NÁRODNÁ BANKA SLOVENSKA

Report on the Results of the Slovak Financial Sector Analysis

for the first half of 2006

Contents

List of boxes

Analysis summary

The Slovak financial sector was marked in the first half of 2006 by a continuation of the trends seen in 2005. The financial sector reported further growth, and since December 2005 the volume of assets and managed assets increased by almost SKK 100 billion, or 5.9%, to stand at SKK 1,797 billion. That represented a slowdown in comparison with the 12 months of 2005, when the sector grew by SKK 318 billion or 23%.

The structure of the financial sector underwent a partial change, largely due to rising in interest rates. The banking sector continued to hold the dominant position, though its pace of growth slowed down in the first half of 2006. Banks held 81.9% of the sector's assets and managed assets in June 2006. Overall, the banking sector's share of assets is in long-term trend decline. Insurance companies constituted the second largest segment with their share of the financial sector's assets and management assets amounting to 7.5%. Compared with December 2005, this represents a slight increase, mirroring the development for the whole of 2005. After increasing in previous years, collective investment in mutual funds saw its share decline in the first half of 2006. The earlier growth had been related mainly to low interest rates in financial markets and the efforts of customers to increase the value of their disposable funds through riskier investments. In the first half of 2006, however, a combination of rising interest rates and decreasing yields in certain funds once again encouraged households to keep their disposable funds in banks. As for pension fund management companies, the assets under their management increased by SKK 8 billion during the first half of 2006, following a rise of SKK 9 billion for the whole of 2005.

Most financial sector institutions reported an increase in profitability, the only exception being the decline in profits of asset management companies. Profits in the insurance sector, by contrast, rose sharply.

The financial sector's largest player, the banking sector, showed positive trends during the first half of 2006.

Of particular note here was the increase in lending. In June 2006, loans to customers accounted for the largest share of the banking sector's assets. As the lending share rises, the structure of the banking sector's assets more closely resembles the asset structure of banks in the EU. Banks lent mainly through enterprise and retail loans, and lending to non-banking financial companies also increased. Despite the increase in interest rates, there has not as yet been any tailing off in the pace of lending growth. The year-on-year decline in the volume of securities in the banking sector is to a large extent related to the redemption of government bonds issued in the period when selected banks underwent restructuring. Banks' holdings of all securities, except for bank bonds and foreign equity securities, decreased.

The main conclusion to be drawn from the analysis of banks' funds is that most domestic banks, and the Slovak banking sector as a whole, still have at their disposal sufficient customer funds to finance further lending growth. In this respect, the structure and volume of the main aggregates of liabilities have developed without showing any negative trends. In comparison with the previous year, the volume of customer deposits and issued securities held in the banking sector increased, as did their share of total liabilities.

The development of the interbank market reflected the fact that the NBS base rate was raised by a total of 1 percentage point in the first half of 2006. In relation to expectations for future development and to the situation on the foreign exchange market, interest rates on longer maturities experienced the most marked rise. The volume of funds deposited with the NBS or invested in the purchase of NBS bills increased only slightly year-on-year, especially when compared with the high growth posted during the first half of 2005. The deposits of foreign banks also rose, as did the underlying instruments of

currency derivatives traded on the interbank market.

The banking sector reported a net profit after tax of SKK 8.1 billion as at the end of June 2006. Banks' profitability increased by almost 7% year-on-year. The decline in net interest income in comparison with previous years was halted. As interest rates and bank lending rose, there was a more substantial increase in interest income than in interest expenses. Interest income from the NBS and customers increased most of all, while the decline in interest income from securities continued. Non-interest income is an increasingly significant element of the banking sector's overall profit. Income from fees and trading increased. Foreign exchange transactions were especially lucrative. The banking sector saw an increase in operational expenses, particularly personal costs, but since these expenses rose at a slower pace than did the growth in income from banking activities, the sector's overall operational efficiency was higher year-on-year. As the volume of defaulted claims increased, so did the cost of writing off claims against customers and creating provisions. The concentration of profits among the largest banks was a trend that continued in the first half of 2006.

The development of capital adequacy stabilized during the first half of 2006. The average ratio of capital adequacy declined only slightly over the period and there was a more stable spread between the lowest and highest ratios in the sector. The growth in risk-weighted assets was accompanied by an increase in own funds, especially retained earnings. In June 2006, all banks reported a capital adequacy ratio above the minimum level of 8%.

Banks' exposure to financial risks remained largely unchanged during the first half of 2006. The banking sector reported an improved financial situation, with an increase in profitability and a sufficient volume of capital. Nor was there notable change in the financial situation of the sectors to which banks are significantly exposed. As household lending rose, so did the credit risk of households. Household indebtedness continued to grow in the first half of 2006. According to macroeconomic data, however, households still generated sufficient income to meet their loan repayments. Simulations of adverse effects on a selected sample of households indicate that the ability of indebted households to meet their liabilities towards banks could be impaired by a drop-off in their income. The macroeconomic figures also show that the volume of financial assets held by households is sufficient to be used for loan repayments. The quality of the household lending portfolio, measured by the ratio of defaulted loans to total household loans, remained basically unchanged, largely because of the increase in new lending. The actual volume of defaulted loans rose.

Defaulted loans as a share of total corporate loans continued their trend decline in the first half of 2006. The relative improvement in the quality of the corporate loans portfolio resulted from the increase in overall corporate lending, and especially the write-off and transfer of loss-making loans. The volume of defaulted loans fell during the previous 18 months.

Securities held by the banking sector had a conservative structure and predominantly included government bonds. Certain banks reported a growing share of riskier securities, reflecting efforts to increase and diversify income.

The banking sector had negligible exposure to foreign exchange risk in June 2006. In most banks, the volume of liabilities denominated in foreign currency was greater than the volume of assets so denominated. Banks were closing these open positions through derivative transactions, particularly currency forwards and swaps. Practically every bank which traded in currency options had closed positions under option contracts.

In June 2006 the exposure of banks to interest rate risk was also relatively low in regard to the effect of rate changes on the real value of assets and liabilities. This was because a large proportion of assets and liabilities carried

variable or partially fixed interest rates. Banks were especially sensitive to interest rate rises, more so because of the declining value of fixed-rate securities held in their portfolios. That said, offering partially fixed rates allowed banks to shift the interest rate risk to customers, though at the expense of their own credit risk.

The significance of the liquidity risk in the banking sector remained substantially the same during the first half of 2006. On the one hand, the provision of long-term loans further exacerbated the time discrepancy between assets and liabilities, which was reflected in lower median of liquidity ratios for maturities of up to 7 days and up to 3 months. On the other hand, the share of the liquidity cushion in the total assets of the banking sector stopped falling at the end of 2005 and achieved relative stability in the first half of 2006.

Written premiums amounted to SKK 26.6 billion by the end of the first half of 2006. Of that total, written premiums in life insurance and non-life insurance accounted for, respectively, SKK 11.3 billion and SKK 15.3 billion. These figures cannot, however, be compared with those reported for the first half of 2005 since the methodology used to report written premiums was changed with respect to the application of international accounting standards. The three largest insurance companies saw their market share in terms of written premiums fall from 67.5% to 60.7%, and therefore the gradually declining trend in market concentration continued. Indemnity costs rose in comparison with the same period of the previous year by 16.6%, up to SKK 10 billion. Insurance companies made an overall profit of SKK 2.9 billion, and their net profit was a full 52% higher year-on-year.[1] The investment of technical reserves remained substantially unchanged and they continue to be placed in low-risk assets.

In the first half of 2006, as in 2005, fully 95% of the transactions made by customers of securities dealers were carried out through banks, although in comparison with the same period of the previous year, the total volume of transactions declined by 41%. The most traded instruments were bonds and forward contracts. The volume of managed assets increased by 58% to SKK 29 billion. The capital adequacy of Slovak securities dealers fulfilled the stipulated minimum level with a sufficient reserve.

The net value of assets managed in open-end mutual funds hardly varied during the first half of 2006. Investors did, however, begin to gradually sell their shares in money market and bond funds or to shift them into riskier funds. This behaviour was largely explained by the rise in interest rates, which had an adverse effect on the performance of bond funds and likewise negated the advantage of money market funds over time deposits. Riskier funds, especially share funds, became more marketable and this supported the growth in prices on European stock exchanges.

The first half of 2006 marked the deadline for voluntary entry into the second pillar of the new pension system. By 30 June 2006, pension fund management companies had 1.39 million registered savers. The volume of assets invested through pension funds almost doubled during this period, to stand at SKK 17.27 billion. Meanwhile, under the third pillar, the transformation of three supplementary pension insurance companies into supplementary pension companies was completed, and by the end of June 2006 they were managing SKK 14.9 billion in their funds.

[1] The year-on-year comparison of insurance companies' profitability is restricted by the significant changes in accounting standards made with effect from 1 January 2006.

Box 1 Macroeconomic environment in Slovakia

The gross domestic product in constant prices grew by 6.5% in the first half of 2006, reflecting a real increase in both foreign and domestic demand. The consumption component of domestic demand rose year-on-year by 6.1% in constant prices. Investment activity increased (up by 10.8% in constant prices). The import and export of products and services posted double-digit growth in the first half of 2006, and the fact that imports grew at a faster pace than exports resulted in a year-on-year deterioration in the trade balance. Total employment increased in the second quarter by 4.5% according to a sample workforce survey, while unemployment continued to decline (from 11.1% to 10.4% year-on-year). The unemployment rate according to the sample survey represented 13.5% for the second quarter. As for households, their gross disposable income increased by 12.8% in the first quarter of 2006 with their current income growing faster than current expenditure.

Consumer prices measured by the CPI rose by 4.6% in June 2006, in comparison with the same period of the previous year.

The NBS raised interest rates twice during the first half of 2006, and in June the base rate stood at 4.0%. Long-term market interest rates also posted growth, as did the lending and bank deposit rates.

Characteristics of the Slovak financial sector

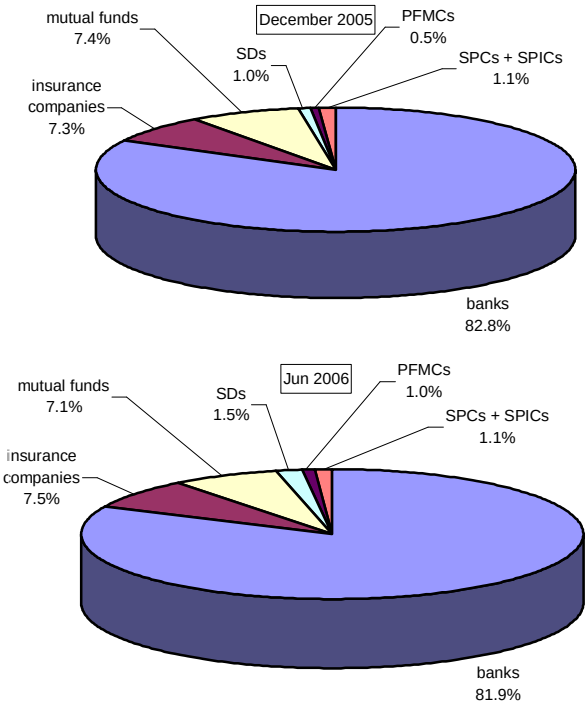
Assets and managed assets of the financial sector

The Slovak financial sector in June 2006 comprised banks, insurance companies, asset management companies (collective investment), pension fund management companies, supplementary pension companies (insurance companies), and securities dealers (SDs).[2]

At the end of June 2006, these institutions managed assets worth SKK 1,797 billion, which represented almost 122% of GDP in current prices. For the six months from December 2005, the volume of managed assets and assets increased by almost SKK 100 billion, or 5.9%. That represented a slowdown in comparison with the 12 months of 2005, when the financial sector reported growth of SKK 318 billion, or 23%. The main change was in banks' assets, which increased at a slower pace owing to a drop-off in the inflow of short-term capital, especially from abroad.

Although the banking sector saw a slowdown in growth during the first half of 2006, it continued to hold the dominant position in the Slovak financial sector. In June 2006, the assets held by banks totalled SKK 1,472 billion (net), representing 81.9% of the assets and managed assets in the financial sector (Chart 1 and Chart 2). Overall, therefore, the long-term trend decline in the share of banking sector's assets is continuing (its share for 2004 stood at 85%). The prominent position of the banking sector is largely the result of an historical development in which banks acted as the principal financial intermediary. Such a model based on a dominant banking sector is the norm in most European economies.[3]

Chart 1 Financial institutions by share of assets and managed assets of the financial sector, in December 2005 and in June 2006.



- Source: NBS
- For banks and insurance companies, the share is evaluated using net assets, and for other sectors, by the value of managed assets; the June 2006 figure for SPICs is estimated.
- SDs – securities dealers other than banks.
- PFMC – pension fund management companies (2nd pillar).
- SPCs – supplementary pension companies (3rd pillar).
- SPICs – supplementary pension insurance. companies (untransformed 3rd pillar).

Insurance companies constituted the second most important segment of the financial sector, accounting for 7.5% of its assets and managed assets. That represented a slight rise in comparison with December 2005, and also tallied with the pace of growth for the whole of 2005.

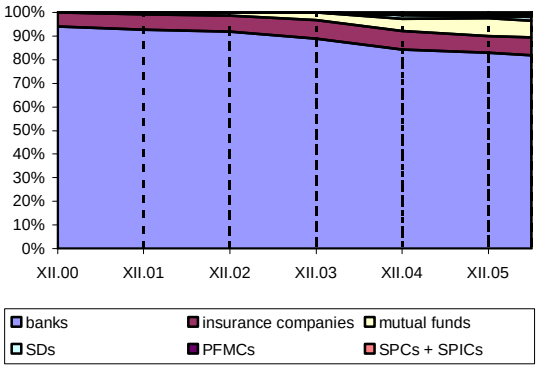
Although it has been a growing sector of recent years, collective investment through

[2] The financial sector is understood to mean financial companies subject to regulation by the NBS.

[3] In the US, by contrast, direct financial intermediation predominates – customers acquire funds or invest surplus money directly in financial markets.

mutual funds reported a decline in the first half of 2006. Mutual funds accounted for 5.3% of the financial sector's assets in 2004, and 7.4% in 2005, but a slowdown in growth during the first half of 2006 saw their share slip to 7.1%. The increase in 2004 and 2005 was mainly related to low interest rates on financial markets and customers' efforts to increase the value of their disposable funds through riskier investments. By contrast, a combination of rising interest rates in the first half of 2006 and declining yields in certain funds once again encouraged households to keep their disposable funds in banks.

Chart 2 The financial sector broken down by institutions, December 2000 – June 2006

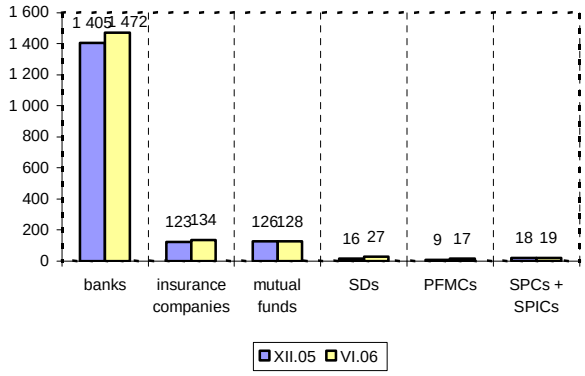


- Source: NBS.
- Data was not available for SDs in 2001-2003 and for PFMCs in 2001 – 2002.
- The SPIC figure for June 2006 is estimated.
- SDs – securities dealers other than banks.
- PFMCs – pension fund management companies.
- SPCs – supplementary pension companies.
- SPICs – supplementary pension insurance companies.

Securities dealers other than banks account for a relatively small share of managed assets. After declining in 2005, their share increased in the first half of 2006 owing to a sharp rise in the volume of managed assets.

Assets managed by pension fund management companies increased during 2005 from zero to SKK 9 billion and grew by a further SKK 8 billion in the first half of 2006. Customer assets managed under the 2nd pillar of pension savings were therefore the fastest growing segment of the Slovak financial sector. Their share of the sector's assets almost doubled during the first six months of 2006. Based on the estimated figures for supplementary pension companies and supplementary pension insurance companies, assets managed under the 3rd pillar of pension savings (or insurance) increased slightly while their share in the financial sector remained unchanged.

