becoming increasingly doubtful about the viability of independent investment banks – these institutions have to fund their activities entirely from the market (they are barred from taking deposits) and it is therefore a serious challenge for them to maintain liquidity and capital adequacy in times of crisis. In light of these concerns, the Fed announced on 22 September 2008 that it had agreed to convert the last pure investment banks – Goldman Sachs and Morgan Stanley – into bank holding companies, at their request. These institutions thus came under the regulation and supervision of the Fed, whereas before they had been regulated by the Securities and Exchange Commission.

Nationalization of AIG

The shake-up of the two investment banks was soon followed by another event that exacerbated the already great uncertainty and lack of confidence in international financial markets. AIG, the world's largest insurance company by market capitalization, was de facto nationalized by the US Government. On 16 September 2008, the Fed announced that it was lending AIG USD 85 billion in return for the government getting a 79.9% stake in the company. The measure was intended to prevent the collapse of a company holding a key position in the global financial system. Its long-standing financial problems were largely attributable to the extensive derivative transactions of its Financial Products division, which involved the sale of credit insurance and the purchase of super-senior tranches of collateralized debt obligations (CDOs). Amid rising tension in credit markets, AIG suffered serious losses on the market repricing of these exposures. Also contributing to the company's downfall was its complex organizational structure and the international nature of its business, which substantially reduced the scope for regulation and oversight of critical derivative transactions.

Passage of the government rescue package TARP

The markets were further panicked on 29 September 2008 when the US Congress voted to reject a USD 700 billion bailout package put together by the US Treasury. The government's rescue plan – TARP (Troubled Asset Relief Program) – was eventually passed by Congress at the second attempt, on 3 October 2008. Among the measures introduced through the TARP were tax relief amounting to USD 149 billion, the power to cap executive bonuses at institutions participating in the programme, and a temporary (until 31 December 2009) increase in the amount up to which deposits are guaranteed by the Federal Deposit Insurance Corporation (FDIC), from USD 100,000 to USD 250,000. The main contribution to solving the crisis, however, was to be the creation of a market in troubled assets. By purchasing these assets (up to the amount of USD 700 billion) through a reverse auction mechanism, the government was to help bring transparency to the financial condition of the financial institutions concerned, to

15 *The previous largest bankruptcy was that of World Com Inc., which had assets of USD 104 billion.*

16 *On 1 July 2008, Bank of America completed its USD 4.1 billion acquisition of Countrywide Financial – the largest mortgage lender in the United States, which had found itself on the verge of collapse.*

quell fears and uncertainty in markets, and to get capital flows and lending going again. The reduction of uncertainty in the markets was also to be assisted by granting the Treasury a clear statutory mandate, and the financial means, to recapitalize failing financial institutions, to provide subsidies for the rescue takeovers of failing companies by other companies, and to guarantee systemically important parts of financially unsound companies. The unforeseeable nature of government interventions probably also contributed to the extreme rise in risk aversion in the markets. In November 2008, however, the US Treasury began to change the TARP's focus. Plans to purchase troubled assets were set aside, and the priority became to use the programme's funds for bank recapitalization.[17]

Measures for establishing confidence in markets were also exceptional

The crisis in financial markets called for various – in some cases even unprecedented – measures from government authorities. The world's major central banks increased the amount of funds with both short and long maturities, and continued to coordinate the supply of these funds in the money markets. Central banks began to extend the maturity of their credit operations, expanded the group of entities qualified to receive them, or eased the collateral quality requirement.[18] On 8 October 2008, several central banks[19] embarked on a coordinated cut of 0.5 of a percentage point in their main refinancing rates, in order to mitigate the impact of the financial crisis on the real economy. Apart from the previously mentioned nationalizations and government guarantees for the takeover of failing companies by other private companies,[20] additional measures included the almost worldwide extension of the temporary ban on the covered short selling of shares in selected companies and the blanket ban on uncovered (without borrowing of the security) short selling in given markets, the suspension of trading in certain shares, and the total suspension of trading in several stock markets. In September and October, certain European countries introduced a blanket guarantee for all deposits in the banking system. This measure for dealing with the crises had until then tended to be used for systemic financial crises in emerging countries.[21]

1.3 THE EURO AREA FINANCIAL SECTOR – DEVELOPMENTS AND RISKS[22]

In 2008, the euro area financial system underwent a major test of its shock-absorption capacity. The financial sector and financial markets in the euro area are facing serious risks and will have to withstand them over the near term, too. The outlook for financial stability in the euro area is therefore very uncertain.

Box 2

SCOPE OF GOVERNMENT MEASURES

The European Commission estimates that the EU governments have earmarked EUR 3 trillion for rescuing banks, including EUR 300 billion for their recapitalization. As regards government support programmes for the financial sector in the United States (including the Fed's extended programmes), the total amount of financial assistance represents fully USD 11.8 trillion. In addition, the US Government has set aside USD 1.1 trillion (7.7% of GDP) for federal stimulation programmes. The Congressional Budget Office estimates that the total US budget deficit for 2009 will be USD 1.7 trillion (11.9% of GDP), falling to USD 1.1 trillion (7.9% GDP) in 2010. In November 2008, the European Commission proposed a total fiscal stimulus of EUR 200 billion (1.5% of GDP). The total fiscal stimulus in the EU amounts to between 3.3% and 4% of GDP. The Chinese government has earmarked the equivalent of around USD 586 billion for infrastructure projects. Japan has unveiled a fiscal stimulus amounting to USD 99 billion to be focused on health care, local governments, new social measures and solar energy. The G20 countries have agreed to a total fiscal expansion of USD 5 trillion, a 4% increase in output, and acceleration of the transition to the green economy.

17 *By the end of 2008, USD 178 billion of the approved total package of USD 700 billion had been used for the purchase of preference shares and warrants (options to buy shares) in 214 US financial institutions. Of that amount, USD 40 billion was used for buying preference shares in AIG, USD 25 billion for buying preference shares in Citigroup and USD 15 billion for buying preference shares in Bank of America. The Treasury also agreed to extend a loan of USD 18.4 billion to the car makers General Motors and Chrysler.*

18 *This is a typical crisis measure by central banks. It has been not been typical, however, to extend the entities eligible for Fed refinancing operations to include investment banks and other financial companies, including the insurance company AIG. On 7 October 2008, the Fed announced that it was launching an emergency Commercial Paper Funding Facility. The US central bank thus began to directly enter the market used for the short-term corporate financing.*

19 *The Federal Reserve System, European Central Bank, and the central banks of the United Kingdom, Canada, Sweden, Switzerland, and the United Arab Emirates. The Chinese central bank also cut its rates, though it was not formally part of the coordinated action. The next day saw the central banks of South Korea, Hong Kong and Taiwan cut rates, too.*

20 *The Fed's move to guarantee part of the assets of Bear Stearns was unprecedented since Stearns was an investment bank and therefore did not fall under the Fed's regulation.*

21 *Laeven, L., Valencia, F.: Systemic Banking Crisis: A New Database. IMF Working Paper 08/224, September 2008.*

22 *This part is largely based on the results of the ECB's analyses.*

1.3.1 Euro area banking sector

Large banking groups in the euro area saw profits fall in 2008, and their solvency came under strong pressure in the last quarter of 2008

Up until September 2008, large European banks were relatively successful in resisting the unfavourable market conditions that had faced them since mid-2007. Their capacity to absorb large losses from the revaluation of structured credit instruments was based on the strong profits they had been generating (up to August 2007), the continuing growth in lending during almost the whole of 2008, and the maintenance of capital adequacy ratios at levels far above the regulatory minimum. But asset write-downs, which as at November 2008 amounted to approximately EUR 73.2 billion, took a heavy toll on the profitability of European banking groups. Whereas the median ROE for the whole of 2007 was 15 %, it declined to 11% for the first half of 2008. In general, the impact of the unfavourable market situation was hardest on those institutions most extensively engaged in investment banking and in securities dealing. Even in the second half of 2007, the average capital ratio of large banking groups in the euro area had deteriorated (the Tier 1 ratio fell to 7.9%), but capital raising actions and a reduction in risk-weighted assets drove an average improvement in solvency in the first half of 2008 (the Tier 1 ratio rose to 8.3%). The capital adequacy ratios of euro area banking groups continued to rise in the third quarter of 2008 (on a smaller sample of banks, the Tier 1 ratio increased to 8.7%).

Banks' financing conditions became far more difficult

A typical feature of the recent crisis in financial markets, dating back to August 2007, has been low liquidity in the interbank and money markets. As mentioned in part 1.2.1, the situation in the major money markets took a particularly dramatic turn in mid-September 2008, following the collapse of the US investment bank Lehman Brothers. Fears of a domino effect on other financial institutions – fed by the spread of rumours – resulted in some banks being unable to obtain funds for a price significantly higher than the EONIA.[23] Banks increasingly had to finance their operations through the ECB. At the same time, banks were depositing increasing amounts with the ECB, which was reflected in a marked deterioration in interbank liquidity distribution. Several European banks, especially those most reliant on market financing, faced the risk of lost confidence and speculation about their liquidity position and solvency (Box 3).

Box 3

THE PANIC IN FINANCIAL MARKETS IN SEPTEMBER 2008 LED TO THE INSOLVENCY OF SEVERAL MAJOR EUROPEAN BANKS, THUS TRIGGERING EXTENSIVE GOVERNMENT INTERVENTIONS

The panic that gripped stock and money markets following events on Wall Street in mid-September 2008 (see part 1.2.6) clearly reflected concerns about credit quality and investors' insolvency fears. European banks, being heavily dependent on short-term interbank financing, recorded the largest slump in share prices. In such circumstances, banks with a wide funding gap and depreciating capital were all but denied access to money and capital markets and therefore faced the threat of insolvency. In order to prevent a potential retail run, the governments of several European countries embarked on extensive interventions in their banking sectors.

On 28 September 2008, the governments of Belgium, the Netherlands and Luxembourg announced that they would provide the Fortis banking and insurance group with a capital injection of EUR 11.2 billion in exchange for a 49% stake each in the group's banking subsidiaries falling within their respective jurisdictions (the group's sound insurance arm was to remain untouched). The government's thus opted for partial nationalization of the bank in preference to selling it to two interested buyers (BNP Paribas, ING), which had requested guarantees against any future losses. The deal included a EUR 5 billion write-down of com-

23 *The EONIA (Euro Overnight Index Average) is the effective overnight reference rate, computed as a weighted average of all overnight unsecured transactions undertaken in the interbank market and initiated within the euro area by the contributing banks.*

Box 3 – continuation

plex debt securities. The Bank had been closely watched since June 2008, when it surprisingly announced plans to raise EUR 8 billion in new capital by issuing shares and selling assets. On 3 October 2008, with Fortis said to be facing persisting liquidity problems, the Dutch government acquired the group's Dutch subsidiary for EUR 16.8 billion, and thus the group was broken up along the territorial lines of Benelux. With the Dutch Government having torn up the original agreement, the Belgian Government, on 5 October 2008, was forced to agree to the sale of the remaining part of the Fortis group to the French group BNP Paribas.[24]

On 29 September 2008, the German banking group HRE,[25] with a net asset value of EUR 400 billion, accepted state assistance of EUR 35 billion in the form of loan guarantees. On 5 October, this aid was increased to a total of EUR 50 billion in order to meet the group's additional needs. HRE had got into liquidity troubles because of its strategy of short-term financing, which proved unsustainable in the prevailing market conditions. The German Government's contribution to the total loan guarantees for HRE will be approximately EUR 26 billion.

On 29 September 2008, the UK Government nationalized the mortgage bank Bradford & Bingley after a weekend that saw large numbers of its depositors withdrawing their savings. The government thus took over the bank's headquarters and its mortgage operation, comprising a portfolio of mostly risky loans worth GBP 42 billion. Spanish bank Abbey Santander snapped up B&B's deposit book and branch network. This was the UK's second bank nationalization during the ongoing crisis.[26] The largest British mortgage bank, HBOS, which had the same business model, was saved through being taken over by Lloyds TSB. The price terms originally agreed for the takeover were altered in October 2008, when both banks received a significant capital injection from the government.

Another European financial institution forced to resort to government funding was Dexia, a French-Belgian bank specializing in the financing of local governments. After Dexia's share price plunged 30% on 29 September 2008 (to EUR 7.07 per share) and amid fears of the systemic repercussions of its potential collapse, the governments of France, Belgium and Luxembourg agreed to inject EUR 6.4 billion into the bank. This formally involved subscribing for new shares at EUR 9.90 per share (the average closing prices over the previous three months). The company had suffered extensive losses through its US insurance arm, Financial Security Assurance, which specialized in debt insurance, including the insurance of complex mortgage backed securities.

These measures by different EU governments did not prevent intense turbulence continuing in financial markets amid a lack of confidence and fear of losses (a particularly critical period for European markets was the week 6-10 October 2008). On 12 October, at a summit in Paris, euro area representatives agreed on a joint approach to tackling the crisis in the banking sector. The basic principles of the bailout plan mirrored the British rescue scheme (worth GBP 400 billion) unveiled on 8 October: a government guarantee for new medium-term interbank loans (valid until the end of 2009), and recapitalization in exchange for ownership interests. At the same time, the ECB continued to provide additional liquidity at fixed rates, extended the list of eligible collaterals to include short-term commercial paper, and increased the supply of longer-term funds. The details of national bailout plans were based on national specifics. The total amount of aid agreed for the euro area banking sector could reach almost EUR 2 trillion. These efforts to tackle the problems in euro area in a more coordinated way were welcomed by the markets: CDS spreads of large banking groups declined sharply and the share prices of these groups stabilized.

The large amount of toxic assets in banks' balance sheets poses a risk to the euro area banking sector

As for risks to the euro area banking sector, they continue to relate to the highly uncertain extent of ultimate losses on exposures to complex in-

24 BNP Paribas agreed to buy Fortis' banking arm in Belgium and Luxembourg and its insurance arm in Belgium for USD 14.5 billion. On 12 December 2008, however, a court ruled that Fortis shareholders had the right to vote retrospectively on the breakup of Fortis, and in February 2009 Fortis shareholders voted against the breakup, thereby blocking the Belgian Government's agreement with BNP Paribas.

25 The bank has an international operation and specializes in mortgage lending, commercial real estate lending and public sector lending.

26 The Northern Rock bank was nationalized back in February 2008. B&B and Northern Rock were both mortgage banks with a highly vulnerable business model. Their lending operations were largely financed from short-term money market funds.

vestment instruments whose value is linked to the sinking US real estate market. It should be noted that even though the outlook for this market remains gloomy,[27] a highly unfavourable scenario for property price development is already priced into mortgage-related securities. At the same time, financial companies began in 2008 to bring a large proportion of the implicit losses from these securities on to their balance sheets and/or profit and loss accounts. There is, however, likely to be a further increase in losses from the extensive investments of European banks in securities backed by other types of US loans, e.g. consumer loans and credit cards. The quality of these underlying assets is only just beginning to deteriorate.

Stability risks to the euro area banking sector are increasing also because of the marked deterioration of the domestic economy

Risks to financial stability from the household sector have increased, with households in many countries facing falling property prices, depreciating savings, the risk of unemployment, and lower disposable income. The risks to banks in this regard may be mitigated by, on the one hand, the contribution of government measures – e.g. for maintaining employment, or providing mortgage repayment assistance to borrowers – and, on the other hand, the slowdown in lending to households, which began even before the turbulence in financial markets.[28] Another reason that the balance sheets of euro area non-financial corporations are generally sounder than they were before the beginning of the previous turn in the credit cycle is their exceptionally favourable performance over the past couple of years. Conditions for non-financial corporations, however, are worsening markedly. Given the relatively high financial leverage of the euro area's non-financial corporations (the debt-to-equity ratio in the second quarter of 2008 was almost 200%) and banks' tightening of credit conditions since mid-2007, the corporate sector may face difficulties in obtaining financing. It may be expected that bankruptcies will increase sharply in the near-term horizon, especially among companies in a speculative rating grade, i.e. companies with a low profitability and high financial leverage.

The profitability of euro area banks is not expected to rise significantly in the near-term

Even though write-downs of impaired securities related to subprime mortgages will gradually decline, the increase in write-downs stemming from the marked impairment of other structured instruments (e.g. securities backed by US consumer loans) will further erode banks' financial results. Banks' profitability is also under downward pressure from the need to reduce financial leverage, which is reflected in the sharp slowdown in risk-weighted asset growth. Lending activities of banks, a major source of their income, will be restricted also by the unfavourable economic climate. That banks will be less profitable than in previous years is also partly due to the lower non-interest income from trading in financial markets, asset management, and securitizations.

The size of risks to the euro area banking sector is determined also by persisting difficulties in banks' financing

Regarding the risks and stability of the euro area banking sector, the critical question is for how long the financing problems in the markets will persist – in other words, for how long banks will have to be reducing financial leverage in response. Unless the complicated situation in credit markets is solved in the short term, the risk of an adverse feedback loop between the banking sector and economy will increase. Ultimately, with banks' shock-absorption capacity already undermined, this will lead to the impairment of banks' high quality assets, too. The unblocking of credit flows in the economy may be helped by government measures aimed at increasing confidence in the banking sector. What will be important, however, is how banks react to these measures and to the extremely tough business conditions facing them now and in the near future.[29]

1.3.2 Euro area insurance sector

The profitability of insurance companies in 2008 was adversely affected by the weak performance of financial markets and the real economy and by strong competition

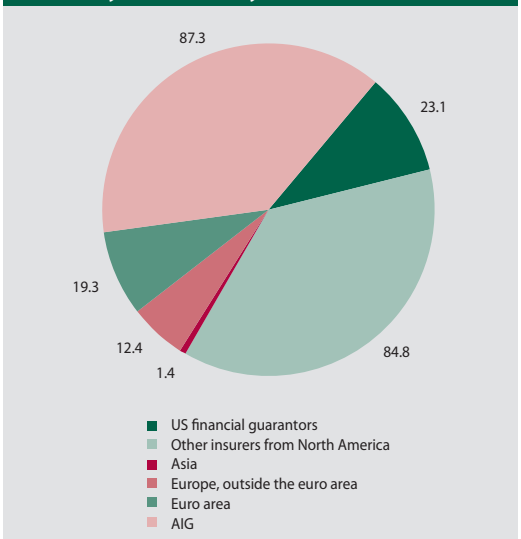
The performance of large insurance and reinsurance groups in the euro area deteriorated in 2008 as their premiums written and investment income declined. The median ROE of the euro area's large primary insurers fell in the first half of 2008, to 12% (from around 14% in 2007), and in

27 *Residential property prices in the United States peaked in mid-2006. According to the Case–Shiller price index, real estate prices in the third quarter of 2008 were 21% below that peak. According to the Case–Shiller 10 futures price index for November 2008, the markets expect these prices to bottom out in 2010, at around 33% below their peak (the index indicates the future development of residential property prices in the 10 largest US cities).*

28 *In the euro area, growth in loans made to households for the purchase of real estate peaked in the first quarter of 2006 (at around 12%). In the recent cycle, consumer loans to households recorded their sharpest year-on-year rise, of around 8.5%, in the second quarter of 2006. In the third quarter of 2008, growth in both types of lending was around 4% year-on-year.*

29 *Some large euro-area banking groups are vulnerable not only to more difficult conditions in the domestic economic environment, but also to deteriorating economic conditions in emerging countries in which they have exposures. According to the ECB, however, these exposures together are not so substantial that, in the event of very serious macroeconomic problems, they would pose a systemic risk to the euro area.*

Chart 12 Write-downs by insurers globally from July 2007 to May 2009 (USD billion)



Source: ECB.
Note: During this period, euro area insurers obtained around USD 8 billion in new capital.

the third quarter, to 10.1%. Some insurers (particularly reinsurers) reported an impaired capital position for the third quarter of 2008, some raised capital by issuing shares and bonds, and some also received a government capital injection. In general, however, euro area insurers are keeping their capital levels above regulatory requirements so as to obtain a certain targeted credit rating.[30] In recent years, insurers have been improving their solvency also through securitization, whereby they transfer their off-balance sheet risks to third parties. In the first half of 2008, however, insurance-linked securitization slowed down (particularly in life insurance) owing to the deteriorating financial position of "monoline" financial guarantors.

Risks to the euro area insurance sector increased, thereby worsening its outlook

Among the most serious risks that increased for insurers in 2008 – and are likely to keep mounting in the coming period – are risks related to developments in the financial market and macroeconomic environment, and contagion risks from banking activities or from ownership links to banks and other financial institutions. Since the outlook for stock and credit markets is gloomy for insurers, the next few quarters may be expected to bring substantial downward pressure on insurers' investment income, as well as a declining uptake of investment life insurance. Insurers' profits will be also squeezed in a macroeconomic environment for which the outlook is unfavourable and which is likely to see lower demand of households and firms for insurance products. Furthermore, an increase in the bankruptcy rate will adversely affect the value of insurers' investments in structured credit products.[31] As for insurers that are part of a financial conglomerate that includes a bank, the insurer, along with the rest of the group, could be negatively affected by any heavy losses incurred by the banking arm. A rating downgrade for a bank within a group could also affect the rating of an insurer belonging to the same group, and therefore its financing costs, too. The financial position of an insurer may become complicated if it is called upon to provide an intra-group transfer of liquidity to an ailing banking entity. An insurer that is part of a financial group may also be vulnerable to reputation risk from losses or liquidity problems reported by a banking entity in the group. As far as euro area insurers are concerned, the long-term risks and challenges that remained unaltered in 2008 still include: longevity risk, the risk of losses from a catastrophic event exceeding projected losses, and strong competition in some segments of the insurance sector.

1.4 MEDIUM-TERM RISKS FROM EXTERNAL CONDITIONS

- A highly uncertain outlook for the global economy and international trade/looming deflation in advanced countries
- Persisting uncertainty in the financial sectors of advanced countries
- Protectionism
- Risk of insufficient differentiation between countries in the broader central and eastern European region

Restoring demand for domestic production is crucial to maintaining financial stability in Slovakia

Given the high openness of the Slovak economy, it is essential for the economy's healthy growth

30 *It is difficult to measure solvency consistently across insurers in the euro area in view of the lack of a single approach to capital adequacy and to information disclosure. This is expected to be remedied by Solvency II, a new EU Directive that will enter into force in 2012.*
31 *Insurers usually hold them to maturity, meaning that a drop in their market value does not reflect in the company's results, as it does in the case of banks.*

Box 4

IMF ESTIMATE FOR TOTAL WRITE-DOWNS IN THE FINANCIAL SECTOR FOR THE YEARS 2007 TO 2010

The International Monetary Fund currently estimates (in its Global Financial Stability Report, April 2009) that the total amount written down by financial institutions in relation to the financial and economic crisis amounts to around USD 4.1 trillion. Of that amount, banks will face total write-downs of USD 2.5 trillion. Banks in advanced countries are likely to write down an additional amount of around USD 340 billion arising from their exposures in emerging countries. Globally, bank write-downs will therefore represent 61% (2.5/4.1) of write-downs by all market participants. In regional terms, banks in Europe (excluding the United Kingdom) account for most of the potential banking write-downs, fully USD 1.11 trillion, while US banks are likely to write-down USD 1.05 trillion of their assets. The IMF estimate for write-downs by banks in the United Kingdom and in Asia (Japan, Australia, New Zealand, Hong Kong, Singapore) is approximately the same: USD 316 billion and USD 337 billion, respectively. Even though non-UK based European banks will account for a significant share of global banking write-downs, as much as 44% of their write-downs may concern assets outside Europe, mostly in the United States (USD 198 billion) and emerging European markets (USD 172 billion). By comparison, only 8% of the total write-downs by US banks concern non-US exposures. As for total potential write-downs by UK banks, the proportion attached to foreign assets is 45%, similar to the figure for European banks. With Asian banks, the estimated dollar value of write-downs on their assets in the United States (USD 116 billion / 35%) is far higher than the write-downs on their exposures in any other region.

The IMF estimates that euro area banks will require new capital in the amount of USD 375 billion or, in the event of a more serious scenario, as much as USD 725 billion. The additional capital required by US banks is estimated at USD 275 billion or USD 500 billion, and that required by UK banks at USD 125 billion or USD 250 billion.

and financial stability that foreign demand for domestic production is revived as soon as possible. The global financial and economic crisis is slowly reaching the stage where highly adverse developments in the real economy are beginning to be reflected in banks' balance sheets. As the bankruptcy rate climbs in the United States and euro area, banks' loan impairments are rising. With leading banks in many advanced countries having been recapitalized with public funds at the end of 2008 – due to extensive valuation losses from investments in US structured instruments backed by subprime mortgages – their capital can be expected to come under further pressure. In order to get banks in advanced countries lending again, governments will very probably have to make further capital injections if banks cannot obtain sufficient liquidity in financial markets.[32] As for when financial markets will return to a steadier state of optimism, there is great uncertainty. A key driver in this regard will be the bringing of transparency to the holdings and value of illiquid securities backed by mortgages and other depreciating assets. This is expected to be supported by programmes for purchasing bad assets. Such a programme was unveiled by the US Treasury in March 2009 and amounted to between USD 500 and 1,000 billion.[33] Among euro area countries, only the Irish Government has so far taken a similar step. Announced in April 2009, it will largely involve ring-fencing bad bank loans provided for real estate construction.

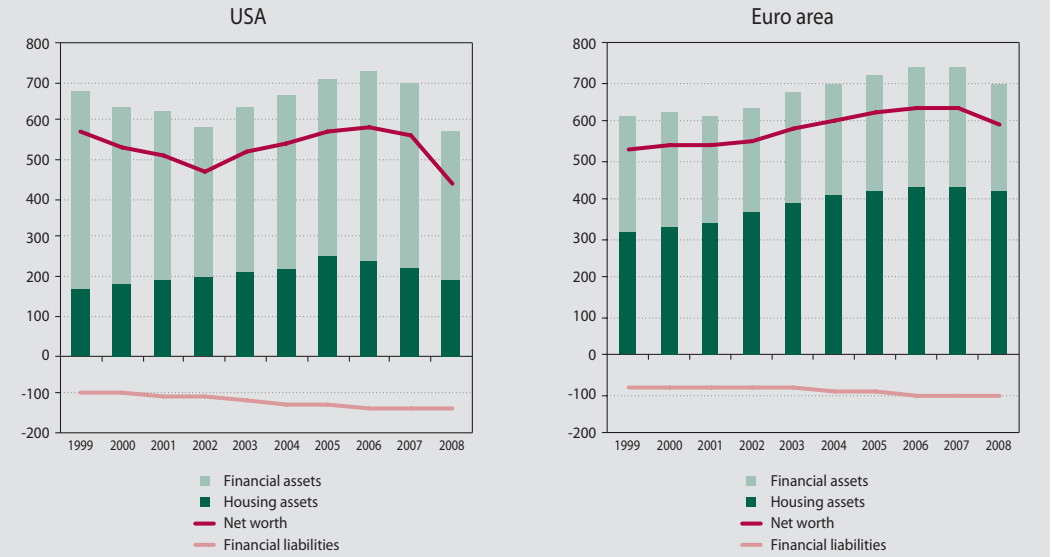
As well as by uncertainty in advanced countries' banking sectors, global growth will be stalled by the bad state of US household balance sheets

The economy will not have sound credit flows so long as demand for credit is weak, notwithstanding the massive banking sector recovery programme, banks' unrestricted access to liquidity

32 *At the beginning of April 2009, major international bank HSBC successfully raised new capital through a record GBP 12.5 billion rights issue, in which its shareholders subscribed for almost 97% of the shares offered. The success of the issue had been expected, however, given the bank's relatively sound financial position – whereas rival banks reported heavy losses in 2008, HSBC made a pre-tax profit of USD 9.3 billion.*

33 *The programme for purchasing bad assets has been earmarked between USD 75 and 100 billion of TARP funds by the US Treasury. It will also receive capital from private investors, guaranteed by Federal Deposit Insurance Corporation (FDIC), and further funds from the Fed.*

Chart 13 Household assets, liabilities and net worth in the US and euro area (% of disposable income)



Source: IMF – World Economic Outlook, April 2009.
Note: Data for the euro area are up to the third quarter of 2008.

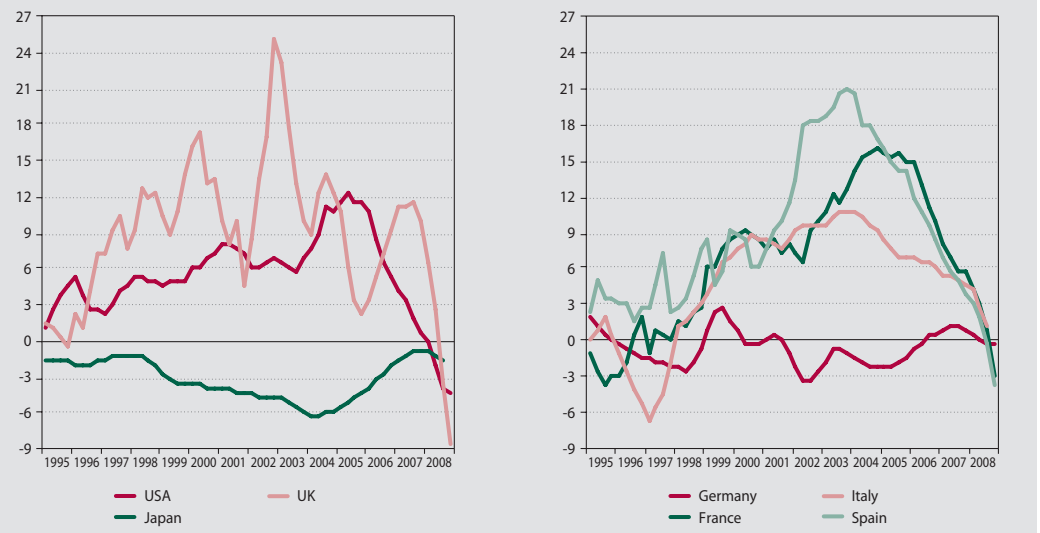
through central bank operations, or the direct increase in money supplies through the purchase of government bonds by central banks (Fed, Bank of England). The crisis has hit not only banks' balance sheets, but also the balance sheets of households and firms. US household indebtedness has increased to around 130% of income, largely driven by the rising prices of housing and financial innovations. As household wealth plunged amid falling residential property prices, depreciating financial investments and rising unemployment, the household savings rate rose to stand at 3.6% in December 2008 (for the whole of 2005, at the height of the housing market boom, it was -0.5%). This in turn caused a record decline in consumption at the end of 2008. Because of the sharp fall in house prices and stock markets, the household savings rate will have to soar to levels of around 10% of disposable income. At the same time, the US Government has embarked on massive interventions to shore up employment and stimulate consumption. It is assumed, however, that the principal effect of these measures will be to improve household balance sheets (the generation of savings),[34] the result being that demand for credit will be relatively weak for at least the next two years and US economic growth will be substantially below its potential.

The outlook for economic growth is gloomier for the euro area than for the United States, owing to vulnerable bank balance sheets and structurally weaker domestic demand

The balance sheets of euro area banks have been, and will continue to be, strained. At the end of 2008, household indebtedness in the euro area represented more than 60% of household income and the savings rate stood at 14.4%. Although consumption appetite and the taste for debt is historically lower in the euro area than in the United States, even this relatively low household consumption has been, and will be, adversely affected by the slump in household wealth[35] and, in particular, by the negative outlook for employment and income. Euro area countries reporting substantial surpluses of private savings have eschewed fiscal measures that would overly stimulate private consumption, fearing that this would cause overstretching of public deficits and debt accumulation, potentially leading to destabilization of the euro and difficulties in refinancing higher deficits in the future.[36] Consequently, weak domestic consumption and a propensity to save combined with a strong euro and weak foreign demand for the industrial production of euro area countries will in the short– and medium–term horizons mean the crisis has a more

34 *Although the temporary tax relief in May 2008 substantially raised US household income, the additional funds had a negligible effect on consumption expenditure growth and were almost entirely put into savings.*
35 *According to the FT house price index, residential property prices in the euro area fell in the last quarter of 2008 by 4.8% year-on-year.*
36 *The total fiscal stimulus in the EU, including automatic stabilizers, amounts to more than EUR 400 billion, or approximately 3.3% of the European Union's GDP.*

Chart 14 Residential property prices (12-month percent change)



Source: IMF – World Economic Outlook, April 2009.
Note: Data for Japan and Italy are up to the third quarter of 2008.

severe effect on the euro area economy than on the US economy.