Chart 3 Volume of assets managed by different financial institutions, December 2005 – June 2006



- Source: NBS.
- The data represent the net asset value of the sectors in SKK billion.
- The SPIC figure for June 2006 is estimated.
- SDs – securities dealers other than banks.
- PFMCs – pension fund management companies.
- SPCs – supplementary pension companies.
- SPICs – supplementary pension insurance companies.

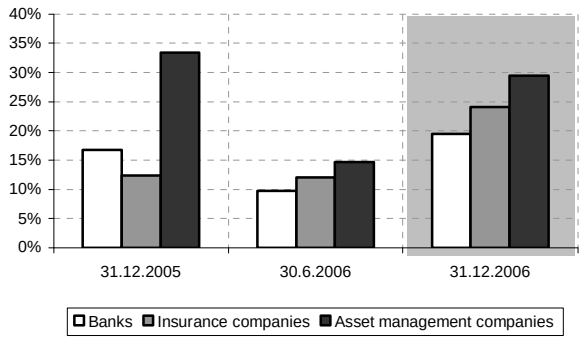
Profitability of the financial sector

A unifying approach to comparing the profitability of financial market sectors is to compare the return on equity (ROE) and return on assets (ROA) of each sector's institutions.

As an indicator of the yield on shares, ROE is of particular interest to company owners. This ratio was highest in the collective investment sector, and since domestic banks are the major owners of asset management companies, it is they that collected most of the profits. In terms of

ROE, the advantage of asset management companies over banks and insurance companies lessened in the first half of 2006. The reason was the relative increase in the profitability of banks and insurance companies and decrease in the profitability of asset management companies. The subdued pace of profit generation in asset management companies in the first half of the year is probably related to the negative sales of funds during this period. This fact is seen in the ROE comparison from December 2006 and the annualized figures from June 2006. In comparing banks and insurance companies, it notable that the profit made by the banking sector for the first six months of 2006 was over half of its profit for whole of 2005, while the ROE of insurance companies for the first half of 2006 was almost the same as that for the 12 months of 2005 (Chart 4).

Chart 4 Return on equity (ROE) in the financial sector

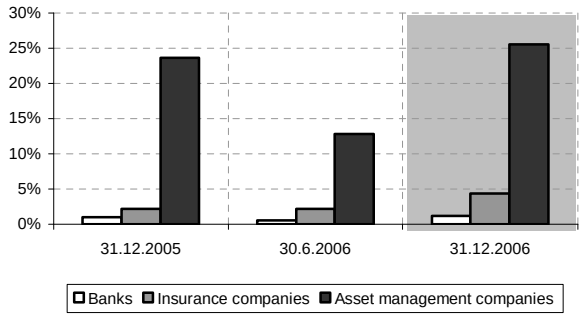


- Source: NBS.
- The figure as at 31 December 2006 is extrapolated by annualizing the figure from June 2006.

The average returns on equity of pension fund management companies and supplementary pension companies were, respectively -25% and 23% in June 2006.

Return on assets, on the other hand, indicates the overall efficiency with which a given institution generates profit. Unlike the ROE ratio, which allows the profitability of different financial sectors to be compared through the prism of earnings per share, the ROA ratio represents something different in each of the financial sectors. In the case of banks, whose assets predominantly consist of financial investments, it is an indicator of the overall efficiency of the investments made by the given institution. It is different with asset management companies, which only manage funds and do not themselves hold financial assets. This is also why their return on assets approximates to their return on equity, and it is not significant for a financial company. As far as insurance companies are concerned, this ratio indicates above all the profitability of the assets in which technical reserves are invested and the profitability of other financial assets.

Chart 5 Return on assets (ROA) in the financial sector



- Source: NBS.
- The figure as at 31 December 2006 is extrapolated by annualizing the figure from June 2006.

The average returns on equity of pension fund management companies and supplementary pension companies were, respectively -23% and 16% in June 2006. As with collective investment undertakings, the ROA ratio is not particularly relevant to these management companies.

Chart 5 does not therefore allow for an overall comparison of the profitability in different sectors (as ROE does), but it does show accelerated growth in the ratio for all sectors in the first half of 2006.

Financial intermediation

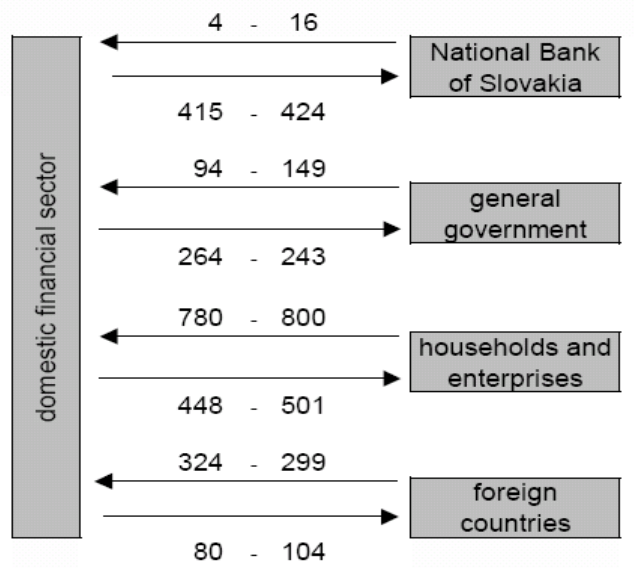
The main function of the financial sector is financial intermediation between entities that have disposable funds and those requiring disposable funds. The depiction of these relationships indicates the character of the respective financial sector. An overview of the relationships in the domestic financial sector and selected aggregates is shown in Scheme 1, and more detailed information on the relationships between different economic entities is given in matrix form (Table 1).

A majority of the flows between the financial sector and other entities increased in value during the first half of the year. The funds acquired by the financial sector came mainly from entities in the real economy. At the end of 2005, the deposits of the household sector, corporate sector and general government held in the financial sector amounted to SKK 873.5 billion. A majority of this balance (SKK 704 billion) was deposited with banks. In June 2006, the balance stood at fully SKK 948 billion, of which SKK 770 billion was held in banks. Banks are therefore maintaining their dominant position in terms of raising funds.

By the end of December 2005, financial companies had around SKK 448 billion invested in the household sector and corporate sector, and by the end of June 2006 that figure represented SKK 501 billion. The financing of the various sectors of the real economy was carried out mainly by banks.

Other financial intermediaries also performed activities in this field. Information about the total volume of loans provided by these companies is not at present available, since these entities are not subject to any reporting obligation towards the NBS. Approximate information may be obtained from banks' reporting, which shows that by the end of 2005, banks had lent financial intermediaries SKK 55.3 billion, and by the end of June 2006, SKK 61.8 billion. It may be assumed that the loans provided to financial intermediaries went in large part to financial intermediaries, which then used them for lending purposes, e.g. in the form of leasing or consumer credit. In addition to these funds, several other financial intermediaries are obtaining funds from foreign banks, or from their own financial groups.

Scheme 1 Selected relationships between the financial sector and other sectors, June 2006 and December 2005



- Source: NBS.
- Data are in SKK billion.
- Numbers above the arrows:
  - first from left - December 2005
  - second from left - June 2006.
- The general government data include government bonds and Treasury bills.
- The NBS data include NBS bills.

Transactions with the NBS remain of great importance to the financial sector. Despite a slight year-on-year decline in the volume of interbank market funds sterilized by the NBS (from SKK 438 bn to SKK 424 bn), and in their share of the sector's total assets (from 33% to 29%), their volume remains relatively significant.

The relationship with foreign financial entities remained substantially unchanged from 2005, when it was defined by the inflow of funds from foreign banks to domestic banks. Although

the pace of growth in foreign funds did slow down in the first half 2006, the volume of lending to foreign banks increased.

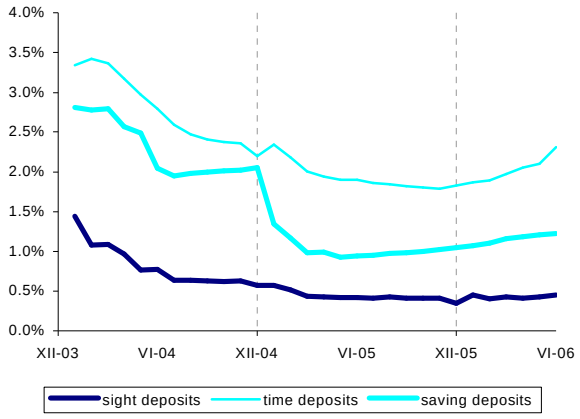
The main economic entities (households, enterprises, and also general government) keep a substantial proportion of their financial assets in banks, which are at the same time their principal creditors. With their capacity to receive deposits and provide loans, banks represent the main link between the real economy and the financial sector. This exclusive role of banks is reflected in their share of the total assets managed by financial market institutions. (Chart 1).

The financial sector also receives money through mutual funds, whose popularity in Slovakia has been on the rise in recent years, largely in reaction to the decline in interest rates. In the second half of 2005, interest rates on savings deposits began to increase, and by the end of the year, so did time deposit rates. This was one reason for the turnaround in the trend shift of household money from bank accounts to mutual funds. While mutual funds stagnated in the first half of 2006, bank account balances increased substantially. Households also keep a proportion of their financial assets in the form of investment and capital life insurance and pension savings; the growth in these investments did not, however, adversely affect bank deposits.

The importance of banks within the financial sector is highlighted by the fact that other financial institutions, including insurance companies and foreign banks, keep their assets in them. Banks may therefore mediate financial flows not only between entities of the real economy and the financial sector but also between different financial institutions.

Insurance companies have a special place in the financial system since their insurance activities contribute to the diversification of risks. In addition, they offer households the possibility of long-term investment through investment and capital life insurance, which account for most of the written premiums in the household sector.

Chart 6 Average interest rates on retail deposits



- Source: NBS.
- Date are in percent.

An overview of household financial assets is also provided schematically in Table 1. Besides standard bank deposits and the said life insurance, mutual funds represent a significant item. Based on their share in domestic funds, households may be assumed to have a high share also in foreign funds (though the respective data are not available). At present, pension savings account for the smallest component of household financial assets, though their position will increase significantly as the pension reform is gradually implemented.

Table 1 also shows fields indicating where a financial relationship exists between entities, but for which data are not available. A typical example is the activity of foreign banks and foreign asset management companies.

The relationships between households, enterprises and general government fall outside the scope of the financial sector analysis and therefore these data are not given in the lower right section of the table.

Table 1 Selected financial relationships between economic entities, December 2005 and June 2006

in SKK bn	NBS	Domestic financial sector						Domestic non-fin. sector			Foreign countries			
		Domestic banks	Insurance companies	PFMCs	SPCs	AMCs	Other fin. comp.	Households	Enterprises	General government	Foreign banks	Foreign AMCs	Foreign general gvt. and int. companies	Other
NBS		4 - 16	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0.2 - 0.2	0.1 - 0.1		315 - 183		266 - 236	47 - 47
Domestic banks	415 - 424	57 - 47	0.04 - 0.04			0 - 0	55 - 62	167 - 193	281 - 308	264 - 243	25 - 58		4 - 3	51 - 43
Insurance comp.	0 - 0	33 - 41				1.1 - 2.3								
PFMCs + SPCs	0 - 0													
AMCs	0 - 0	15 - 11												
Other fin. comp.	0.1 - 0.1	19 - 21												
Households	0.5 - 0.5	360 - 390	54 - 57	9 - 17	14 - 15	91 - 88								
Enterprises	0 - 0	251 - 232				0.8 - 0.7						21 - 23		
General government	3 - 0.3	93 - 148				0.7 - 0.5								
Foreign banks	163 - 6	302 - 282												
Foreign AMCs		22 - 17												
Foreign general gvt. and int. companies	2 - 1													
Other														

No direct relationship of creditor-debtor

Data are not available

- Source: NBS.
- Data are in SKK bn
  - first from left - December 2005
  - second from left - June 2006.
- **Rows:** overview of financial assets (loans, deposits made, and securities) invested in the institutions named in the columns.
- **Columns:** overview of liabilities (deposits and received loans) towards institutions in the rows.
- Regarding insurance companies, the figure represents technical reserves for life insurance.

Ownership structure

Table 2 Ownership structure of the financial sector broken down by country, in June 2006 (in %)

	Banks	Insurance companies *	Pension fund management companies	Asset management companies	Securities dealers
Slovakia	10.44	8.47	44.62	78.47	16.31
EU countries (excluding Slovakia)	85.80	87.67	27.82	21.53	79.61
Czech Republic	7.90	1.21	6.44	10.34	1.27
France		0.99			
Netherlands	1.40	13.38	18.62		0.09
Luxembourg	28.37	0.00	2.76		31.05
Hungary	4.55	1.26			4.98
Germany	1.95	40.43			
Austria	36.04	17.53			36.34
Italy	4.29	0.00			4.69
Portugal	0.17	0.00			
United Kingdom	1.14	8.07			1.19
Other		4.80		11.20	
Non-EU countries	3.76	3.86	27.56 (**)		4.09

- The ownership structure represents the principal owners of companies; their interests are measured as a percentage of the share capital.
- * Data for 2005.
- ** Switzerland.

A majority of institutions of the Slovak financial sector are owned by foreign companies, most of which are from EU Member States. Banks and insurance companies are typically owned directly by foreign financial groups, while asset management companies and pension fund management companies are often owned through banks or insurance companies.

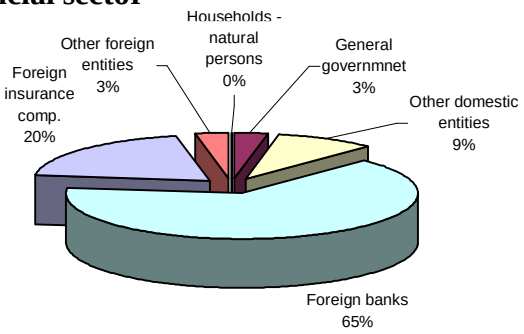
In June 2006, according to the last-owner criterion, 85% of the financial sector's assets were held by foreign companies and the rest by domestic entities.

The largest share of the financial sector's asset structure is held by foreign banks. They reported significant holdings in the domestic banking and collective investment sectors, and a somewhat smaller interest in the asset share of the pension savings sector.

Foreign insurance companies invested mainly in pension fund management companies. In the collective investment sector, they constitute the second most significant investor, after foreign banks.

The leading position among domestic entities was held by the category of "other domestic entities". This mainly includes financial companies with a significant interest in collective investment. As regards the ownership of securities dealers, domestic capital is dominant.

Chart 7 Ownership structure of the financial sector



- Source: NBS.
- Interests are measured as a percentage of the share capital.
- Ownership structure by last owners; as regards indirect control, only a financial institution may be deemed to constitute the last owner.

Table 3 Ownership ties in the Slovak financial sector in June 2006

	Banking sector	Insurance sector	Collective investment	PFMCs	SPCs	SDs
Households	0.1%			0.3%		
State and local administration	4.5%					0.3%
Domestic banks						
Other domestic entities	5.0%	3%	31.4%	2.4%		98.5%
Foreign banks	87.1%	21%	43.2%	9.5%	55%	
Foreign insurance companies	0.3%	71%	14.2%	84.9%	33%	0.5%
Other foreign entities	2.9%	4%	11.2%	2.9%	12%	1.5%

- Source: NBS
- Ownerships are measured as a percentage of the share capital.
- Ownership structure by beneficial owners; as regards indirect control, only a financial institution may be deemed to constitute the latest owner.
- SD – securities dealers
- PFMC - Pension fund management companies

1 Banking sector

Main changes and trends in banks' liabilities

The main conclusion to be drawn from the analysis of liabilities is that a majority of domestic banks, and the Slovak banking sector as a whole, still have at their disposal sufficient customer funds with which to provide for further lending growth. In this respect, the structure and volume of the main aggregates of liabilities have developed without showing any negative trends.

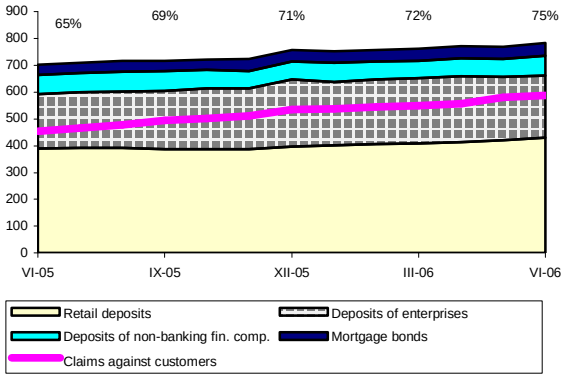
In comparison with the previous year, the volume of customer deposits and issued securities held in the banking sector increased, as did their share of total liabilities.

As a share of total liabilities, liabilities with a maturity of more than 1 year reached an 18-month high (8.3%) in June 2006. This situation is the result of several factors. First there is the slowdown in growth of foreign banks' short-term deposits, after they almost doubled in 2005 (see the section Interbank Market) and thereby increased the amount of customer funds. The second factor is the trend shift among households towards time accounts, which in December 2005 – apparently because of higher interest rates and the drop in yields on money market funds – began to increase substantially following a long-term period of decline. The doubts expressed in December last year about the trend shift of household financial assets from banks to mutual funds have now been confirmed. The third factor is the issuance of bank bonds which began in August 2005.

One of the criteria for measuring banking sector stability is the degree to which the sector is able to use customer deposits to finance customer lending. If customer funds are insufficient, then there is an increasing dependency on funds from the domestic interbank market and from abroad, which in turn heightens the liquidity risk, systemic risk, and possibly the foreign exchange risk. The indicator most frequently used in this respect is the loan-to-deposit ratio[4].

Despite the gradual increase in the loan-to-deposit ratio (from 65% in June 2005, to 75% in June 2006), the Slovak banking sector has sufficient funds from domestic customers at its disposal (Chart 8). That said, a number of banks are closing their foreign exchange position by using interbank funds for the provision of foreign currency loans. In June 2006, four banks reported a loan-to-deposit ratio of higher than 1, and 13 banks had registered an increase in the ratio. Nevertheless, the Slovak banking sector still has one of the lowest loan-to-deposit ratios in the European Union.

Chart 8 Funds from domestic customers and loans



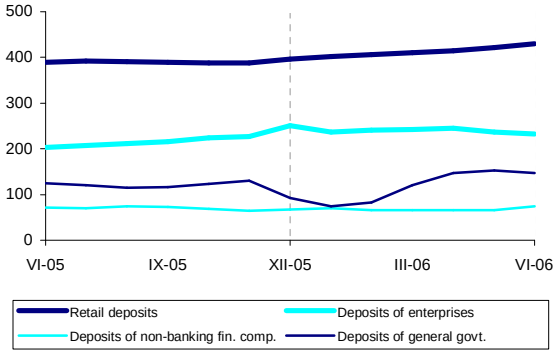
- Source: NBS.
- Data are in SKK billion.
- Figures above the columns show the loan-to-deposit ratio
- Deposits of general government are not included since they mostly consist of short-term ARDAL funds.

[4] The loan-to-deposit ratio represents the ratio of customer loans to the sum of retail and corporate deposits, deposits of financial companies, and issued mortgage bonds. In the analysis as at December 2005, the ratio deposits-to-loans was used.

Customer funds

Liabilities towards customers as a share of total liabilities fluctuated between 59% and 63% over 18 months. In comparison with the period prior to January 2005, the share stopped falling, and in April 2006 it stood at a 16-month high.

Chart 9 Main aggregates of customer deposits



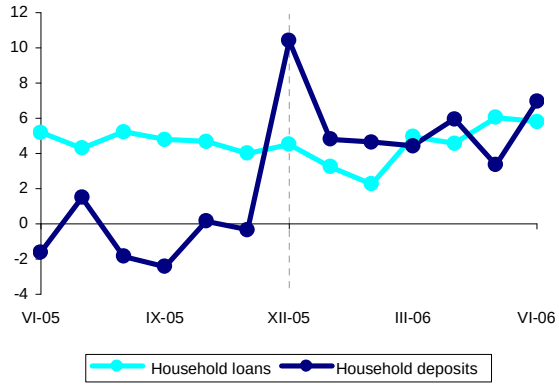
- Source: NBS.
- Data are in SKK billion.

Retail deposits

Household deposits continued to predominate among retail deposits (over the preceding 12 months, their share of retail deposits fluctuated between 90% and 92%), and so far as banks are concerned they remain the most advantageous form of funds. In contrast to most of the months in 2004 and 2005, December 2005 saw household deposits begin to grow substantially. From February 2004 to November 2005 they had fallen from SKK 371.8 billion to SKK 349.9 billion, but in June 2006 they stood at SKK 390 billion. That represents a seven-month increase of SKK 40.5 billion. In several months of 2006, the year-on-year increase in household deposits outstripped the growth in household lending, which is still considered to be very fast. In other words, for every month of 2006, households borrowed from banks between SKK 2.3 billion and SKK 6 billion, and at the same time deposited with them between SKK 3.4 billion and SKK 6.9 billion (Chart 10).

The great majority of retail deposits are koruna deposits; the share of koruna deposits in total retail deposits has been rising moderately over the long term and amounted to 90% in June 2006.

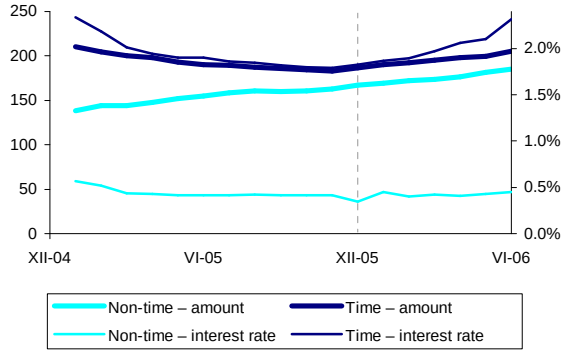
Chart 10 Month-on-month changes in household loans and household deposits



- Source: NBS.
- Data are in SKK billion.

As non-term deposits continued their smooth growth, so there was a trend shift in time deposits, especially koruna deposits (Chart 11) Household foreign exchange deposits increased at the same rate but in smaller volumes.

Chart 11 Retail deposits and average interest rates



- Source: NBS.
- Volume data (left axis) are in SKK billion.
- Average interest rate data (right axis) are in percent.

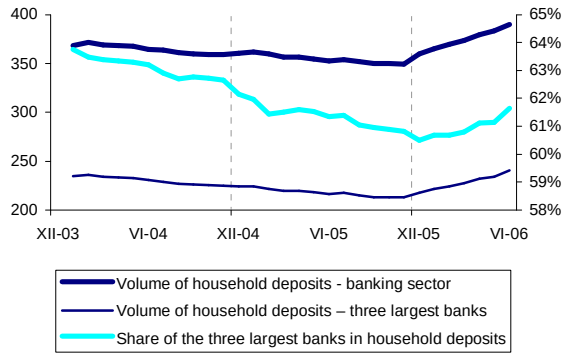
The overall development of retail deposits may to a certain extent be explained by cyclical factors, as may interest rate movements. The

growth in retail deposits cannot be put down to developments in the amounts invested in mutual funds or in life insurance, since these amounts also increased over the same period.

A correlation between the volume of deposits and interest rates can be seen in time deposits. Non-time deposits grew despite interest rates either declining or stagnating.

The analysis of household deposits confirms the dominant position of the three largest banks. The trend decline and trend growth seen in household deposits in different periods were more pronounced in these three banks. Their share of total household deposits fell during the period of decline and, conversely, increased during the period of growth (Chart 12).

Chart 12 Share of the three largest banks in total households deposits



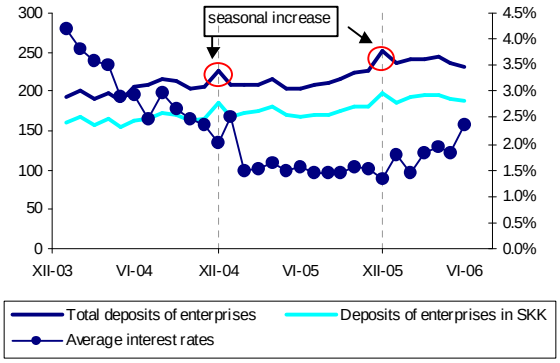
- Source: NBS.
- Data on the left axis are in SKK billion.
- Data on the right axis are in percent.

Deposits of non-profit organizations were stable and their volume hardly changed year-on-year, to remain at SKK 15 billion. Deposits of sole traders fluctuated between SKK 22 billion and SKK 24.6 billion, with the peak reported in June 2006.

Enterprise deposit accounts

Representing the second most important source of finance for banking activities, funds held in enterprise deposit accounts generally develop differently to retail deposits. They are substantially more volatile, and in the koruna-denominated component show certain seasonality, which to a large extent determines their overall trend. The seasonality of deposits of enterprises occurs in December of the given year with a one-month increase of around 10% (seen in December 2004 and December 2005). Their development needs to be noted in this context (Chart 13).

Chart 13 Deposits of enterprises



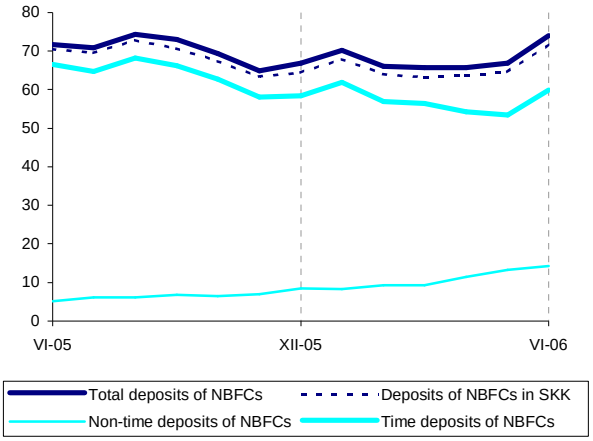
- Source: NBS.
- Volume data (left axis) are in SKK billion.
- Average lending rate data (right axis) are in percent.

Deposits of enterprises increased year-on-year from SKK 203 billion to SKK 232 billion. The rise was accounted for by both the dominant koruna deposits and foreign exchange deposits. Non-time and time deposits followed a comparable course. The increase in deposits of enterprises cannot, however, be put down to the effect of interest rates.

Deposits of non-banking financial companies

Following a period of significant growth (64% in 2004), deposits of non-banking financial companies (NBFCs) became more stable during 2005 and the first half of 2006. Throughout this period, they amounted to between SKK 65 billion and SKK 74 billion (Chart 14).

Chart 14 Structure of deposits of non-banking financial companies by currencies and maturity



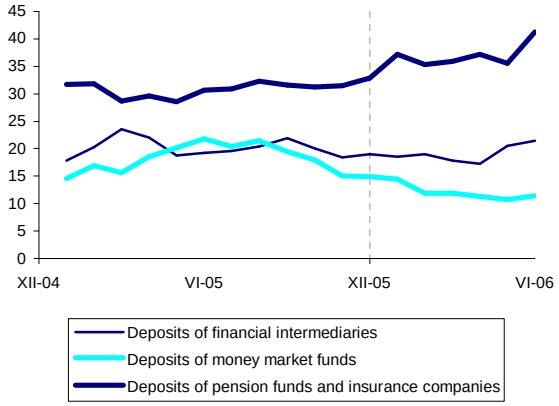
- Source: NBS.
- Data are in SKK billion.

The second half 2006 saw notable trend growth in non-time deposits of financial companies. This most probably relates to the koruna current accounts of insurance companies and pension companies.

The funds of financial companies are losing some of their strict investment character, as has been noted numerous times in previous analyses. In June 2006, non-time deposits accounted for 19.2% of the total deposits of NBFCs, compared to 7.2% in June 2005.

Midway through last year, a change appeared in the structure of NBFC's deposits. The volume of deposits made by mutual funds began to decline, probably as a consequence of falling sales of money market funds. By the end of the year, deposits of insurance companies and pension companies had started to increase (Chart 15).

Chart 15 Structure of deposits of non-banking financial companies by counterparties

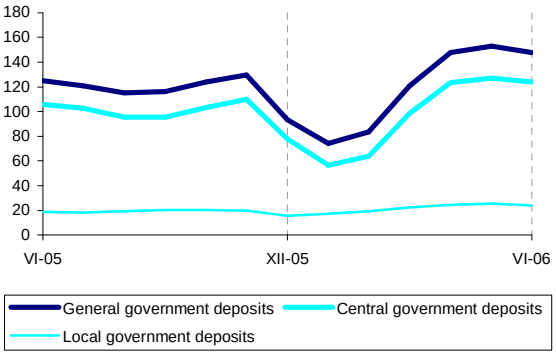


- Source: NBS.
- Data are in SKK billion.

General government deposits

General government deposits are largely made up of central government funds and local government funds. In the case of the central government, a large part of the deposits comprises general government funds managed by the Debt and Liquidity Management Agency (ARDAL).

Chart 16 Structure of general government deposits



- Source: NBS.
- Data are in SKK billion.

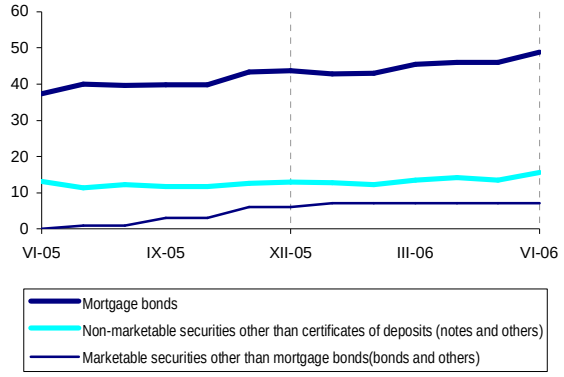
Almost all deposits of general government have a maturity of less than 1 year, and more than half have a maturity shorter than one month. General government deposits come mainly in the form of time deposits, and banks predominantly

used them in NBS sterilization tenders. These are also the most volatile component of general government deposits. The decline in central government deposits which occurred at the end of last year and at the beginning of this year was accounted for by koruna time deposits; in April, foreign-exchange time deposits again recorded a notable increase. The decrease in ARDAL deposits was probably related to the maturing of restructuring bonds. The Finance Ministry's claim against banks – through a time deposit – was off-set by the banks' claim against the Ministry – through bonds.

Local government deposits consisted mainly of non-time deposits, in other words, the current accounts of towns and communities. These were mostly denominated in koruna. Local government funds typically have a very high concentration.

Funds raised from securities issues

Chart 17 Structure of issued securities



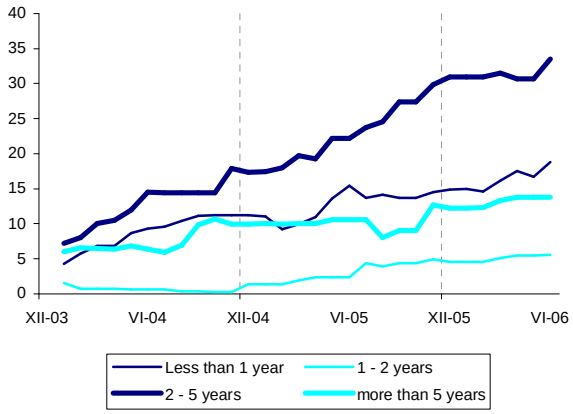
- Source: NBS.
- Data are in SKK billion.

Although the volume of issued securities remains relatively small, the funds raised in this way have been steadily growing in significance. The share of issued securities in total liabilities went from 1.9% at the beginning of 2004 to 4.9% in June 2006.

Mortgage bonds constitute a substantial proportion of long-term securities (68% of issued securities), while notes are of less importance (Chart 17).

Apart from mortgage bonds and notes, the first bank bonds denominated in Slovak koruna were issued in August 2005. The reason for the issue of what is an expensive source of funds, particularly so when interest rates are rising, could be that long-term funds are needed in order to ensure more balanced financing of investment loans to companies and home loans to households. That would also explain the notable increase in bonds with a residual maturity of between 2 and 5 years in other words, relatively long-term funds (Chart 18).