The current extensive level of government stimulation in certain advanced economies is unsustainable and will have no more than a temporary effect on economic revival

Although the massive stimulation of (especially Anglo-Saxon) economies through the monetary system and deficit financing is now generating a serious inflation risk in the long-term horizon, these risks will not be a threat over the next few years owing to the large negative output gap and deflationary pressures. Unless consumption revives in countries with structurally weak consumption demand (China, Germany, Japan), it is difficult to see how the global economy can sustainably recover.

The revival of international trade is threatened by increasing protectionist sentiments

Despite the global crisis, politicians have shown limited capacity to act in a sufficiently unified and coordinated way, and protectionist sentiments have appeared. An example of this was the "Buy American" bill, a set of measures promoted by the Democratic Party and supported by trade unions and certain industry associations. The aim was to legislate through laws regulating fiscal stimuli so as to require that all infrastructure projects use steel, iron and other goods produced exclusively in the United States.[37] The EU likewise began to reintroduce export subsidies for dairy products, though these did not contravene current WTO regulations. The creeping protectionist mood could also be seen in the statements of some European politicians. Highly expensive measures focused primarily on the domestic economy have a secondary positive effect on other economies (export oriented), which in turn raises political tensions. Nevertheless, the prosperity of the globally economy is heavily reliant on international trade, which is at present characterized by vertical specialization (various countries specialize in different stages of production). A slide towards protectionist measures and trade wars would therefore seriously prolong the global crisis, which in turn would have an unequivocally negative impact on domestic financial stability.

In central and eastern Europe, some countries heavily reliant on attracting foreign capital have entered into financial straits because of the diminished inflow of external funds

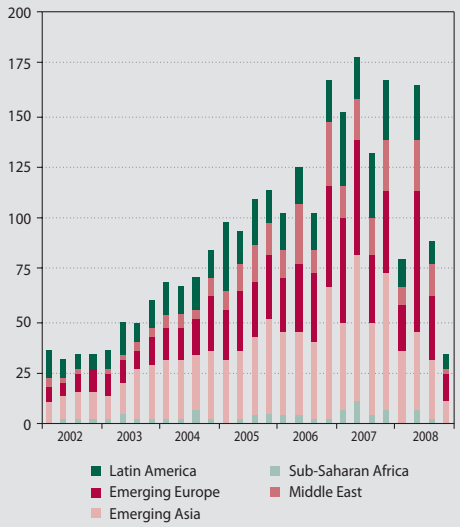
Another serious risk to global economic growth is financial protectionism – where governments of advanced countries in which the banking

37 *After President Obama expressed objections to the bill, Congress made amendments that brought it into compliance with the United States' commitments under the WTO and NAFTA agreements.*

Chart 15 Total foreign bank claims (% of destination country's GDP)

Source: IMF – World Economic Outlook, April 2009.
Note: Latin America consists of Argentina, Brazil, Chile, Columbia, Mexico, Peru, and Venezuela. Emerging Europe contains Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russia, Slovak Republic, Slovenia and Turkey. Emerging Asia includes China, India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand.

Chart 16 Inflows to emerging economies – bond, equity, and loan issuance (USD billion)



Source: IMF – World Economic Outlook, April 2009.
Note: Latin America consists of Argentina, Brazil, Chile, Columbia, Mexico, Peru, and Venezuela. Emerging Europe contains Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russia, Slovak Republic, Slovenia and Turkey. Emerging Asia includes China, India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand.

sector has received a sizeable taxpayer bailout are putting pressure on banks to increase lending to the domestic economy. The situation in which western European banks have been pulling capital out of central and eastern European countries and reducing their credit exposure to this region has more to do with the need of these institutions to reduce their financial leverage. The capital of foreign banks has been strongly squeezed by large losses from the revaluation of securities; further losses are expected to arise from the increase in loan defaults, and investors in general have taken a more cautious approach to investment decisions. Consequently, at the end of 2008, some central and eastern European countries began having a serious problem to refinance their financial liabilities. The whole CEE region was also starting to pose an investment risk because of its rapidly deteriorating economic performance and the highly unfavourable outlook for some of the region's economies. This was reflected in an intensive depreciation of free-floating currencies and decline in stock markets in the region.[38] Several countries, including three EU Member States, were forced to seek funding from the International Monetary Fund.[39]

Chart 17 Nominal exchange rate of V4 currencies vis-à-vis the euro (daily data, index 30. 12. 2005 = 100)

Source: Eurostat.
Note: A rise/fall in the index represents depreciation/appreciation of the currency against the euro.

38 *As risk aversion grew, investments in emerging countries generally lost their allure. According to estimates by the Institute for International Finance (IIF), net private capital flows to emerging countries in 2008 declined to USD 467 billion, i.e. half of their 2007 level. The IIF expects them to plunge further in 2009, down to USD 165 billion, with more than three-quarters of that drop attributable to the reduced flow of capital from commercial banks.*

39 *The IMF estimates that the emerging Europe region – including Turkey – will in 2009 have to refinance USD 413 billion of outstanding debt and to finance USD 84 billion of current account deficits. The IMF assumes that the financial gap will be USD 123 billion in 2009, falling to USD 63 billion the following year. Although the majority of this amount is covered by the IMF, other funds (up to USD 105 billion) will also be necessary, for example, from the EU.*

Chart 18 Foreign exchange exposure is strongly linked to market perceived default risk, regardless of the exchange rate regime

Source: IMF – World Economic Outlook, April 2009.

Another slight risk to the Slovak economy appears to be that foreign banks are not drawing a sufficient distinction between CEE countries

Slovakia avoided the financial turbulence at the end of 2008 since it was irreversibly headed towards joining the euro area. Slovakia also had no difficulty in refinancing its current account deficit as it is not among those countries that have a seriously high deficit financed largely with short-term bank loans. Contagion, however, could come from another source. A possible scenario, albeit quite unlikely, is that some of the foreign banks with high exposure to the region will decide to pursue an undifferentiated business strategy across the central and eastern European region (regardless of the local situation in each country where they operate). Several western European banks have had their ratings downgraded because of their large exposures in eastern Europe, which, for example, makes it tougher for them to obtain additional capital in financial markets.[40] If, say, the parent undertakings of Slovakia's leading banks began applying an overly conservative business strategy equally across central and eastern Europe, in order to minimize their risks from the region, then Slovakia's domestic production could be excessively restricted by a shortage of financing.[41]

Investor confidence in eastern Europe could be further shaken by devaluation of certain Baltic currencies

Another threat to financial stability in the region is the potential collapse of certain fixed exchange rate regimes in the Baltic countries (the risk is greatest in the case of Latvia). These regimes are increasingly difficult to sustain given the highly unfavourable condition of the Baltic countries' economies and their difficulties in securing foreign financing. Slovakia, however, as a member of the euro area, would be to a large extent protected from the repercussions of any such collapse.

40 *According to IMF estimates, banks in the emerging region of eastern Europe may face write-downs amounting to USD 185 billion and will therefore have to obtain USD 102 billion in new capital. Since parent undertakings will themselves have increased write-downs, it will be difficult for them to supplement the capital of their subsidiaries.*

41 *The mitigation of this risk was to a certain extent helped at the beginning of March 2009 by a joint declaration of financial supervision authorities from several of the region's countries (Czech Republic, Slovakia, Poland, Hungary, Romania, and Bulgaria), in which they criticized the perception of risk in the CEE region for not being nuanced enough.*

CHAPTER 2

SLOVAK ECONOMY DEVELOPMENTS AS THEY AFFECT FINANCIAL STABILITY

2

2 SLOVAK ECONOMY DEVELOPMENTS AS THEY AFFECT FINANCIAL STABILITY

2.1 OVERALL DEVELOPMENT OF THE SLOVAK ECONOMY

The eruption of the financial crisis in the first half of 2007 did not immediately affect the Slovak economy and domestic financial sector to a significant extent. With the banking sector following a conservative business model and being oriented on domestic customers, it was not seriously affected by the decline in asset prices in global financial markets. The repercussions of the financial crisis were felt more by the customers of certain financial institutions through the depreciation of their investments. By the end of 2008, however, the Slovak economy was also feeling the effects of the financial crisis, which had begun to spill over to the real economy through the transmission channel of international trade.

The real economy in 2008 faced the worsening global financial crisis still without serious problems. The condition of the domestic economy was underpinned by several years of sustainable growth in economic activity, although Slovakia, as a small and highly open economy, was not able to remain unaffected by the adverse external developments. A combination of domestic macroeconomic stability and the approval of Slovakia's entry into the euro area as of 1 January 2009 served to cement expectations and dampen the effects of the financial market turbulence that had been prevailing since September 2008. In order to curb the impact of the crisis on the domestic economy and to minimize its potential repercussions, the Slovak Government, in conjunction with NBS, adopted certain stabilization measures coordinated with other EU countries.[42]

Loans to the private sector granted by domestic monetary financial institutions increased to 39.6% of GDP. Although the external debt of the private sector increased, it remained at a safe level and the sources of financing were stable.

The continuing appreciation of the koruna exchange rate in 2008 had a tightening effect on monetary policy, but towards the end of 2008, the NBS followed the ECB by loosening monetary policy through cutting key rates.

The general government deficit again came in below the Maastricht reference value, but given the expectation of slower growth in economic activity, there will be rising tension between the commitment to further consolidation and efforts to intensify the anti-cyclical effect of fiscal policy outside the scope of the budget.

The economy continued to grow on the basis of sound fundamentals; its cyclical position had a neutral effect on price developments

Although the Slovak economy continued to grow at a fast pace in 2008 (real GDP rose by 6.4% year-on-year), it slowed down in November and December owing to a slump in domestic industrial production and exports. Slackening foreign demand dragged net exports back into deficit, while domestic demand increased at the same pace as in 2007. Investment activity and domestic consumption slowed down, particularly in the last quarter of 2008. Economic growth fluctuated close to its potential, and with sound fundamentals it did not cause an increase in either external or internal imbalances.

GDP growth was supported by an increase in labour productivity, as well as by a rise in the number of employees. The proportions of real wage growth and labour productivity growth were, however, again disrupted, since the margin by which labour productivity growth exceeded wage growth declined substantially.

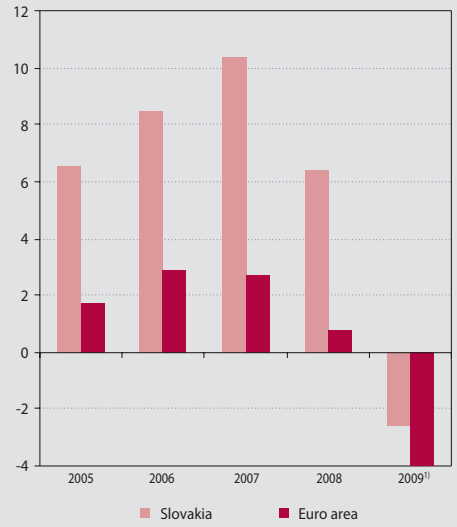
Price increases began to slow down from autumn

Consumer prices[43] in 2008 rose by 4.4% year-on-year, and core inflation increased by 3.3%. Price developments were conditioned by the global rise in prices of energy and agricultural commodities, which in autumn caused a turnaround in trend developments. Despite the acceleration of prices from the second half of 2007, Slovakia

42 *These included: the "Proposed Measures of the Slovak Government for Overcoming the Impact of the Global Financial Crisis", an amendment to the Deposit Protection Act, and an NBS Provision on the liquidity of banks and branches of foreign banks.*

43 *Inflation as measured by the national index of consumer prices.*

Chart 19 GDP (%)



Source: Statistical Office of the Slovak Republic; European Commission – Economic Forecast, Spring 2009.
1) Estimate.

Chart 20 Labour productivity and wages (year-on-year change %)

Source: Statistical Office of the Slovak Republic.

comfortably met the inflation criterion for joining the euro. The average harmonized inflation rate in the reference period for assessing Slovakia's readiness for euro area entry, lasting from April 2007 to March 2008, came to 2.2%, against a reference value of 3.2%.

Price competitiveness weakened

The price competitiveness of domestic exporters, as measured by the index of the nominal effective exchange rate (NEER), weakened. The average appreciation of the NEER over the year accelerated to 5.8%, largely because of appreciation against the euro. The real effective exchange rate, taking price developments into account, strengthened by 2.3% on the basis of the manufacturing products price index.

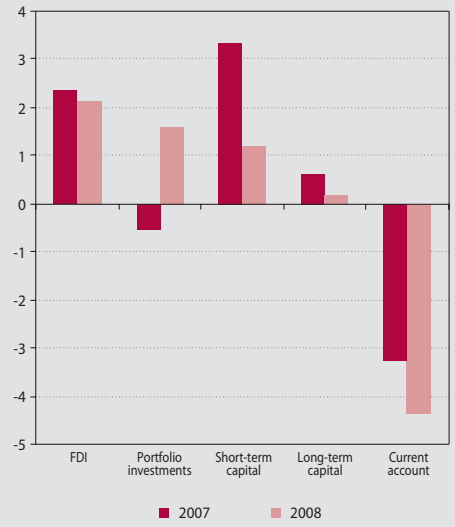
The balance of payments current account deficit increased year-on-year

In 2008, with the financial crisis spilling over to the real economy of euro area countries, current account deficit failed to meet expectations of a substantial reduction. The deterioration in external conditions, particularly the decline in demand in the countries of major trading partners, meant that the trade balance did not build on the improvement it recorded in 2007. The rise in the current account deficit was largely attributable to the worse performance of the balance of services and balance of current transfers. The rise in the current account deficit was mitigated by a reduced deficit in the income balance. The current account balance as a share of GDP came to 6.5% (or 1.4% of GDP after deducting repatriated dividends and reinvested earnings).

The inflow of short-term external financing declined

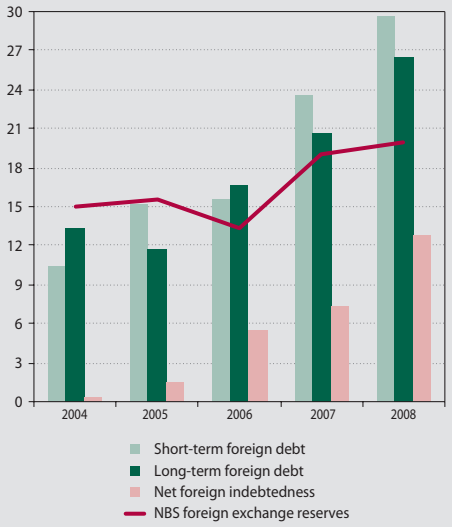
The capital and financial account recorded a surplus of EUR 5,868.7 million. As for the structure of financial inflows, portfolio investment increased (including, on the one hand, a declining uptake of foreign securities among residents, and, on the other hand, rising interest of foreign investors in issued notes), foreign direct investments fell slightly, and the inflow of other investments also declined (with a drop in non-residents' short-term deposits in Slovak banks and the repayment of import liabilities in the corporate sector). This financing structure could, in the current conditions, be seen as on the whole favourable, given the high current account deficit and low proportion of short-term capital flows.

Chart 21 Current account deficit coverage (EUR billions)



Source: NBS.

Chart 22 Foreign indebtedness and foreign exchange reserves (USD billions)



Source: NBS.

Foreign indebtedness has a rising trend

The gross foreign debt expressed in dollars rose to USD 52.5 billion. The ratio of foreign debt to GDP increased to 55.4%, and the country's net foreign indebtedness relative to the size of its economy fell to 7.6% of GDP. Short-term debt as a share of total gross foreign debt dipped to 51.6%. The coverage of short-term foreign debt by NBS foreign exchange reserves represented 69.5%.

The monetary stance went from restrictive to expansive

In the first half of 2008, monetary policy had a tightening effect on the economy as the nominal exchange rate appreciated, and with the NBS base rate remaining unchanged and inflation expectations rising, the interest rate component of the monetary conditions was gradually loosened. In the second half of the year, the slashing of interest rates along with stable development of the exchange rate had an expansive effect on the economy.

Public finances had a slightly restrictive effect on the economy in 2008

The state budget deficit for 2008 was a modest 2.2% of GDP. Given, however, the insufficient consolidation in 2008 and deterioration of outlooks for coming years, it will be tougher to achieve the medium-term fiscal target set in the convergence programme as a deficit of 0.8% of GDP up to 2010 (adjusted to take account of cyclical effects and temporary measures). The general government gross debt for 2008 declined to 27.6% of GDP, from 29.4% for 2007. The contribution of general government budgets to the year-on-year change in aggregate demand – the fiscal impulse (change in the cyclically adjusted primary balance of general government) – was moderately restrictive in 2008, at -0.6% of GDP.[44]

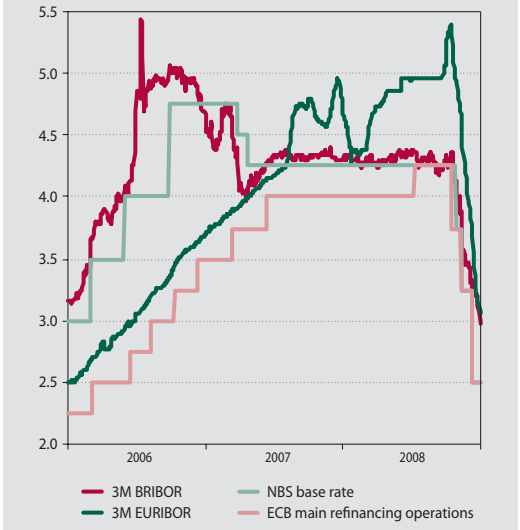
In view of the euro area entry and the need to issue an instrument acceptable for transactions with the ECB, the Debt and Liquidity Management Agency (ARDAL) has since October 2008 been holding auctions of annual Treasury Bills, which have attracted strong interest from domestic investors. ARDAL has therefore had the opportunity at Dutch auctions to reduce the accepted interest rates. In 2008, ARDAL issued government bonds only in the domestic markets, the conditions there being more favourable than those in the European market.

44 *Ministry of Finance of the Slovak Republic, Convergence Programme of Slovakia for the Period 2008–2012.*

Chart 23 Slovak koruna vis-à-vis the euro and US dollar

Source: NBS.

Chart 24 Short-term money market rates and interest rates of the ECB and NBS (in %)



Source: NBS, ECB, Reuters.

2.2 DOMESTIC FINANCIAL MARKET DEVELOPMENTS IN TERMS OF RISKS TO FINANCIAL STABILITY

The domestic financial markets were calm in 2008 and were not even seriously disturbed by the liquidity crisis that followed the collapse of Lehman Brothers in September. The domestic environment was a source of predominantly positive impulses related to the expectations of the country's entry into the euro area – counterbalancing the adverse repercussions of global market developments that saw an increase in negative sentiment towards the region. These expectations became entrenched when in May 2008 the European Commission proposed that Slovakia be admitted to the euro area and when in July 2008[45] this proposal was approved and the conversion rate to the euro for the Slovak koruna was set. Events in advanced markets did not have a significant direct effect on the stability of domestic financial markets.

From October 2008, the NBS began bringing its base rates into line with ECB rates, cutting key rates on three occasions by a total of 175 basis points. The foreign exchange market in 2008 did not produce any situation that required intervention from the central bank.

During the first half of 2008, the banking sector was not expecting any changes in NBS key rates, and therefore money market developments at the short-end of the yield curve reflected the sector's usual liquidity situation. Rates of longer maturities, which are partly applicable to the year of 2009, have since May been following an upward trajectory in line with the gradual harmonization with euro area interest rates. In reaction to the NBS rate changes from October 2008, money market rates declined along the whole yield curve. The domestic market was sufficiently liquid, whereas in euro area countries money market rates climbed as a result of increasing market uncertainties.

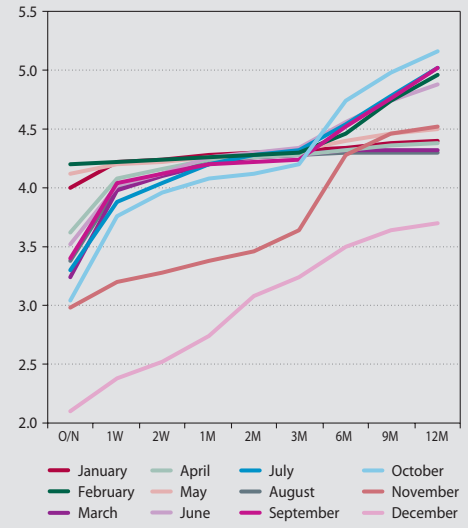
Foreign exchange market

The long-term trend appreciation of the koruna exchange rate ended at the level of the conversion rate to the euro

The koruna temporarily weakened in the first two months of 2008 amid the spread of risk aversion to emerging markets, and did so again in April and May owing to seasonal factors (the repatriation of dividends). The exchange rate strengthened, however, in reaction to the report confirming Slovakia's preparedness for joining the euro area and to the increasing likelihood that its entry would be approved. Following publication

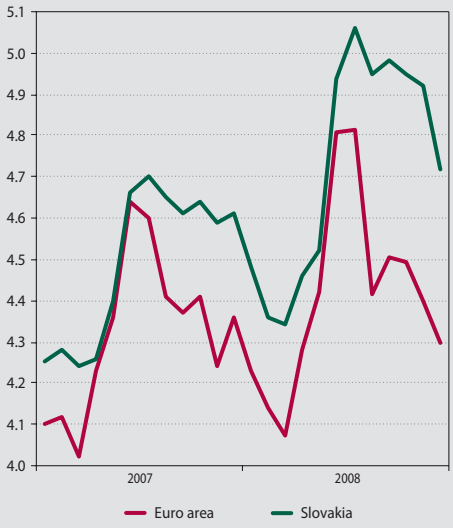
45 *The conversion rate was set on 8 July 2008 at the central parity of 30.1260 SKK/EUR.*

Chart 25 Money market yield curves (%)



Source: NBS.

Chart 26 10-year government bond yields (%)



Source: Eurostat.

of the Convergence Report in May 2008, it was agreed to revalue the currency's central rate to a stronger level (30.1260 SKK/EUR), which was subsequently accepted as the conversion rate between the koruna and the euro. Before the revaluation of the central parity, the koruna had been trading on the strong side of the fluctuation band, and afterwards it eased towards the conversion rate of 30.126 SKK/EUR. Apart from a slight depreciation in October (1.8% from the central parity), the convergence of the koruna to the fixed value was smooth and stable with very little volatility, owing to the sharply reduced effect of speculative transactions.

The Slovak koruna's exchange rate during 2008 strengthened year-on-year against both the euro and US dollar, by an average of 7.4% and 13.6%, respectively.

Interbank money market

The domestic money market was calm in 2008

After leaving key interest rates unchanged in the first half of the year, the NBS began, from October 2008, to bring its base rates into line with ECB rates. Through three cuts,[46] the key rates were reduced by 175 basis points, to 1.5% on overnight sterilization operations, 3.50% on overnight refinancing transactions, and 2.50% on two-week repo tenders. With banks not expecting any changes to the NBS base rates, the yield curve had a normal shape during the first half of 2008. The rates of shorter maturities proved more volatile, reacting to the current state of liquidity in the banking sector. From May 2008, the rates of longer maturities were rising to the level of euro area interbank rates, which increased amid the liquidity shortage in international financial markets. Money market rates reacted to the movement in NBS rates by declining along the whole of the yield curve.

The short-term interbank rate (3-month BRIBOR) was stable, hovering around the NBS base rate. The cutting of NBS key rates at the end of October triggered a sharp fall in Slovak interbank market rates, compared to the level of short-term rates in the European market (3-month EURIBOR). Given the non-standard situation in advanced markets, rates in the Slovak market were lower and less volatile than in the euro area.

The banking sector had sufficient liquidity

The high liquidity of the banking sector reflected the liquidity-absorbing stance of NBS. The withdrawal of koruna liquidity from circulation ahead of Slovakia's entry into the euro area was reflected in the sector's liquidity, particularly during the last days of 2008. The central bank implemented

46 *In October, November and December 2008.*

standard monetary policy measures – modified towards the end of the year – in order to support the smooth transition to an environment with the opposite liquidity parameter. In the first quarter of the year, banks preferred the longer-term form of liquidity-absorbing operations, through repo tenders and above all NBS bills. The situation turned around in the final months of the year, when banks were opting to deposit surplus funds in the NBS overnight deposit facility so as to have the funds at their disposal for a shorter period.

Capital market

Primary bond market again dominated by government bond auctions

In the first half of 2008, ARDAL was in a position to choose auction bids owing to the favourable development of the state budget and because temporarily surplus funds of the State Treasury were at its disposal. The yield curve of benchmark government bonds was shaped mainly by yields in the euro area, which by the end of the period were declining sharply. In the primary market for non-government bonds, issues of mortgage bonds predominated. Bond trading on the Bratislava Stock Exchange (BSSE) rose slightly compared to previous years, and the market capitalization of bonds as at the end of December amounted to SKK 503.6 billion (EUR 16.7 billion).

Share trading on the BSSE remained weak

Equities had a market capitalization of SKK 116.9 billion (EUR 3.9 billion) as at the end of December, representing a fall of 26.7% in comparison with 2007. The SAX Index was highly volatile owing to the very low number of component shares (5). It ended December at 359.18 points, down by 86.5 points year-on-year.

2.3 MEDIUM-TERM RISKS FROM THE MACROECONOMIC ENVIRONMENT AND FROM FINANCIAL MARKETS IN SLOVAKIA

In the medium-term horizon, the potential risks to financial stability relate mainly to:

- adverse developments in the economy's export performance and a slowdown in domestic demand
- the shock-absorption capacity of the domestic economy
- the medium-term development of public finances

The medium-term risks from Slovakia's domestic macroeconomic environment and financial markets are tending to rise on account of the high openness of the Slovak economy

Risks to domestic financial stability are still tending to rise, largely due to negative developments in the external environment that are testing the economy's capacity to absorb external shocks. The expected decline in the domestic economy should not, though, pose a threat to the maintenance of financial stability. The risk trends that the previous Financial Stability Reports identified in the external environment became more entrenched in 2008. The principal risk to materialize was the slide of euro area countries into recession and its gradual spillover to the domestic environment. The domestic environment has contributed positively to financial stability in recent years, although the generation of corporate profits has necessarily slowed down. This was not being reflected in household income by the end of 2008, since the labour market lags behind developments in the corporate sector. In the coming period, however, households, too, will be feeling constraints on income.

The economy's high openness was until recently, in an environment of stable export markets, supporting the generation of profits. The economic crisis, however, has revealed the risks that arise when real economic activity is concentrated in a relatively narrow range of export sectors. It is becoming evident that the sectors dependent on domestic demand are unable to offset the income losses of the export sector and that they too, with a certain lag, are impacted by the decline in economic activity. In the conditions of a small and open economy there is limited scope for using fiscal policy to stimulate domestic demand, and the multiplier effects of fiscal stimuli are relatively low. At the same time, the pursuit of an expansive fiscal policy in the medium-term

horizon increases the costs of servicing public debt. Benefits of a more substantial nature can be expected only from structural policies focused on supporting the economy's growth potential.

For Slovakia, membership of the euro area is helping to mitigate risks arising from the instability in financial markets. The country is gaining opportunities to obtain funds in the domestic currency from abroad, thereby avoiding any exchange rate risk and reducing the costs of servicing external debts (although, at the same time, the exchange rate is to a large extent losing its shock-absorption function). It is therefore necessary to continue consolidating public finances and increasing labour market flexibility, since these two areas are crucial to shock-absorption capacity in the monetary union.

According to forecasts,[47] EU countries are expected to experience an economic downturn in 2009, followed by a slight recovery in 2010. Uncertainties regarding a possible delay of the expected recovery in the euro area represent a risk for Slovakia's development, too. Given the banking sector's substantial orientation on financing of the domestic economy, a decline in corporate sector income (or corporate losses) and the exhaustion of firms' accumulated financial reserves will feed back into the financial sector through an increase in credit risk on loans.

47 *For example, the IMF and European Commission forecasts mentioned in the first chapter.*

CHAPTER 3

NON-FINANCIAL CORPORATE AND HOUSEHOLD SECTORS

3

3 NON-FINANCIAL CORPORATE AND HOUSEHOLD SECTORS

The slowdown in the domestic economy and the unfavourable trend in the external environment led to slower growth in corporate revenues. Household incomes were affected to a lesser extent in 2008, owing to the labour market's lagged reaction.

Lending to non-financial corporations and households continued to grow in 2008, but at a slower pace

Bank lending to non-financial corporations and households showed weakening dynamics, but loans still recorded large increases in absolute terms. The last few months of 2008 saw a marked slowdown in lending activity, mainly in relation to non-financial corporations.

The indebtedness of non-financial corporations and households continued to grow; loans provided to these sectors corresponded to 39.6% of GDP. Neither corporations nor households had problems with loan repayments.

3.1 NON-FINANCIAL CORPORATE SECTOR

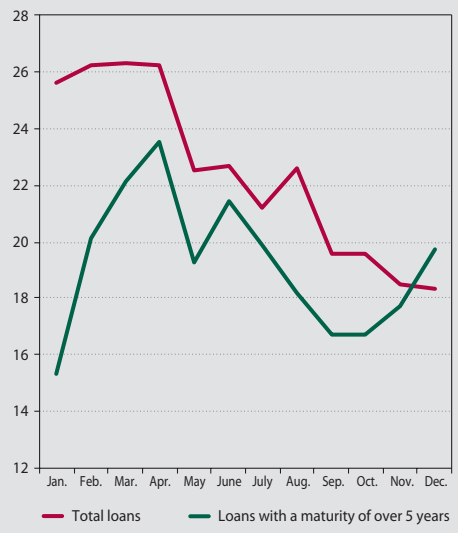
Expectations regarding the corporate sector worsened towards the end of 2008

The economic sentiment indicator continued to fall, in line with the downward trend that began in the autumn of 2007. A substantial negative change occurred in October 2008. The level of optimism fell in all sectors. Optimism remained relatively strong in services and retail trade, but pessimistic views emerged in industry and construction.

Corporate financial performance declined

The economic results of the non-financial corporate sector were 7.4% lower than in the previ-

Chart 27 Lending activity in 2008 (year-on-year changes in %)



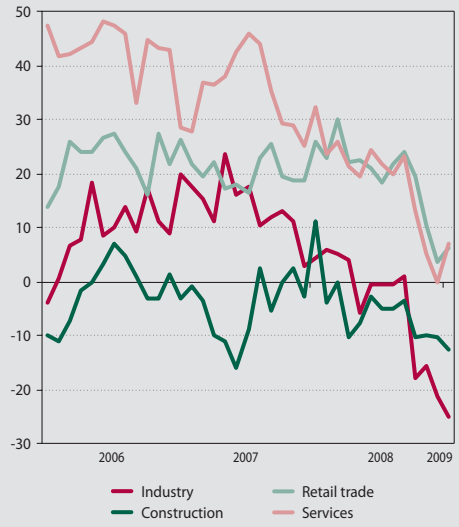
Source: NBS.

Table 5 MFI loans to non-financial corporations and households

	2006	2007	2008
Non-financial corporations, EUR millions	10,899.6	13,448.6	15,455.3
Households+non-profit institutions, EUR millions	7,901.4	10,101.3	12,630.9
Loans to non-financial corporations, % of GDP	19.7	21.6	22.9
Loans to households, % of GDP	14.4	16.4	18.7
Loans to non-financial corporations, growth in %	20.3	25.6	14.9
Loans to households, growth in %	31.4	28.6	25.0
Loans to non-financial corporations, year-on-year change in EUR millions	–	2,549.0	2,006.7
Loans to households, year-on-year change in EUR millions	–	2,199.9	2,529.6

Source: NBS, Statistical Office of the SR.