Chart 18 Issued securities by current residual maturity

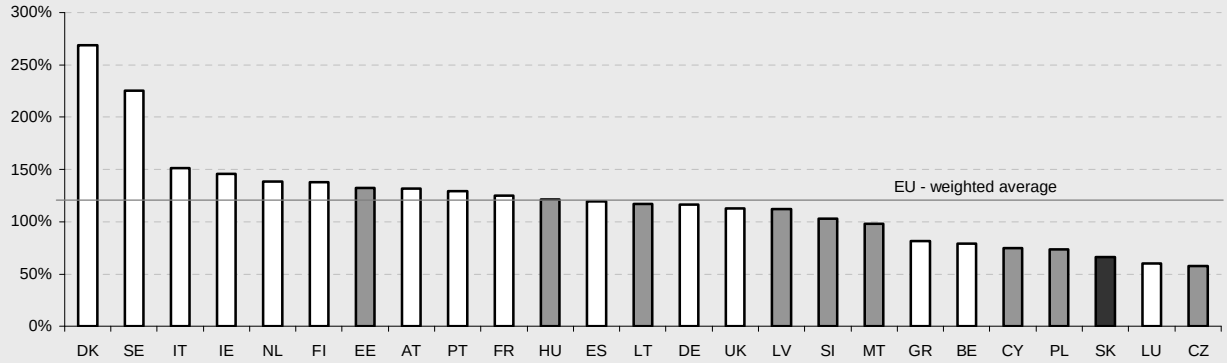


- Source: NBS.
- Data are in SKK billion.

Box 2 Deposits and loans in EU banking sectors

The structure of liabilities in EU banking sectors[5] has remained substantially unchanged for the past five years. Customer deposits continue to be the main component – accounting for around 36% of liabilities (compared to 61% in the Slovak banking sector). In second place there is market-based debt, representing around 25% (5% in the Slovak banking sector), and this is followed by the interbank market, with around 19% (23% in the Slovak banking sector). In most EU countries, lending growth is outpacing the increase in deposits, largely owing to the growth in household lending. As a result, loans in general account for around 42% of total assets, meaning that they are not fully covered by customer deposits (which, as mentioned, make up only some 36% of liabilities). This is also borne out by the breakdown of the loan-to-deposit ratio in the European Union.

Chart 19 Loan-to-deposit ratio in EU countries, December 2005

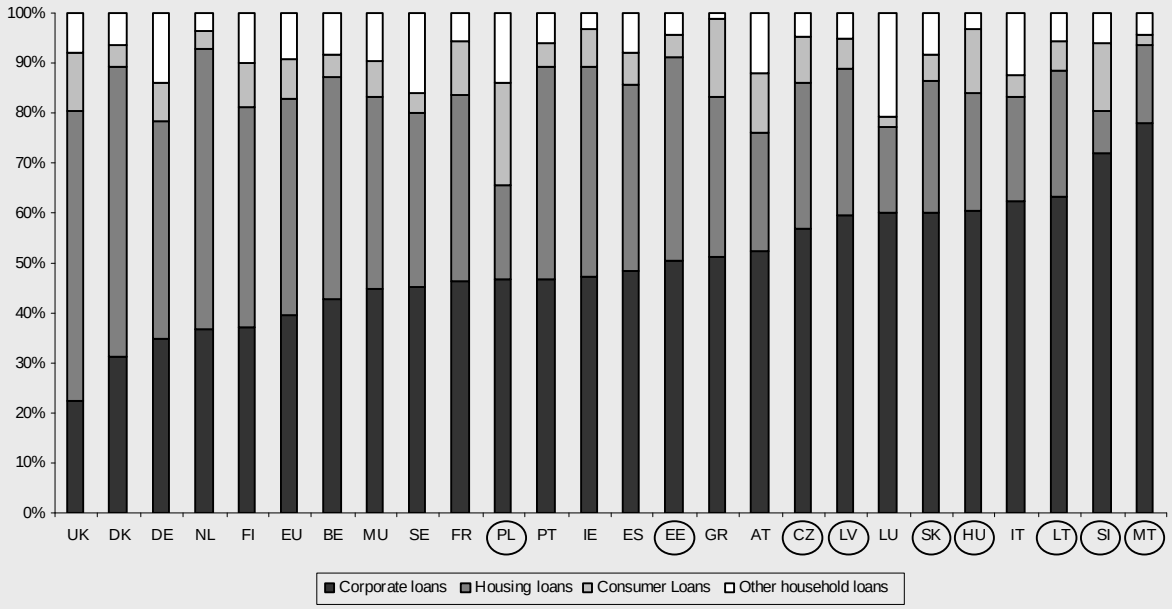


- Source: WGBD

The new Member States typically have lower figures. Of the eight Member States with a ratio of less than 100, five are from the new intake. This situation mainly reflects a generally lower volume of customer lending, especially household lending. In the new Member States, including Slovakia, there was in the past a relatively higher proportion of lending to enterprises. Today, the volume of loans to enterprises reported by most of these countries is higher than the volume of household loans.

[5] Based on a sample of consolidated data for 2005, covering the largest banks in the EU.

Chart 20 Composition of lending in the banking sectors of EU Member States, December 2005



- The new Member States are encircled.
- The chart does include data for Cyprus.

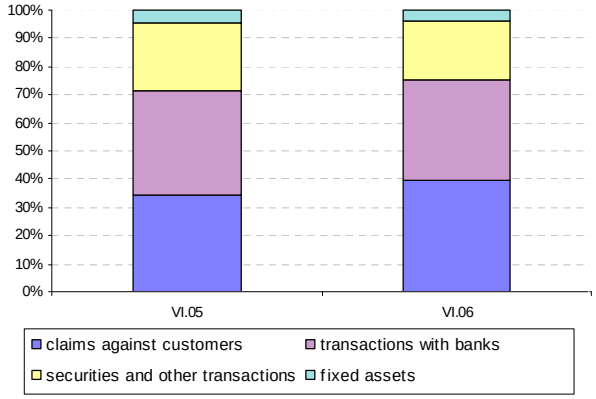
Main changes and trends in banks' assets

In June 2006, customer loans represented the largest share of assets in the banking sector (40% of the sector's total assets). At the same time, their share reported a substantial increase year-on-year. As the proportion of these loans increases, the asset structure of the banking sector ever more closely resembles the asset structure of banks in the rest of the EU.

Banks lent mainly to companies and retail customers, and there was also growth in lending to non-banking financial companies. Despite the growth in lending rates, there has not be seen any significant decline in the pace of lending growth.

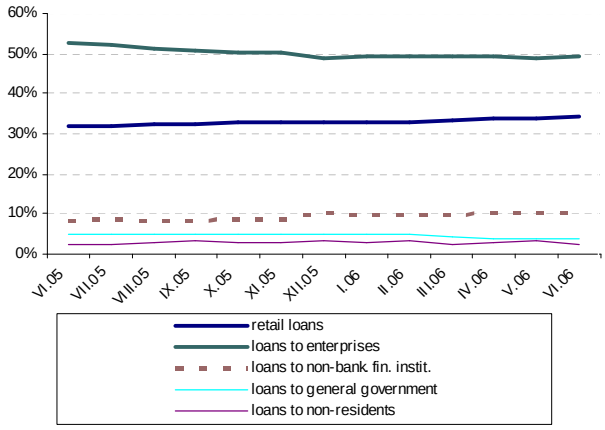
The year-on-year decline in the volume of securities in the banking sector is to a large extent related to the maturing of government bonds issued in the period when selected banks underwent restructuring. Banks' holdings of all securities, except for bank bonds and foreign equity securities, decreased.

Chart 21 Asset structure of the banking sector



- Source: NBS.
- The vertical axis shows the shares of individual aggregates of assets in total assets.

Chart 22 Credit portfolio of the banking sector



- Source: NBS.
- The vertical axis shows the shares of different loan categories in total loans.

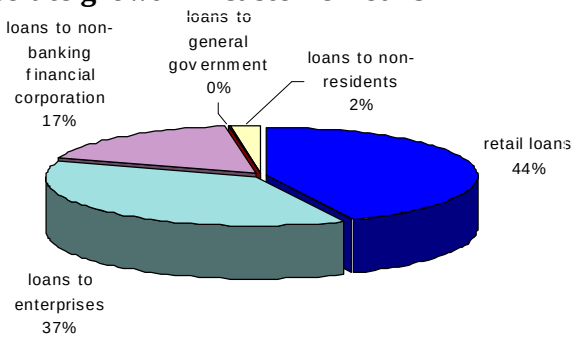
Customer loans

The trend change in the structure of the banking sector's credit portfolio continued, as retail loans and loans to non-banking financial companies increased in share. Although loans to enterprises, general government and non-residents increased in absolute terms.

The absolute increase in lending was largely accounted for by retail lending, enterprise lending and loans to non-banking financial companies.

Most of the loans provided by banks were denominated in the local currency. Less than 25% of the total volume of customer lending was denominated in foreign currencies. From June 2005, these loans increased by 23%. Foreign currency loans were provided mainly to enterprises (foreign currency loans to enterprises constituted almost 84% of the total volume of foreign currency loans to customers).

Chart 23 Lending categories by share of absolute growth in customer loans



- Source: NBS.

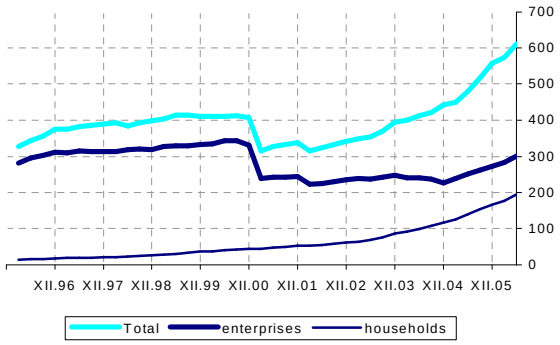
Loans to enterprises

In comparison with household lending, lending to enterprises has a substantially longer history in the Slovak banking sector. For both, however, the years 2000 and 2001 proved to be a key period when, in the wake of consolidation in the banking sector, household lending increased substantially and scope appeared for lending to the corporate sector.

The increase in lending to enterprises took place, however, only after December 2004, and between then and June 2006 it rose from SKK 225.9 billion to SKK 300.8 billion. In terms of currency composition, this growth included koruna loans worth SKK 40.1 billion and foreign currency loans worth SKK 34 billion. As regards maturity, long-term loans repayable over more than 5 years and short-term loans with a maturity of up to 1 year increased (by SKK 32.7 billion and SKK 41.3 billion, respectively), and loans with a maturity of between 1 and 5 years rose only slightly (by SKK 0.5 billion).

In June 2006, lending to enterprises constituted the largest part of banks' credit portfolio. Although lending to enterprises declined slightly as a share of total customer lending, it recorded a substantial increase in absolute terms. The trend apparent in the sector since the beginning of 2005 continued. Up to the end of 2004, the only increase in lending to enterprises had been in foreign currency loans, but the beginning of the following year saw growth also in koruna loans. In the first half of 2006, the relative growth of koruna loans was greater than that of foreign currency loans. Lending demand from large enterprises increased during the first six months of the year, as it did from small and medium sized enterprises. But while large enterprises stepped up their demand mainly for long-term loans, small and medium-sized enterprises were raising their demand for both short-term and long-term loans.

Chart 24 Volume and share of loans to enterprises



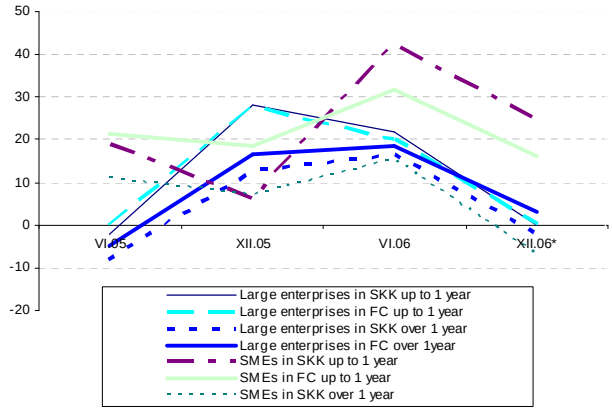
- Source: NBS.
- Data are in SKK billion.

The growth in demand of enterprises was supported by the improved financial situation of the business sector. Enterprises financed mostly long-term investments and also operating capital. To a greater extent than in previous years, enterprises took out loans with certain banks for the purpose of financing mergers, acquisitions, and restructuring. Selected banks also reported an increase in demand for loans to refinance other loans.

The rise in demand for loans to enterprises was also supported by the relaxation of lending standards. In the first half of 2006, banks eased their lending standards for a majority of loans to large enterprises, and also for those to small and medium sized enterprises. This loosening was largely a response to competition from other banks, and, for the first time, some banks ascribed it partly to competition from non-banking companies. On the other hand, some banks cited the expected macroeconomic

development as a reason for the tightening of standards.

Chart 25 Lending standards for loans to enterprises

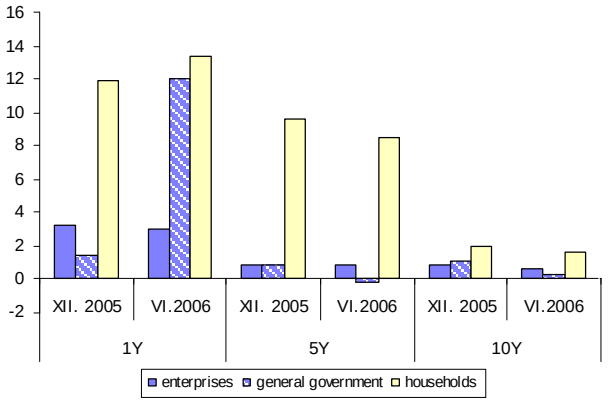


- Source: Questionnaire on Supply and Demand in the Lending Market, NBS.
- Data for the second half of 2006 represent the expected development in lending standards.
- Data on the vertical axis show the so-called net percentage share of banks, calculated by taking the lending to enterprises of banks which relaxed lending standards and those which tightened lending standards and finding the difference between the percentage share of each in total lending; a positive figure indicates the relaxation of standards (see Box 3).

Banks expect lending standards to be further relaxed in the second half of 2006, though to a lesser extent. A tightening of lending standards is expected for long-term koruna loans to small and medium-sized enterprises.

The easing of selected lending conditions contributed to the rise in demand of enterprises for loans. According to the questionnaire's findings, banks reduced their enterprise loan fees, raised limits for the maximum loan size and maturity, and, according to banks also allowed a decline in their interest rate margin on enterprise loans. This may also be confirmed by the reported interest rates. In comparison with the end of 2005, banks saw a decrease in the difference between interest rates on loans to enterprises and market rates with the respective maturity.

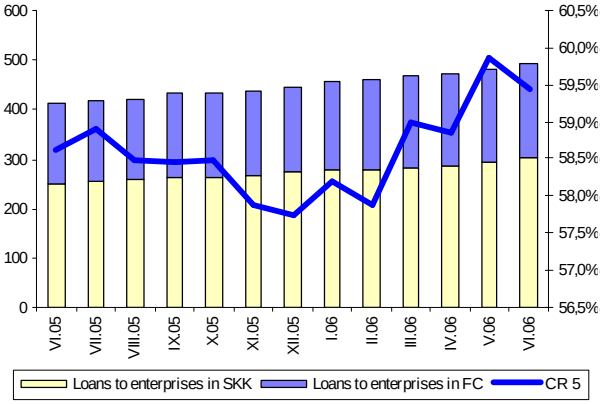
Chart 26 Banks' interest margin on loans



- Source: NBS.
- Figures on the left axis are in percent and represent the difference between, on the one hand, interest rates on new loans for up to 1 year, up to 5 years, and over five years, and, on the other hand, income from the 1 year interbank rate and from 5-year and 10-year government bonds.

Concentration in the lending market of enterprises,[6] measured as the share of the five largest banks in this segment, increased slightly in the first half of 2006.

Chart 27 Growth and concentration in the lending market of enterprises

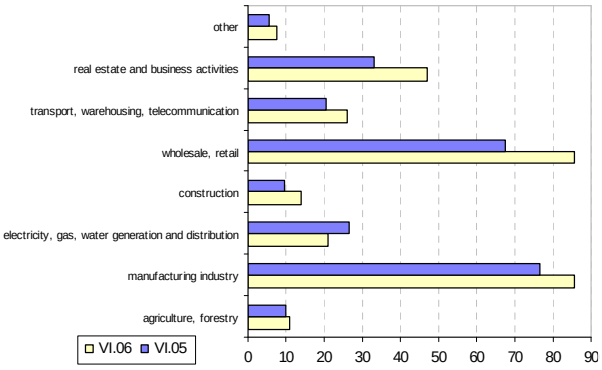


- Source: NBS.
- Data on the left axis are in SKK billion.
- FC – foreign currency.
- CR 5 – the five largest banks by their share of the corporate lending market.

[6] The data are confined to loans to domestic enterprises. Loans to foreign enterprises come under lending to other sectors.

In terms of its industry breakdown, lending growth was most notable in loans to trading companies, to companies involved in real-estate financing, and to companies in construction and selected manufacturing industries (chemicals, cellulose, paper, rubber and plastics).

Chart 28 Corporate lending broken down by industry



- Source: NBS.
- Data on the axis are in SKK billion.

Retail loans

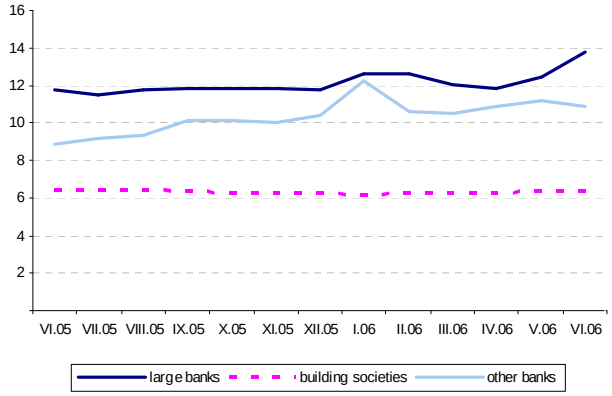
Retail loans are among the fastest growing items on the banks' balance sheet. From June 2005 their volume increased by almost 38%, and in June 2006 they already accounted for almost 40% of customer lending. Retail loans almost entirely comprised koruna loans. Foreign currency loans as a share of the total amounted to 1.2% in June 2006, compared to 1% in June 2005. In volume terms, that represents an increase from SKK 1.5 billion to SKK 2.6 billion. Close to 92% of retail loans were provided to households.

Although year-on-year growth in retail lending was fast in the first half of 2006 (an increase of 15% from 31 December 2005 to 30 June 2006), it was not as fast as in the first half of 2005 (a rise of 18% from 31 December 2004 to 30 June 2005).

Retail lending increased in nearly all the banks which provided such loans to their customers. The three largest banks saw substantial rises.

Household demand increased, especially for loans with specified purpose and for loans without specified purpose collateralized by real estate.

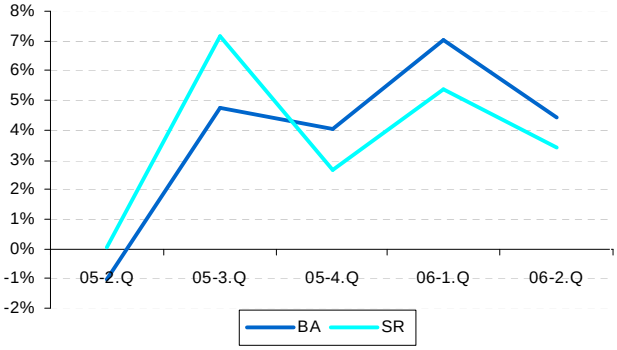
Chart 29 Interest rates on new loans to households by banking group



- Source: NBS.
- Data on the left axis are in percent.
- Interest rates on new standard loans.

The growth in demand occurred despite the upturn in interest rates. As with lending to enterprises, banks' interest margins narrowed and particularly so on long-term loans (Chart 26).

Chart 30 Residential real estate prices



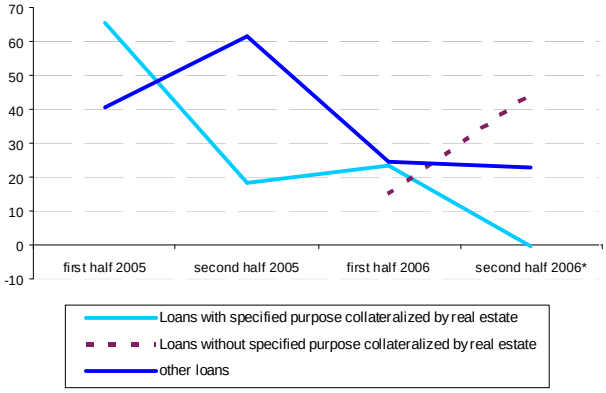
- Source: National Association of Real Estate Offices of Slovakia (NARKS), NBS.
- The vertical axis shows the percentage changes in prices in comparison with the previous quarter.
- Percentage changes are calculated from prices per 1m2 of residential real estate.
- BA – Bratislava Region.

The rising demand for household lending was, according to the banks, largely attributable to the

growth in real estate prices. In order to buy property, households were therefore constrained to borrow more. Real estate prices climbed sharply, especially in the first quarter of 2006 – in comparison with the previous quarter they increased by almost 5.5%, with Bratislava region reporting the highest rise of more than 7%. The second-quarter growth was more moderate.

Household demand was also stimulated by households' positive expectations for the macroeconomic development and an increase in their income.

Chart 31 Lending standards for household loans

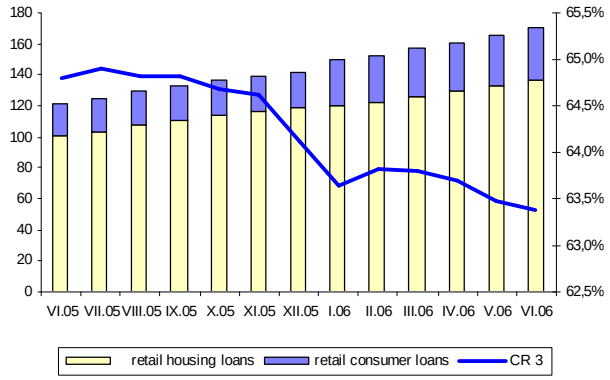


- Source: Questionnaire on Supply and Demand in the Lending Market, NBS.
- Data for the second half of 2006 represent the expected development in lending standards.
- Data on the vertical axis show the so-called net percentage share of banks, calculated by taking the household lending of banks which relaxed lending standards and those which tightened lending standards and finding the difference between the percentage share of each in total lending; a positive figure indicates the relaxation of standards (see Box 3).

Banks supported household lending growth by further easing of their lending standards. This loosening was mainly a response to pressure from other banks and it reflected efforts to preserve market share. With certain banks, there was also a loosening of risk appetite for the household segment. The relaxation of lending standards most often involved easing the maximum maturity limits on loans and lowering the requirements for quality of collateral and the customer's financial standing.

Banks expect that the second half of the year will bring tightening of lending standards for other household loans. However, the relaxation of standards for loans collateralized by real estate should continue, reflecting the banks' confidence that real estate prices will keep rising.

Chart 32 Growth and concentration in the retail lending market



- Source: NBS.
- Data on the left axis are in SKK billion.
- The right axis shows the three largest banks by their share of retail lending.
- CR 3 – the share of the three banks with the largest share in retail lending market.
- Data for 2005 cover only standard loans.

Concentration in the retail lending market declined only slightly in the first half of 2006, with the three largest banks maintaining their typical dominance.

As regards retail market products, housing loans are the most popular, and in June 2006 they accounted for 65% of retail lending. The demand was concentrated in mortgage loans, intermediate loans and other housing loans, typically in the form of loans without specified purpose collateralized by real estate. Building loans provided by building societies decreased in share.

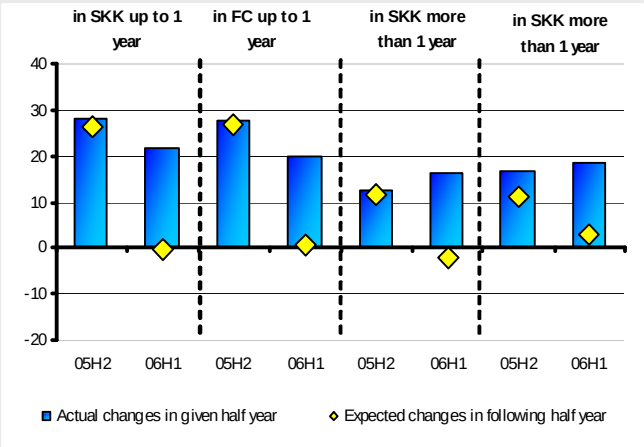
Box 3 Supply and demand in the lending market in the first half of 2006

In June 2006, the NBS conducted another round of its survey on supply and demand in the lending market. The respective questionnaire provides regular, qualitative information on changes in lending standards and other conditions under which corporate loans and household loans are provided. The questionnaire results also give an overview of changes in lending demand from the view of banks. The findings can therefore be of assistance when analysing fluctuations in the credit cycle and its determinants, and so contribute to the better evaluation of financial stability. The data in the charts are given as a "net percentage share". As regards, for example, banks that relaxed lending standards for household loans, the net percentage share is calculated by taking the household lending of banks which relaxed lending standards and those which tightened lending standards and finding the difference between the percentage share of each in total lending. Put simply, the banks' individual responses are weighted by the average volume of the relevant type of loans for the first half of 2006. A positive value indicates a relaxation of lending standards.

For the first half of 2006, banks recorded notable demand for long-term loans to large enterprises and higher demand among small and medium-sized enterprises for both short-term and long-term loans. On the other hand, demand from large enterprises for short-term loans declined. In comparison with the second half of 2005, there was less demand from large, medium-sized and small enterprises. Demand was largely stimulated by the need to finance long-term investments and operating capital, though the weight of these reasons was down from its level in the second half of 2005. Other reasons increased in significance, including the need to improve the financial position of enterprises, to use loans for the servicing of other loans, and to finance mergers, acquisitions, and restructuring.

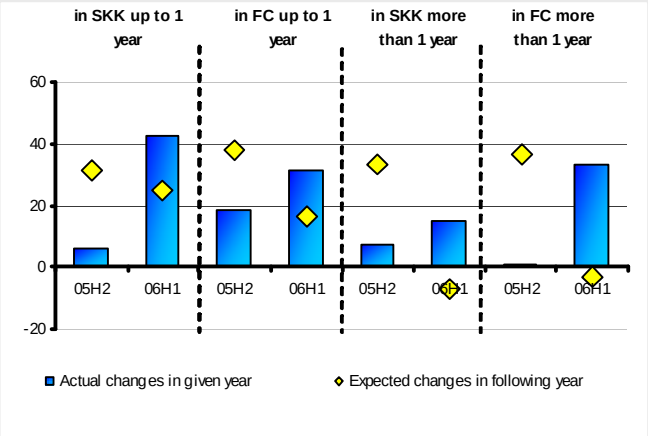
The relaxation of lending standards for corporate loans continued during the first six months of 2006. In comparison with the first half of 2005, the easing of standards was more moderate for large enterprises, but greater for small and medium-sized enterprises. The banking sector does not expect the second half of the year to bring further changes in lending standards (except for short-term loans to small and medium-sized enterprises).

Chart 33 Changes in lending standards for loans to large enterprises



- Source: NBS.
- Data are given as a net percentage share.
- A positive figure indicates the relaxation of standards.

Chart 34 Changes in lending standards for loans to small and medium-sized enterprises

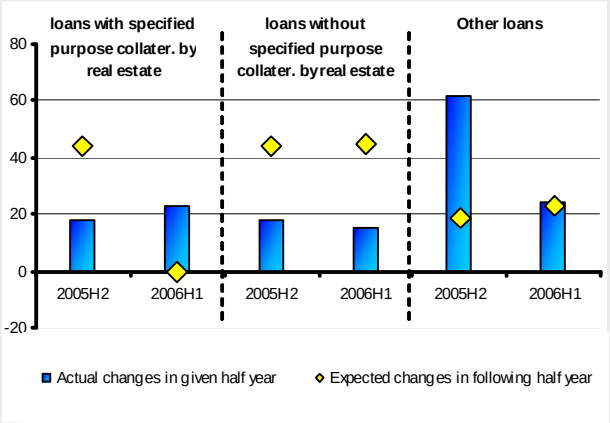


- Source: NBS.
- Data are given as a net percentage share.
- A positive figure indicates the relaxation of standards.

The main factor behind the relaxation of lending standards for corporate loans was competition from other banks. For the first time, banks cited competition from non-banking entities as a reason for easing standards. In the first half of the year, banks reduced the spread between lending rates and market interest rates, cut corporate lending fees, and lowered the threshold for the minimum level of co-financing. They also raised the limits on the maximum size and maturity of loans.

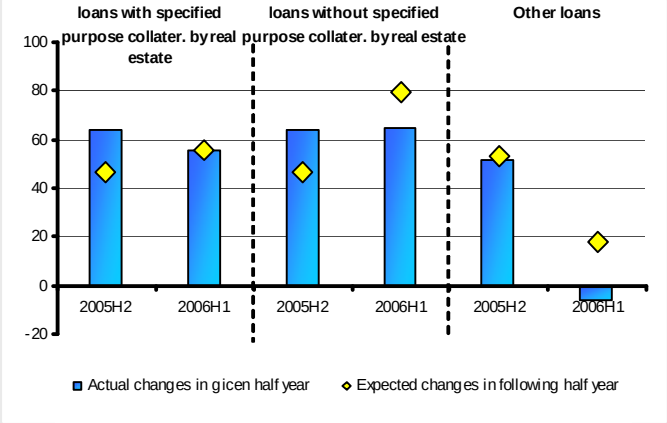
Lending demand from households in the first half of 2006 remained close to its level for the second half of 2005. The only notable change was the decline in demand for other loans. The increased demand reported in selected banks was largely the result of movements in real estate prices, positive expectations for the near-term macroeconomic development, and shifting income levels. First-half household demand was also affected by changes in interest rates and fees, and the introduction of new products. As regards the second half of the year, demand is expected to increase, especially for any purpose loans secured against property.

Chart 35 Changes in lending standards for household loans



- Source: NBS.
- Data are given as a net percentage share.
- A positive figure indicates the relaxation of standards.

Chart 36 Changes in demand for household loans



- Source: NBS.
- Data are given as a net percentage share.
- A positive figure indicates the relaxation of standards.

Banks eased lending standards for households in the first half of the year. This was mainly because of competition from other banks, a change in banks' risk appetite, and developments in the real estate market. The relaxation of standards largely involved loosening the maximum maturity limits on loans, the extent of powers in lending decisions, and the financial-standing requirements for customers. Banks also reduced the spread between household lending rates and market interest rates.

Lending to other sectors

Lending to non-banking financial institutions accounted for more than 10% of customer loans in June 2006. Like retail and enterprise lending, lending to non-banking financial institutions recorded a sharp increase (almost 60% from June 2005). Nearly the entire volume was lent to financial intermediaries (leasing companies, hire-purchase companies, etc.), and only a small proportion to pension funds and insurance companies. Four banks accounted for around 60% of the loans to financial companies.

Lending to general government had a declining trend in the first half of 2006. Two banks had a dominant position in this sector, one dominant in lending to local government and the other providing a major share of the loans to central government.

Lending abroad constituted less than 3% of customer loans in June 2006. It increased from the beginning of the year by 23%.

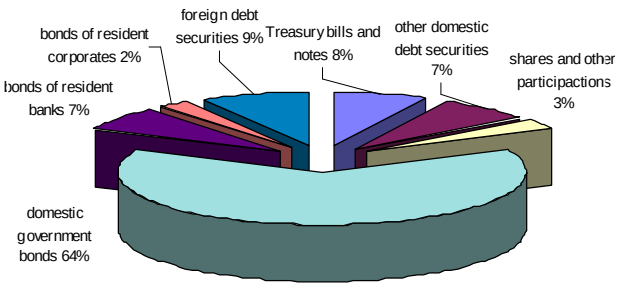
Investments in securities

The volume of securities held by banks at the end of June 2006 was down by 25% year-on-year, or by more than SKK 100 billion. Securities holdings declined most sharply in the last quarter of 2005 and in January 2006, owing to the decrease in holdings of government bonds. The volume of securities increased slightly from the end of January 2006.