Chart 28 Business tendency indicators (cumulative balances)



Source: Eurostat.

ous year, with profits reaching SKK 285.7 billion (EUR 9.5 billion), representing 14.1% of GDP. The highest profit ratios were achieved in mining and quarrying (20%), real estate business (12.3%), and the production and distribution of electricity, gas, and water (11.7%). The high performance of Slovak enterprises, which exceeded the European average in the last few years (at the aggregate level), allowed them to accumulate some financial reserves, which now enable them to overcome a shorter period of financial distress.

Corporate indebtedness increased somewhat at the aggregate level

Despite the growing volume of liabilities in the corporate sector, the debt ratios remained virtually unchanged, as a result of dynamic growth in corporate profits in recent years. As from 2006, the growth in corporate liabilities was accompanied by a growth in financial assets.

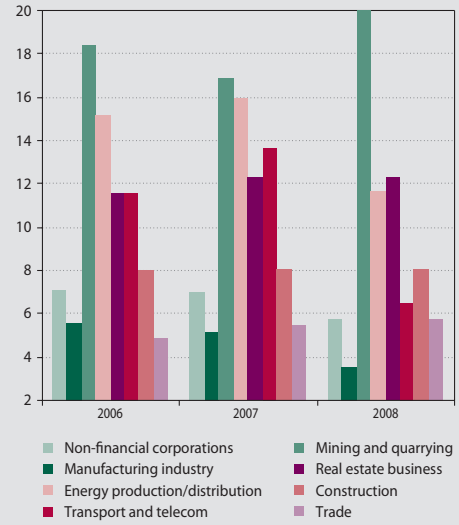
The structure of financing was dominated by equity financing

The structure of liabilities was dominated by shares and other liabilities (50%) followed by loans (30%) and other receivables and liabilities such as trade credits and advances (19%). Bond issues represented the least significant form of financing with a proportion of 0.7%.

The dynamics of bank lending weakened

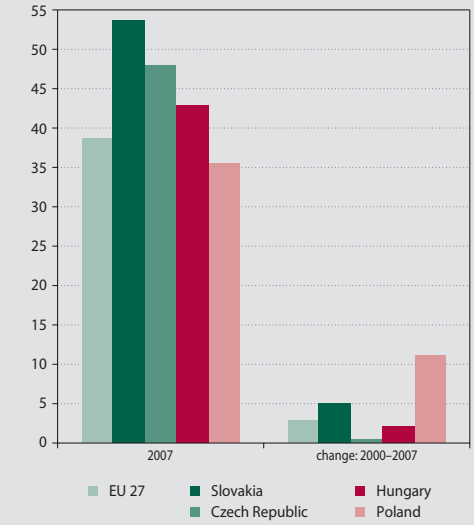
The rate of growth in loans to non-financial corporations from the domestic banking sector

Chart 29 Gross profit margins of non-financial corporations (%)



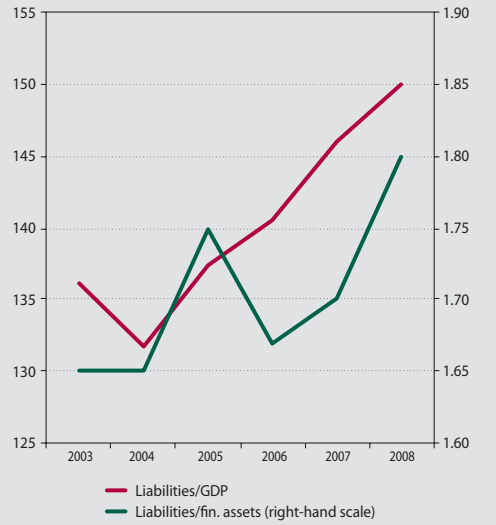
Source: Statistical Office of the SR.
Note: Gross profit margin = gross profit / total revenue.

Chart 30 Profits of non-financial corporations as a share of value added (%)



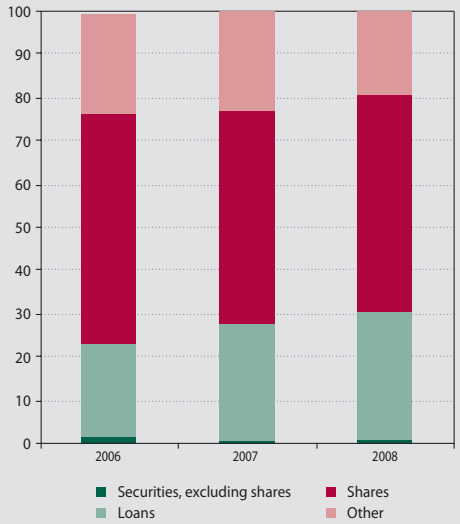
Source: Eurostat.

Chart 31 Debt ratios of non-financial corporations (%)



Source: Eurostat.

Chart 32 Structure of liabilities in the non-financial corporate sector (%)



Source: NBS, NBS calculations.

slowed to 14.9% in 2008, due to tightened credit standards of banks. Demand for loans, particularly for long-term loans, also fell in the corporate sector.

3.2 HOUSEHOLD SECTOR

Household indebtedness continued to grow, but the sector's balance sheet represented no marked source of risks to financial stability

The sector's balance sheet was supported by the situation in the labour market and the favourable trend in household income. The conditions changed towards the end of the year, hindering the progress of household indebtedness. This can be ascribed to several factors: the weakening wage dynamics, falling real property prices, and rising interest rates on loans.

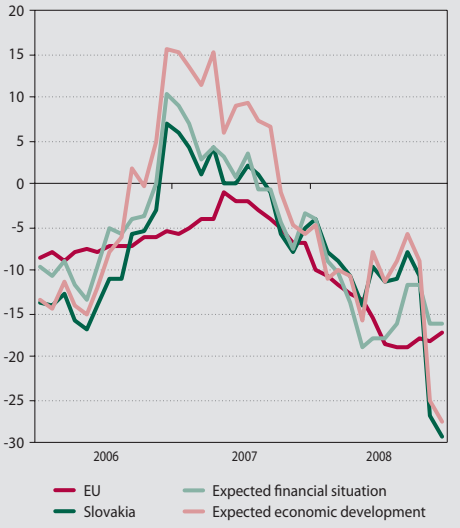
Consumer confidence weakened, though household income continued to grow

As from the beginning of 2007, when the consumer confidence indicators reached historical highs, consumer sentiment gradually fell into pessimism, with a steep decline over the last few months of 2008. A fall in optimism was also recorded in the labour market.

The labour market reacted to economic developments with delay

The dynamic economic growth created jobs and provided for conditions for a fall in unemployment and growth in household income. The growth in nominal wages accelerated, while that

Chart 33 Consumer confidence indicator (overall balance)



Source: Eurostat.
Note: Seasonally adjusted data.

in real wages slowed towards the end of the year, despite the falling inflation. Gross disposable income, which households had at their disposal after the payment of current expenses from their current incomes, increased by 11.9%. A larger share of income was used for saving: the gross savings rate increased to 9.2%.

Financial assets of households

The structure of financial assets was dominated by less risky and more liquid assets in the form of deposits and currency in circulation. The share of deposits increased and that of currency decreased because of the euro cash changeover. An unfavourable trend in financial markets negatively affected yields on financial assets invested by households in mutual fund shares and insurance products. The situation also affected the level of pension fund yields. While the overall situation was calm in the first half of 2008, after turbulences in September, households transferred their funds from mutual funds to banks, which are seen as more secure owing to increased protection of deposits.

Lending to households remained robust in 2008

The good financial position of households encouraged them to borrow more. Nevertheless, the growth rate of loans slowed in 2008, as demand for loans among households fell in connection with the falling real estate prices, which gave rise to considerations about the postponement of house purchases (borrowings) until a later date, when prices will fall still further.

Chart 34 Labour market developments – unemployment and job vacancy rates (%)

Source: Statistical Office of the SR, Eurostat.

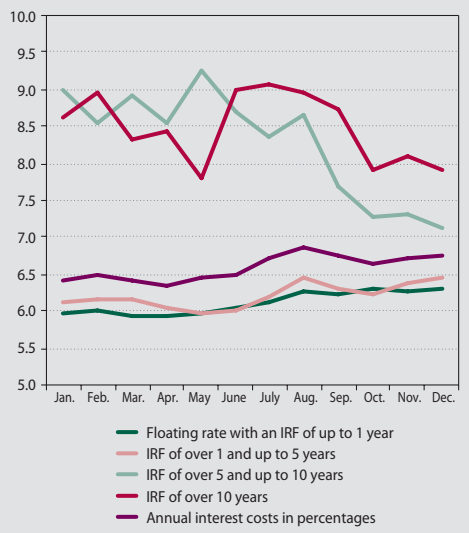
Chart 35 Gross household savings and investment rates (% of gross disposable income)

Source: Statistical Office of the SR.
1) Excluding pension savings.

Chart 36 Structure of financial assets in the household sector (%)

Source: NBS.

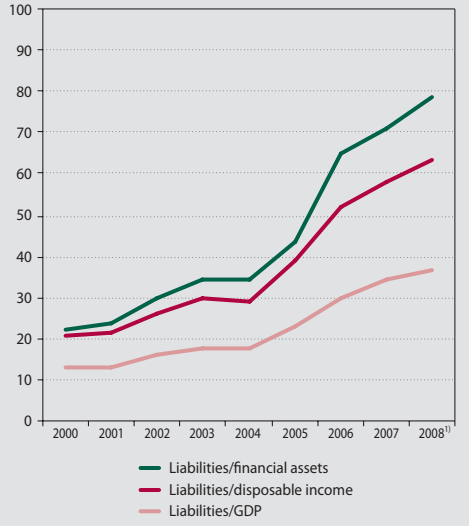
Chart 37 Interest rates on new loans (%)



Source: NBS.

Households took out mainly loans for housing purposes and, to a lesser extent, other loans and consumer loans. Banks adopted a different approach: they imposed stricter loan security requirements and higher interest rates for loans with shorter fixation periods.

Chart 38 Debt ratios of households (%)



Source: Eurostat, Statistical Office of the SR.
1) NBS estimate.

The ability of households to repay their debts (liabilities) continuously in relation to their disposable incomes was sufficient at the aggregate level; the ratio of loan repayments to disposable income rose to 33% in 2007. The long-term deteriorating trend in the ratio of liabilities to financial assets continued; this ratio indicates the ability of households to repay their debts in one-off payments. Although the level of financial assets is markedly higher than that of household debts, the ratio between them is deteriorating in the long term.

3.3 MEDIUM-TERM RISKS IN THE NON-FINANCIAL CORPORATE AND HOUSEHOLD SECTORS

Medium-term risks are mainly associated with:

- the impact of the weakening economic activity on the financial position of non-financial corporations;
- the intensifying tensions in the budgets of indebted households.

Since the banking sector is heavily oriented towards financing of the domestic economy, the continuance of lending to the non-financial corporate and household sectors is making banks increasingly exposed to credit risks on these loans.

The risks to financial stability from the non-financial corporate sector tend to increase, owing to its reduced scope for generating balance-sheet profits and reserves that determine the capacity of companies to absorb financial shocks. Another difficulty is likely to be the continuing strong growth in wages and unit labour costs, which restrict the competitiveness of the tradable sector in foreign markets.

Another potential risk is the tightened terms of financing, which put a pressure on the ability of companies to repay their credit liabilities. The significance of this risk is also indicated by the results of stress tests (Part 4.1.5).

The indebtedness of households increased, but its level does not yet represent a serious risk to

the financial sector's stability. In regard to the slowdown in economic activity, the risks of income losses for households show a tendency to increase. A certain credit risk is represented by indebted households with lower incomes, which may have problems with debt repayment if their disposable incomes fall still further, and by higher-income households with higher loan repayment burdens.

CHAPTER 4

FINANCIAL SECTOR DEVELOPMENTS AND RISKS

4

4 FINANCIAL SECTOR DEVELOPMENTS AND RISKS

Developments in the financial sector of Slovakia in 2008 were affected by the global financial crisis, which arose in the middle of 2007 in the US mortgage market. The impact of the financial crisis on the domestic financial sector was more moderate than in other advanced economies. In the case of the banking sector, the moderate impact can be attributed to the relatively strong link between the business activities of banks and the domestic economy, and to the negligible share of activities vis-à-vis abroad. More severely hit by the financial crisis were the collective investment and pension saving sectors. Customers received lower yields (in many cases reduced to the level of negative nominal annual rate of return). Financial corporations in some of the segments recorded decreases in both assets and profits. For domestic financial stability, a more serious threat is represented by the global economic crisis, which also hit Slovakia in the last quarter of 2008. Thus, banks and other financial corporations will have markedly restricted possibilities for profit growth in 2009. In the second half of 2009, an increase is expected in the volume of non-performing loans, mainly in the corporate sector.

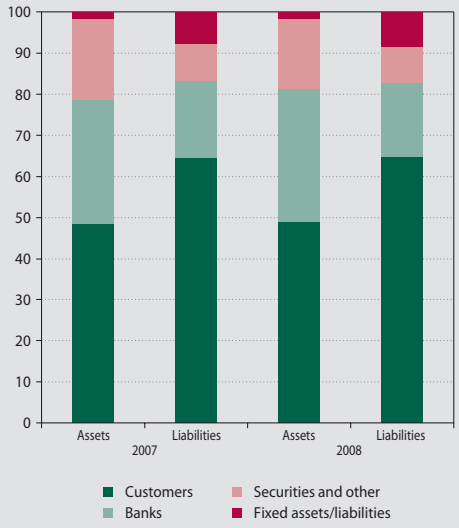
4.1 BANKING SECTOR

4.1.1 KEY PERFORMANCE TRENDS IN THE SECTOR'S BALANCE SHEET

The balance sheet of the banking sector maintained a sound structure during 2008 – the loan-to-deposit ratio followed a favourable trend in terms of financial stability

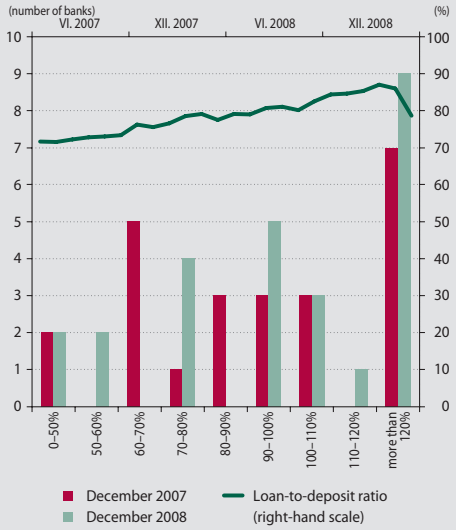
In the structure of assets and liabilities, only minimal changes were recorded in 2008 (Chart 39). In terms of financial stability and in connection with the persistent financial market turbulences in particular, it is important that the volume of loans in relation to the volume of deposits decreased (*the loan-to-deposit ratio, LDR*). It was a favourable trend in terms of financial stability,

Chart 39 Main asset and liability items (%)



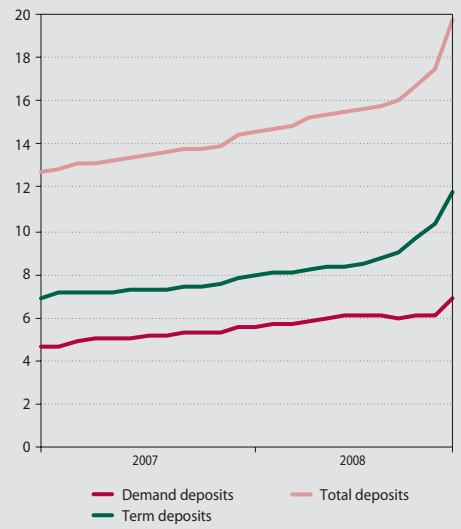
Source: NBS.

Chart 40 Loan-to-deposit ratio: trend and distribution



Source: NBS.
Note: The lower horizontal axis shows the intervals of this ratio; the number of banks with a given ratio is on the left-hand vertical axis. The upper horizontal axis shows the dates of the ratio's average values; the average values are on the right-hand vertical axis.

Chart 41 Household deposits (EUR billions)



Source: NBS.

Chart 42 Corporate deposits (EUR billions)

Source: NBS.

for banks were not dependent on volatile financial markets when financing customers, since they held sufficient customer funds. By the end of 2008, the value of this ratio had fallen to 79% for the banking sector as a whole. This fall was mainly caused by an increase in the volume of customer deposits. The LDR ratio mainly reflected the developments that took place in November and December 2008, because its value had been higher until end-October (Chart 40).

The banking sector was not affected severely by the financial crisis on the resources side – customer deposits increased as a result of strong growth in household deposits

Banks obtained most of their resources from customers. Customer deposits grew during the year, mainly deposits from households. In this regard, 2008 was a specific year, mainly as a result of preparations for the adoption of the euro, which contributed to the growth in deposits, particularly in the last quarter.[48] The growth in deposits was also boosted by the continuing redemption of mutual fund shares.[49] Increases in household deposits were recorded in all the main categories (Chart 41). The largest increase took place in time deposits, which had grown in volume by 52% year-on-year by December 2008. On the other hand, fixed-term corporate deposits fell year-on-year by 15.5%, in connection with the deteriorating financial and liquidity positions of enterprises as a result of negative trends in the corporate sector (Chart 42).

The negative developments in financial markets caused funds to become more expensive and long-term funds to be less accessible, which in turn restricted the possibilities of financing through mortgage bonds

Bonds issues were dominated by mortgage bonds (83%), which are to be issued by all banks providing mortgage loans. Mortgage bonds were issued more intensely in the middle of the year, when banks issued such bonds with a total nominal value of EUR 843 million during April to August. This high value was attributable to developments in the market for mortgage loans, where new mortgage loans reached maximum amounts in that period. Starting from September, however, the situation changed and banks issued new mortgage loans during the last four months in the amount of only EUR 232 million (Chart 43). Banks had to adapt their new issues to the market conditions. Not only did they issue securities in lower amounts, but also with shorter maturities (Chart 44). Since most bonds were issued with maturity in 2013, it can be assumed that, in the case of persistent financial

48 *Bank customers deposited their surplus funds in bank accounts in order to have them automatically converted to the euro following the changeover to the single currency.*

49 *Since mutual funds paid low yields, many of the clients withdrew their investments and deposited them in bank accounts.*

market problems, banks will be exposed to worsened conditions when placing new bond issues on the primary markets. On the other hand, the need to issue new mortgage bonds will probably fall, owing to an expected decline in mortgage lending.

The slowdown in bank lending to households was less affected by the tightening of credit standards than by the drop in demand

The total volume of bank loans provided to the retail sector increased by a quarter during 2008. But whereas net lending growth was accelerating in the first half of the year, it slowed down in the second half (Chart 45). New loans were already beginning to fall at the end of the first quarter of 2008. In November 2008, the volumes of new consumer loans and house purchase loans were lower than in the same period of 2007 (Chart 46).

Bank lending to households in 2008 was influenced by several factors. The first was the situation in the real estate market. The increase in real estate prices well exceeded the growth in household income, particularly in 2007 and the first quarter of 2008. This led to a fall in demand in the real estate market, followed by a fall in prices. Fall in real estate prices was first recorded in the second quarter of 2008. In the third quarter, the repercussions of the global financial crisis were beginning to have a greater impact on the domestic economy. The negative results of the corporate sector spread relatively quickly to employment (staff numbers in industry fell year-on-year in November – December 2008) and household income. November and December saw a sharp fall in consumer confidence. Developments in the last quarter also contributed to the fall in residential property prices. The adverse trends in the economy and real estate market reduced the level of demand for all types of loans.

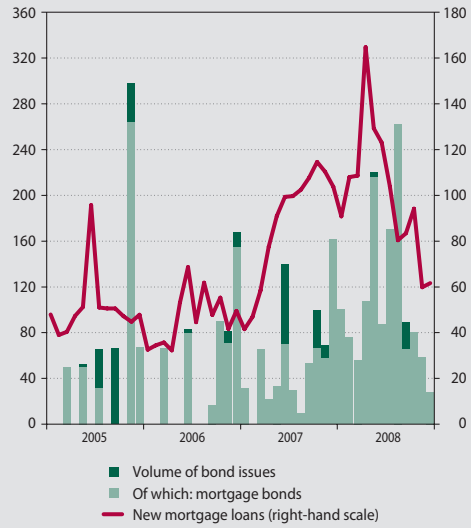
The uncertainty concerning the future trend in economic development and the financial position of households, coupled with the continuing fall in real estate prices, called for a tightening of credit standards. This included a stricter approach to the assessment of loan applications, higher risk charges, and tighter loan security requirements. Numerous banks reduced their loan-to-value ratios (LTV – relationship between the amount of a loan and the value of the loan collateral) for new loans.

In general, the volume of loans provided was affected less by the tightening of credit standards than by the fall in demand. The unwillingness of households to borrow more made a much

Chart 44 Bond maturities (quarterly data)

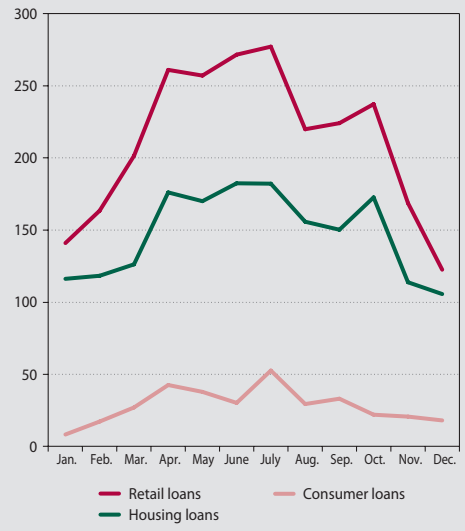
Source: NBS.

Chart 43 Total nominal values of monthly bond issues and new mortgage loans (EUR millions)



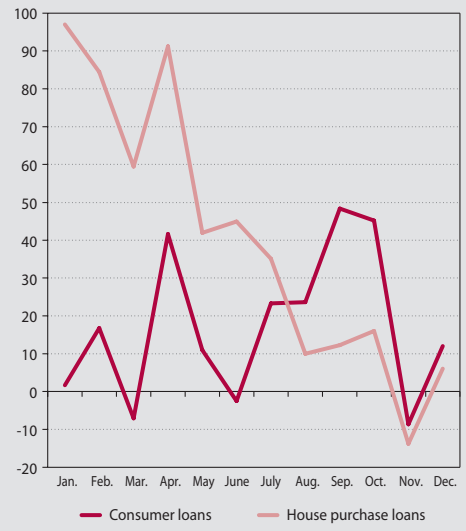
Source: NBS.

Chart 45 Year-on-year changes in retail loan volumes in 2008 (EUR millions)



Source: NBS.

Chart 46 Year-on-year changes in new retail loans in 2008 (%)

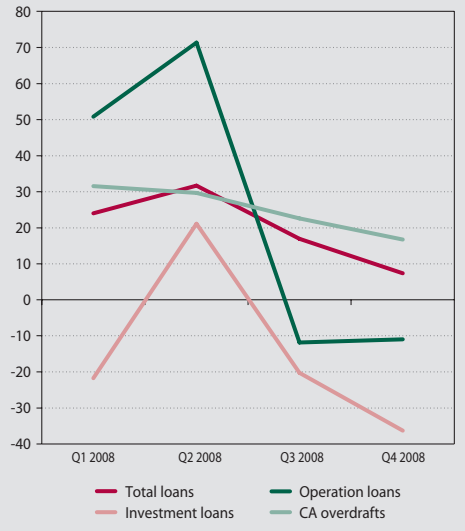


Source: NBS.

greater contribution to the slowdown in bank lending. Although banks took a far more cautious approach, lending to households remained a significant source of profit for banks (mainly house purchase loans). From the viewpoint of banks, an excessive tightening of standards for house purchase loans could weaken the real estate market still further, causing a further fall in demand for loans.

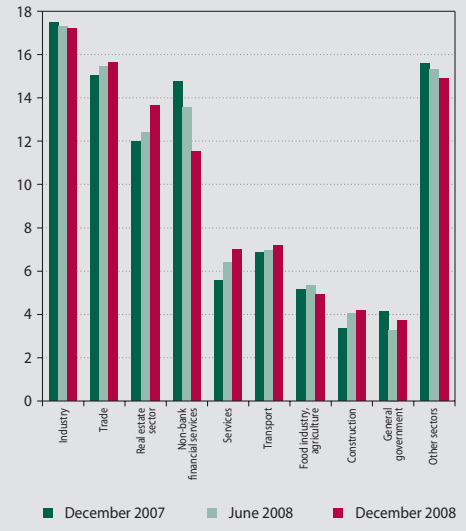
In 2008, bank lending to enterprises grew at a slower pace than in the previous periods

Chart 47 Year-on-year changes in the outstanding amounts of corporate loans in 2008 (quarterly data, %)



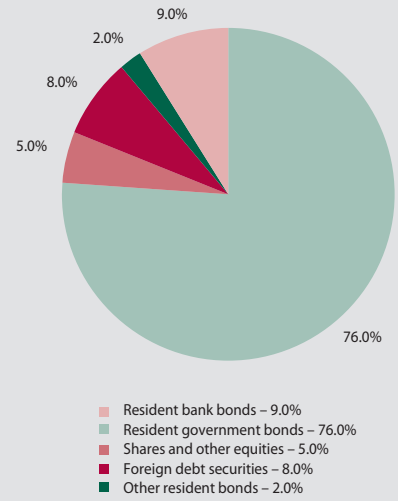
Source: NBS.

Chart 48 Structure of loans granted to non-financial corporations by sector (percentages)



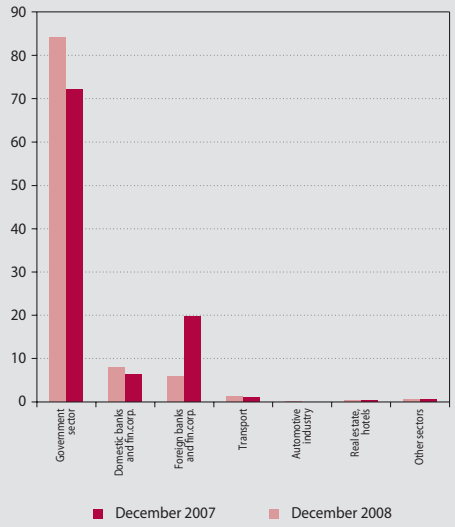
Source: NBS.

Chart 49 Structure of securities held by banks



Source: NBS.

Chart 50 Structure of debt securities by sector of issuance (%)



Source: NBS.

Bank lending to the corporate sector had grown year-on-year by almost 14% by December 2008. There were increases in all the main aggregates of corporate loans: investment loans, loans for operations, and current account overdrafts. Compared with the previous years, however, bank lending showed weaker dynamics. After accelerating over the first half of the year, the rate of year-on-year growth slowed or became negative in the third and fourth quarters (Chart 47). In these quarters, year-on-year decreases were recorded in investment and operation loans. Regarding the structure of loans by sector, the second half of the year saw a decrease in the proportion of loans granted to non-bank financial corporations (mainly hire purchase, leasing, and factoring companies) and industrial enterprises. The largest increase in the share of loans was recorded in the real estate sector (Chart 48).

Faced with an unfavourable outlook for economic development, banks took a far more cautious approach to lending in the second half of 2008. They started to distinguish between the sectors according to the potential risk and gave priority to the transparency of financing and the recoverability of the funds provided. The prudent conduct of banks was also reflected in the parameters of corporate loans.[50] Banks required stricter terms and conditions in loan agreements. In the real estate sector, this was mainly reflected in the size of the capital stake required from the investor, the contractual occupancy of premises, and so on. The overall slowdown in the growth rate of loans was also due in large part to the fall in demand for new loans from enterprises.

Investment in foreign debt securities, mainly in the risky categories, was relatively low and declined further in the course of 2008

Slovak banks also confirmed their orientation to the domestic economy in terms of their securities portfolios (Chart 49). The proportion of securities that are risky, and in many cases hard to value, was relatively small. At the end of 2008, foreign debt securities accounted for approximately 8% of the total volume of securities. A large part of the portfolio was invested in domestic government bonds or mortgage bonds issued by domestic banks (Chart 50).

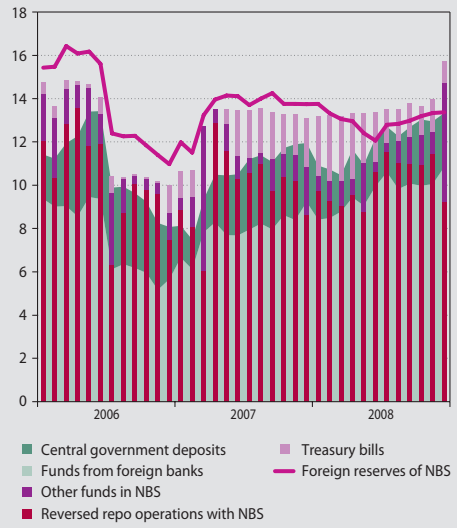
4.1.2 Key performance trends in the interbank market

Interbank assets and liabilities increased in 2008

Overall, interbank assets increased on a year-on-year basis by 23.4%, to EUR 20.4 billion as at 31 December 2008, and accounted for 32.4% of

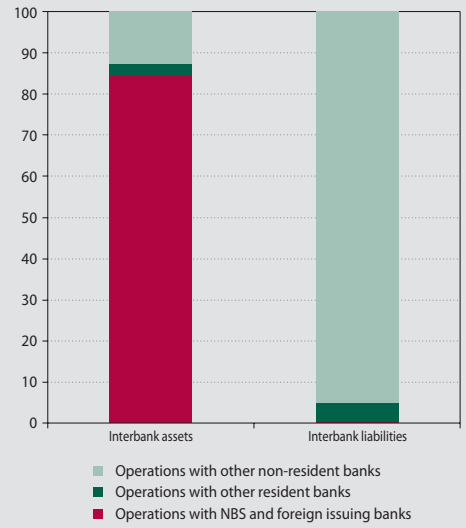
50 *Risk charges for new loans increased, the maturities of loans to enterprises decreased, and tighter collateral requirements were imposed on new loans, as well as on outstanding loans.*

Chart 51 Selected interbank asset/liability items and central government funds (EUR billions)



Source: NBS.
Note: Operations between domestic banks are not included in this chart.

Chart 52 Components of interbank assets and liabilities as at 31 December 2008 (%)



Source: NBS.

total assets. The largest increase took place in the last month, when assets increased by more than EUR 2.9 billion (17.1%). Interbank liabilities followed a trend similar to that in 2007. On a year-on-year basis, the total amount of funds from banks increased by 11%, to EUR 11.4 billion. This amount represented 18.2% of total assets.[51] In contrast with several other eastern European countries, where foreign short-term funds in the form of bank loans recorded an outflow owing to increasing financial market uncertainty, the inflow of funds from non-resident banks operating in Slovakia continued in 2008 (Chart 51). Funds from foreign banks continued to be the largest component of interbank liabilities (95 % as at the end of 2008). Since the lending activities of domestic banks are usually not dependent on such funds, a large portion of them was again deposited with NBS in 2008 (Chart 52).

4.1.3 Profitability

The banking sector's profitability in 2008 was markedly distorted by the negative financial result of one of the banks

The overall profit of the banking sector fell by almost 10% on a year-on-year basis.[52] Larger banks recorded marked increases in their profits. Mixed results were achieved by medium-sized banks: only two of them earned higher profits than a year earlier. Negative trends in profitability were reported by three banks; two of them closed the year 2008 with a loss. Home savings banks also recorded a year-on-year fall in profitability. Most branches of foreign banks achieved a higher profit than a year earlier.

The ratio of net profit to total equity was smaller than a year earlier; the number of banks recording a year-on-year fall in profitability increased The average value of return on equity (ROE), weighted by the average amount of own funds, came to only 13.3%, representing a year-on-year decline of more than 4 percentage points. The ROE ratio rose on a year-on-year basis in five banks only, to a minimum extent. This was partly the result of increases in the own funds of several banks.