Despite this decline, securities continued to make up a significant part of banks' assets and accounted for around 20% of the total in June 2006.

The securities portfolio of banks had a conservative structure. Government securities and Treasury bills made up almost 79% of total securities holdings. Foreign debt securities and mortgage bonds also represented a significant share.

Chart 37 Portfolio structure of securities owned by the banking sector in June 2006

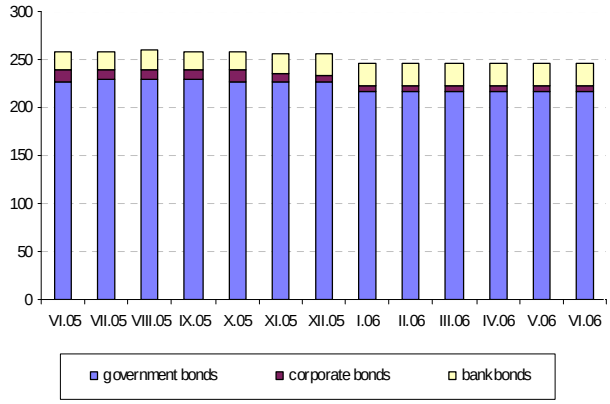


- Source: NBS.
- The chart shows the main categories of securities by their share of the total volume of securities.

Debt securities

Holdings of government bonds declined sharply in January 2006, by more than SKK 32 billion. Of that amount, 97% represented a decrease in the holdings of two banks. The reason was the redemption of bonds, which the banks had acquired from the state under the restructuring of the credit portfolio. The other restructuring bonds held in the bank sector are due to mature in 2008 and 2011. The volume of government bonds held by the two said banks started to increase again in the first half of 2006.

Chart 38 Structure of domestic debt securities



- Source: NBS.
- Data on the vertical axis are in SKK billion.

The increase in the volume of banks' domestic bonds, particularly mortgage bonds, was jagged in character and was related to the obligation of banks' to issue these securities in order to finance mortgage loans.

Foreign debt securities consisted mainly of bank bonds and other debt securities. The bond issuers were predominantly foreign entities from euro area countries.

Equity securities

Equity securities are largely made up of domestic paper, which declined over the course of the year. Banks held mainly shares and interests in financial companies (accounting for almost 68% of domestic equity securities) and in enterprises (32%).

Holdings of foreign equity securities had a rising trend. Regarding banks' holdings of shares and interests in companies from non-euro area EU countries, the countries in question were predominantly the Czech Republic and the United Kingdom.

Interbank market

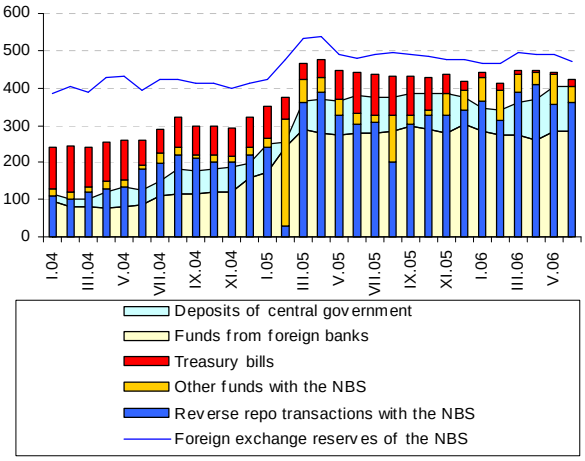
The development of the interbank market reflected the raising of the NBS base rate by a total of 1 percentage point in the first half of 2006. In relation to expectations for the future development and to the situation on the foreign exchange market, interest rates on longer maturities underwent the most marked rise. The volume of funds deposited with the NBS or invested in the purchase of NBS bills increased only slightly year-on-year, especially when compared with the high growth posted during the first half of 2005. The deposits of foreign banks also rose, as did the underlyings of currency derivatives traded on the interbank market.

As a share of the banking sector's balance sheet total, neither asset nor liability transactions on the interbank market recorded a significant change during the first half of 2006, especially in comparison with the substantial increase in these transactions during the first half of 2005.

The funds from the Slovak interbank market, which were sterilized by the NBS and those, which banks deposited with and lent to other commercial banks declined only slightly year-on-year as a share of the sector's balance sheet total, from 39% to 37%. Between June 2005 and June 2006, the figure fluctuated in a range of 35% to 39%. Among the group of large banks, this share fell during the second half of 2005 (from 30% to 22%) and rose in the first half of 2006 (to 30%). But among the group of banks tied to their own banking groups – which reported the highest share of interbank transactions – the share increased during the first half of 2005 (from 64% to 68%) but fell in the second half of the year (to 59%).

The volume of funds, which the NBS sterilized through deposits and loans from commercial banks, through minimum reserve requirements, or through the issuance of NBS bills for the banks' portfolios, remained substantially unchanged year-on-year (it declined slightly from SKK 436 billion to SKK 421 billion[7]). One reason could be that the volume of the NBS's foreign exchange reserves, which correlates with the volume of sterilized funds, was from mid-2005 approximately stable. This amount (converted into Slovak koruna, always using the exchange rate as at the current day) decreased from SKK 480 billion to SKK 471 billion. The only interventions made by the NBS on the foreign exchange market came in October 2005 (in the amount of EUR 220 million, in order to weaken the Slovak currency) and in June 2006 (EUR 1,335 million, in order to strengthen the koruna).[8]

Chart 39 Interbank assets and liabilities and funds of general government



- Source: NBS.
- Data are in SKK billion.
- The chart does not include transactions between domestic banks.

For the Slovak banking sector, this meant that the volume of the Slovak currency which banks

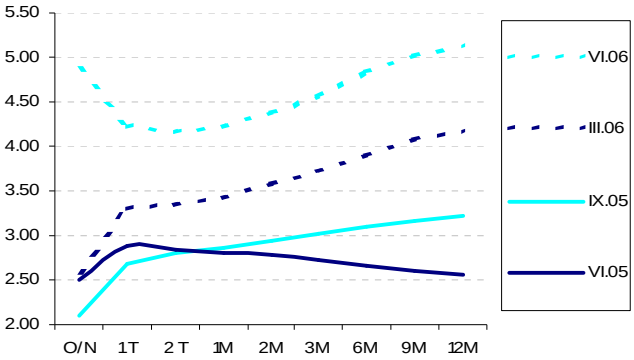
[7] In this text, unless stated otherwise, data on monetary amounts represent the balance sheet position as at a given date and not the volume of transactions for the given period.

[8] Source: Monetary Survey, NBS.

could deposit with the NBS or use to purchase NBS bills was not increased through foreign exchange interventions during the first half of 2006. This year the NBS also carried out regular weekly repo tenders and accepted the banks entire demand on every occasion.

Bills issued by the NBS were less significant in comparison with 2005, as were State Treasury bills. In fact, owing to the favourable development of government debt, a large volume of State Treasury bills remained after their primary issue in the portfolios of ARDAL (fully 100% as at 30 June 2006).[9] On the other hand, the volume decline of NBS bills in banks' portfolios is a consequence of lower demand, meaning that banks are requiring higher yields (more than the yields in sterilization repo tenders). This is reflected in the changing yield curve of interest rates.

Chart 40 Yield curves of BRIBOR rates

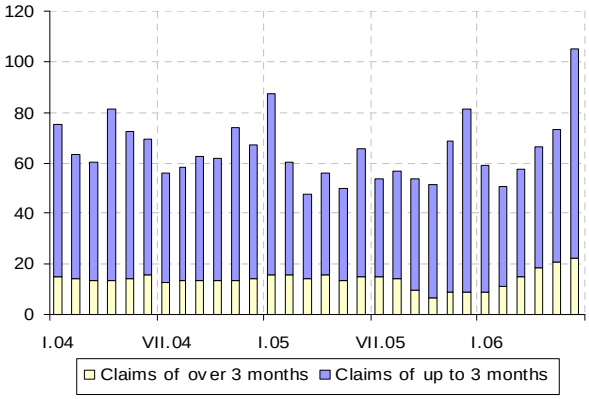


- Source: NBS.
- Data are in percent.

With market participants expecting higher interest rates, rates were indeed raised significantly on longer maturities. Whereas the yield curve had an inverse shape in June 2005 – amid expectations for a decline in interest rates – it tilted during the second half of the year in parallel with the rise in that period. This resulted from two increases in the base rate, by half of one percentage point on each occasion (1 March and 31 May 2006). The required yields on NBS bills were therefore, owing to their longer maturity, higher than the required yields in sterilization repo transactions, and this was not accepted by the NBS. The decrease in the volume of Treasury bills, which are seen on the interbank market as a liquid instrument, was offset by the rise in funds deposited with the NBS under a very short maturity (1 day).

While the volume of funds provided to domestic commercial banks cannot be said unambiguously to have increased or decreased, claims against foreign banks did rise substantially during the second quarter of 2006 (from SKK 22.8 billion in March to SKK 57.8 billion in June). This included claims in both the domestic and foreign currencies.

Chart 41 Volume of loans and deposits provided to commercial banks



- Source: NBS.
- Data are in SKK billion.

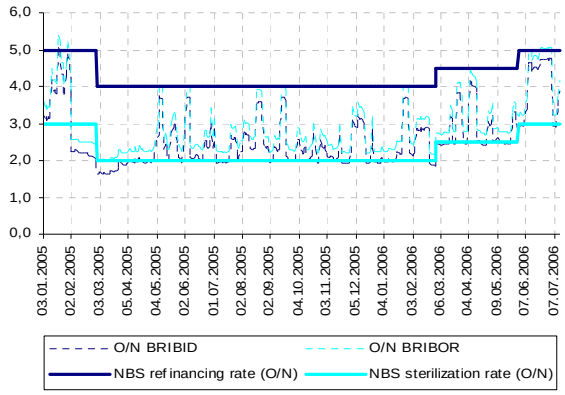
Alongside the increase in longer-term interest rates, the volume of longer-maturity loans and deposits provided to banks rose year-on-year. Loans and deposits with a residual maturity of more than 3 months, which had decreased in the third quarter of 2005 to SKK 6.8 billion (in October 2005), went back up again to reach SKK 22.2 billion. At the same time, the liquidity of longer-term deposits and loans on the domestic interbank market increased. The spread between the BRIBOR and BRIBID rates for maturities of

[9] Source: www.ardal.sk. As at 30 June 2006, the volume of State Treasury bills issued for the own portfolio of the Slovak Ministry of Finance amounted to SKK 30 billion.

between 6 months and 1 year narrowed by 3 basis points (i.e. by 10% in relative terms). Another reason, apart from the rise in longer-term interest rates, could be the substitution for the reduced volume of Treasury bills in banks' portfolios.

More than once during the first half of 2006, banks used refinancing transactions with the NBS in response to a temporary shortage of liquid funds. Such a shortfall in liquidity appeared in the banking sector at the end of January, at the beginning of April, and in June. This situation was characterized by an increase in the overnight interest rates on the interbank market to above the level of the NBS's overnight refinancing rate (Chart 42). Refinancing funds amounted to SKK 32.3 billion on 31 January 2006 and SKK 15.5 billion on 30 June. On those days when banks did not need short-term refinancing from the NBS, the volume of deposits and loans from the NBS varied between SKK 3.5 billion and SKK 5 billion. Chart 42 also shows that the banking sector had a surplus of overnight liquid funds more often than a shortage during the first half of 2006, which indicates that overnight sterilization transactions were used more often than refinancing transactions.

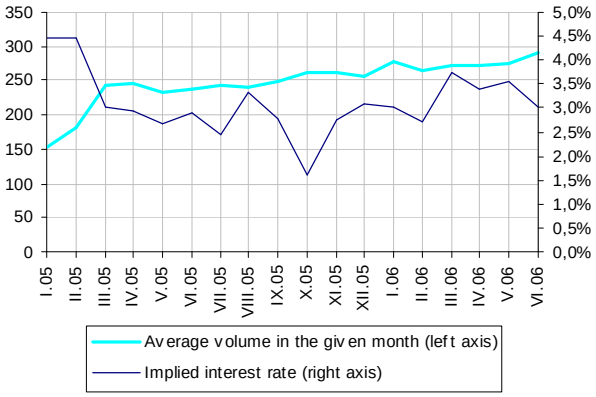
Chart 42 Overnight interest rates on the interbank market



- Source: NBS
- Data are in percent

The volume of deposits from foreign banks increased year-on-year (the average volume was SKK 237 billion in June 2005 and SKK 292 billion in June 2006). This could be related to the fact that the differential between the base rates of the NBS and ECB also widened year-on-year, by 0.25 of a percentage point (to 1.25 percentage points in June 2006). Along with the upturn in interest rates on the Slovak interbank market, there was also a partial, albeit less substantial, increase in rates on these funds.

Chart 43 Volume of deposits of non-resident banks and the implied interest rate



- Source: NBS.
- Data on the left axis are in SKK billion.
- The implied interest rate was calculated as 12 times: the given month's interest expenses as a share of non-resident banks' deposits, plus the average volume of these deposits.
- The calculation of the implied interest rate did not take into account banks which did not report any expenses for deposits of non-resident banks.

As has been mentioned, a large proportion of the funds acquired from foreign banks were placed by banks in two-week sterilization repo transactions with the NBS. A relatively high share of these funds (65% to 80%) were in foreign currency, and therefore banks had first to convert these funds into the domestic currency, using currency instruments. Most of these currency conversions were carried out through currency swaps, which explain why currency-swap transactions accounted for more than half of the total volume of interbank transactions. For foreign banks with positions in Slovak koruna, such transactions offer indirect access to transactions with the NBS, subject to lower credit risk in comparison with the unsecured depositing these funds with a Slovak bank.

Off-balance sheet

A large part of the off-balance sheet comprises the value of underlyings of the currency and interest rate transactions through which banks partially close open positions originating from trading with banks or customers. Therefore the first half of 2006 saw an increase in both interes -rate and currency instruments. This rise was supported by the fact that a part of the deposits of non-resident banks was shifted to swap contracts with resident banks. A large proportion of such funds (whether acquired from deposits or swap contracts) were placed in repo transaction with the NBS, and therefore the volume of registered securities accepted as collateral in these transactions remained unchanged from the end of 2005. Related to the increase in lending is the rising value of real estate, which banks accepted as collateral for loans and for commitments to provide loans.

Derivative instruments

Table 4 Year-on-year changes in derivative instruments

	Value of underlying assets					Positive fair value VI. 2006	Negative fair value VI. 2006
	VI. 2006	XII. 2005	VI. 2005	Year-on-year change	Change against XII. 2005		
Interest rate instruments	592 403	406 485	377 883	57%	46%	7 858	7 700
Currency instruments	1 007 813	684 541	559 800	80%	47%	9 019	6 750
Equity, commodity and credit instruments (claims)	0	21	881	-100%	-100%	0	N/A
Equity, commodity and credit instruments (liabilities)	25	44	904	-97%	-43%	N/A	0
Options – interest rate	8 262	3 817	1 550	433%	116%	285	74
Options – currency	325 352	190 741	302 566	8%	71%	3 610	3 638
Options - equity, commodity, and credit	508	385	353	44%	32%	180	180

- Source: NBS.
- Unless stated otherwise, the figures in the table represent off-balance sheet claims. Off-balance sheet liabilities differ from claims by up to 0.1%.
- Figures are in SKK million.

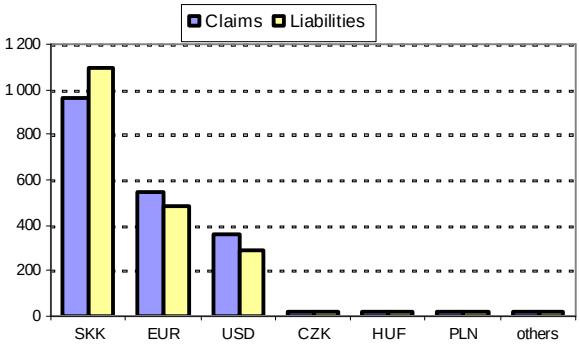
The underlyings of derivative transactions were valued at SKK 1,936 billion in June 2006 and represented 126% of the overall balance sheet total. For the first time ever, therefore, this value substantially exceeded the overall balance sheet total.

The derivatives portfolio comprises mainly currency and interest rate instruments, which recorded the highest increase. Banks made extensive use of these instruments to hedge open positions in foreign exchange risk or interest rate risk.[10] As Chart 44 shows, hedging was focused on the euro, US dollar and Czech koruna, since off-balance-sheet positions in these currencies are open and long. Positions in other currencies on the off-balance sheet are closed.

Most derivative transactions are in the form of fixed forward transactions (mainly swaps in USD, and EUR, and interest rate swaps in SKK) and currency options. The underlying assets in fixed forward transactions increased throughout the year, but especially so in the second quarter of 2006.

[10] See section Risks

Chart 44 Derivative transactions by structure of underlying currencies



- Source: NBS
- The vertical axis shows the volume of claims and liabilities from derivative transactions in the respective currency – as at 30 June 2006 and in SKK billion

In June 2006, currency options accounted for 97% of all options, with most of the options being in the currency pair SKK/EUR. Currency options recorded substantial growth during the first half of the year, as they had in 2005. Such transactions are not significant in regard to the hedging of banks' open foreign exchange positions, since the foreign exchange position of most banks in these transactions is practically closed. Such transactions are mainly concluded for domestic customers, with the bank involved in back-to-back hedging with foreign banks. All such contracts are made on the bank's account. In general, the volume of all derivative transactions which banks perform on the customer's account represents only 16%, with the rest carried out on own account. The increase could also be related to the growth in retail structured products, some of which are speculating on the currency.

Commodity derivatives are still not being used on the Slovak market, and banks have also closed their positions in credit derivatives. The only bank to have had a position in credit derivatives closed it through credit default swaps in the second quarter of 2006. Among derivatives based on equity instruments, options are the most used. A majority of banks open positions in such derivatives for only a short time.

Other off-balance-sheet transactions

Table 5 Year-on-year changes in other off-balance-sheet items

	VI. 2006	XII. 2005	VI. 2005	Year-on-year change	Change since XII. 2005
Guarantees					
Provided guarantees including documentary credits	91 887	65 589	78 286	17%	40%
Accepted guarantees including documentary credits	921 675	951 509	811 295	14%	-3%
of which: real estate	290 324	281 929	229 733	26%	3%
of which: securities from repo transactions	390 994	386 487	324 186	21%	1%
Claimable value of securities	255 350	48 009	24 316	N/A	N/A
Loan commitments					
Commitments to provide loans	230 916	192 392	174 825	32%	20%
Commitments to accept loans	28 094	32 488	37 334	-25%	-14%
Total customer loans	611 402	558 532	478 712	28%	9%
Transactions with the NBS	421 242	394 146	332 137	27%	7%
Value in safekeeping					
Value accepted into safekeeping	438 258	393 520	340 833	29%	11%
Value provided for safekeeping	6 051	3 100	3 108	95%	95%

- Source: NBS.
- Figures are in SKK million.
- For the claimable value of securities, the reporting methodology has been changed. Since January 2006, it has also taken into account collateral for standard loans.

Guarantees are, after derivative instruments, the second largest item on the off-balance sheet. The volume of accepted guarantees increased by 14%, mainly owing to the rise in transactions with the NBS and in lending. This upturn took place mostly at the end of 2005; total guarantees declined during the first half of 2006 by 3%, despite the lending growth. In transactions with the NBS there was no increase in reverse repo transactions, and so this form of collateral also remained at the same level. Where collateral did

decline, it was mainly in the form of financial assets and securities. On the other hand, there was growth in real estate collateral, being used mainly to secure housing loans.

Developments in the level of collateral vary from bank to bank. Whereas large banks saw an increase in collateral, branches of foreign banks reported a substantial drop-off. This is mainly because of the changes in the size of reverse repo transactions with the NBS, where the situation mirrored that in collateral.

Provided bank guarantees also recorded growth.

Loan commitments, too, increased at a substantial pace, and especially at branches of foreign banks. Since lending growth is markedly slower than the increase in loan commitments, the rise probably related to new loans that were still to be drawn by customers.

The value in safekeeping continued its rising trend from 2005, possibly in relation to the exercise of the depositary's office for pension fund management companies.

Box 4 EU banking sectors

Despite the slowdown in economic growth in the EU, financial conditions for banks improved. Banking sectors saw a continuation of strong lending growth, and especially so in the non-euro area countries as a result of their positive macroeconomic development. While household lending maintained its pace of growth, it was in some countries outstripped by corporate lending. The rising number of mergers and acquisitions in the business sector and the increase in corporate indebtedness can largely explain that enterprises are increasingly inclined to seek financing from banks. Despite shrinkage in interest margins on loans, banks reported a rise in net interest income owing to the higher volume of lending. As lending grew, so banks acquired more financing through the issuance of bonds.

Non-interest income continued to rise among EU banks, with most of the growth accounted for by fee income and trading income. In comparison with previous years, the reduction of operating expenses was less of a factor in the generation of banks' profits. Indeed, operating expenses increased, especially among banks in the new Member States.

A trend decline in expenditure on creating provisions was one of the main factors in the profit growth reported by banks in certain EU countries over recent years. During 2005, signs emerged of a change in this cycle, as the corporate default rate climbed in a number of countries and banks increased the creation of provisions. But so long as most countries continue to report a decline in these costs, it is still too soon to speak about a cyclical shift in the creation of provisions in EU banking sectors.

Although the financial position of EU banks is developing positively, there could be risks related to the intensive competition between banks and the relaxation of credit standards, particularly in the real estate financing market.

Large banks have an increasing dependency on non-interest income, above all on trading fees. In some new Member States, the increase in foreign currency loans poses a particular risk. Banks are exposed to indirect foreign exchange risk in the sense that exchange rate fluctuations may transform into credit losses.

Profitability

The banking sector made a net profit after tax of SKK 8.1 billion for the year to June 2006, representing an improvement of 6% year-on-year.

The decline in net interest income in comparison with previous years was halted. As interest rates rose, banks reported a more substantial increase in interest income than in interest expenses. Interest income from the NBS and customers increased most of all, while the decline in interest income from securities continued.

Non-interest income is an increasingly significant element of the banking sector's overall profit, and income from both fees and trading increased. Foreign exchange transactions were especially lucrative.

The banking sector saw an increase in operational expenses, particularly personal costs, but since these expenses rose at a slower pace than did the growth in income from banking activities, the sector's overall operational efficiency was higher year-on-year.

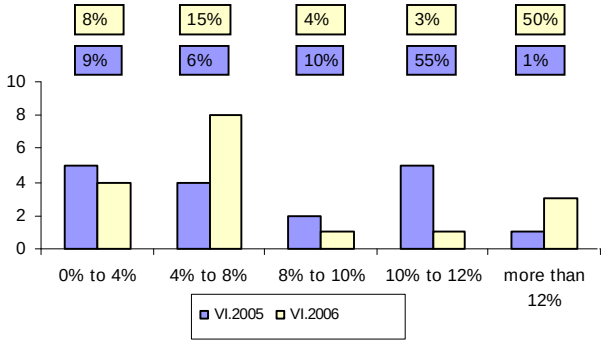
As the volume of defaulted claims increased, so year-on-year did the cost of writing off claims against customers and creating provisions. The concentration of profits among the largest banks was a trend that continued in the first half of 2006.

The average ROE, weighted by volume of own funds, amounted to 9.8% in June 2006, representing a slight increase year-on-year (against 8.9% in June 2005).

In comparison with June 2005, ROE increased mainly in larger banks, and declined largely in smaller banks by market share (ROE fell in 8 banks accounting for 17% of the market). These trends indicate an increasing concentration of profits among the largest banks.

Relatively significant changes in ROE took place in the banking sector. While the ROE of some banks recorded a comparatively large increase, that of other banks fell substantially year-on-year. Most, banks posted a year-on-year decline in profit owing to a decrease in income from trading in equity securities, debt securities, and foreign exchange. In some banks, the year-on-year downturn in income was caused by higher expenditure on the creation of provisions.

Chart 45 Breakdown of ROE in the banking sector



- Source: NBS.
- The vertical axis shows the number of banks.
- The percentage above each bar represents the assets of the banks in that bar as a share of total assets in the sector.
- The calculation does not include branches of foreign banks.

Table 6 Year-on-year changes in the basic categories of expenses and income

	VI.05	VI.06	change
(a) OPERATING COSTS	13.7	14.3	4%
(b) GROSS INCOME (c + d)	21.9	24.7	12%
(c) Net interest income	14.9	15.6	5%
(d) Net non-interest income	7.1	9.1	29%
(e) NET INCOME (b - a)	8.3	10.5	25%
(f) NET PROFIT AFTER TAX	7.6	8.1	6%

- Source: NBS.
- Data in the table are in SKK billion.

As regards the concentration in profit generation, the three largest banks in the sector accounted for more than 64% of its total profit as at June 2006. In comparison with the same period of the previous year, their share increased (from 61% of the total profit in June 2005).

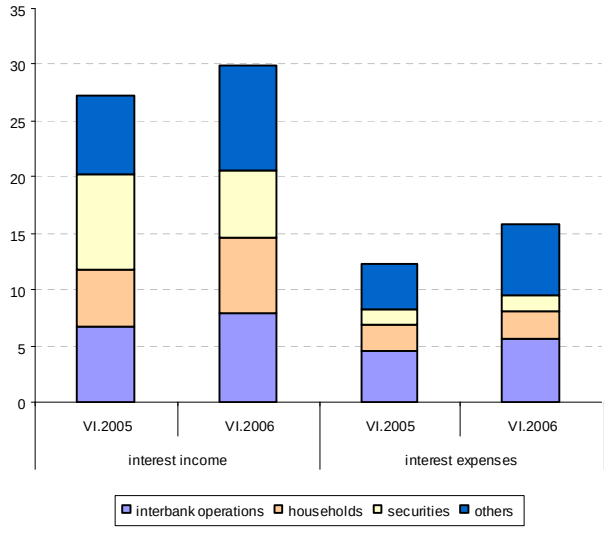
The ratio of net profit after tax to average net assets (ROA) stood at 0.57% in June 2006. The ratio declined year-on-year (from 0.59% in June 2005), which may be explained by the increase in low-yielding interbank assets.

Net interest income

At the end of June 2006, interest income accounted for the largest part of banks' gross income from banking activities. At the same time, however, its share was in trend decline against the faster growth of non-interest income.

The falling trend in net interest income came to a halt in the first half of 2006. Whereas previous periods had seen a downturn in banks' net interest income, the figure for June 2006 was higher year-on-year as interest income had been rising more quickly than interest expenses.

Graf 46 Structure of interest income and expenses

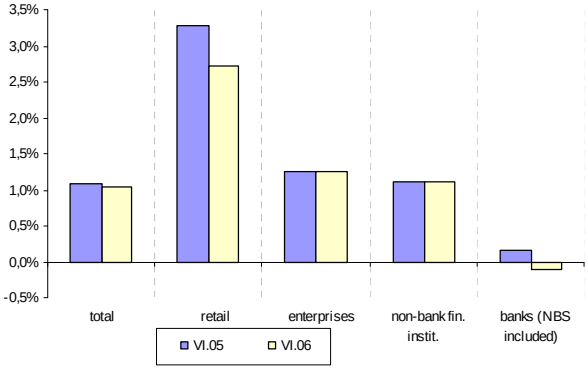


- Source: NBS
- Data are in SKK billion.

The year-on-year rise in interest income was mostly caused by the growth in interest income from households (up by 31%), the interbank market (17%), and other sectors (32%), especially enterprises. While the additional income from interbank transactions was earned predominantly by branches of foreign banks, the income from households and other enterprises went mainly to large banks.

Banks' interest margins on loans either remained stable or fell slightly, indicating that, amid the rising interest income, their gains came mainly from the growth in lending volume.

Chart 47 Interest rate spread



- Source: NBS.
- The interest rate spread represents the difference between, on the one hand, the share of cumulative income (interest and non-interest), except for income from defaulted assets, in the current value of loans to a given counterparty, and, on the other hand, the share of cumulative expenses in the current value of deposits provided to this counterparty.

In comparison with previous periods, the pace at which interest income rose was affected by lower interest income from securities. This income fell again year-on-year, with its share of interest income down from 30% in June 2005 to below 20% in June 2006. The drop-off in income from securities was to a large extent caused by the redemption of high-interest government bonds issued at the time of bank sector restructuring; the brunt of this loss was felt by the largest banks.

Interest expenses increased year-on-year, and, as with income, the rise was caused by a growing volume of liabilities and the raising of interest rates on source products. The largest shares of banks' expenses were paid on the interbank market, to households, and to enterprises.

The highest rise in interest expenses was recorded vis-à-vis the interbank market (up by 23%) and other sectors. Banks incurred higher expenses for security issues, especially mortgage bonds.

Net non-interest income

The significance of non-interest income in the banking sector continued to grow. Banks earned most of this income from fees and trading.

Net fee income accounted for the largest segment of non-interest income (23% of the banking sector's gross income as at June 2006). As a share of the average value of assets, net fee income declined slightly year-on-year, from 0.39% to 0.38%.

Banks earn almost 90% of fee income from customers, and more than 80% comes from deposit products and banking transactions. In June 2006, loan fees represented just under 20% of customer fees. In terms of individual sectors, the banking sector acquired most of its fee income from households (44%) and from other customer sectors (48%), especially enterprises.

Income from trading accounted for the second largest item of non-interest income. The relative volatility of this income source was reflected in the substantial year-on-year changes in the sector. The performance of banks was adversely affected by income from securities trading. The rise in interest rates led to higher costs for rate-related evaluations of securities. As for interest rate risk, banks partially hedged it with income from the revaluation of interest-rate derivatives. The correlation between income from securities trading and income from interest rate derivatives was negative throughout the banking sector. At the end of June 2006, the whole sector's overall balance for these transactions was negative (representing a loss of more than SKK 500 million).

Net income from trading in equity securities increased in the sector. Most banks acquire this income mainly through selling equity securities, since the revaluation of these securities is not a source of income or expense. Certain banks, however, earned a majority of this income from revaluation.

Like income from debt securities trading, income from foreign exchange trading had a negative correlation with income from derivative transactions, in this case currency transactions. The relationship is not, however, as clear-cut as with debt instruments, which is reflected in the fact that overall net income from these transactions amounted to SKK 4.4 billion.

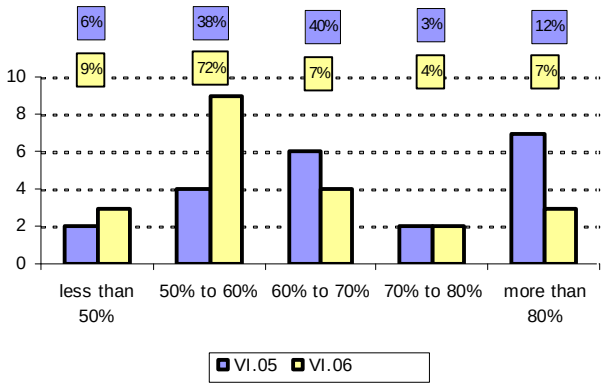
Dividend income from shares and interests recorded substantial growth.

Operating costs

Operating expenses in the banking sector increased by 4% year-on-year. Staffing costs rose most of all, though expenditure on purchased performances also went up. Personnel expenses calculated per employee increased by 7% year-on-year.

Of banks' total operating expenses, around 45% are staff-related and probably some 30% comprise payments to external companies for the provision of performances and services.

Chart 48 Breakdown of operating efficiency in the sector in June 2006



- Source: NBS.
- The vertical axis shows the number of banks.
- The percentage above each bar represents the assets of the banks in that bar as a share of total assets in the sector.

Despite the increase in expenses, the cost-to-income ratio for banking activities declined, and

amounted to 58% in June 2006 (compared to 62% in June 2005).

Although operating expenses rose in the banking sector as a whole, they did not increase in all banks. Some have a longer-term trend decline in expenses, and the reduction of operating expenses in these banks represents a key source of profitability growth.