In contrast with the moderately slowing growth in interest income, the year-on-year growth in non-interest income noticeably accelerated

Interest income continued to be the sector's primary source of income in 2008. The most signifi-

51 *Interbank assets, as well as liabilities, continued to have a dominant share in total assets in the balance sheets of some branches of foreign banks in 2008. Regarding the counterparties, the owners of non-resident bank deposits were mostly banks from Austria, Belgium, the Netherlands, and the Czech Republic.*

52 *This result was distorted by one of the banks suffering a substantial loss. With this bank left out of consideration, the sector's total net profit would be 6% higher than a year earlier.*

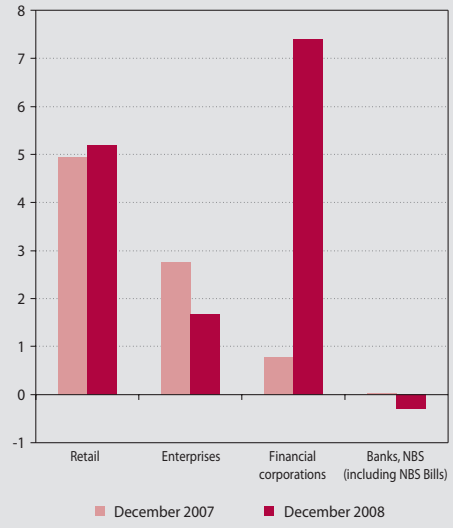
cant source of interest income was still the household sector (this income grew by 21%), closely followed by the non-financial corporate sector (up by 17%). The rate of growth in banks' interest income slowed in the last quarter of 2008. This was caused by a fall in the volume of new loans to enterprises, a fall in customer interest rates on loans, and a rise in interest expenses in the household sector. The net interest margin widened on a year-on-year basis by 0.3 of a percentage point, to 2.5%. The interest margin increased somewhat in the retail sector, while decreasing markedly in the corporate sector (Chart 53).[53]

As for non-interest income, a positive trend was mainly recorded in trading income, which climbed up by more than 19% year-on-year. Income from fees and commissions increased by more than 11% year-on-year.

The rate of total profit growth was reduced mainly by the creation of provisions, which in some cases caused a loss

The net creation of provisions grew on a year-on-year basis by more than 340%, to almost EUR 311 million. Even though one bank's provisions accounted for almost 35% of this figure, the rest of the sector still created a far larger amount of provisions than it did in 2007. The share of the largest banks in the creation of provisions dropped to less than half of the sector's total share. The smallest amount of provisions was created by home savings banks.

Chart 53 Interest rate spread in the banking sector (%)



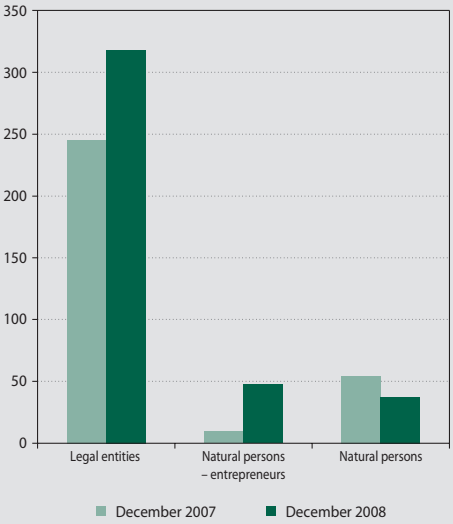
Source: NBS.
Note: Interest rate spread represents the difference between, on the one hand, the proportion of cumulative interest income to the average value of selected assets provided to a given counterparty and, on the other hand, the proportion of cumulative expenses to the average value of selected liabilities provided to this counterparty.

An indicator of a bank's ability to cover losses caused by credit risks, reflected in the creation of provisions, is the ratio of provisions to gross income. This indicator rose in year-on-year terms up to 13% in the sector, owing to the intense creation of provisions. In large banks, this indicator was relatively low.

The increased creation of provisions was a reaction to soaring loan default rates

The total volume of non-performing loans in the sector increased by 29%. Non-performing loans were still dominated by loans to legal entities (78% of the total volume of defaulted loans) and loans to natural persons – entrepreneurs (11%). The volume of non-performing loans among natural persons decreased (9% of the total volume) (Chart 54).

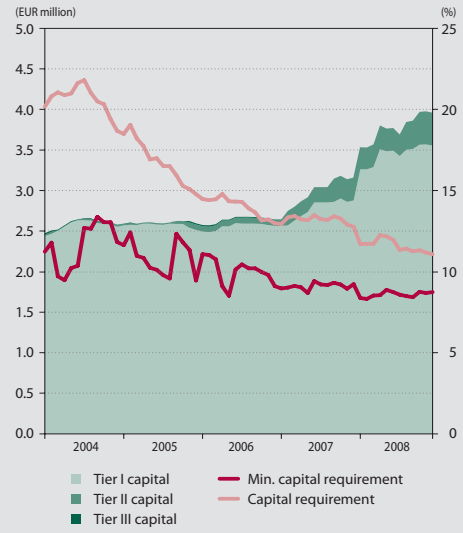
Chart 54 Breakdown of defaulted receivables by category of customer (EUR millions)



Source: NBS.

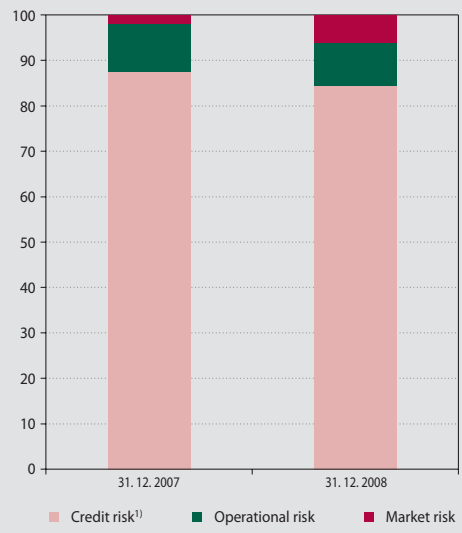
53 *The interest rate spread for financial corporations is strongly distorted by developments in one of the banks.*

Chart 55 Composition of own funds in the banking sector



Source: NBS.

Chart 56 Capital requirements by category of risk (%)



Source: NBS.
1) Credit risk also includes the risk of depreciation in the value of receivables (credit risk does not include transaction risk, counterparty risk and the risk of asset exposure in the trading book). ČSOB, a.s. was not taken into account in the evaluation as at 31 December 2007.

Operating efficiency in the banking sector increased in 2008

The ratio of operating expenses to gross income, i.e. *the cost-to-income ratio,* decreased year-on-year from 59% to 55%, indicating an improvement in the sector's operating efficiency. The ratio was considerably reduced by large banks and smaller branches of foreign banks. On the other hand, high cost-to-income ratios were recorded by some of the medium-sized banks.

4.1.4 Capital adequacy

Despite the crisis, most banks increased their own funds in 2008

The own funds of the banking sector amounted to EUR 3.8 billion as at the end of 2008, representing an increase of EUR 0.66 billion compared with the same period of 2007.[54] Own funds were increased in 14 banks of the Slovak banking sector.[55] In most cases, the own funds were increased from retained profits from previous years, or from reserve funds or other funds created from profits, and/or through a reduction in accumulated losses. Some of the banks increased their own funds by raising the level of Tier II capital formed by subordinated debt. These were mainly banks whose own funds were close to the capital requirements (Chart 55).

All banks reported sufficient own funds to meet the capital requirements in 2008

In 2008, all banks fulfilled the prescribed ratio between the capital requirement and the actual amount of own funds.[56] The number of banks with a ratio of over 80% increased on a year-on-year basis.

The principal risk in terms of capital requirement fulfilment was still credit risk

On a year-on-year basis, the total capital requirement increased by 27% (by EUR 588.1 million, to EUR 2.77 billion as at the end of 2008). The capital requirements increased for all types of risks. The principal risk continued to be credit risk, which accounted for 83% of the total capital requirement as at the end of 2008 (Chart 56).

54 *The data for December 2007 do not include ČSOB, a.s., which was registered at that time as a foreign bank's local branch. With this bank excluded from the data for 31 December 2008, the banking sector recorded a year-on-year increase in own funds of EUR 0.315 billion.*

55 *ČSOB, a.s., is subject to this monitoring as from 31 January 2008, when it was transformed from a foreign bank's branch into a subsidiary company.*

56 *Under Article 30(5) of Act No. 483/2001 Coll. on banks as amended,, banks are required to maintain own funds in the minimum amount calculated as the sum of own funds required for the coverage of credit risk and the risk of depreciation in the value of ceded claims arising from the bank's activities recorded in the banking book, risks arising from positions recorded in the banking and trading books, exchange rate and commodity risks arising from the bank's activities recorded in the banking and trading books, and the operational risk involved in the bank's business activities.*

4.1.5 Risks in the banking sector

CREDIT RISK[57]

Credit risk in lending to households

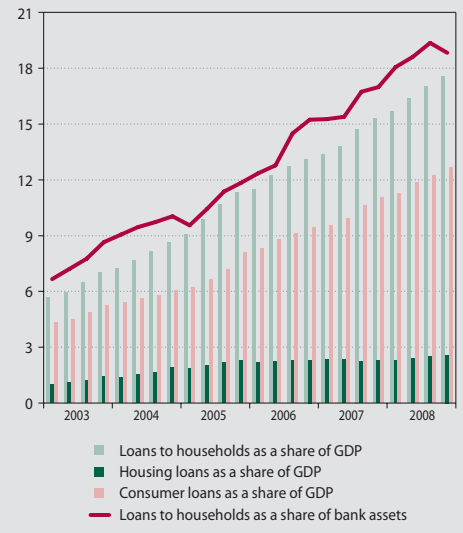
Household indebtedness has increased to a significant extent, but its level is not high in relative terms

Household liabilities, mainly in the form of loans, have been growing since 2005. A marked increase was mainly recorded in long-term loans granted for house purchases. The growing indebtedness was stimulated by the favourable economic development and rising real estate prices. Although loans markedly increased in 2008 in absolute terms, their proportion to total bank credit and GDP remained relatively small (Chart 57), compared with the values of similar indicators in other countries.

The debt burden of loans repayments is heaviest on lower-income households, though they account for a relatively small share of total borrowing

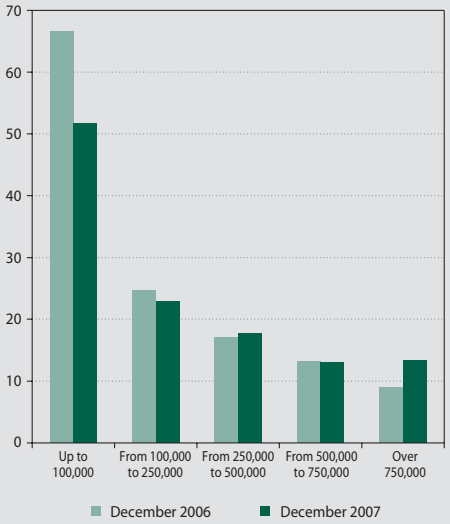
In terms of household credit risk, the key factor is the loan repayment burden in relation to the level of disposable income. A high ratio of repayments to disposable income leaves little room for both the client and the bank to handle stress situations. According to data for 2007, the average ratio of loan repayments to disposable household income stood at 33%, representing a year-on-year rise of 3 percentage points. The value of this ratio differs widely according to the level of income. In general, the higher income a household earns, the lower the value of this ratio will be (Chart 58). Most sensitive to income losses are household with lower incomes. On the other hand, lower-income groups account for a relative small share of total borrowing.

Chart 57 Trend in household indebtedness (%)



Source: Statistical Office of the SR, NBS.

Chart 58 Breakdown of loan repayments as a share of disposable income by category of disposable household income (%)



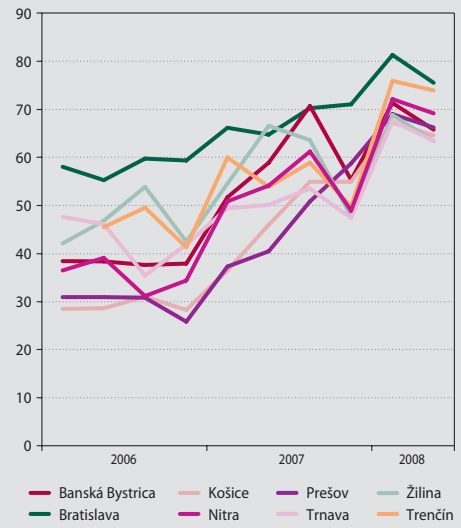
Source: Statistical Office of the SR, EU SILC 2006, EU SILC 2007, NBS.
Note: The horizontal axis shows the income groups of households (in SKK) that have borrowings.

Households that took out housing loans in 2007 and 2008 are also in a risky category

The highest debt burden is caused by loans provided in 2007 and 2008. This is to a large extent due to the sharp rise in real estate prices during these years. In 2007 and the first half of 2008 in particular, real estate prices rose more rapidly than incomes in all the regional capital cities (Chart 59). This trend moderated in the second half of 2008, when real estate prices dropped in all these cities. The high risk attached to these households, and/or the loans

57 *A more detailed evaluation of the financial positions of households and enterprises in terms of credit risk is presented in Chapter 3.*

Chart 59 Loan repayment burden as a share of household income for the purchase of a 3-room flat (%)



Source: Real Estate Price Map, Statistical Office of the SR, NBS.
Note: The burden is calculated for the purchase of an average 3-room flat financed from a bank loan granted for 20 years with an LTV of 80%, at an average interest rate. The values in the chart are only indicative; their main task is to illustrate the trend over the period under review.

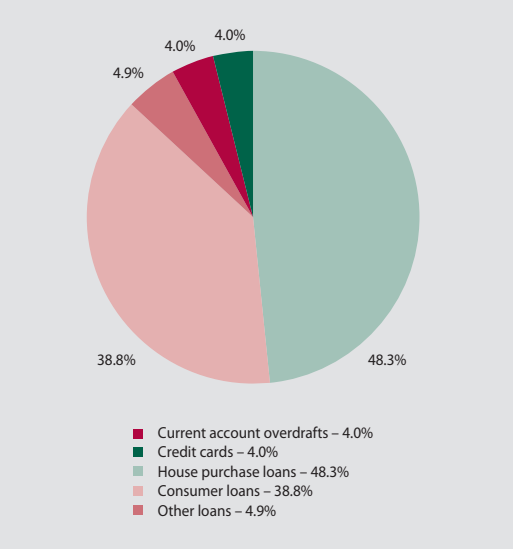
arranged for them, is also reflected in the ratios between the amounts of loans and the values of assets securing the loans (*loan-to-value ratio; LTV*). When real estate prices were rising rapidly in 2006, 2007, and the first quarter of 2008, banks were providing new loans with high LTV ratios. Banks did not modify this approach until the second half of 2008, when, in response to changes in the real estate market, they began to assess this ratio more strictly and several of them recorded a fall in the average LTV ratio for new loans.

Loans to households are increasingly sensitive to interest rate changes; the rising interest rates tend to increase the degree of household credit risk over the medium-term horizon

In 2008, housing loans were mostly provided with an initial rate fixation of up to one year, exposing households to a higher risk owing to the volatile interbank market developments. A potential rise in inflation, which is a real risk over medium-term horizon, exposes households to the risk of increased loan repayments or credit default.

The quality of household loan portfolios, as measured by the ratio of defaulted loans to total

Chart 60 Structure of non-performing loans in the household sector



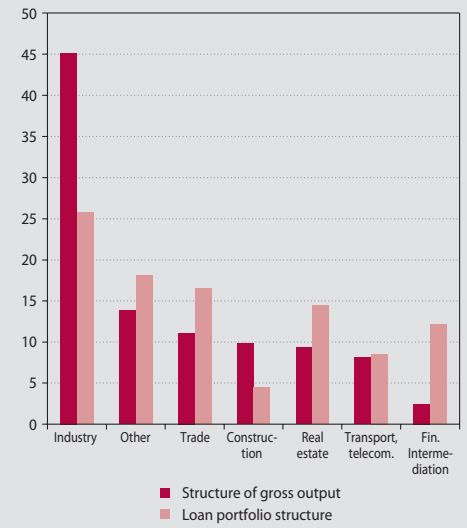
Source: NBS.

Table 6 Loan default rates in the household sector (%)

	December 2007	December 2008
Total loans to households	3.1	3.3
Loans for house purchases	2.2	2.3
Mortgage loans	1.4	1.4
Other house purchase loans	2.6	2.5
Building loans	1.5	1.3
Intermediate loans	3.8	4.5
Consumer loans	8.3	8.7

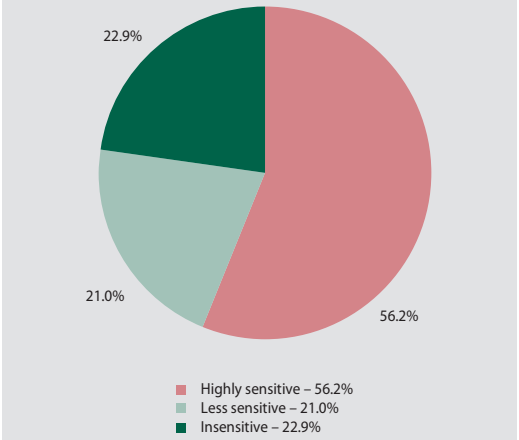
Source: NBS.

Chart 61 Comparison of the structure of loans to non-financial corporations and the structure of gross output by sector (%)



Source: Statistical Office of the SR, RBUZ.

Chart 62 Structure of loans to non-financial corporations in terms of their sensitivity to a downturn in the business cycle



Source: Statistical Office of the SR, RBUZ.

loans, remained virtually unchanged in 2008, but the default rates will probably rise in 2009

The volume of non-performing household loans increased year-on-year by 35%, but similar increases were also recorded in the previous years. The situation did not worsen markedly even in the last quarter. On a year-on-year basis, the proportion of non-performing loans increased only slightly (Table 6, Chart 60). This was to a large extent due to the continuing strong growth in lending. In 2009, however, the default rates will rise in all probability. This will be the result of an expected slowdown in bank lending, coupled with the worsening economic situation and growth in non-performing loans.

Credit risk in lending to non-financial corporations

The banking sector's corporate loan portfolio is sensitive to the economic downturn

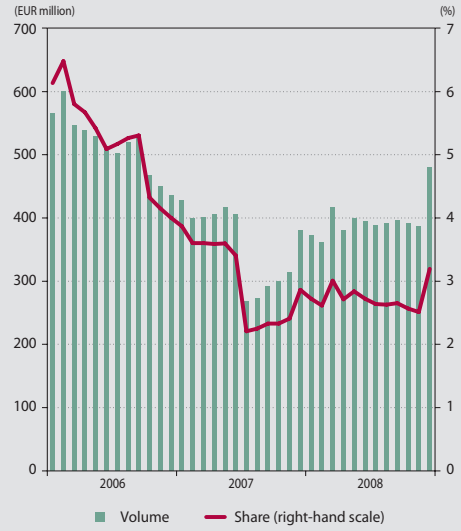
A large part of the loans provided within the domestic economy goes to non-financial corporations. The composition of these loans is broadly similar to the structure of the domestic economy (Chart 61).[58] As the domestic economy, the corporate loan portfolios of banks are dominated by sectors that are sensitive to the economic decline. At the end of 2008, such sensitive sectors accounted for almost 60% of the corporate loan portfolios of banks (Chart 62).

Despite the worsening financial conditions in the corporate sector towards the end of 2008, the corporate loan portfolios of banks remained broadly unchanged

The financial position of enterprises deteriorated in the last quarter of 2008. Despite experiencing negative trends in the second half of 2008, the sector was still generating profit and reporting a sufficiently liquid position at the year-end. The sector benefited from the favourable period of the previous years, when enterprises created a sound financial position for themselves. This is also confirmed by data on the amount of non-performing loans in banks. The credit quality of the corporate loan portfolio remained more or less unchanged in 2008. At the level of the sector as a whole, the volume of non-performing loans in this segment increased year-on-year by almost EUR 100 million (26%), to EUR 481 million as at 31 December 2008, but this increase took place practically in one particular bank, which recorded defaulted derivative receivables in this amount in December (in legal and ac-

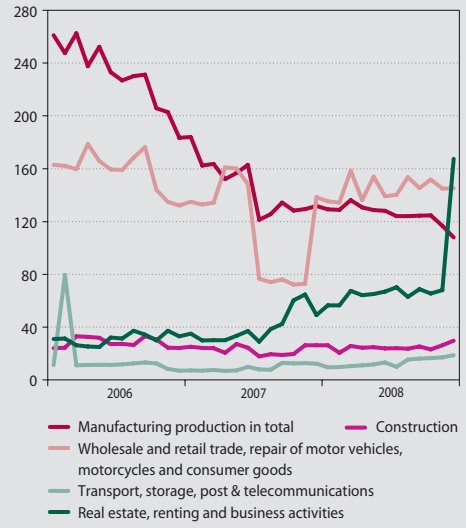
58 *The loan portfolios of banks show a higher portion of loans to the financial intermediation sector. Such loans are granted mostly to leasing companies, financing the purchases of transport vehicles and machines for the corporate sector.*

Chart 63 Volume and share of non-performing loans in the corporate sector



Source: NBS.

Chart 64 Volume of non-performing corporate loans in selected sectors (EUR millions)



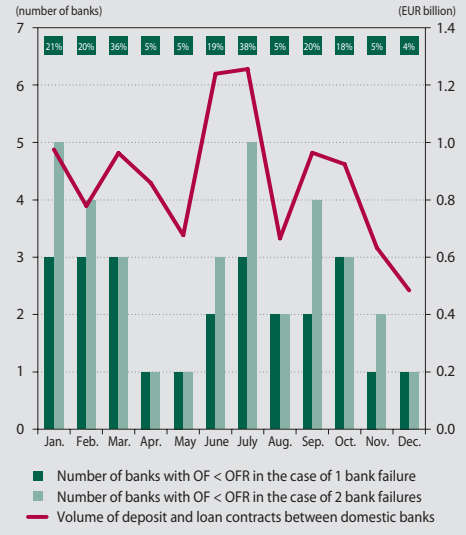
Source: NBS.

counting activities). With the data on this bank excluded from the sector as a whole, the year-on-year increase would be only EUR 2.1 million, which would represent a decrease in the share of non-performing loans (due to faster growth in the rest of corporate loans), from 2.8% in December 2007 to 2.5% as at the end of 2008. With the above bank included, the share of such loans would reach 3.2% at the end of the period under review (Charts 63 and 64).

There is considerably uncertainty about the depth and duration of the economic decline; loans arranged at earlier dates are more risky

The expectations regarding the rate of economic growth in 2009 are negative and rather uncertain. The subject of uncertainty is the depth and duration of the economic decline. If the negative trends become deeper and more prolonged, however, the 'cushion' established by enterprises in the good times could be eroded relatively quickly. As regards the stability of the sector as a whole, a key question is how loans arranged at earlier dates will behave. Banks tightened their credit standards for new loans to enterprises as early as the second half of 2008 (for some of the sectors even earlier). Thus, the conditions under which these loans were arranged were set out with regard to the expected economic decline.

Chart 65 Impact of systemic risk stress testing on the domestic interbank market



Source: NBS.
Note: The left-hand scale shows the number of banks whose own funds (OF) would be lower that the own funds requirement (OFR) in the case of failure in one or two banks. The right-hand scale gives the volume of deposit and loan transactions between domestic banks in billions of EUR (as at the month-end). The figures in frames over the chart show the assets of banks whose own funds would fall below the own funds requirement after the collapse of one bank, as a share of the banking sector's total assets.

A sensitivity analysis of interbank deposits and loans in terms of credit risk has shown that the level of systemic risk in the domestic interbank market is low

Systemic risk (contagion risk) is the risk that failure of one domestic bank will trigger a chain reaction, causing problems or defaults in other banks that are interconnected through interbank deposit and loan transactions. Chart 65 illustrates the number of banks whose own funds may fall below the capital requirement in the event of failure in one or two banks. In general, the level of systemic risk in the Slovak interbank market is low, owing to the relatively low volumes of interbank deposits and loans.

CREDIT RISK STRESS TESTING

Stress testing has shown that the corporate loan portfolios of certain banks are highly sensitive to the worsening macroeconomic conditions

The stress tests were based on the assumption that the macroeconomic situation will deteriorate. The continuing fall in foreign demand will reduce domestic output and revenues still further. As a result, non-financial corporations will have a reduced capacity to repay loans to banks and the outstanding amount of non-performing loans will increase in the banking sector. The impact of a scenario on specific banks was evaluated on the basis of the falls in their capital adequacy ratios as a result of losses from defaulted loans. The first (moderate) scenario simulated a slowdown in the rate of economic growth, i.e. moderate recession (Table 7). The volume of non-performing loans was expected to grow, but not excessively. The second (severe) scenario simulated a severe economic recession. The volume of non-performing loans in enterprises that are highly sensitive to the business cycle reached one third of the total volume. In both scenarios, the value of assets used as collateral was expected to fall.[59] Under the moderate scenario, the capital adequacy ratio would fall below 8% in three banks, mainly as a result of the relatively low current level of capital adequacy. Under the severe stress scenario, numerous banks would be unable to maintain their capital adequacy ratios above the 8% level. Thus, further three banks would have a capital adequacy ratio below the required level.

If banks use their retained profits from 2008 to increase their own funds, their corporate loan portfolios will be less sensitive to the unfavourable macroeconomic conditions

Numerous banks recorded increased profits in 2008, compared with the previous year. These profits may be used as a source of additional cap-

Table 7 Stress scenario settings and default rates for the individual scenarios

		Moderate scenario	Severe scenario
GDP change		-4.3 %	-7.8 %
Inflation		0.1 %	-4.7 %
Unemployment rate		16.6 %	21 %
ECB interest rate		0.5 %	0.5 %
Stock market decline		40 %	70 %
Appreciation of the EUR against other currencies		10 %. or 20 %	20 %. or 40 %
Non-performing loans – households		5.3 %	6.2 %
Default rates of loans to enterprises	Insensitive sectors	2 %	5 %
	Less sensitive sectors	7 %	15 %
	Sensitive sectors	15 %	30 %
Default rates of debt securities in the individual rating categories		Twofold increase	Threefold increase

Source: NBS.
Note: The values express simulated conditions in terms of the indicators for December 2009. The scenarios expect a gradual deterioration in the current indicators throughout the year. At the end of 2008, the average defaults rates of loans to enterprises ranged from 1% for insensitive, 2-3% for less sensitive, and 3% for sensitive sectors.

59 *The settings of the individual scenarios are described in more detail in Box 5 and Chapter 7 of the NBS report 'Analysis of the Slovak Financial Sector for 2008'.*

ital. Assuming that banks decide to retain their profits from 2008, there would be only one bank with a capital adequacy ratio below the 8% limit, under the moderate scenario. Under the severe scenario, further three banks would be under the prescribed limit.[60]

The default rate of household loans markedly increases under a stress scenario where the shock in the form of a real GDP fall persists longer than 1 year

Household loan portfolios were also tested under a stress scenario where the shocks persisted for several years, not only for one year. For testing the impact of the ongoing slowdown in economic activity on the banking sector through household loans, we used a VAR model with the following variables: the volume of loans granted to households, the volume of non-performing household loans, real GDP growth, unemployment, and inflation. An exogenous variable used in this model is the ECB base rate. The stress scenario was designed to simulate the economic recession faced by the Slovak economy at the beginning of 2009 and lasting for three years. Specifically, the scenario was based on the assumption that real GDP will fall by 4.3% in 2009, but then will remain unchanged for two years (i.e. a period of zero growth). Another assumption was a 2 percentage point rise in unemployment in both 2009 and 2010, followed by stagnation in 2011, while inflation was expected to fluctuate around 2% throughout this period. The ECB was expected to leave its base rate at the current level (1%).

If we assume that the volume of loans provided remains unchanged, this scenario is likely to increase the share of non-performing household loans from 3% to 6%. A possible fall in the volume of loans provided would increase the share of non-performing household loans, to above 6%.

EXCHANGE RATE RISK

Banks had negligible direct exposure to exchange rate risk as at 31 December 2008

In connection with the euro cash changeover (as from 1 January 2009) and the related moderation in the SKK/EUR exchange rate volatility, banks were only exposed to changes in the exchange rates of other currencies. In the balance sheets of banks, however, open positions in these currencies were at the level of only 0.6% of total assets and were fully covered by currency derivatives. During the second half of the year, balance-sheet positions in other foreign currencies decreased to a significant extent. In most banks, value-at-risk (VaR)[61] as at the end of the month never exceeded 2% of the own funds in 2008.

Nor was the banking sector exposed to indirect exchange rate risk

Only 2.1% of the corporate loans and 0.2% of the retail loans were denominated in non-euro currencies. In Slovakia, therefore, a weakening of the domestic currency does not pose an upside risk to loan repayments and consequently to the loan default rate, unlike in several other countries of central and eastern Europe. However, the data needed to assess the degree of exchange rate risk to which enterprises are exposed (i.e. data on open foreign exchange positions) are not available. The sum of absolute values of positions in the individual foreign currencies (except in the euro) from currency derivatives, traded between domestic enterprises and banks, indicates no negative trend in this risk. The sum of these values for 2007 and 2008 fluctuated between EUR 0.4 billion and EUR 0.8 billion.

INTEREST RATE RISK

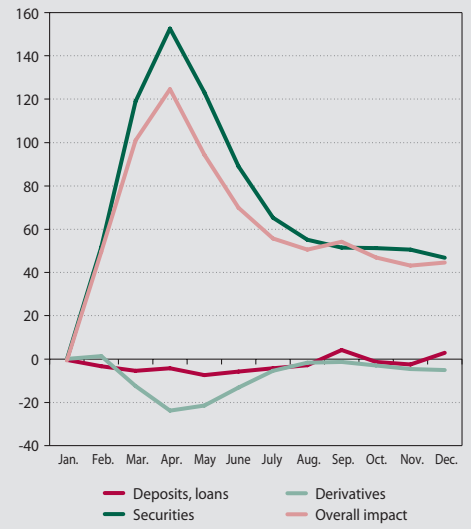
The profitability of most banks should not be seriously affected by interest rate movements over the short-term horizon (i.e. several weeks)

Only a small proportion of banks' assets and liabilities (approximately 10%) are revalued to fair value through profit or loss. A rise in interest levels would have an adverse effect, since these assets include bonds with a longer duration, while liabilities comprise mainly short-term deposits. In the case of a 1 percentage point rise in interest rates, the banking sector's net loss from the revaluation of financial instruments in the trading book (except for derivatives) would account for 0.06% of the assets. Some of the banks, however, use interest rate derivatives for interest rate risk coverage in the trading book. With this taken into account, the loss would drop to 0.05% of the assets, which represents 7% of the profit generated in 2008.

60 *The 2009 revenues of banks are not taken into account in the scenarios. These revenues are expected to form an additional cushion.*

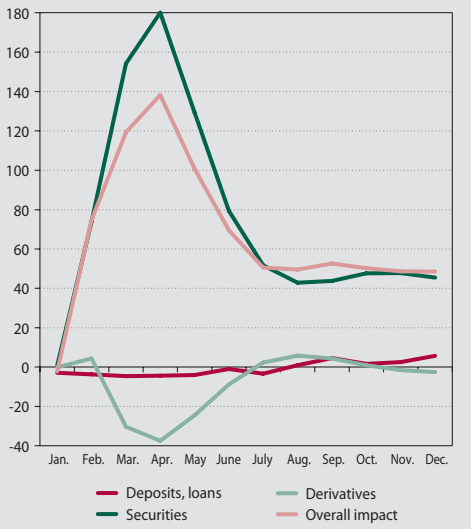
61 *VaR (value-at-risk) is a risk measure of a portfolio's maximum loss that should not be exceeded with a probability of 99%. It is assumed that the distribution of future changes in the market factors (exchange rates in this case) can be simulated by distributing the changes recorded during the past year (250 working days) and that the portfolio remains unchanged for 10 days. For VaR calculation, only one-day losses were simulated and the value obtained was multiplied by $\sqrt{10}$.*

Chart 66 Stress scenario results for 2009 – first approach, scenario 1 (EUR thousands)



Source: NBS.

Chart 67 Stress scenario results for 2009 – first approach, scenario 2 (EUR thousands)



Source: NBS.

A rise in interest rates would have a more negative impact over a longer-term horizon (an impact on the economic value of the balance sheet)

In the case of a parallel 1 percentage point rise in interest rates, the economic value of the banks' balance sheets (the value of all assets and liabilities), including interest rate derivatives, would fall by 0.7%. The risk of change in the economic value in the case of interest rate movements is thus relatively high. This can be attributed to the fact that banks used interest rate derivatives for interest rate risk coverage in the trading book, rather than for the coverage of positions in the banking books, which are relatively important.

Stress scenarios simulating a reduction in the ECB base rate and an increase in credit spreads had a positive effect on the profitability of banks

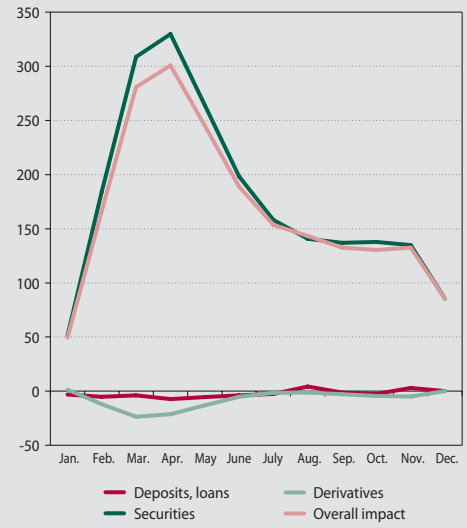
Interest rate risk stress testing consists in a comparison of the results of stress tests performed using a basic scenario and two stress scenarios. The final results are the differences between the test results obtained from the stress scenarios and the basic scenario. The basic scenario was based on the yield curves of euro interbank rates, assuming that the CDS spreads, as measured by the iTraxx index, will remain unchanged during the year. This scenario simulated a 50 basis point reduction in the ECB base rate in January 2009 and 25 basis point cuts in May and September. Under stress scenario 1, the ECB base rate was expected to be reduced by 100 basis points against the basic scenario in January 2009, while the CDS spreads, as measured by the Traxx index, were expected to remain unchanged during the year. Under stress scenario 2, a 100 basis point cut in the ECB base rate against the basic scenario was expected to be accompanied by a further increase in financial market uncertainty, which was modelled through a twofold increase in the CDS spreads compared with the figure for the end of 2008.[62]

Two approaches were used during stress testing. According to the first approach, the profit or loss was calculated from the deposit and loan portfolios; the revaluation of securities in portfolios held for trade (HFT), other portfolios revalued to fair value (FV), and portfolios allocated for sale (AFS);[63] interest income; and the revaluation of interest rate derivatives in the trading and banking books in the case of a change in the ECB base rate compared with the basic scenario (Charts 66 and 67).

According to the second approach, securities held to maturity (HTM portfolio) were also included in the calculation.[64] This approach was

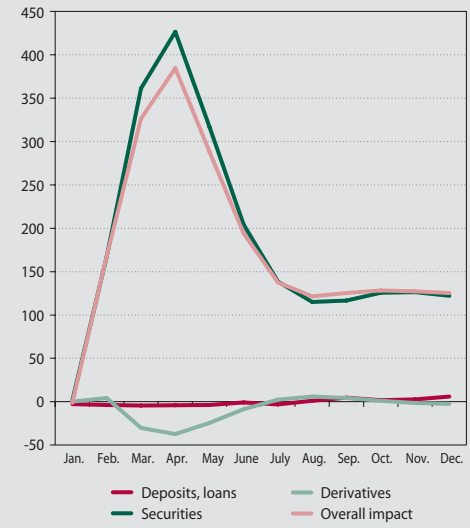
62 *The scenarios are described in more detail in Box 6 of the NBS report 'Analysis of the Slovak Financial Sector for 2008'.*
63 *The HFT and FV portfolios are revalued to fair value through profit or loss; the AFS portfolio is revalued through equity capital.*
64 *In compliance with the accounting rules, the HTM portfolio is not revalued to fair value.*

Chart 68 Stress scenario results for 2009 – second approach, scenario 1 (EUR thousands)



Source: NBS.

Chart 69 Stress scenario results for 2009 – second approach, scenario 2 (EUR thousands)



Source: NBS.

based on the assumption that, if the need arises, banks may also sell securities from this portfolio. Hence, the revaluation of these instruments was also taken into account. Since a large part of the securities is held in this portfolio, the profit from their revaluation would markedly exceed the loss from the revaluation of derivatives. In this case, the banking sector would record a larger profit than according to the first approach, under both scenarios (Charts 68 and 69).

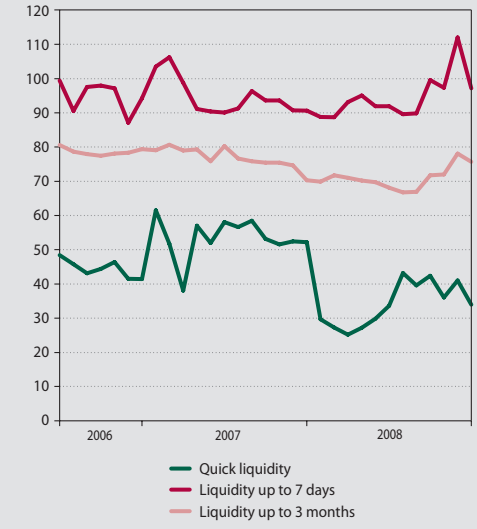
LIQUIDITY RISK

Short-term liquidity in the sector as a whole rose in 2008

In terms of short-term liquidity, the banking sector as a whole recorded a modest increase in the liquidity cushion in the second half of 2008 (Chart 70). In some of the banks, however, the liquidity situation deteriorated. For the majority of banks, the condition for maintaining a sound liquidity position is that a certain proportion of deposits continue to be held in the bank after they have matured. This condition is, however, not equally significant for the individual banks, which can be seen if we compare the ratios of liquid assets and open positions from operations with clients to total assets (Chart 71).

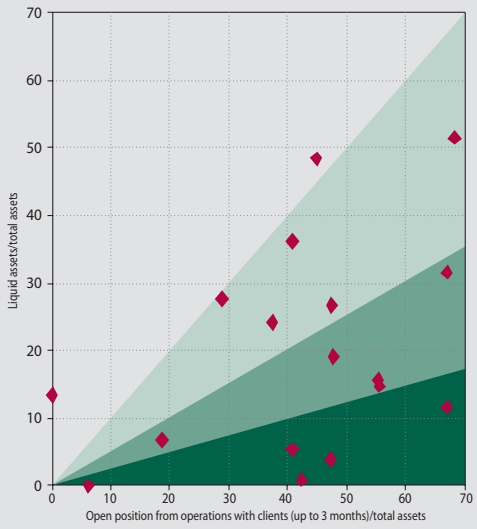
The stress scenario simulating a 20% fall in the volume of customer deposits caused the median value of the 7-day liquidity ratio (the ratio of liquid assets maturing within 7 days to liabilities with a residual maturity of 7 days) to drop from 97% to 79%, and that of the 3-month liquidity ratio from 76% to 69%.

Chart 70 Liquidity ratios (median values) (%)



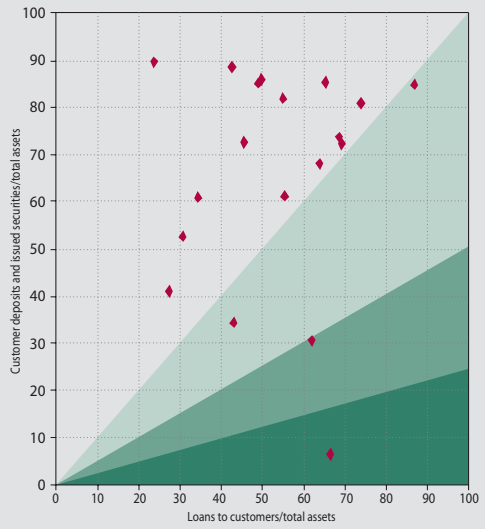
Source: NBS.
Note: Branches of foreign banks with a market share smaller than 2% of the sector's total assets are not included in this chart.

Chart 71 Liquidity cushion compared with an open position of up to 3 months (%)



Source: NBS.
Note: Branches of foreign banks with a market share smaller than 1% of the sector's total assets are not included in this chart.

Chart 72 Loans as a share of total assets compared with deposits and issued securities as a share of total assets (%)



Source: NBS.
Note: Branches of foreign banks with a market share smaller than 1% of the sector's total assets are not included in this chart.

The new indicator of liquid assets was met by all banks as at the end of 2008

As from 15 November 2008, bank liquidity is monitored on a monthly basis in terms of a new indicator of liquid assets,[65] defined as the ratio between the sum of liquid assets and the sum volatile liabilities. This ratio must not fall below 1.0. Volatile liabilities comprise a certain percentage of deposits, depending on the counterparty and the period of fixation. Banks are required to maintain a sufficient amount of liquid assets for their coverage, mainly cash, convertible securities, and assets maturing within a month. This means that bank should be able to cover a relatively massive outflow of customer deposits by liquid assets. At the end of 2008, the prescribed limit was met by all banks.

The long-term outlook for liquidity risk was relatively low even at the end of 2008

The lending activities of most banks are financed from customer deposits or issues of longer-term securities, and not from short-term funds obtained from the interbank market (Chart 72).

4.2 INSURANCE SECTOR

4.2.1 Financial situation in the sector

The total profit of insurance companies markedly decreased in 2008, mainly as a result of a fall in return on financial assets, coupled with lower technical results in non-life insurance and surrenders of life insurance contracts

The financial positions of most insurance companies worsened in 2008, compared with the previous year. The total profit earned by insurers fell by almost one half, to EUR 108 million. Return on equity decreased from 18.8% in 2007 to 9.1% in 2008. Thus, the steep rise in profitability seen since 2003 came to an end (Chart 73). Profit from financial operations fell by more than 71% in comparison with 2007. The main component of the sector's overall financial result was profit from the technical account, which increased year-on-year by almost 42%. In 2008, profit from financial operations accounted for only 34% of the total profit, compared with 70% in the previous year.[66] Excluding unit-linked products, the insurance sector's financial result fell by EUR 39 million (23%) in comparison with 2007, mainly as a result of lower yields on assets.

65 *Decree No. 18/2008 of Národná banka Slovenska of 28 October 2008 on the liquidity of banks and branches of foreign banks, the method of liquidity risk management by banks and branches of foreign banks, and on amendments to Decree No. 11/2007 of Národná banka Slovenska concerning the presentation of statements and reports by banks, branches of foreign banks, securities dealers, and branches of foreign securities dealers for supervision and statistical purposes.*

66 *The structure of profits was significantly influenced by accounting for unit-linked products. Losses from financial operations in unit-linked products reached EUR 89 million in 2008 but left the economic results of insurance companies unaffected, because they were fully reflected in the falling technical reserves for unit-linked products, thus increasing the technical result in life insurance.*

Chart 73 Total profit generated in the insurance sector (EUR millions)

Source: NBS.
Note: Net profit for the calendar year.

The technical account in life insurance again recorded a positive balance (a year-on-year change of EUR 67 million), mainly as a result of stronger growth in premiums written than in technical expenses.[67] At the same time, profit in the technical account of non-life insurance decreased in comparison with the previous period, partly because of a fall in non-life insurance premiums written. An important factor in profit growth in the technical account was a decrease in the share of reinsurers in the premiums written (EUR 85 million).

4.2.2 Technical premiums and premiums written[68]

Technical premiums grew more dynamically than in 2007, despite the financial crisis

Life insurance achieved a record year-on-year increase – the largest since 2002. This was, despite the financial market turmoil, the result of growth in the sale of unit-linked life-insurance investment products, where the risk of investment is borne by the insured. The growth in technical non-life insurance premiums accelerated in comparison with 2007, but lagged well behind the figure recorded in life insurance (Charts 74 and 75). This growth took place predominantly in motor insurance and property insurance.

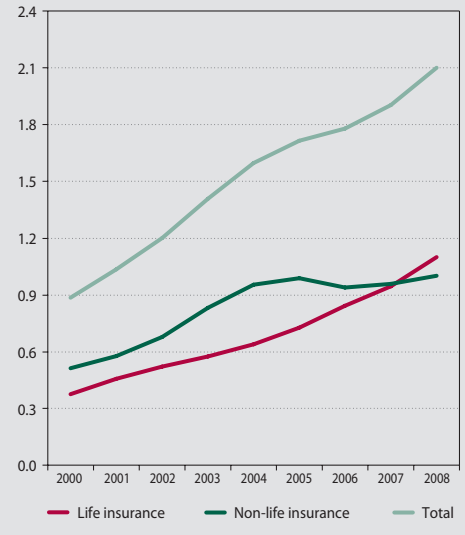
Technical premiums ceded to reinsurers recorded a decline

Insurance premiums ceded to reinsurers are in decline. They decreased in 2008 by 17.2%, to EUR 267 million. The major part of ceded premiums (92.2%) pertained to non-life insurance. These premiums accounted for almost a quarter

Chart 74 Technical premium growth (%)

Source: NBS.

Chart 75 Technical premium growth (EUR billions)

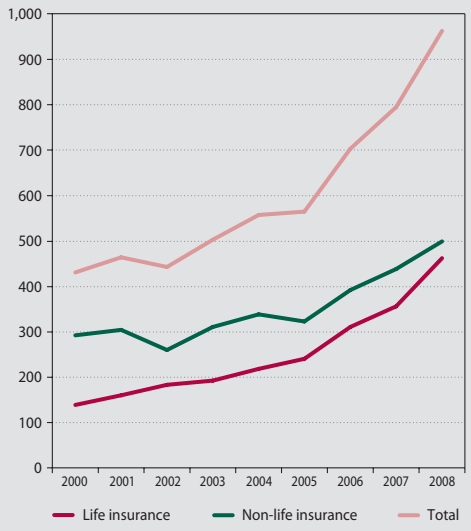


Source: NBS.

67 *Technical expenses were lower as a result of negative yields on unit-linked products.*

68 *Since premiums written were reported according to the Slovak accounting standards up to the end of 2005 and then, from 2006, according to the international financial reporting standards (IAS/IFRS), the NBS analysed the term 'technical premium', which can be defined as the price agreed in individual insurance contracts, irrespective of the method of their financial reporting. Premiums written (in gross amount), as defined in the IAS/IFRS standards, increased by 1.9%, to EUR 1.8 billion as at 31 December 2008. The slower growth was caused mainly by a decrease in premiums written in non-life insurance (by 2.7%), while those in life insurance increased by 7.3%, to EUR 0.9 billion.*

Chart 76 Insurance claims incurred (EUR millions)



Source: NBS.

of the total amount of technical non-life insurance premiums. In life insurance, premiums were ceded to reinsurers in the amount of EUR 21 million (i.e. 1.9% of the amount of technical life-insurance premiums).

4.2.3 Technical claims incurred and the loss ratio

Technical claims incurred increased in both life and non-life insurance

Technical claims incurred in 2008 (hereinafter referred to as 'claims incurred') increased in comparison with the previous year by EUR 115 million, to EUR 872 million (Chart 76). In the long term, claims incurred in life insurance are growing more rapidly than in non-life insurance. In 2008, claims incurred in life insurance grew by 29.9%, compared with 14.1% in non-life insurance. The growth in life insurance claims was caused almost exclusively by surrenders of life insurance contracts.

The loss ratio increased[69]

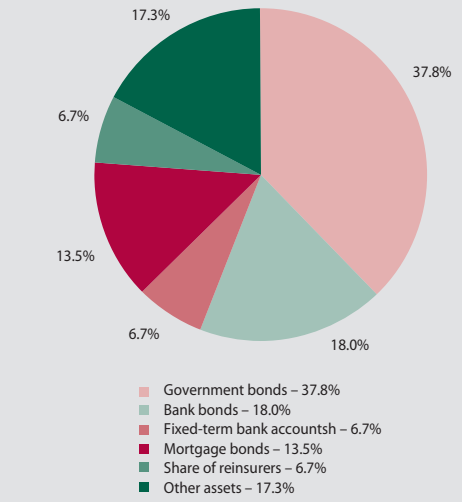
Compared with 2007, the loss ratio in the non-life insurance segment as a whole increased by 3.4 percentage points, to 52.3 %. Compulsory liability insurance recorded a lower loss ratio in 2008, while accident insurance and property insurance recorded higher figures. The highest loss ratio was recorded in accident insurance (69.9%), but the combined ratio in this category exceeded 100%,[70] which indicates that there is strong competition in this category.

4.2.4 Solvency positions of insurers

The statutory solvency requirements were met by all insurance companies

Insurance companies are required to have an actual solvency ratio (i.e. own assets in relation to liabilities) higher than the prescribed ratio of solvency, as well as a guarantee fund amounting to at least the minimum amount required. These requirements were met by all insurers as at 31 December 2008. The required solvency ratio was raised by 11% compared with the previous year. The actual solvency ratio increased in comparison with the previous year by 32%, mainly as a result of growth in funds to which no insurance or reinsurance obligations apply. The proportion between the overall actual solvency ratio and the increased value of required solvency and guarantee fund amounted to 2.8 (solvency margin).

Chart 77 Technical reserve investment

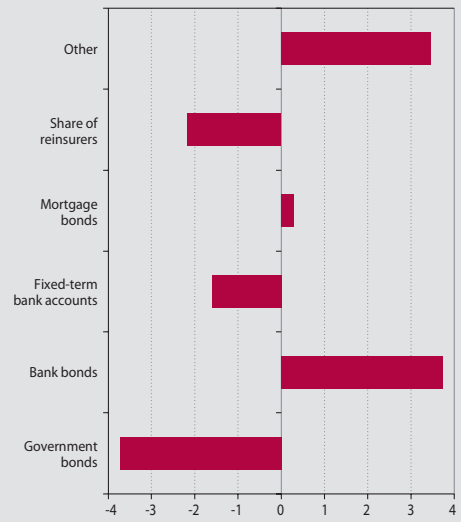


Source: NBS.
Note: The term 'government bonds' covers bonds issued by Slovakia or other EU Member States, NBS or other central banks, bonds guaranteed by Slovakia, including EIB, EBRD and IBRD bonds.

69 *The loss ratio is calculated as a percentage ratio between:*
• the sum of expenses on claims incurred and changes in gross technical reserves for claims, and
• premiums earned, i.e. gross technical premiums written after deducting the change in gross technical reserves for unearned premiums.
The loss ratio is monitored only in non-life insurance.

70 *The combined ratio is defined as the sum of expenses on claims incurred and operating expenses in relation to the amount of premiums written. A value above 100% indicates that the insurance company concerned has a loss from premiums written (the insurance company pays more than it receives). Investment income is not covered by the combined ratio.*

Chart 78 Changes in technical reserve investment between 31.12.2007 and 31.12.2008



Source: NBS.

4.2.5 Technical reserves and their investment by insurers

The technical reserves of insurance companies followed the growing trend from the previous years – they were invested conservatively

Gross technical reserves, reduced by the amount of reserves for the coverage of liabilities from investments on behalf of the insured, amounted to EUR 3,482 million as at the end of 2008 and were covered by assets up to 107.9%. The coverage of technical reserves by assets remained unchanged in comparison with the end of 2007. Over the first half of 2008, the composition of assets covering the technical reserves followed the trend from 2007: the proportions of government bonds and reinsurers decreased, while those of bank bonds and other assets (other debt securities in particular) increased. In the second half of the year, however, a change occurred. Government bonds increased in terms of both share and volume, while banks bonds ceased to grow and the growth in other assets slowed (Charts 77 and 78).

4.2.6 Risks in the insurance sector[71]

Market risk, which could have a direct effect on financial performance, is virtually negligible in most insurance companies

Most insurance companies have practically closed foreign exchange positions, not exceeding 2% of the assets. The overall position is long and two thirds of it is formed by open position in US dollars. Investment in shares and mutual fund shares revalued to fair value through profit or loss accounts for only 0.8% of the assets. Investment in debt securities revalued to fair value through profit or loss accounts for 3.1% of the assets. Over a period of 10 days, the losses of most insurance companies arising from the market risk are not likely to exceed 0.6% of the assets, with a probability of 99% (VaR). The only exception is an insurance company recording a VaR of 1.9% of the assets, due to its exposure to interest rate risk.

Asset values, however, are exposed to interest rate changes in numerous insurance companies The assets of insurers comprise in large part debt securities, which have a relatively long duration in several companies. A parallel rise in interest rates of 1 percentage point would cause the value of assets in the insurance sector to fall by 4%. (The sharpest individual fall was 7.5%). This loss would not, however, be entirely reflected in the reported profit or loss or in changes in equity; most of it would become apparent only gradually, through a change in interest income. If only assets revalued to fair value through profit/loss or equity are taken into account, the loss would account for 0.6% of the assets.

4.3 SECURITIES DEALERS

The capital adequacy ratio was well above the 8% level required by law

The own funds of non-bank securities dealers and asset management companies licensed as securities dealers were well above statutory limit in all firms over the course of 2008. At the end of the year, the volume of own funds was six times higher than the required amount, while the highest capital requirements applied to the coverage of credit and operational risks.

The volume of transactions fell somewhat, while that of customer assets under management increased

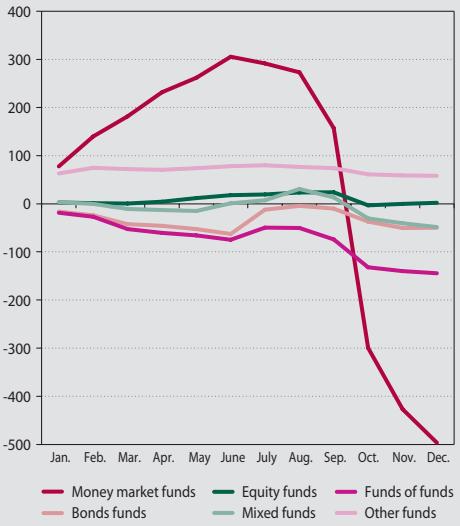
The total volume of transactions in bonds, shares, and mutual fund shares fell slightly in

71 *Since there are no sufficient data for a detailed analysis of the exposures of insurers to insurance risks, the present analysis focuses on the impact of market risks only. The analysis covers all assets that pose risks to insurers, including assets covering neither technical reserves nor the guarantee fund. However, the analysis does not cover the risk involved in assets invested on behalf of the insured, nor technical reserves ceded to reinsurers, because these assets pose no risk to the insurance company.*

Chart 79 Volume of investments in mutual funds operating in Slovakia (EUR billions)

Source: NBS.

Chart 80 Monthly cumulative net sales of open-end funds in Slovakia in 2008 (EUR millions)



Source: NBS.

2008, to EUR 14 billion (from EUR 16 billion in 2007). Transactions in money market instruments and financial derivatives cannot be compared on a year-on-year basis, owing to the different methodology applied in 2008. The volume of customer assets managed by securities dealers (including banks and asset management companies licensed as securities dealers) grew year-on-year by 41% (from EUR 1.5 billion to EUR 2.1 billion).

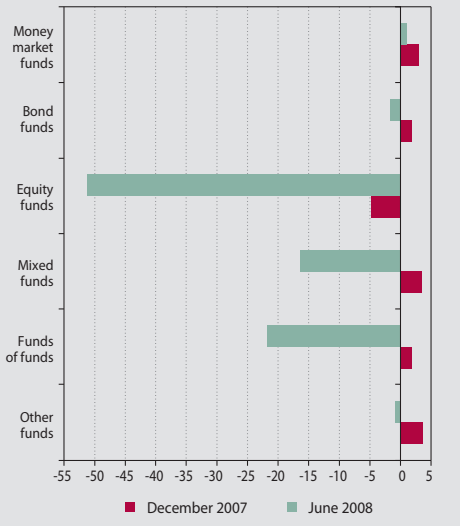
4.4 COLLECTIVE INVESTMENT

4.4.1 The collective investment sector in 2008

The financial crisis has had a significant impact on the collective investment sector, which shrank in size by almost 30%

The growth in the volume of assets managed in this sector came to a halt in the first half of 2008. This was followed by a sharp fall in net asset value (NAV) in mutual funds in the second half of the year (Chart 79). The fall in NAV was associated with the unusually high investor redemptions (Chart 80), due to uncertainty regarding the further trend in the value of investments[72] and, to a lesser extent, with the depreciation of assets in the portfolios of mutual funds as a result of the crisis (Chart 81). In general, mutual funds had sufficient liquid assets (bank deposits and government bonds) to meet the needs of shareholders wishing to withdraw their investments. In several cases, however, they were

Chart 81 Performance of domestic open-end funds (% p.a.)



Source: NBS.
Note: The funds are weighted by net asset value (NAV).

72 *Investor redemptions were also encouraged by the adoption of a new deposit-guarantee scheme offering 100% coverage for bank deposits. This combined with the massive campaign for deposit products and the rising deposit rates, gave investors a strong incentive to withdraw their investments, mainly from money market funds.*

forced to sell the debt securities of enterprises or foreign banks the liquidity of which was relatively low at that time.

The sharpest fall in NAV was recorded in equity funds; money market funds strengthened their position within the sector

Except in other funds and real estate funds (the share of which is negligible), net asset value dropped in all categories of funds. The sharpest drop was recorded in equity funds, which wrote off 67% of their NAVs during the period under review. Thus, their relative share of the sector's NAV decreased from 11% to 5%. Money market funds strengthened their dominant position by several percentage points; they managed 45% of the total NAV in mutual funds in December 2008.

The profits of asset management companies fell only slightly

Ten domestic asset management companies recorded profits in 2008, in the total amount of EUR 9.4 million. This was somewhat less than in the previous year (by 8%). Regarding the nature of remuneration received by asset management companies, which depends mainly on the volume of assets under management, the fall in NAV is not expected to be fully reflected in profits before 2009. Two companies recorded a loss. Two thirds of the sector's total profit are concentrated in a single asset management company.

4.4.2 Risks in collective investment

The riskiness of investments in mutual funds reflected the rising financial market volatility and the prevalence of investments in low-risk funds

The riskiness of investment in mutual funds was to a large extent influenced by a marked increase in volatility, particularly in equity markets. On the other hand, approximately two thirds of the total volume of assets managed in collective investment funds were invested in funds with a VaR of up to 1% of the NAV (with a probability of 99% and over a time horizon of 10 days). They were mostly money market funds, but bond funds and other funds were also represented. Low risks were also faced by some of the equity funds, which sold all shares from their portfolios during the crisis.

The volatility of equity funds rose during the second half of the year

In funds holding a large portion of shares and having open foreign exchange positions, the risk of loss markedly increased. Numerous funds had a VaR at the level of 10% to 40% of the net asset value. In these funds, VaR rose during the second half of 2008 almost threefold. The proportion of assets invested in shares and mutual fund shares to total assets invested in collective investment funds decreased somewhat during the second half of the year, from 15.1% to 13.7%.

Money market funds and bond funds were exposed to low interest rate risk and to moderate credit risk

Money market funds and bond funds were exposed to interest rate risk, but only in the long term. When the ECB reduced its base rate still further, these funds recorded a fall in interest income. This fall, however, was insignificant in comparison with the risks in other funds. These funds were also exposed to credit risk, mainly through debt securities. Most exposed to credit risk were bond funds. If the probability of default attached to the individual ratings increases twofold or threefold, the loss would reach 0.2% or 0.5% of the net asset value.

4.5 SAVING FOR RETIREMENT

4.5.1 The pension saving sector in 2008

PILLAR II

The retirement pension saving system in 2008 was shaped by two events: the persisting and deepening global financial crisis, and the opening up of the system to allow savers to opt in or out

The pension saving sector as part of the financial market was also affected by the global financial crisis. Pension fund yields declined as a result of falls in the prices of certain types of fund assets. Consequently, the annual yield rate in the second pension pillar was positive only for conservative funds (Table 8).[73] As the crisis in financial markets continued throughout 2008, it brought about a marked change in the basic structure of the port-

73 *In pension funds, the average annual yield was calculated as a weighted average of the year-on-year percentage changes in the daily values of pension fund units. The year-on-year percentage changes in the daily values of pension units were calculated as at 31 December 2008 (PMZDHDJ31.12.2008) according to the following formula:,*

$$PMZDHDJ_{31.12.2008} = \left(\frac{DJ_{31.12.2008}}{DJ_{31.12.2007}} - 1\right) * 100\%$$

where DJ is the value of a pension unit on the given day. As indicated by the weighted average, the weight applied is the ratio of the fund's net asset value (NAV) to the sum of NAVs of funds of the same type. The yield is given in nominal terms, which means that inflation is not deducted. When yields are calculated for various forms of investment, the nominal yield is used as a rule, calculated according to the standard methodology. This yield, however, is not identical to the yield in the saver's personal pension account, which is determined on an individual basis. The input data were the values of pension units from the individual pension funds reported to Národná banka Slovenska by pension fund management companies for the days 31 December 2007 and 31 December 2008, which are available on the web site of Národná banka Slovenska.

Table 8 Annual pension fund yields as at 31 December 2008

Types of funds	Weighted average
Conservative funds	2.8%
Balanced funds	-5.2%
Balanced funds	-7.4%

Source: NBS.

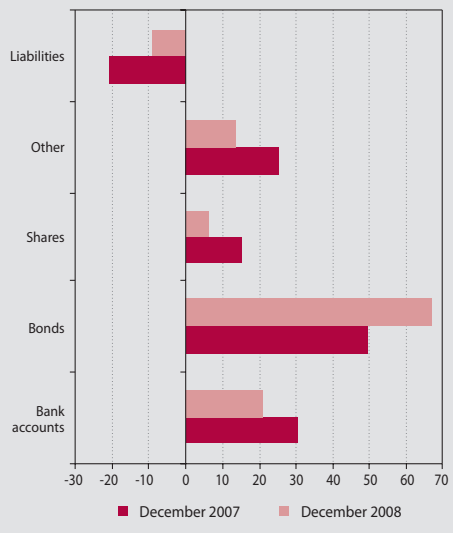
folio in terms of the constituent financial instruments. Most notably, the proportion of bonds increased at the expense of all other investment types (Chart 82).

Another factor that influenced the functioning of Pillar II of the retirement pension system was its opening up for a limited period to allow savers to join or leave on a voluntary basis. Pillar II was opened up by the Slovak government in two stages. The first stage took place during the first half of 2008. The second stage began on 15 November 2008 and lasted until the end of the calendar year. According to information from pension fund management companies, the number of savers who demanded that their savings be transferred to the account of the Social Insurance Agency reached roughly 107,000 in the first stage.[74] The number of new savers was smaller, which means that the total number of savers enrolled in the system fell during 2008 by approximately 75,500, to 1,483,124. This represented a decrease of 4.8% in relative terms.

The composition and characteristics of the funds' bond portfolios changed in 2008

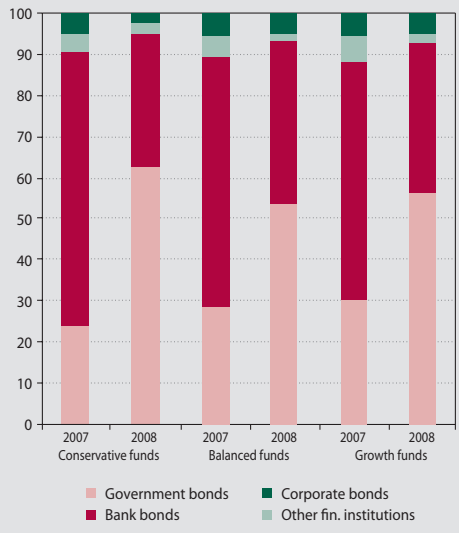
Because of the turbulent conditions in 2008, pension fund management companies modified numerous parameters of their bond portfolios. The structure of bond portfolios by sector of issuance changed (Chart 83), but the orientation to Europe deepened (96% of the volume). The share of Slovak debt securities, largely government securities, reached 73% at the end of the period under review. The share of debt securities issued with a floating coupon, which are common among bank issues, decreased by approximately 27 percentage points, to 42% at the end of 2008. Together with government bonds, the

Chart 82 Types of investments as a share of the total volume of assets under management (%)



Source: NBS.

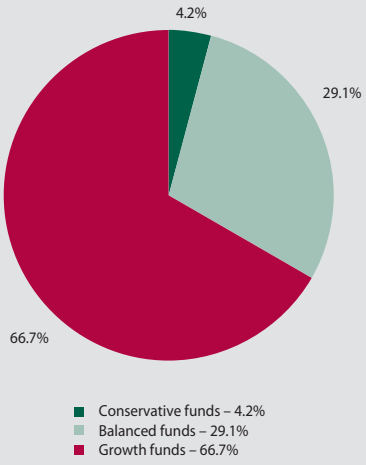
Chart 83 Bond portfolio structure by type of fund (%)



Source: NBS.

74 *This number relates to the period from 1 January 2008 to 30 June 2008. In accordance with the valid law, the actual disenrollment of savers during the second phase of the capitalisation pillar began on 1 January 2009. The disenrollment is therefore not reflected in the total number of savers for 2008.*

Chart 84 Structure of the total volume of assets under management by type of fund in 2008



Source: NBS.

share of fixed-coupon bonds increased (31%), especially that of zero-coupon bonds (27%). The maturity of the bond portfolio showed a decreasing tendency. The original interval of the average volume-weighted maturities (2.8 to 6.8 years) for the individual funds was reduced to 1.4 to 3.2 years. The average maturities decreased in all eighteen funds. During 2008, bonds were even more concentrated in the already dominant A+ rating category. The proportion of bonds with the highest possible rating (AAA) increased somewhat.

Net asset value in Pillar II funds increased, but more slowly than in 2007 in both relative and absolute terms

The net value of assets managed by pension fund management companies kept rising during 2008, and reached EUR 2.23 billion at the year-end (i.e. an annual increase of 31%). This represented a marked slowdown in comparison with 2007, which was largely attributable to the base effect, but it was also caused by the disenrollment of a proportion of savers whose accumulated assets were transferred from pension funds to the Social Insurance Agency. This fact, supported by a fall in the value of selected assets, led to a relatively significant reduction in the absolute increase in net asset value in 2008, compared with the previous year. As usual, the distribution of the net asset value among the three prescribed types of funds remained broadly unchanged (Chart 84).

Pension fund management companies as a sector again failed to achieve a profit in 2008

The sector as a whole reduced its loss to EUR 5.7 million, which was approximately a third of the figure for 2007. Of the total number of six companies, only two reported positive financial results.

PILLAR III

The volume of assets in Pillar III funds increased

The volume of assets managed by five supplementary pension insurance companies (DDS) belonging to Pillar III of the pension system grew steadily throughout 2008. The net value of assets managed in this system reached EUR 936 million at the end of the year. Fully 97% of this amount fell within the saving phase of the supplementary pension insurance cycle, i.e. within contributory funds.

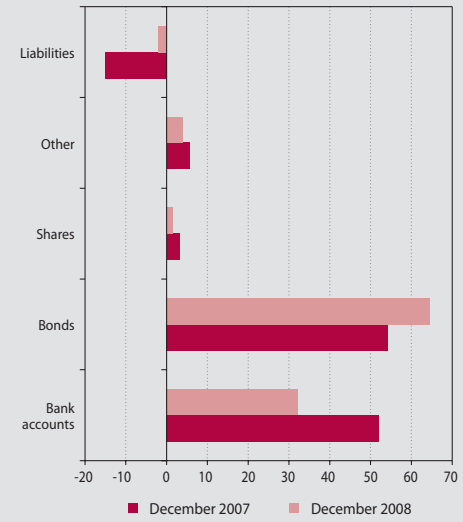
The structure of assets, as in Pillar II, changed in favour of bonds

The structure of assets (Chart 85) refers to the portfolio of the system as a whole, but since a large portion of the total net asset value in Pillar III is in contributory funds, this structure also gives a clear picture of the situation in this type of funds. The assets of payout funds are composed exclusively of bank deposits (56%) and bonds (44%). However, the portfolios of Pillar II funds show relatively large variations and the individual funds' asset structures often deviate considerably from the sectoral average.

Pillar III fund yields were likewise affected by the financial market crisis

Contributory funds achieved an average annual yield of -2% (weighted by NAV) as at 31 December 2008. The yields spreads of the individual contributory funds (-20.9% to 2.9%) were relatively wide, which can be attributed to the diverse orientation of these funds, from the money market to the equity market. Positive re-

Chart 85 Types of investments as a share of the total volume of assets under management (%)



Source: NBS.

sults were achieved by three funds (out of ten) in this category. The situation in payout funds was better: they managed to appreciate the assets of savers by an average of 1.4%.

Apart from developments in the value of assets under management, the final valuation of assets for supplementary pension savers takes into account the various types of fees that are debited by supplementary pension insurance companies from the relevant fund's account. The most significant of these fees is the fund administration fee, which accounted for 91% of the amount of all fees in Pillar III pension saving in 2008. The fund administration fee is fixed in the fund statute as a percentage of the average NAV and, according to law; its maximum value is 3%. At the end of 2008, the average level of NAV-weighted fees in all 14 funds of the system was relatively close to the limit value, at 2.44%.

Supplementary pension insurance companies as a sector were more profitable in 2008

Supplementary pension insurance companies achieved an aggregate profit of EUR 3.26 million in 2008, which was EUR 384,000 more than in 2007. Loss was recorded by one supplementary pension insurance company.

4.5.2 Risks in pension saving

PILLAR II

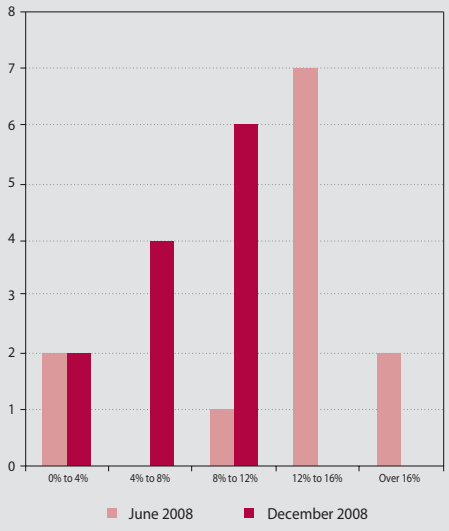
Portfolio duration increased

The portfolios of conservative pension fund management companies (except for one) have no open currency positions and contain neither shares nor mutual fund shares. Therefore, they are not exposed to exchange rate risk, or to equity risk.[75] The proportion of bonds to assets in conservative funds ranges from 45% to 72%. The average weighted portfolio duration increased somewhat in comparison with June 2008 (values were in the range of 0.5 – 1.02). The portfolios are more sensitive to interest rate changes, which means higher interest rate risk than in the previous period. The proportion of bonds to total assets in balanced and growth funds ranged from 42% to 71% in the second half of 2008.

The proportion of shares and mutual fund shares in the portfolios of balanced and growth funds is decreasing

In balanced and growth funds, the proportion of shares and mutual fund shares to net asset value

Chart 86 Shares and mutual fund shares as a percentage of NAV



Source: NBS.
Note: The horizontal axis shows the proportion of shares and mutual fund shares to NAV in percentages. The vertical axis shows the number of balanced and growth funds belonging to the given category.

75 *The only exception was a company in which conservative and mutual fund shares accounted for 2% to 3% of the total net asset value in the second half of 2008.*

shows a decreasing tendency (Chart 86). Despite this, VaR recorded abrupt changes as a result of turbulences in the equity market, followed by an increase in the volatility of yields. The most significant increase in this risk indicator took place in the first half of October.

Low exchange rate risk

Exchange rate risk is relatively low, since the foreign exchange positions of pension funds are largely closed. The open positions are mostly euro positions. These, however, represent no risk, owing to the adoption of the euro in January 2009. Leaving this out of consideration, pension funds are mainly exposed to the risk arising from changes in the exchange rates of the US dollar and Polish zloty.

PILLAR III

Supplementary pension insurance funds were exposed to very low market risk

The funds of supplementary pension insurance companies (DDS) are highly concentrated, with 96% of the assets managed in four funds. Owing to their conservative structure, these funds are exposed to relatively low market risk. None of these funds has a VaR ratio exceeding 1.3% of the assets with a probability of 99%, over a time horizon of 10 days. The portfolios of other contributory funds are much more risky, because they tend to invest more in shares and mutual fund shares.

During the second half of 2008, overall market risk increased as a result of a rise in financial market volatility.

Credit risk was also at a low level

The degree of credit risk arising from debt securities held in the portfolios of these funds was estimated on the basis of a simple sensitivity test. A default rate was assigned to such securities according to their external ratings. Even under the assumption of a twofold or threefold increase in the default rate, none of the funds would suffer a loss higher than 0.3% or 0.5% of the net asset value.

4.6 RISKS ARISING FROM FINANCIAL SECTOR DEVELOPMENTS IN 2008

- Slightly increased credit risk in loans to households;
- More significantly increased credit risk in loans to non-financial corporations;
- Increased interest rate risk for the portfolios of conservative pension funds and increased short-term volatility in share prices in balanced and growth funds;
- Increased short-term share price volatility for mutual funds oriented towards equity markets.

The direct impact of the persisting unfavourable situation in the global economy in 2009 upon the Slovak economy will cause a credit risk increase in the banking sector

Data on loan defaults in the household sector in 2008 do not indicate a deterioration in the quality of loan portfolios. Although the outstanding amount of non-performing household loans increased year-on-year by 35%, similar increases were also recorded in the previous years. The default rates of the individual types of household loans increased year-on-year only slightly, owing to the continuing strong growth in the volume of loans. The worst performers in terms of quality were consumer loans. The higher risk involved in these loans is, however, reflected in their higher prices (interest rates). The gloomy prospects of the domestic economy for 2009 and 2010 will, in all probability, lead to an increase in the default rate of household loans.[76] The financial position of households, which is highly dependent on employment and wage developments in Slovakia, is expected to deteriorate, owing to the large number of heavily indebted households (households with a relatively high loan repayment burden in relation to their disposable income). For example, the credit risk involved in mortgage loans provided in 2007 and 2008 increased, because real estate prices in that period rose more rapidly than incomes in all regions. Banks were forced to provide new loans with high LTV ratios (the ratio between the amount of a loan and the collateral value), which increases the risk of loss

76 *The modelled macroeconomic scenario, according to which real GDP will fall by 4.3% in 2009 but the level of output in the following three years will remain unchanged, unemployment will rise by 2% in both 2009 and 2010 but will remain unchanged in 2011, inflation will hover around the level of 2% throughout the period under review and the ECB will leave its base rate at 1%, could result in an increase in the share of non-performing loans in the household sector, from 3% to 6% (under the assumption of zero growth in new loans). If the volume of new loans falls, this proportion may increase still further.*

for the bank in the event of default in loan repayment, coupled with a fall in residential property (collateral) prices.

The unfavourable economic development will have a more adverse effect on the quality of loans granted to non-financial corporations

In 2008, the loan default rate followed a favourable trend, because enterprises had sufficient financial reserves from the previous favourable period and the annual rate of credit growth was high. There is, however, a high probability that this trend will change in the coming period. At the end of 2008, sectors that are highly sensitive to the economic downturn accounted for almost 60% of the corporate loan portfolios of banks. The performance parameters of 'sensitive' enterprises markedly deteriorated in the last quarter of 2008 and the growth dynamics of bank lending to enterprises weakened to 7% (from 32% in the second half of the year). In the second half of 2008, banks took a far more cautious approach to lending to enterprises than to lending to households. However, the quality of earlier loans is largely dependent on the depth of the economic decline and the duration of the negative trends.[77]

The highly negative and volatile developments in the global financial markets adversely affected the performance and riskiness of funds with portfolios dominated by shares, and caused an increase in redemptions in collective investment funds

The persistent turbulence in the global financial markets, mainly in the autumn of 2008, led to an increase in equity risk in the portfolios of domestic funds. Equity risk increased in the balanced and growth funds of pension fund management companies (DSS), the equity funds of collective investment companies, and some of the contributory funds of supplementary pension insurance companies (DDS). The balanced and growth funds of DSSs reduced the level of equity risk through the sale of shares and through portfolio diversification in favour of government bonds. A similar approach was taken by most contributory funds of DDSs. Increased diversification from shares into bonds in 2008 was also recorded in mutual funds, which focus primarily on investment in shares. Uncertainty among investors caused a massive outflow of funds from this sector. Most redemptions took place in money market funds, which was probably connected with the attractive rates of interest paid on bank deposits and the introduction of a strengthened deposit guarantee scheme, offering 100% coverage for bank deposits. Funds had sufficient liquid assets at their disposal to pay dividends to investors; none of them had to be closed (which is a lawful option).

The overall fall in liquidity, which was a common problem in advanced financial markets throughout 2008, was not seriously reflected in the domestic financial sector. The banking sector, which is in general highly sensitive to liquidity stresses, had sufficient domestic resources.

77 *Depending on the sensitivity of enterprises to changes in the business cycle and on the version of the scenario applied with a one-off shock to the economy, the loan default rate will rise from 1% to 2% under the moderate scenario (for insensitive sectors) and from 3% to 30% under the severe scenario (for sensitive sectors).*

CHAPTER 5

THE SLOVAK INTERBANK PAYMENT SYSTEM (SIPS) – SECURITY AND RELIABILITY IN 2008

5

5 THE SLOVAK INTERBANK PAYMENT SYSTEM (SIPS) – SECURITY AND RELIABILITY IN 2008

From the viewpoint of risks to financial stability, the operation of the SIPS interbank payment system in 2008 may be evaluated as positive

In 2008, the SIPS system worked reliably and without disruptions, and the payment infrastructure underwent final preparations for its transition to the euro currency as from 1 January 2009.[78] The new payment infrastructure is based on the TARGET2-SK payment system and the EURO SIPS retail payment system (established through the migration of the original SIPS). EURO SIPS functions as a domestic clearing system and the results of the clearing are finally settled in TARGET2-SK.

The new payment infrastructure is the product of consensus between Národná banka Slovenska and all SIPS participants

A decision on the future form of the payment infrastructure in Slovakia was taken at the end of 2006 when approval was given to a strategy which envisaged SIPS becoming a retail payment processing and clearing platform in the form of a TARGET2 "ancillary system", with the RTGS functionality removed from the original SIPS system and replaced by the TARGET2 system. The selected strategy for rebuilding the payment infrastructure in Slovakia was also supported by the Slovak banking community, which undertook to participate in TARGET2 and to use the future EURO SIPS system. The banking sector's preparations for connecting to TARGET2 came under the intensive coordination of Národná banka Slovenska in September 2007, with the presentation of a detailed plan containing required analyses of banks' procedures and future ancillary systems (EURO SIPS, Central Securities Depository, First Data Slovakia), training of future participants, registration for SWIFT services, three-phase coordinated testing in TARGET2 and, finally, registration in the production environment. By the end of 2008, Národná banka Slovenska, commercial banks and ancillary systems were ready to commence live operation, and the entire TARGET2 connection process culminated with the successful transfer of koruna account balances held with banks in the SIPS system to euro accounts in TARGET2-SK. In accordance with the applicable rules, the operation of EURO SIPS as a TARGET2-SK ancillary system was launched in the afternoon of 31 December 2008. The opening of its first operating day in the euro currency went smoothly and took place at the time stipulated in the system schedule.

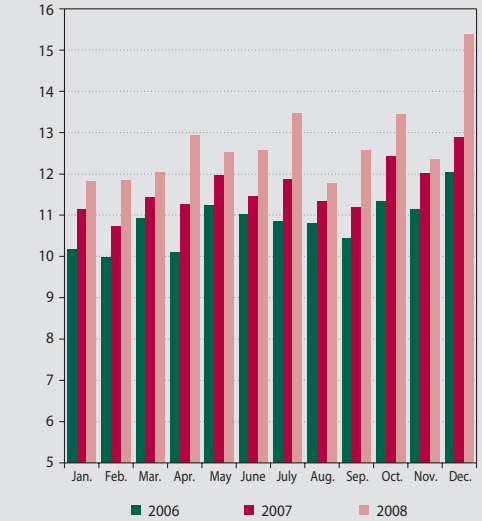
The number of transactions executed through SIPS rose by 9.3% in 2008

A total of almost 153 million transactions were executed through SIPS in 2008, and therefore the rising year-on-year trend of previous years was maintained (Chart 87).

The value of executed transactions fell slightly in 2008

The total value of transactions executed in 2008 was around SKK 79.5 billion (EUR 2.6 billion), which was almost identical to the previous year's figure. The total value declined by 1.32% in com-

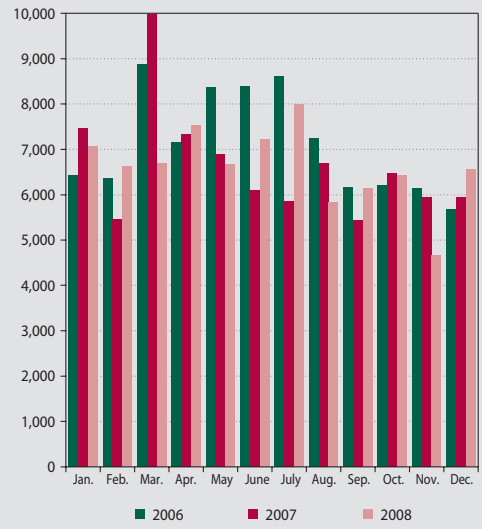
Chart 87 Number of transactions executed in SIPS (millions)



Source: NBS.

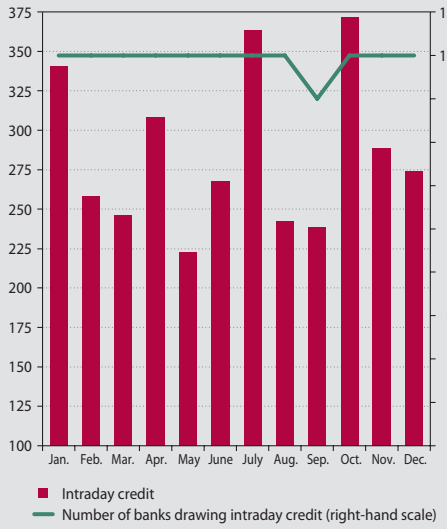
78 *A direct amendment (Act no. 270/2008 Coll.) to the Payment System Act was adopted in 2008. The enactment of this amendment was related to changes in the SIPS domestic payment system and to the connection to the TARGET2 payment system from 1 January 2009, taking place because of the introduction of the euro in the Slovak Republic. In 2008, Národná banka Slovenska in cooperation with the Ministry of Finance of the Slovak Republic began the process that will result in the Payment Services Directive (2007/64/EC) being transposed into Slovak law through the adoption of a new generally binding law, expected to take effect as of 1 November 2009. With the adoption of this law, the Payment System Act will be repealed.*

Chart 88 Value of transactions executed in SIPS (SKK billions)



Source: NBS.

Chart 89 Intraday credit in 2008 (SKK billions)



Source: NBS.

parison with 2007, thereby confirming that the previous year had marked a turning point in the year-on-year growth curve – after rising by almost 50% from 2004 to 2006, the total value of transactions fell for the first time in 2007, by 7.1%. (Chart 88). Strong downward pressure on the value of payments came from the more stable development of the domestic currency's exchange rate and probably also reflected the impaired economic situation.

Priority payments as a share of the total number and value of executed transactions did not change in 2008

A total of 277,697 priority payments were made in 2008 with an overall value of almost SKK 54 billion (EUR 1.8 billion). Priority payments as a share of the total number of transactions therefore remained at the same level as in 2007, below 0.2%. Although this share is minimal, the value of priority payments as a share of the total value of executed transfers represented 68%, the same as in 2007.

Smooth functioning of the payment system is supported by the provision of intraday credit

Národná banka Slovenska provides intraday credit to those participants of the interbank system who are required to hold minimum reserves. Intraday credit is offered as an overdraft facility on financial reserve accounts with a maximum overdraft limit. The intraday credit is payable within one operating day and must be fully collateralized, i.e. by the relevant amount of securities listed in the central register of short-term securities maintained by NBS.

In 2008, participants who applied for intraday credit were provided with this credit in the total amount of more than SKK 3,422.3 billion (EUR 113.6 billion) (Chart 89). The average weekly amount of intraday credit provided by Národná banka Slovenska was SKK 66.092 billion (EUR 2.2 billion). The amount of intraday credit provided to participants is set on a weekly basis.[79] In contrast to the previous year, their drawing of intraday credit was evenly spread through the year with all the participants drawing this credit in every month apart from September.

Rising use of cashless payments

The number of payment cards issued increased by 7.5% in 2008, to stand at 5.255 million. As at 31 December 2008, a network of 2,266 ATMs and 31,722 payment terminals could be used by bank customers in the territory of the Slovak Republic. The number of cashless payments is increasing

79 *The amount of intraday credit represents the value of securities (less deduction) that NBS accepted from participants as collateral for the credit. This is the limit up to which participants may draw the intraday credit. The actual drawing of the credit is not at present subject to statistical tracking.*

more rapidly in comparison with cash withdrawals – last year the number of cashless payments and cash withdrawals rose, respectively, by 28% and 5% year-on-year, and their total values increased, respectively, by 23% and 11% year-on-year.

The CDCP securities settlement system was assessed as compliant with ESCB standards

In regard to the adoption of the euro in the Slovak Republic, the European Central Bank (ECB) asked Národná banka Slovenska to make an assessment of securities settlement systems (SSS) against the standards for the use of EU securities settlement systems in Eurosystem credit operations. The ECB laid down a formal procedure for ensuring the performance of this assessment, under which Národná banka Slovenska acted both as the coordinator of domestic securities settlement systems and as the first assessor. The role of second assessor was filled by Banca d'Italia. The final assessment report was produced by the ECB in December 2008. The subject of the assessment in the Slovak Republic was the central securities depository of the Slovak Republic, Centrálny depozitár cenných papierov SR a.s. (CDCP). CDCP was assessed as "compliant" with standards for its use in Eurosystem credit operations, and it is now included in the list of SSSs eligible for use in Eurosystem credit operations. The ECB has also sent CDCP several recommendations.

Credit risk in the payment system is low. Demands on the system's operational reliability are rising.

The Slovak Interbank Payment System features high degree of reliability and a low credit risk for both its operator (Národná banka Slovenska) and participants. Credit risk is eliminated by the fact that a payment will only be made if the participant has sufficient funds on account with NBS or is able to cover it by drawing intraday credit secured by collateral. The increase in both the number and average value of priority payments and the further automating of payment system operations is placing added demands on the operational reliability of the payment system, on its software and hardware specifications, and on its organization.

PART C

ANNEXES

C

ANNEX 1

HOUSING AFFORDABILITY IN THE REGION, LENDING, THE RATE OF CONSTRUCTION, AND PRICES OF FLATS

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1 HOUSING AFFORDABILITY IN THE REGION, LENDING, THE RATE OF CONSTRUCTION, AND PRICES OF FLATS

Prices of flats[80] in Slovakia differ markedly across regions. These differences have persisted for the entire period since 2002, the first year in which prices of flats were systematically collected. Although the relative level of regional prices (against the average for Slovakia) has stayed relatively constant, the actual (absolute) level has risen by two and a half times.

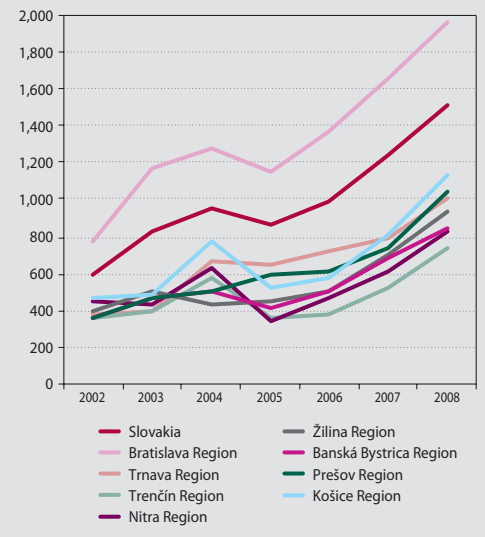
Prices of flats in Bratislava are approximately 35% above the national average, while prices of flats in the regions reach around 60% of that figure. Between the regions, however, there are conspicuous differences, too, with the relative price levels ranging from between 40% and 80% of the national average.

In this part, we will analyse certain factors which, during the period under review, have affected the regional price level of flats and relative prices across regions. Firstly, we will look at the affordability of flats in relation to income and wages, assess the role of living costs in the affordability of housing at the regional level, and point out the potential effect of lending and the rate of construction on prices of flats. We will ask the following questions:

- Are differences in prices of flats – particularly between Bratislava and other regions of Slovakia – really so large that flats in Bratislava are becoming unaffordable? What role do different incomes, wages and costs of households play in the affordability of flats? How does borrowing contribute to the affordability of flats?
- Is it possible that loans to households have affected prices of flats and contributed to driving them up (and fed back to a high amount of actual lending)?
- How have price developments been affected by different components of the supply of flats? What effect have changes in the stock of unfinished flats had on prices of flats?

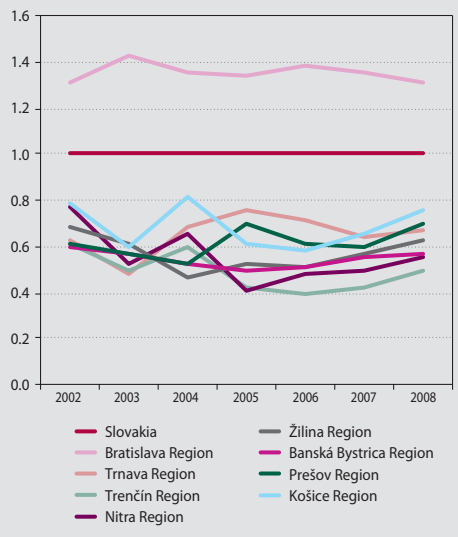
To test the selected hypotheses, we used simple (regression) models for prices of flats.

Chart 90 Prices of flats by Slovak region (EUR/m²)



Source: NARKS, NBS.

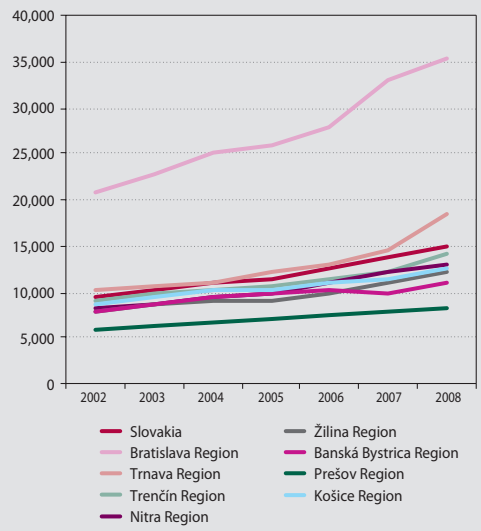
Chart 91 Relative prices of flats by Slovak region (Slovakia=1)



Source: NBS calculations.

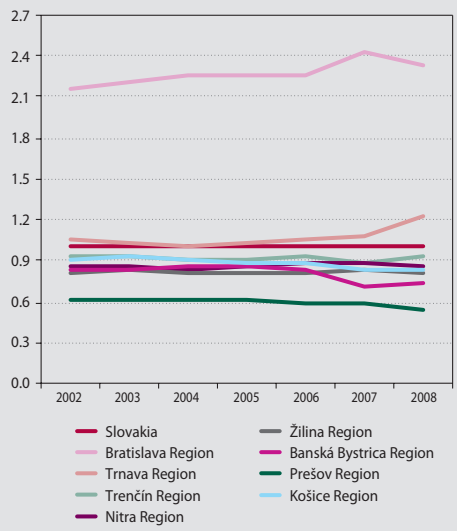
80 *NARKS, in cooperation with NBS, regularly publishes information on average offer prices in the real estate market (now in euros per m2). Further details of the respective methodology may be found in the following article: Cár, M.: Sledovanie cien nehnuteľností určených na bývanie na Slovensku (Tracking residential real property prices in Slovakia); Biatec, Volume 14, no. 1/2006.*

Chart 92 Regional economic level (GDP per capita in PPS)



Source: Statistical Office of the Slovak Republic.

Chart 93 Relative regional economic level (GDP per capita in PPS, Slovakia=1)



Source: NBS calculations.

1.1 ECONOMIC LEVEL AND PRICES OF FLATS

As we have mentioned in previous financial stability reports, the key determinant of prices of flats in Slovakia, and regional differences in prices of flats, is the economic level as measured by GDP per capita in PPS. Bratislava has a markedly different economic level, with a GDP per capita that is 2.5 times higher than the national average. Even between the other regions, however, the statistically reported GDP per capita (in PPS) shows sizeable differences – whereas the figure for Trnava Region was above the national average during the period under review (2000–2006), the figure for Prešov Region was only slightly higher than half of the average.

The regional differences in prices of flats and the large disparities in economic level between regions are interconnected, as is clear from the estimation of the differentiation model for prices of flats.[81] The model shows that regional differences and time series changes in the economic level were the determining factors behind the change in prices of flats in Slovak regions during the period from 2002 to 2006. The relevant elasticity was probably less than 1, and it also depends on the model specification.

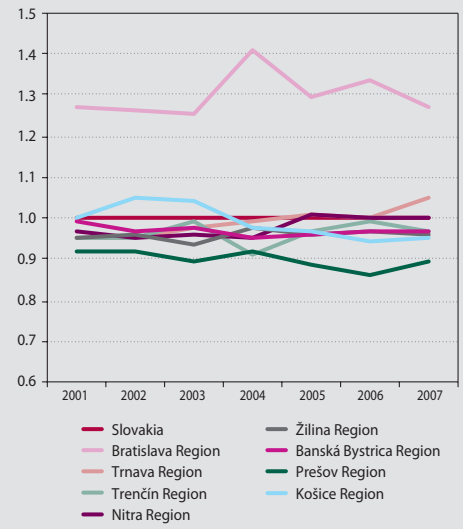
Assuming that differences in the price of flats relate only to the economic level (time series), price elasticity with respect to the economic level acquires a value of approximately 0.8 and does not differ significantly between regions – it is the case in each region that a 1% increase in the economic level translates into a 0.8% rise in prices of flats. Naturally, the absolute increase was smaller in those regions where prices of flats were low.

Assuming that the differences were related also to specific circumstances of the respective period, then the estimated price elasticity with respect to the economic level is smaller, around 0.45. Whereas the previous model attributed these changes in prices of flats exclusively to changes in the economic level, this model attributed them also to the specific circumstances of each period. The estimate shows that prices of flats were undervalued at the beginning (2002) and overvalued in 2004 (the year of Slovakia's accession to the EU). Another "overshooting" of market prices has probably occurred in relation to Slovakia's entry into the euro area.

In fact, we still do not know how to determine more precisely the size of elasticity, since the period in question was marked by major instabilities in the market for flats. These were caused by large structural changes in the economy (ac-

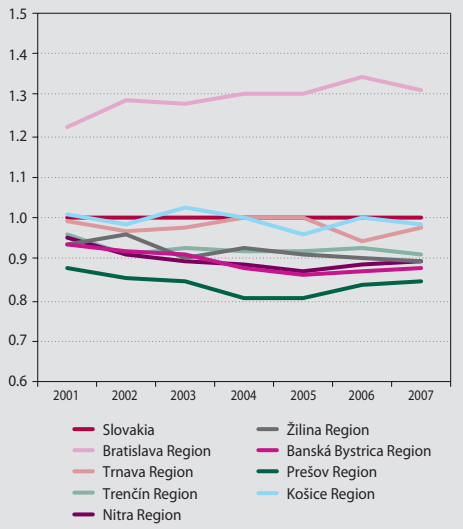
81 *We used a panel regression including cross-sectional and time series data for random effects.*

Chart 94 Regional differences in net income per household (Slovakia=1)



Source: Statistical Office of the Slovak Republic, NBS calculations.

Chart 95 Regional differences in the net wage (Slovakia=1)



Source: Statistical Office of the Slovak Republic, NBS calculations.

celeration of mortgage financing, EU accession, progress towards the euro area), while "convergence" effects operated in both the market and the broader economy.

Our provisional conclusion is that the elasticity of flat prices with respect to the economic level was less than 1 owing to market instability. The probability is that its value did not vary significantly between regions. We assume that the elasticity of flat prices with respect to the economic level will be possible to estimate more precisely only with the passage of time – when unstable periods have a relatively lower weight in the market. We expect that it will then be close to 1.

1.2 AFFORDABILITY OF HOUSING FROM THE VIEW OF HOUSEHOLD INCOME

The different economic level of regions is reflected in the wages and incomes of households. The respective relations between net monthly income per household member and the national average in Slovakia range between 0.9 (Prešov Region) and 1.4. The differences have been diminishing since Slovakia joined the EU. The average net monthly income for a region, however, includes all households – also those which have probably resolved the housing issue or are no longer dealing with it. Purchases of flats are typically made within the group of households which are economically active and therefore whose income is determined by the (net) wage. The regional differences according to this index are somewhat larger and range from 0.8 to 1.4. The charts 94 and 95 show regional income and wage differences.

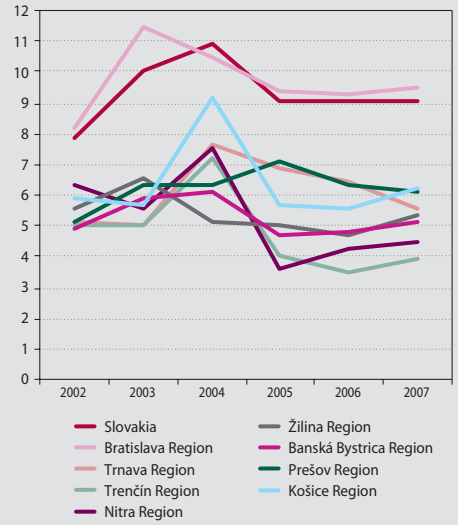
Housing affordability is assessed using a "housing affordability ratio". It is defined, for example, as the number of years before a household can buy a flat out of its (net) income. In order to determine this ratio, it is appropriate to define a "standard situation". For such a situation, we will take the purchase of a starter flat by a childless married couple who have an average income or average wage. The starter flat is assumed to be of average quality (for an average price per m^2) with a size of 50 m^2.

The ratio is therefore defined as follows:

$$\textit{housing affordability} = \\ = (50 * \textit{price per } m^2) / (2 * \textit{income} * 12)$$

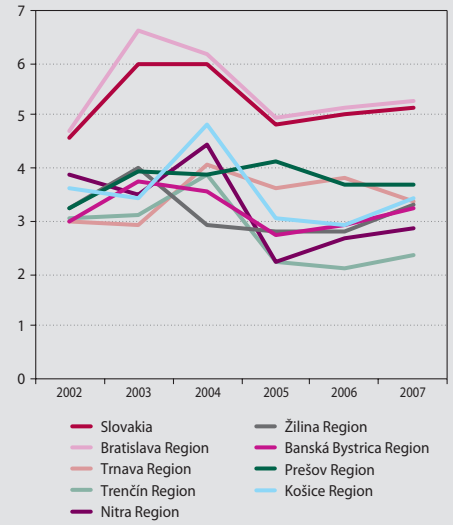
where the *price per* m^2 is the market price per square meter of a flat and *income* is the index of the respective average monthly income per capita in the region (net monthly income per

Chart 96 Affordability of a flat based on household income (number of years to buy a flat)



Source: NBS calculations.

Chart 97 Affordability of a flat based on the married couples' wage (number of years to buy a flat)



Source: NBS calculations.

household member or net monthly wage per employee).

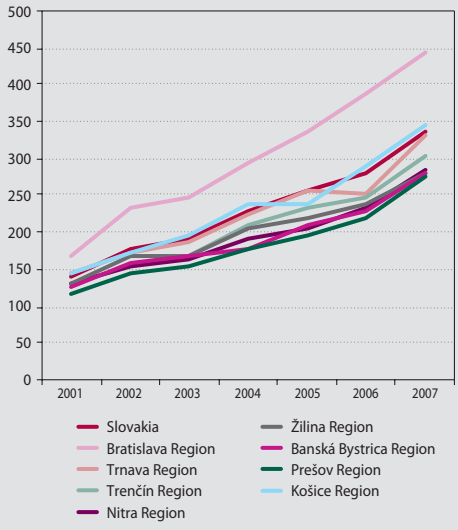
The charts 96 and 97 describe the development of the housing affordability ratio for regions in Slovakia. The y-axis shows the ratio value – the number of years before a married couple can afford to buy a starter flat out of their (average) income (wage).

The charts show that flats in Bratislava are substantially less affordable compared with flats in other regions of Slovakia. In 2007, the purchase price of an average starter flat in Bratislava was equivalent to around the 10-year average net income of a married couple, whereas outside Bratislava it represented between the average 4-year and average 6-year income. Put in more realistic terms, the purchase price of an average starter flat in Bratislava in 2007 was equivalent to the 5-year net (average) married couple's wage, but in other regions of Slovakia, its level ranged from the 2.5-year to 4-year net married couple's wage.

1.3 IS HOUSING MORE AFFORDABLE OUTSIDE BRATISLAVA?

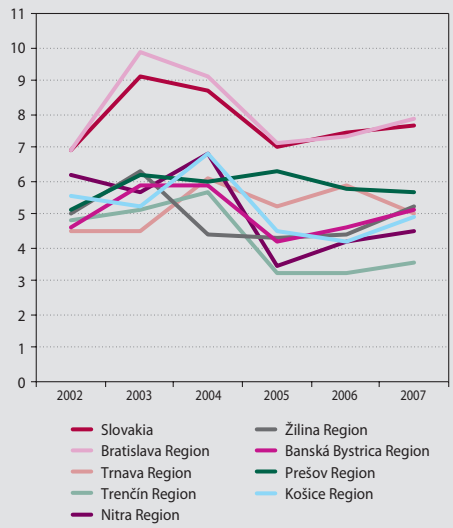
For the above calculation of the income-based affordability of a flat, we did not take into account living costs. Whereas differences in (average) income across regions are large, differences in expenditure are far smaller. In order to determine the affordability of flats across regions on the basis of household funds less other necessary expenditure, we must adopt an assumption about necessary expenditure. Necessary expenditure as a share of actual expenditure will be taken to

Chart 98 Household disposable income (wage less necessary expenditure, EUR)



Source: NBS calculations.

Chart 99 Affordability of a flat based on the adjusted married couples' wage (number of years to buy a flat)



Source: NBS calculations.

be 60%. The housing affordability ratio may then be modified by substituting *income* for *adjusted income*:

adjusted income =
*= income – 0.6 * total expenditure*

Chart 98 shows regional differences in the wage level less (average) expenditure and the time series of the modified affordability ratio for a flat (based on the wage of working married couple). It is evident that where differences in wages are considerable, then differences in the disposable income of households are large, too – the disposable income of households outside Bratislava is substantially different (smaller), and therefore so are the funds available for the purchase of a flat.

For reasons of clarity, let us note that the households under discussion are "average households" with an average income (wage) in the different regions. This is a theoretical construct that allows us to compare differences between regions.

Chart 99 shows that the affordability of a flat based on the adjusted wage level differs between regions to a more marked degree than does affordability based on the original (unadjusted) wage level. The worst situation is in Bratislava – a starter flat in 2007 was affordable after 8 years on the average wage, even where married couples reduced their expenditure to 60% of the average expenditure for Bratislava (i.e. with a relatively low level of necessary expenditure). By contrast, the affordability of a starter flat in Trenčín region is good – working married couples on the average wage could afford to buy a starter flat out of their disposable income within 3 to 4 years. In other regions outside Bratislava, the starter flat becomes affordable after around 4 to 5 years. It should be noted that this is a hypothetical case in which expenditure is maintainable at a low level.

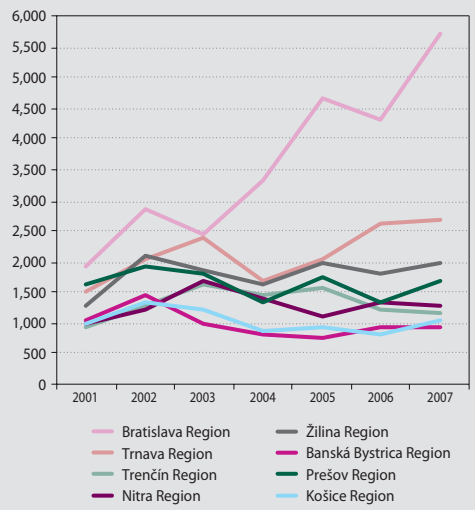
1.4 UPWARD PRESSURE FROM LENDING ON PRICES OF FLATS

Loans taken out for the purchase of a flat have two functions – on the one hand, they act as financial leverage accelerating the purchase of the flat; on the other hand, they represent a source of effective demand, which in the event of inelastic supply increases the imbalance in the market for flats and allows property developers to raise prices of flats. In the extreme case of a large imbalance – arising, for example, from rapid lending growth, the price rises triggered by the lending growth may absorb a significant part of the funds earmarked for the purchase of flats, as well as a large part of the loans provided for this purpose. This situation could arise where the market is gripped by a so-called mania (the upward phase in the development of future price bubble), where soaring prices of flats are increasing the preference to buy (moral hazard). Where a purchase is made with both a loan and own funds, the situation could even arise where lending is serving only to finance an increase in prices of flats.

As for the situation in Slovakia's market for flats, we describe it in simplified terms using the model in the box below.

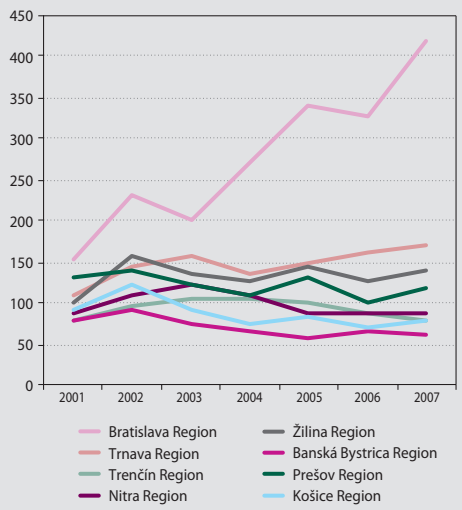
In the market for flats, the supply comprises old flats and new flats. Purchases are financed using some of the proceeds from the sale of old flats, loans, and own funds. The supply of new flats is inelastic, and the supply of older flats is sensitive to demand price.

Chart 100 Number of flats built per year



Source: Statistical Office of the Slovak Republic.

Chart 101 Floor area of newly built flats (thous. m²)



Source: Statistical Office of the Slovak Republic, NBS calculations.

The equilibrium condition is:

$$o * IO + loan + OF = (No + Nn) * dp$$

$$No * r * pn + Nn * pn = (No + Nn) * po,$$

where

- *o* is the share of the income from the sale of old flats which is reinvested in the purchase of flats
- *r* is the price of an old flat relative to the price of a new flat
- *IO* is income from the sale of old flats
- *OF* is the amount of own funds (excluding the reinvested income o*IO)
- *No* is the number of old flats on the market
- *Nn* is the number of new flats on the market
- *dp* is the price determined by demand – offered by prospective purchasers of flats
- *po* is the price of old flats asked by sellers
- *pn* is the price of new flats asked by sellers

In the case of excessive lending, equilibrium is attained by:

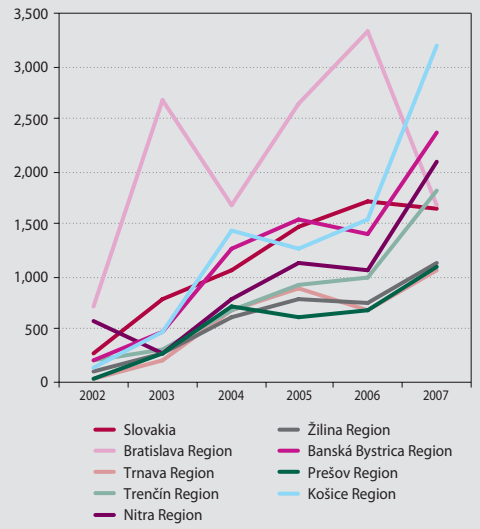
- a higher price of new flats (and, proportionally, of old flats too) and higher inflation;
- narrowing the gap between the price of old and new flats (a higher value for r) and higher inflation;
- less use of own funds (o*IO + OF) and an adjustment of demand – where demand-side decisions dampen inflation pressure from the excessive use of borrowed funds;
- a larger supply of old flats (dampening the inflation pressure from excessive lending triggered by supply) in response to the higher price of (old) flats (higher inflation).

If the market is gripped by buying fever, the sharp rise in prices will reinforce a positive feedback. Not only will this drive up demand for loans, but seemingly also substantiate the increase in supply of loans – as the value of collateral rises, more own funds are brought into play and the supply of old flats declines amid expectations of rising prices. The effect is therefore inflationary.

One sign of the pressure exerted by lending on prices of flats is revealed by comparing the amount of lending with the total area of new flats.

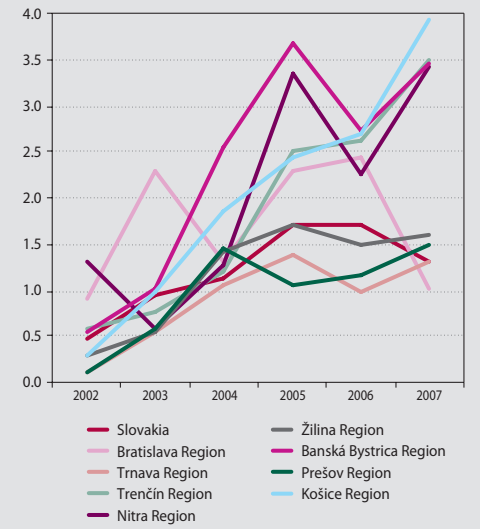
The regional cross-section of data does not enable us to make a detailed and thorough analysis of the role of loans in flat buying, since the available data shows only the total amount of loans to households (it does not identify loans for flat

Chart 102 Lending per m2 of new flats (EUR/m²)



Source: NBS calculations.

Chart 103 Pressure on prices of flats from lending to households



Source: NBS calculations.

buying). That reservation aside, however, we can still construct an equilibrium for the pressure of lending on prices of flats:

*lending per m² of new flats = amount of loans to households/(number of newly built flats * average area of newly built flats)*

Lending per m² of flats represents the price (or part of the price) per m² of newly built flats which may be financed from newly arranged loans. The ratio to the average floor-area price of flats in the market can be used as an indicator of the pressure exerted on prices by newly provided loans, as follows:

pressure of lending on prices of flats = lending per m² of new flats/floor-area price of flats per m²

Chart 102 show the development of these ratios across regions.

Lending per m² of new flats (Chart 102) was clearly highest in Bratislava, where in 2006 it exceeded 3000 €/m². In other regions, the figure ranged towards the end of the period from 1,000 to 1,500 €/m², except for sharp rises in 2007 in the regions of Košice, Banská Bystrica and Nitra. For Slovakia as whole, lending per m² of new flats rose from around 300 €/m² to around 1,700 €/m².

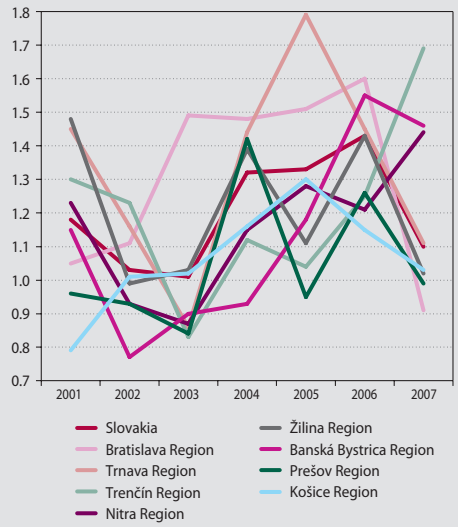
The evaluation is different, however, where the floor-area price of flats is compared. The index of lending pressure on prices is highest in Košice, Banská Bystrica and Nitra region and, during the period under review, it rose most sharply in these regions, too – from a value of around 0.5 to more than 3.5 (2007). A close examination of the regional situation reveals that although the amount of lending in these regions increased rapidly, the total floor area of newly built flats declined. Although it is not possible to know whether the funds borrowed in a given region were used within that region (the data, moreover, are for total loans, not just housing loans), we suppose that these ratios will help identify the lending-related tension in the market for flats.

1.5 THE CONSTRUCTION SITUATION AND PRICES OF FLATS

A key signal for supply (construction of new flats) and demand (the provision of housing loans) is given by the situation in the market for flats (pace of completion, ratio between flats starting to be built and newly completed flats, construction progress, and so on).

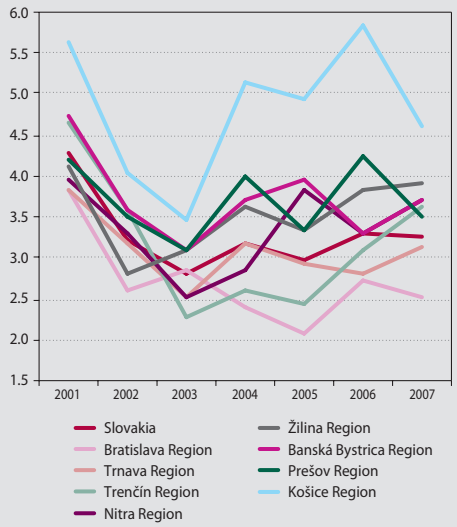
Looking at the Slovak market for flats in terms of the rate of construction and construction

Chart 104 Construction turnaround for flats (flats starting to be built/newly completed)



Source: NBS calculations.

Chart 105 Rate of construction (flats under construction/ newly completed)



Source: NBS calculations.

progress, it may be concluded that the market has gone through one stage of the cycle. This is confirmed by the ratio between the number of flats starting to be built and the number of newly completed flats and the ratio between the number of flats under construction at the end of the previous year and the number of flats completed in the given year (*rate of construction*).

Chart 104 and 105 show these developments in the period under review.

Chart 104 shows that following a temporary crisis in 2002, the construction of flats accelerated – more flats were starting to be built than were being completed. By the end of the period under review, this ratio was falling (especially in Bratislava). Confirmation of this cyclical development can be seen in Chart 105. The rate of construction firstly (in 2002) declined as more flats were being completed than were being built. The subsequent boom in the majority of regions saw an increase in the stock of unfinished flats as a result of insufficient capacity, and this lasted for 3-4 years. An exception, however, was Bratislava, where (probably also due to the migration of capacity from other regions, higher prices of flats, more expensive construction, etc.) a strong rate of construction was maintained for 2 to 3 years.

1.6 INFORMATION FROM THE REGRESSION ANALYSIS

Based on the above considerations and ratios, we used a panel regression analysis to estimate certain variants of models for prices of flats (by floor area).

Here we present only the results of one variant:[82]

log(price per m² of floor area)
= 2.84
*+ 0.46 * log(economic level)*
*+ 0.08 * log(lending per m² of new flats)*
*- 0.23 * log(rate of construction)*
+ 0.16 (for a flat in BA)
- 0.01 (for a flat in TT)
- 0.11 (for a flat in NR)
- 0.23 (for a flat in TN)
- 0.04 (for a flat in ZA)
- 0.08 (for a flat in BB)
+ 0.18 (for a flat in PO)
+ 0.11 (for a flat in KE)

According to this model, the price (in euros) per m² of floor area depends above all on the economic level (in the given region in the given period). The relevant elasticity is approximately 0.5.

82 *Estimate using the Swamy and Aroa method, random cross-sectional effects. The parameters (elasticity) are statistically significant to a level of 10%, R2 = 0.65, DW = 1.94.*

The price of flats is also affected by lending levels. The higher amount of lending relative to the total area of new flats (price per m^2 of new flats financed through loans) increased the average price per m^2 of flats in total. The relevant elasticity is around 0.1.[83] Knowing the marginal accuracy of this estimate (only for the interpretation of the result), we can state that the acceleration in lending between 2002 and 2006 accounted for around 15% of the increase in prices of flats (in total). This is not, though, a unilateral causal correlation. The model explains how lending affected prices. As we have mentioned, however, higher prices – fuelled by other factors, too – are a cause of higher demand for loans and increase the price of flats used as collateral for loans. The relationship between prices of flats and the amount of lending is therefore simultaneous.

The rise in prices was also supported by the situation in unfinished construction projects. The elasticity of prices of flats with respect to the rate of construction is negative, at around -0.25. The decrease in the construction rate put upward pressure on prices, contributing some 7% to their rise during the period under review. The fall in the construction rate, reflecting tensions in the construction situation, resulted from a shortage of flats. In general, therefore, our estimates show that prices of flats in Slovakia – in addition to reflecting the key factor of the rising economic level – were affected by demand-side factors (especially the growth in loans to households) and supply-side factors (particularly the shortage of flats). Together these factors accounted for 20-25% of the increase in prices of flats during the period under review (2001–2007).

CONCLUSION

From the results obtained, we can provide the following answers to the questions posed in the introduction:

- prices of flats in Bratislava Region differ markedly from prices of flats in other regions of Slovakia. Even though income and wages in Bratislava Region are also sharply higher, an averagely expensive starter flat is less affordable in Bratislava Region (based on an average income) than in other regions of Slovakia;
- loans have played a major role in the financing of flats. Sharp lending growth has contributed to the increase in prices of flats – its effect, by our estimates, drove around 15% of the rise during the period 2002–2006. To identify a causal correlation between lending growth and the increase in prices would, however, mean having to express the mutual relationship between prices of flats and the amount of borrowing – higher prices of flats stoked demand for loans and increased the value of flats as collateral for loans;
- the restricted, inflexible supply of new flats and the lag between construction and movements in the economic cycle are causing changes in the rate of construction. Our analyses show that a decline in the construction rate related to insufficient supply has put upward pressure on prices of flats (accounting for around 7% of their increase during the period 2001–2007).

It may be expected that the crisis-triggered cooling of the market for flats is *currently* having a downward effect on prices of flats. The drop in the economic level, reduction in lending, and impaired marketability of flats during the ongoing crisis are temporarily pushing down prices of flats. In certain segments of the housing market, the decline will be severe.

Prices of flats in total are expected to rise in the *long term,* albeit more slowly than in the past. This increase will be based on the convergence of the domestic economic level towards that of advanced euro area countries, and its rise in Slovakia. Nevertheless, developments in different segments of the housing market may vary. The market will continue to reflect the supply of new flats and their prices. If new flats are in short supply or are expensive, prices of old flats will come under upward pressure. By contrast, an increase in the supply of flats dating back to the building boom of the 1960s and 1980s will bring down prices of flats (especially of the old ones).

83 *We note again that lending in our model means any loans to households – not just housing loans. If the model expressed the impact of housing loan and not just the impact of loans to households, the relevant elasticity would probably be higher.*

NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM

ANNEX 2

THE INTERNATIONAL FINANCIAL INTEGRATION OF SLOVAKIA – DEVELOPMENTS AND CHARACTERISTICS

2

2 THE INTERNATIONAL FINANCIAL INTEGRATION OF SLOVAKIA – DEVELOPMENTS AND CHARACTERISTICS

Since the beginning of the transformation process, the Slovak economy has seen major changes both in its structure and in international trade relations stemming from the decision to integrate with the European Union. The level of financial openness of today's Slovak economy was shaped by the liberalization of capital flows in the 1990s. The inflow of foreign capital financed investments and was a driver of the strong pace of growth. This took place, therefore, in line with the theory of capital allocation to emerging economies with a shortage of domestic savings – where these are needed to finance investments that must underpin the growth of the economy's potential and its capacity to generate relatively large income (in comparison with developed economies).

At the regional level, the determinants of foreign capital inflow were mainly the institutional guarantees of EU membership, income prospects, and the cheap and skilled workforce. The result was to accelerate the process of convergence towards EU economies, with which Slovakia was then increasingly linked.

The nature of this development has, however, had less desirable consequences, too – the country is putting itself in the position of an external debtor. Investment income is repatriated (in the form of debt service repayments or dividends), and this is reflected in the rise in the current account deficit through the income balance. Extensive movements of capital could represent a risk, since they may unexpectedly end or change direction with adverse consequences for growth. The maintenance of an external balance (external financial position) is therefore closely tied to the development of the goods and services balance.

A key element in maintaining the country's financial stability is the structure and other characteristics of capital flows, which in times of uncertain and volatile global economic developments (such as now) condition the ability to withstand financial shocks.

In this part, we will focus on certain aspects of Slovakia's international financial integration as reflected in data on the scope of financial flows between the domestic economy and external environment – the international investment position (IIP) of the country. We will outline the development of the IIP over time, the consequences for the external balance, and the changes that euro area membership is bringing.

2.1 THE INTERNATIONAL INVESTMENT POSITION AND ITS SIGNIFICANCE IN TERMS OF FINANCIAL STABILITY

Although the liberalization of capital flows brings benefits by improving the allocation of funds, diversifying risks, and reducing intertemporal budgetary restrictions, capital flows also have implications for a country's financial stability, as shown by the financial crises of the 1990s, especially in Asian and Latin American emerging economies. The problems of these economies were multiplied by the destabilizing, sudden reversal of external financial flows. The repercussions were particularly adverse for indebted economies – particularly where they had predominantly short-term debts and the domestic financial markets had low capitalization but were relatively open. External weaknesses in the balance sheet of an economy, or particular sectors within it, are a factor in the emergence of financial crises.

At present, the sensitivity of emerging economies to shifts in market sentiment and the rising risk aversion among investors are once again relevant. Countries in central and eastern Europe which in recent years were among the most successful emerging economies (and were positively evaluated by financial markets) have since October 2008 been affected by another wave of the

Box 5

INTERNATIONAL INVESTMENT POSITION

The international investment position represents the balance of the economy's external financial assets and liabilities. Investment position data are monitored on a gross basis – assets and liabilities are therefore identified separately. External assets include direct investment abroad, portfolio investment, other investment (distinguishing between equity and debt securities) and reserve assets. External liabilities comprise direct investment in the reporting economy, portfolio investment and other investment.

The difference between the financial assets and liabilities represents the net investment position – the country's net financial position towards non-residents, either a creditor or debtor position.

The data are compiled in accordance with the methodology defined in the fifth edition of the IMF's Balance of Payments Manual (BPM5) and are reported in the domestic currency. Data on stocks denominated in foreign currency are converted into the domestic currency using the exchange rate applicable as at the period end. In general, transactions and stocks are reported at market prices or, if the market price is not available, at book value.

Debt instrument	Debt instrument	Non-debt instruments
Other capital	***Direct investment***	Equity capital, reinvested earnings
Debt securities	***Portfolio investment***	Equity securities
	Other investment	
Trade credits		
Loans		
Cash and deposits		
Other assets		
	Reserve assets	Reserve assets

financial crisis. The countries coming under pressure are mainly those (Hungary, the Baltic States) in which the rising indebtedness of a private sector financed by an inflow of external borrowings has begun to cast doubt on their debt-servicing capability.

Principal consequences of high openness and external financing

Macroeconomic shocks from the external environment can rapidly spill over to the domestic environment. The key factors in this regard are:

- the structure of the external balance – the ratio of non-debt instruments (such as foreign direct investment and portfolio investment) and debt instruments may affect the country's ability to withstand/absorb external shocks;
- the extent to which debts/liabilities are denominated in the domestic currency or foreign currencies – an economy (or economic sector) with substantial exposures in foreign currencies is vulnerable to exchange rate risks;
- maturities – a country with short-term liabilities is exposed to refinancing risk and, in the worst case, to the risk of a liquidity crisis;
- the geographical orientation of investors – a high concentration of investors from a single region increases the risk of shocks spreading from the external environment;
- the aggregate balance sheet may be masking the risks to which individual sectors are exposed – it is therefore necessary to track not only the aggregate balance sheet of the country but also the balance sheets of each sector, especially given the trend of declining public debt and rising private sector debt.

Adverse effects increase, of course, where there is a strong dependence on only one type of external financing or a combination of several risks (e.g. short-term financing in a foreign currency).

THE IMPORTANCE OF THE COUNTRY'S ECONOMIC LEVEL TO FOREIGN LIABILITIES

The past twenty years have seen major global changes leading to an intensification of capital flows between countries.[84] Advanced countries have increased the financial assets held between themselves, particularly through FDI and portfolio investments, in order to diversify potential investment risks ("diversification financing") and a proportion of these flows have been directed to emerging countries that provide higher-risk, higher-yielding investment opportunities (development financing). Because of differences in the international investment positions of advanced and emerging economies (in terms of their monetary structure and portfolio structure), it is advanced countries that gain more from international financial relations.

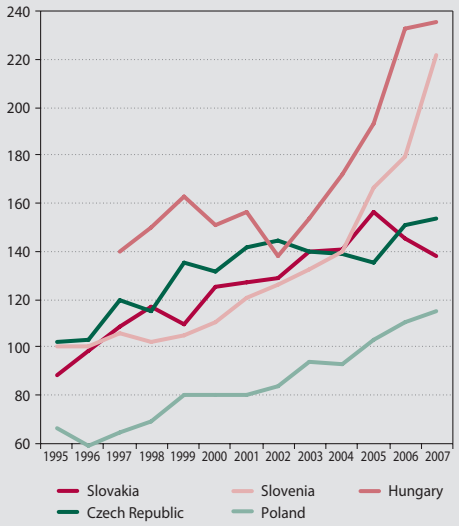
Advanced countries typically have a net creditor position. Their foreign equity assets are denominated in foreign currency (the currency of the investment host country), whereas their liabilities are issued in the domestic currency. In the event of macroeconomic imbalances that lead to currency depreciation, the value of assets denominated in foreign currencies increases, while the value of liabilities (in the domestic currency) remains unchanged. Depreciation therefore helps stabilize the country's net investment position.

Emerging countries are more usually in the position of a net debtor. Their debts are denominated in foreign currencies since these countries cannot borrow in foreign markets in the domestic currency. In their case, depreciation of the domestic currency increases the value of their liabilities (in foreign currency) and thus impairs their net investment position. It is therefore more difficult for these countries to absorb shocks.

2.2 INTERNATIONAL FINANCIAL INTEGRATION OF SLOVAKIA

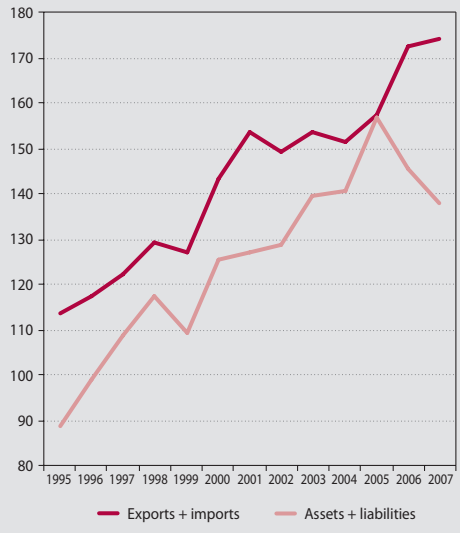
The level of financial openness found today in the new EU Member States was shaped by the liberalization of capital flows in the 1990s. The convergence process – a shortage of domestic sources of financing and the need for development financing – and the attraction of investors to the region resulted in these countries in following a growth model based on external sources of financing. After attaining a certain degree of integration and capital accumulation, these countries themselves began to develop external

Chart 106 International financial integration (assets + liabilities / GDP, %)



Source: NBS, Eurostat, and the national banks of the Czech Republic, Poland and Slovenia.

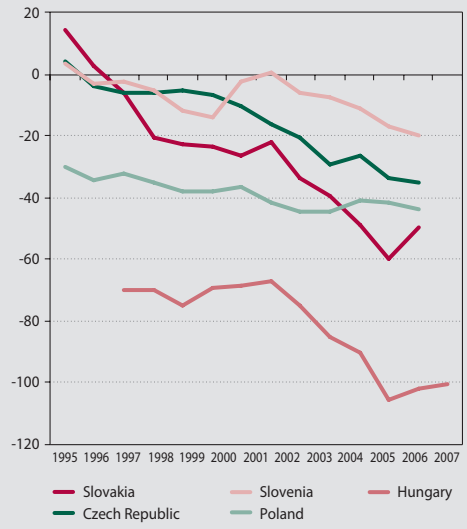
Chart 107 Trade and financial integration of Slovakia (% of GDP)



Source: NBS.

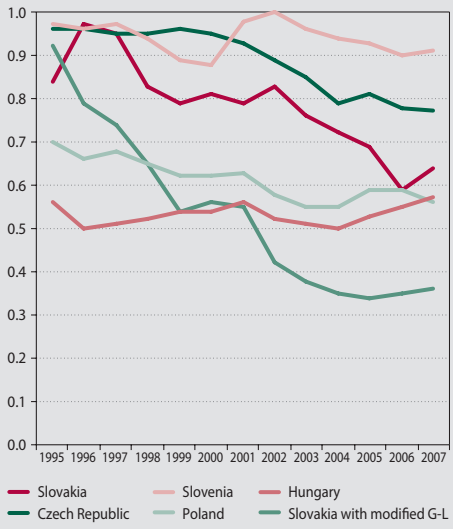
84 *This topic is addressed in more detail in, for example, the following paper: Lane, Milesi – Ferreti (2001) The external Wealth of Nations: Measures of Foreign Assets and Liabilities for Industrial and Developing Countries, Journal of International Economics, Vol. 55.*

Chart 108Net investment position (% GDP)



Source: NBS, Eurostat, and the national banks of the Czech Republic, Poland and Slovenia.

Chart 109 Grubel-Lloyd index



Source: NBS, Eurostat, and the national banks of the Czech Republic, Poland and Slovenia.

financial activities in order to diversify their portfolios.

Among the new EU Member States there are different degrees of financial integration. In financial centres such as Malta and Cyprus, where financial relations with other EU countries are far more well-established, the gross investment position represents between 400% and 600% of GDP. By comparison, central European countries have a lower level of financial integration (Chart 106), and in Slovakia's case it does not exceed 160% of GDP.

The deepening of Slovakia's financial integration was further supported by the high openness of its economy (measured as exported and imported goods and services relative to GDP). In Slovakia's case, ownership links in the real economy maintained a greater significance, and integration through trade in goods and services was faster and more extensive than integration through financial links[85] (Chart 107).

Net investment positions (assets less liabilities relative to GDP) across the region are mostly negative (Chart 108) with a rising trend. At the beginning of the 1990s, Slovakia had a creditor position, but this turned into a debtor position within a relatively short time. The debtor position has also been increasing in relation to the size of the economy.

Until recently, academic literature took it as given that countries at the stage of development in which the new EU Member States find themselves should have a debtor position when in the process of deepening financial integration – notwithstanding that some highly indebted countries (the Baltic States, Hungary) have seen the open manifestation of an external imbalance. The financial crisis, however, is severely testing the model of growth based on substantial external financing and demonstrates the need to seek other variants, too. Recent reports from the IMF and European Commission[86] assume that the inflow of capital to the new EU Member States will decline sharply in 2009 (particularly in the most indebted countries), which will lead to a decline in the negative net investment position.

Another way of measuring the rate of international financial integration is based on a development of the Grubel-Lloyd index[87] (see, for example, Obstfeld, 2004).[88] We measure the extent of the net investment position by comparing it with the size of overall financial flows (i.e. the gross investment position):

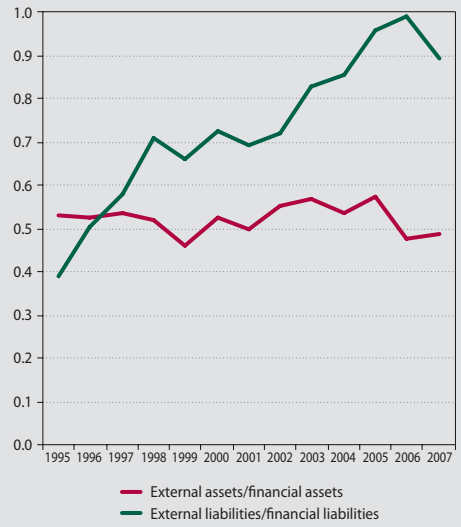
85 *By contrast, in the case of financial centres such as Malta and Cyprus, as well as the Baltic States and Hungary, financial integration far outpaced trade integration. A downside of having strong financial links is that shocks from global markets spread more quickly to the domestic economy.*

86 *IMF – World Economic Outlook, April 2009; European Commission – Spring Forecast, May 2009.*

87 *The Grubel-Lloyd index was originally established to measure the extent of intra-industry trade. By extension, however, it may be used to measure the movements of capital flows between countries by viewing them figuratively as a form of trade.*

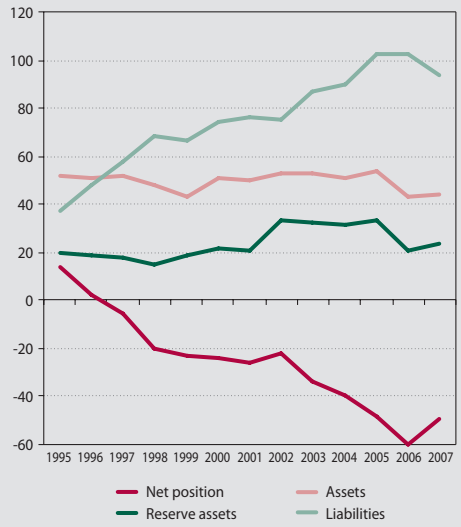
88 *Obstfeld, M.(2004) External adjustment, NBER Working Paper10843.*

Chart 110 External assets and liabilities relative to financial assets and liabilities (%)



Source: NBS.

Chart 111 Net investment position of Slovakia (% GDP)



Source: NBS.

$$1 - |A - L| / (A + L)$$

where A – assets of the IIP
L – liabilities of the IIP

The value of the index ranges from 1 (the net position is balanced and only overall gross flows play a role) to 0 (the net position reflects either substantial "development" or substantial "diversification" financing). In Slovakia, this ratio was firstly balanced and later declined – it reflected more the prevailing need to finance the current account than the deepening of financial integration in terms of increasing diversification financing (Chart 109).

The other variant is the modified G-L index,[89] which on the asset side does not include the official foreign reserves since a high level of foreign reserves may "mask" the possibly higher debtor position of the private sector. This is also the case in Slovakia: since foreign reserves account for a high share of the structure of assets – because of the need to have a flexible monetary policy for the floating exchange rate regime[90] – the modified G-L index is markedly lower, indicating a lower financial integration rate (Chart 109).

The rising significance of financial links with non-residents, particularly the mounting liabilities of residents in Slovakia to non-residents, is shown in Chart 110. Whereas external assets were maintained at the level of 15% of financial assets, foreign liabilities as a share of total liabilities rose to 30%.

Chart 111 shows how external assets and liabilities have risen since 1995 in relation to the size of the economy. On the whole, the increase in assets was proportional to the pace of GDP growth. The share of assets accounted for by reserve assets (external financial assets controlled by monetary authorities) was significant (40–60%). With foreign liabilities rising at a faster pace than GDP, the result was an increasing negative net position relative to the size of the economy.

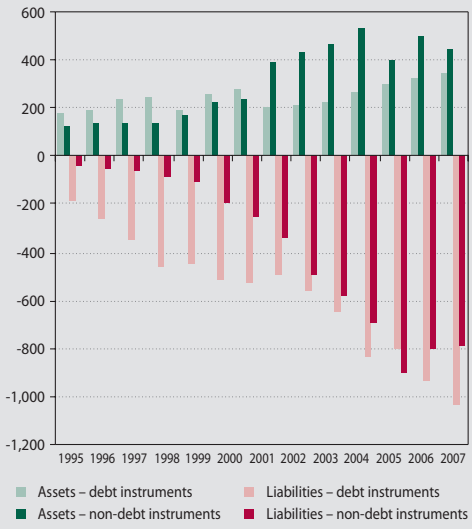
The structure of assets and liabilities in terms of component debt and non-debt instruments

The capital structure of IIP is significant for the fact that with non-debt equity flows, a country may more effectively share risks with foreign investors. Returns on equity investment are linked to the performance of the economy. The dividends and earnings paid to investors during a period of weaker performance are usually declining. This, however, is at the expense of the fact that the rate of return on investments may actually be higher than with debt financing. In the case of

89 *Obstfeld, M. (2004) External adjustment, NBER Working Paper10843.*

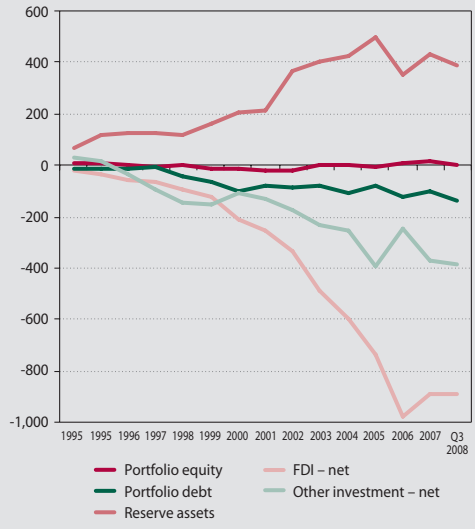
90 *From 2009, substantial convergence between the G-L index and modified index may be expected, given the changed nature of NBS monetary policy following Slovakia's entry into the euro area, which will formally be reflected in a decline in foreign reserves (the motivation for holding foreign reserves against liabilities denominated in euros is waning).*

Chart 112 Debt and non-debt instruments (SKK billions)



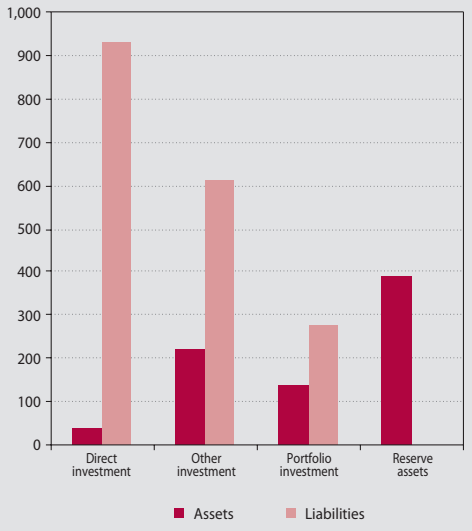
Source: NBS.

Chart 113 Net investment position (SKK billions)



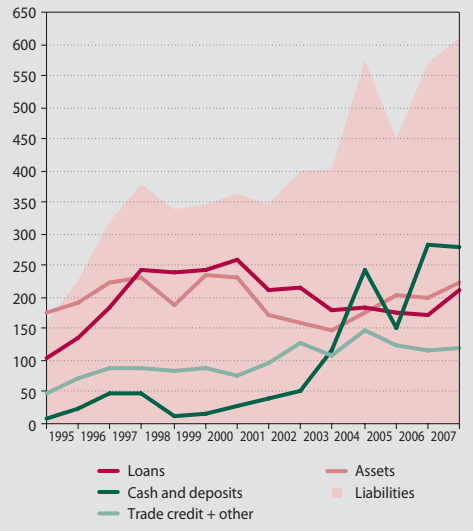
Source: NBS.

Chart 114 Gross investment position, Q3 2008 (SKK billions)



Source: NBS.

Chart 115 Other investment (SKK billions)



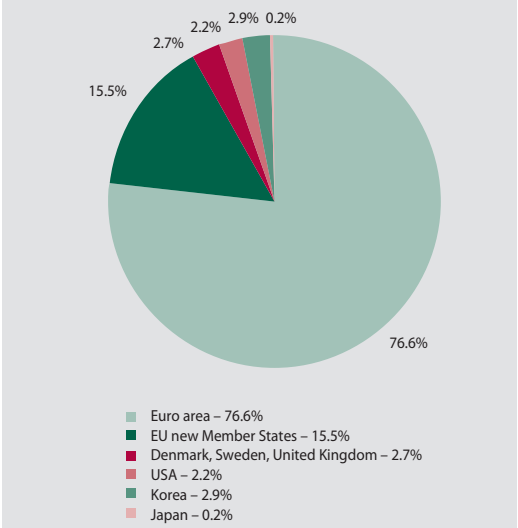
Source: NBS.

debt financing, debt service payments are usually constant, regardless of the current situation in the economy (of the debtor), and this may create tension if the country (debtor) is adversely affected by shocks. FDI[91] is deemed to be a long-term investment and the safest investment, and it is therefore less exposed to any shifts in investor sentiment towards the country.

In Slovakia's case, the liabilities side was at first dominated by debt instruments (Chart 112), but after 2000 the increase in non-debt instruments intensified, especially through the inflow of FDI (Chart 113).

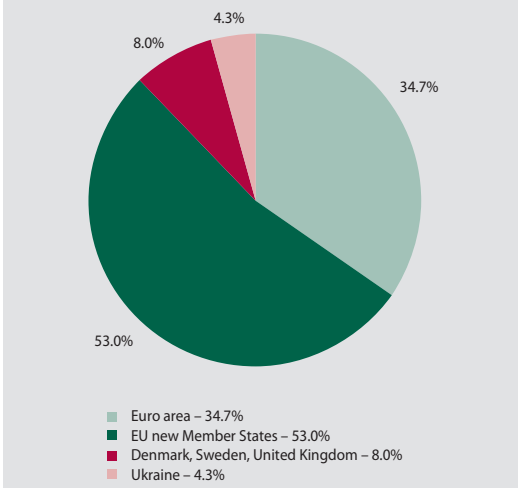
91 *When assessing the significance of FDI, it is necessary to note that investments are classified as FDI where the investor's equity ownership is higher than 10%.*

Chart 116 FDI stock in Slovakia in 2007



Source: NBS.

Chart 117 FDI stock held by residents abroad in 2007



Source: NBS.

Foreign direct investment

At the current stage of development, FDI inflow is outstripping direct investment by residents abroad (Chart 114). The geographical origin of FDI investors in Slovakia is clearly shown – more than 90% of them are from EU countries. The stock of FDI held by residents abroad indicates that Slovak investors are establishing themselves mainly in the immediate region of the new EU Member States.

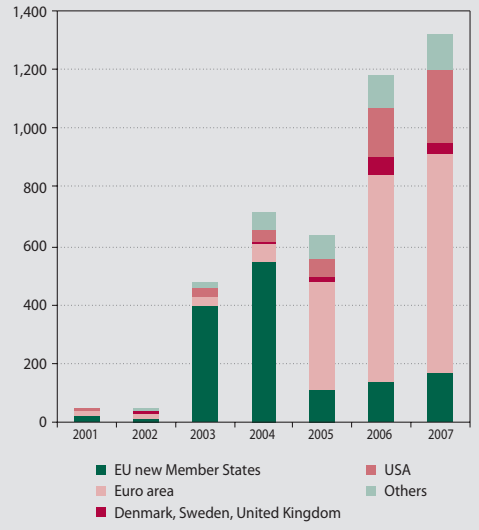
Other investment

This category of instruments represents a form of debt financing. Slovakia is a net debtor in this category because since 1998 the total amount of other investment on the asset side has been lower than the most prevalent instrument on the liabilities side – loans. As at the end of the period under review (2007), private sector debt instruments had a dominant share of other investment and general government only 6.7%. Most of this investment (53.8% in 2007) consisted of flows through the banking sector. In contrast to the situation in certain new EU Member States, capital inflow to Slovakia through the banking sector was directed to deposits, while lending growth was financed from domestic funds. Financing through other investment tends to be short term, and short-term instruments as a share of other investment represented fully 72.6% in 2007. Therefore this form of financing has in recent years had a relatively volatile development.

Portfolio investment

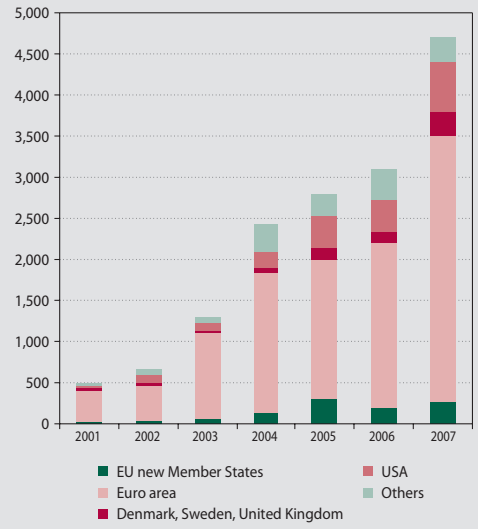
With portfolio investment, too, the external liabilities of residents predominate over the external assets of residents and the net balance is negative. On the asset side, portfolio investment

Chart 118 Assets: portfolio investment – equity (USD millions)



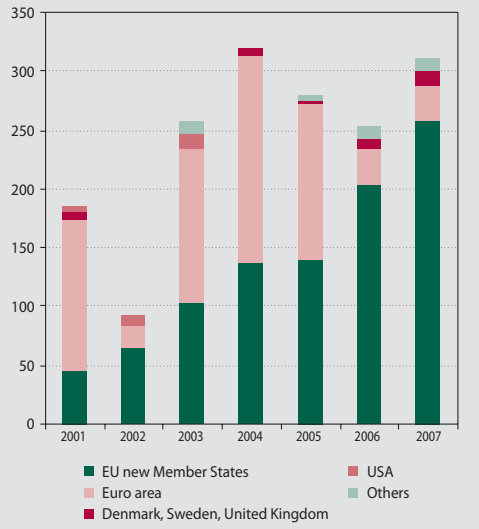
Source: IMF – Coordinated Portfolio Investment Survey.

Chart 119 Assets: portfolio investment – debt (USD millions)



Source: IMF – Coordinated Portfolio Investment Survey.

Chart 120 Liabilities: portfolio investment – equity (USD millions)



Source: IMF – Coordinated Portfolio Investment Survey.

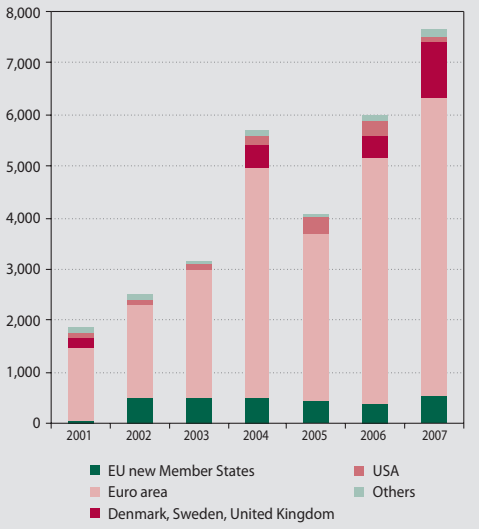
gained in significance as a corollary of the expansion in collective investment after 2000.

Debt portfolio instruments have by far the largest share (80% on the assets side and 93% on the liabilities side in 2007). A key factor in the increase in portfolio debt instruments on the liabilities side has been the financing of the government sector abroad (its share for 2007 was 79.5%).

Portfolio equity investment is the only category in which Slovakia has a creditor position (Chart 113).

Data on the bilateral composition of investors (Charts 118–121) indicate that portfolio investment by residents in Slovakia was mostly made in EU countries, and, likewise, residents of EU countries account for the majority of portfolio investors in Slovakia.

Chart 121 Liabilities: portfolio investment – debt (USD millions)

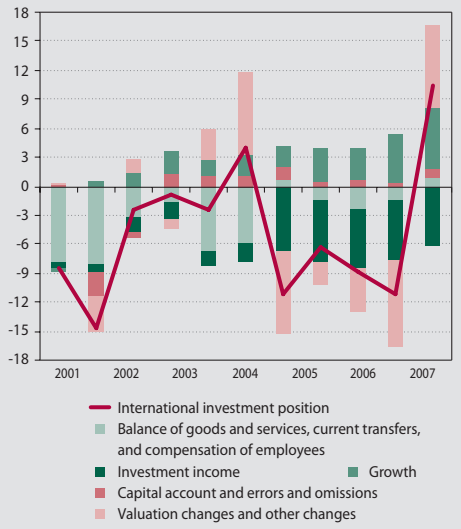


Source: IMF – Coordinated Portfolio Investment Survey.

2.3 STATISTICAL BREAKDOWN OF FACTORS CONDITIONING THE DEVELOPMENT OF THE NET INVESTMENT POSITION

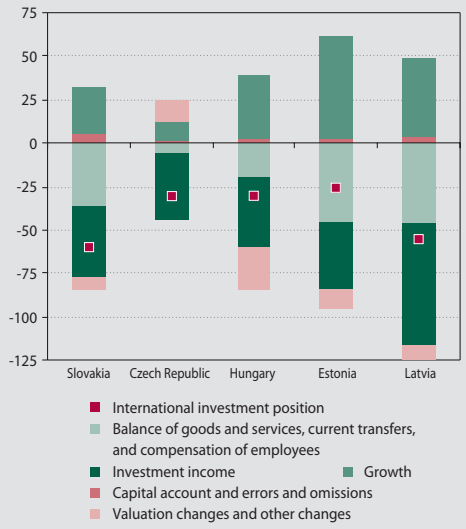
Among the most important determinants of IIP is the development of external financial requirements. A net external debt is generated by a current account deficit. Simply put, in order to pay for the excess of imports over exports, the country must borrow from abroad, and hence non-residents purchase liabilities issued by Slovak residents. These financial flows are recorded as net capital inflow and represent an increase in the stock of external liabilities. Another determinant of the IIP is valuation changes. The value of

Chart 122 Effects on net position of Slovakia (% of GDP)



Source: NBS, NBS calculations.

Chart 123 Effects on net position 1997 – 2007 (% of GDP)



Source: Eurostat, NBS calculations.

the stock of foreign assets and foreign liabilities of residents in Slovakia changes over time, reflecting fluctuations in the prices of assets and in exchange rates (where assets and liabilities are denominated in different currencies), there are changes for other reasons (e.g. methodological changes) as well.

Changes in the net investment position may be disaggregated on the basis of accounting identities,[92] which indicate the links between the development dynamics of the net investment position (stocks of financial assets and liabilities) and the financial account of the balance of payments (flows), current account balance, economic growth and the effect of fluctuations in exchange rates and in the rate of return on instruments. The disaggregated effects on the net international investment position may be divided as follows (according to Lane, Milesi-Ferreti[93]):

$$B_t - B_{t-1} = CA_t + KG_t + E_t \qquad (1)$$

where

B_t – net investment position

CA_t – current account balance

KG_t – capital gains/losses expressed as a stock change (from the international investment position) minus the corresponding flow (from the balance of payments)

E_t - transfers on the capital account[94] and net errors and omissions

The equilibrium (1) may be expressed as shares of GDP

$$b_t - b_{t-1} = ca_t + kg_t + e_t - n_t/(1 + n_t) * b_{t-1} \qquad (2)$$

where

$n_t = (GDP_t / GDP_{t-1}) - 1$ is nominal GDP growth

The current account components – *ca* – may be further broken down into effects of income from investments that are directly linked with capital flows and into other effects (goods and services trade balance, compensation of employees, and current transfers balance). Capital gains/losses – *kg* – include the effects vis-à-vis the Slovak koruna of exchange rate fluctuations of currencies in which individual financial instruments are denominated, the effects of changes in the market valuation of instruments, as well as other changes in volume (e.g. relating to changes in the reporting methodology, reclassification). The last component of the equation (2) describes the effect of the country's GDP growth on the change in its net investment position.

As Chart 122 shows, Slovakia's negative international investment position deepened between

92 *A simplified approach – termed "naive" because statistics for the international investment position and balance of payments are not entirely consistent.*

93 *Lane, Milesi – Ferretti (2005) Global Perspectives on External Positions: NBER Working Paper 11589.*

94 *The capital account includes investment-related foreign aid flowing from foreign governments and non-governmental entities and the purchase and sale of patents, licences and copyrights.*

Box 6

THE EFFECT OF REINVESTED EARNINGS ON INVESTMENT INCOME

Since FDI accounts for a high share of the economy's financing, it has significant effects on the international investment position. The reporting of reinvested earnings to a certain extent distorts the balance of payment statistics[95] – in countries attracting substantial FDI, it overestimates the income balance as a negative element in the current account result.

Reinvested earnings on FDI consists of the part of the profits of an FDI enterprise which is not paid in dividends to the foreign investor. In the balance of payments, reinvested earnings are reported as part of the current account's income balance and as a counterpart (with the opposite sign) in the financial account under foreign direct investment. In accordance with international standards, transactions between the domestic economy and external environment in which an actual financial flow does not arise are also recorded in the balance of payments. Such transactions have to be recorded in order to maintain the format of double-entry bookkeeping used for the balance of payments, and the same applies to reinvested earnings, too. Slovakia has been recording reinvested earnings in the balance of payments since 2003.[96]

Table A shows that the impact of reinvested earnings on investment income was greatest in the years 2003 and 2004 and that it has gradually declined since then. Even, however, after taking into account how the reporting of reinvested earnings distorts the income balance, it is clear that the income balance contributes to the deepening of the Slovak economy's net debtor position.

Table A Development of reinvested earnings (SKK millions)

	2003	2004	2005	2006	2007	2008
FDI stock	519,339	623,386	755,760	1,006,131	930,857	929,866[1)]
Current account	-72,502	-106,358	-126,103	-128,103	-98,718	-132,238
Investment income	-81,859	-87,178	-90,561	-104,473	-114,069	-108,033
Reinvested earnings	-54,281	-49,503	-26,994	-28,115	-23,300	-16,800
Investment income /current account	112.91	81.97	71.82	81.55	115.55	81.70
Reinvested earnings /investment income	66.31	56.78	29.81	26.91	20.43	15.55
Reinvested earnings/FDI	10.45	7.94	3.57	2.79	2.50	1.81
FDI/GDP	42.45	45.77	50.87	60.63	50.24	45.8

Source: NBS.
1) 3Q 2008.

1997 and 2007, except in two years. The largely negative effect that this had on the current account deficit was at first driven mainly by the balance of trade in goods and services and later, predominantly, by investment income (particularly after the inclusion of reinvested earnings from 2003). The acceleration in the pace of GDP growth dampened the increase in the negative net investment position. The similar effects on the international investment position in Slovakia and selected new EU Member States over the period 1997-2007 are compared in Chart 123.

Charts 121 and 122 show that a key element in the sustainable development of the net investment position are the proportions between (particularly) the goods and services balance and the investment income balance. The best case is where external funds are invested in projects that stimulate the economy's export potential

95 *Brada, Tomsik (2003) Reinvested Earnings Bias, The "Five Percent" Rule and the Interpretation of the Balance of Payments – With an Application to Transition Economies. The William Davidson Institute Working Paper No.543.*

96 *NBS: Information on the revision of the balance of payments current account for the years 2003 and 2004 and a comparison with selected countries in terms of how the amount of dividends and reinvested earnings affects the current account.*

(a surplus in the goods and services balance), which offsets the repatriation of earnings by foreign investors (a deficit in the income balance).

2.4 CHANGES IN THE INTERNATIONAL INVESTMENT POSITION ARISING FROM SLOVAKIA'S ENTRY INTO THE EURO AREA

Following entry into the euro area and the introduction of the euro, a major proportion of the assets and liabilities originally denominated in foreign currencies were automatically redenominated into the domestic currency. This potentially brings several of the advantages enjoyed by advanced economies in regard to the correction of the external imbalance (assuming, of course, that Slovakia is synchronized with the large economies of the euro area).

In Slovakia, the uptake of foreign currency loans has not been significant. Domestic entities that had liabilities in a foreign currency saw a decline in their exposure to exchange rate risk and interest rate risk after these liabilities were redenominated into euros. This at the same time reduced the financial sector's credit risk on euro-denominated loans.

The nature of the Slovak koruna's exchange rate regime and the aims of NBS's independent monetary policy required the country to have relatively high foreign reserves. Once the part of the foreign reserves, denominated in euros (related to the structure of trade links), had ceased to function, it was no longer necessary to hold such high foreign reserves.

For Slovakia, as a debtor country, a key element in the sustainable development of the net investment position is the proportions between the goods and services balance and the investment income balance. It is important that external funds are invested in projects that stimulate the economy's export potential (a surplus in the goods and services balance), which offsets the repatriation of earnings by foreign investors (a deficit in the income balance). The decline in the negative investment position could also be supported by lower risk margins on debt issued abroad, higher transfers from EU funds, higher incomes of Slovak residents working abroad.

As is being seen in several of the new EU Member States, the flow of external debt funds to the non-tradable sector (property construction) can have destabilizing effects when combined with rising private sector debt and a shift in conditions in international financial markets.

Joining the euro area has helped Slovakia to minimize exchange rate risk and to bolster its reputation as a country regarded among investors as financially stable.

CONCLUSION

Financial integration has been viewed in economic literature as a factor driving the mitigation and diversification of investment risk and thus contributing to economic growth and the maintenance of financial stability. The current financial crisis, however, shows that financial globalization is accelerating, and, in some cases, even intensifying the spillover of external shocks to the domestic economy, which in turn is reducing the benefits of growth and consumption balancing which the inflow of external financial funds helped to generate.

Although Slovakia has a relatively low degree of financial integration (compared to other new EU Member States), it does not have substantial imbalances. As regards the relative level of Slovakia's external liabilities, they are not, at present, large enough to pose a risk to financial stability. At a time of uncertainties in international financial markets, introducing the euro has meant gaining the advantages of a stronger and more stable currency.

ABBREVIATIONS

Abbreviations

ARDAL	Debt and Liquidity Management Agency
BCPB	Bratislava Stock Exchange
BRIBOR	Bratislava Interbank Offered Rates – interest rates fixing on the interbank deposits market
BS	Banka Slovenije – Bank of Slovenia
CBOE	Chicago Board Options Exchange
CDS	Credit Default Swap – credit derivate contract between two counterparts
CPI	Consumer Price Index
ČNB	Česká národní banka – Czech national bank
D	day
DDS	Supplementary Pension Asset Management Company
DSS	Pension Asset Management Company
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECB	European Central Bank
EFT POS	Electronic Funds Transfer at Point of Sale – payment terminal
EIB	European Investment Bank
ERM	Exchange Rate Mechanism
EU	European Union
EURIBOR	Euro Interbank Offered Rate – interest rates fixing on the euro area market
FDI	Foreign direct investments
GDP	Gross Domestic Product
IAS/IFRS	International Accounting Standards/International Financial and Reporting Standards
IBRD	International Bank for Reconstruction and Development
IIP	International Investment Position
IMF	International Monetary Fund
LTV	Loan-to-Value ratio – Proportion of the credit volume to the collateral value
M	month
MF of the SR	the Ministry of Finance of the Slovak Republic
NARKS	National Association of Real Estate Agencies
NAV	Net Asset Value
NBS	Národná banka Slovenska
p.p.	percentage points
PPS	Purchasing Power Standard
RMBS	Residential Mortgage-Backed Security – Security which yield and value are derived from the mortgage loans
ROA	Return on assets
ROE	Return on equity
RTGS	Real Time Gross Settlement
SAX	Slovak stock exchange index
TARGET	Trans-Europan Automated Real Time Gross Settlement Express Transfer
VaR	Value at Risk
ZFS	Initial fixation of interest rate

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