Net income from the write-off of receivables and of provisions

The banking sector's gross income from banking activities as at June 2006 was reduced by SKK 1.6 billion through the net creation of provisions and the write-off of receivables. Of these expenses, the write-off of claims against customers accounted for almost 86% and the net creation of provisions for the remaining 14%.

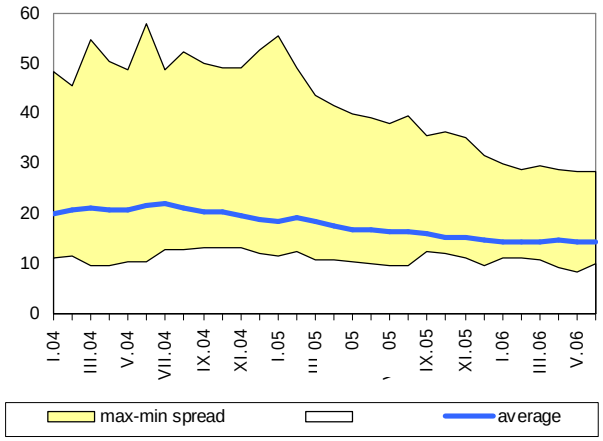
Banks' expenses increased mainly for the write-off of claims against customers (by 130% year-on-year). Expenses for the creation of provisions in banks increased by 12%, reflecting the higher volume of defaulted loans, especially to households. These increased in as many as fourteen banks, by almost SKK 3.2 billion.

Capital adequacy

The development of capital adequacy stabilized during the first half of 2006. The average ratio of capital adequacy declined only slightly over the period and there was a more stable spread between the lowest and highest ratios in the sector. The growth in risk-weighted assets was accompanied by an increase in own funds, especially retained earnings. In June 2006, all banks reported a capital adequacy ratio above the minimum level of 8%.

The capital adequacy of the banking sector fluctuated around its 2005-end level during the first half of 2006, though in comparison with June 2005, it declined by 2.6 percentage points to 14.35%.[11]

Chart 49 Development of capital adequacy ratio in the banking sector

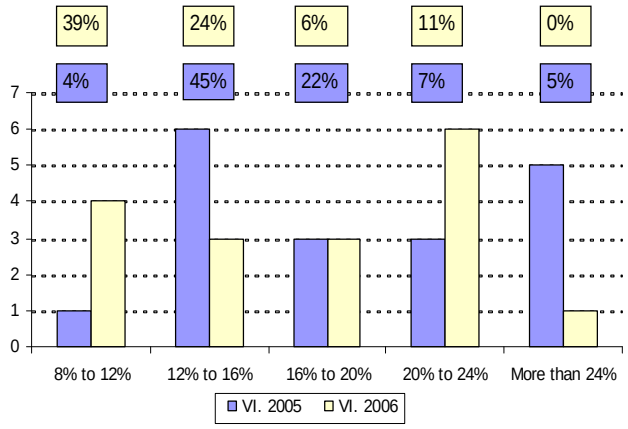


- Source: NBS.
- The vertical axis shows the capital adequacy ratio in percent.
- The chart shows the development of the maximum, minimum and average capital adequacy ratios weighted by total assets.
- The risk-weighted assets of branches of foreign banks are not included.

The spread between the lowest and highest capital adequacy ratios in the banking sector also became relatively stable during the first half of 2006. The ratios among banks at present range between 10% and 30%.

Most banks reported a decline in the capital adequacy ratio. The shift in the banking sector towards lower ratios is shown in Chart 49. In June 2006, up to 39% of the banking sector (in terms of asset share) had a capital adequacy ratio of less than 12%, compared to a figure of 4% in June 2005, reflecting mainly the movement of large banks into the category.

Chart 50 Distribution of capital adequacy ratios in the banking sector



- Source: NBS.
- The vertical axis shows the number of banks.
- The percentage above each bar represents the assets of the banks in that bar as a share of total assets in the sector.

The decrease in capital adequacy was largely the result of the increase in risk-weighted assets (RWA), which itself was caused mainly by lending growth. In comparison with June 2005, RWAs increased by 24%, while own funds grew by only 3%. In particular, RWAs of the banking

[11] The average value weighted by banks' risk-weighted assets. It does not include the risk-weighted assets of branches of foreign banks.

book (mainly with weights of 50% and 100%) reported a steady rise; RWAs of the trading book and other RWAs showed a volatile development, owing mainly to the foreign exchange risk. Their values were of minor significance, however, in comparison with the banking book RWAs. The decline in trading book RWAs and other RWAs reported in June 2006 did not, therefore, affect the increase in total RWAs.

A second cause of the decline in banks' capital adequacy, besides the rise in RWAs, is that banks are seeking to be more efficient in the management of capital requirements. In other words, banks are looking to use less capital in the management of their risks. This trend is also related to the introduction of more sophisticated risk management methods in banks. The overall downturn in capital adequacy should therefore be judged in the context of banks' risk management levels.

As regards the share capital of banks, there were no significant changes during 2005. Most banks saw an increase in their shareholders' equity owing to growth in retained earnings.

Banks reported a high quality of own funds, predominantly made up of Tier 1 capital. Only four banks had subordinated debt, which apart from Tier 1 capital was the only other type of capital in own funds. The majority of subordinated debt fell into the category of Tier 2 capital.

Risks in the banking sector

The exposure of banks to financial risks remained largely unchanged during the first half of 2006. The banking sector reported an improved financial situation, with an increase in profitability and banks holding a sufficient volume of capital. Nor was there any notable change in the financial position of the sectors to which banks are significantly exposed.

As household lending rose, so did the credit risk of households. Household indebtedness continued to increase in the first half of 2006. According to macroeconomic data, however, households still generated sufficient income to meet their loan repayments. Simulations of adverse effects on a selected sample of households indicate that the ability of indebted households to meet their liabilities towards banks could be impaired by a drop-off in their income. The macroeconomic figures also show that the volume of financial assets held by households is sufficient to be used for loan repayments. The quality of the household lending portfolio, measured by the ratio of defaulted loans to total household loans, remained basically unchanged, largely because of the increase in new lending. The actual volume of defaulted loans rose.

As a share of total enterprise loans, defaulted loans continued their trend decline in the first half of 2006. The relative improvement in the quality of the enterprise loans portfolio resulted from the increase in overall enterprise lending, and especially the write-off and transfer of loss-making loans. The volume of defaulted loans fell during the previous 18 months. The econometric model confirmed that the ability of enterprises to repay loans is sensitive, for example, to shareholders' equity as a proportion of assets or to economic growth.

Securities held by the banking sector had a conservative structure and predominantly included government bonds. Certain banks reported a growing share of riskier securities, reflecting efforts to increase and diversify income.

The significance of liquidity risk in the banking sector remained substantially the same during the first half of 2006. On the one hand, granting of long-term credits further exacerbated the time discrepancy between assets and liabilities, which was reflected in a lower median of liquidity ratios for maturities of up to 7 days and 3 months. On the other hand, the share of the liquidity cushion in the total assets of the banking sector stopped falling at the end of 2005 and achieved relative stability in the first half of 2006.

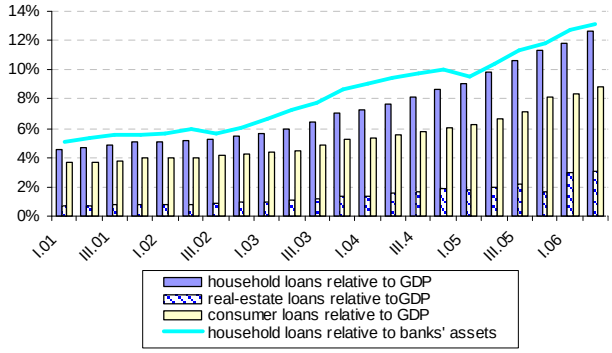
The banking sector had negligible exposure to foreign exchange risk in June 2006. In most banks, the volume of liabilities denominated in foreign currency was greater than the volume of assets so denominated. Banks were closing these open positions through derivative transactions, particularly currency forwards and swaps. Practically every bank which traded in currency options had closed positions under option contracts. If the development of exchange rates during 2005 and the first half of 2006 is taken as a basis, and it is assumed that positions are held for a period of 10 working days, then, for the majority of banks, the largest exchange rate loss should not in 99% of cases exceed 1% of own funds. Banks were not hedging their positions under standby loans or under issued or accepted guarantees. These positions, however, would not affect foreign exchange loss in response to exchange rate fluctuations. In June 2006, the exposure of banks to interest rate risk was also relatively low in regard to the effect of rate changes on the fair value of assets and liabilities. This was because a large proportion of assets and liabilities carried variable or short-term fixed rates. Banks were especially sensitive to interest rate rises, more so because of the declining value of fixed-rate securities held in their portfolios. On the other hand, short-term rate fixation transfers interest rate risk from banks to their customers. A rise in interest rates could therefore increase the loan debt burden of households and threaten their repayment ability.

Credit risk

Household credit risk

Household lending continued its strong growth in the first half of 2006, increasing its share of the banks' balance sheet as it did so. In June 2006, household loans accounted for 32% of total customer lending and represented 12.5% of GDP. As the importance of households borrowing increases, so do their weight from the point of view of credit risk

Chart 51 Household loans relative to GDP and banks' assets



- Source: NBS; Slovak Statistical Office (ŠÚ SR).
- The percentages represent the ratio of household loans to GDP in current prices.

Credit portfolio quality - households

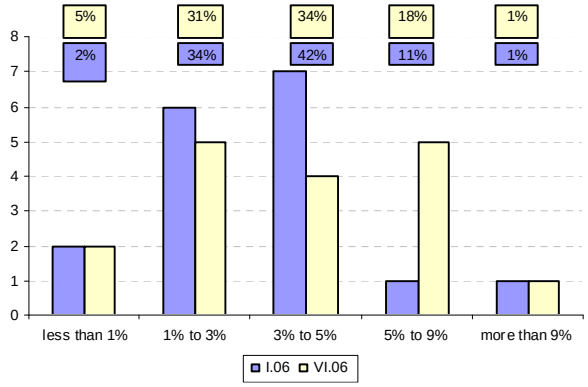
Credit risk may also be viewed through the current quality of the credit portfolio. This is valid where it is assumed that the future development of credit portfolio quality will be similar to the past development.

The volume of defaulted household loans increased by almost 20% from the beginning of the year.[12] There were marked rises in the volume of defaulted mortgage loans (40%), credit cards (59%), intermediate loans (27%), and consumer loans (16%).

[12] The volume of defaulted loans may be affected by additional methodological changes on a bank to bank basis.

Because of the rising amount of new lending, however, the volume increase in defaulted loans was not significantly reflected in the share of defaulted loans. As a proportion of total household lending in the sector, defaulted loans did not vary from January 2006, fluctuating at around 3%. The number of banks in which defaulted loans account for more than 5% of household lending rose from the beginning of the year.

Chart 52 Breakdown of defaulted loans by share of total household loans.



- Source: NBS.
- The vertical axis shows the number of banks.
- The percentage above each bar represents the assets of the banks in that bar as a share of total assets in the sector.

The worst quality was reported among consumer loans, where the share of defaulted loans represented almost 6%. The share of defaulted credit cards also increased in comparison with January.

Table 7 Defaulted loans by share of total loans in the household sector

	I.06	VI.06
household loans	3.0%	3.1%
mortgage loans	1.0%	1.3%
consumer loans	5.6%	5.9%
credit cards	6.6%	9.2%
intermediate loans	3.4%	3.8%
building loans	0.9%	1.7%

- Source: NBS.

Financial position of households

Based on the available aggregated data and microdata for the household sector, it may be said that households generated sufficient income to meet their liabilities towards banks.

According to the Survey of Household Income and Living Standards, conducted by the Slovak Statistical Office in mid-2005,[13] the average ratio of loan repayments to disposable income fluctuated around 21%. Taking into account current expenditure according to number of household members, the average figure exceeded 24%. After factoring in current expenditure, there was also a rise in the proportion of households whose loan repayments exceeded their disposable income.

Table 8 Loan repayments relative to disposable income

	average	first quartile	median	third quartile
loan repayments relative to disposable income	20.9%	8.2%	14.3%	25.1%
loan repayments relative to disposable income, taking into account household expenditure	24.3%	12%	20.8%	35%

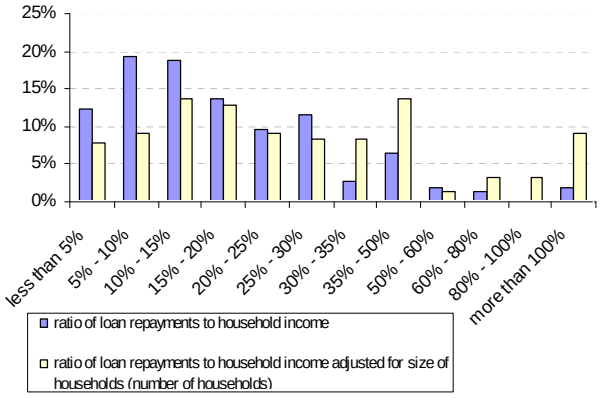
- Source: Slovak Statistical Office (ŠÚ SR), SILC05005 UDB version 12.07.06, NBS.

Simulations of a decline in disposable income and a rise in interest rates indicate that the ability of households to meet their liabilities towards banks is dependent mainly on the development of disposable income. A substantial drop in income would result in a high default rate. Nor the effect of exceptional rises in interest rates was significant.

The sufficiency of income is also confirmed by macroeconomic figures, showing that the ratio of loan repayments to gross disposable income amounted to 4% in the first quarter of 2006. That ratio is among the lowest in any EU country.

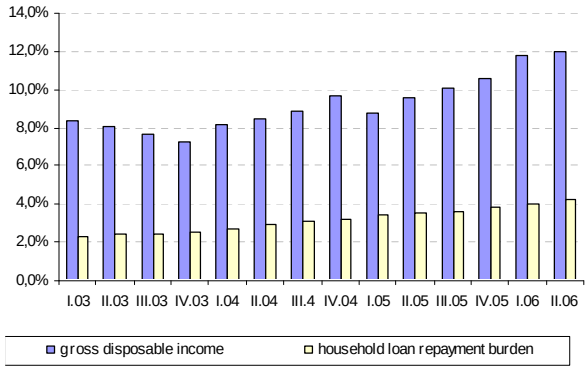
[13] Details of the sample used, as well as a more in-depth analysis, are provided in the special topic.

Chart 53 Loan repayments relative to household income before and after the deduction of current expenditure



- Source: Slovak Statistical Office (ŠÚ SR), SILC05005 UDB version 12.07.06, NBS.
- The horizontal axis shows the ratio of loan repayments to household disposable income, adjusted for current expenditure
- The vertical axis shows the number of households in percent.

Chart 54 Household loan debt burden relative to household income



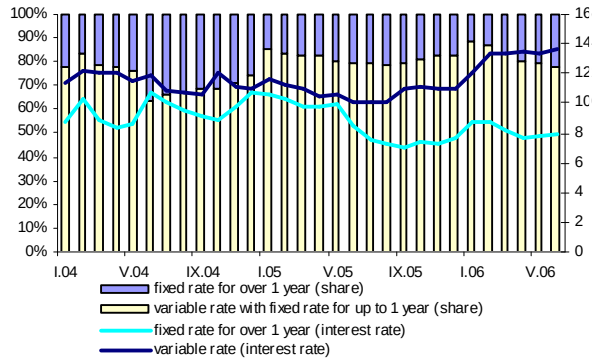
- Source: Slovak Statistical Office, NBS.
- The data for gross disposable income show the percentage increase in comparison with the same period of the previous year.
- Gross disposable income is defined as the difference between the current income and current expenditure of households.
- The loan debt burden represent the ratio of repayments to gross disposable income; the loan debt burden is calculated from the volume of household loans broken down by maturities and interest rates.

At the same time, households held a sufficient volume of financial assets which

could be used for loan repayments in the event of any negative shocks. According to data for 2004, the most recent year for which figures are available, financial liabilities accounted for only 36% of financial assets (with bank loans making up 64% of financial liabilities). Moreover, financial assets largely comprised liquid items – cash and bank deposits (72% of the total).

Despite the upturn in interest rates in the first half of 2006, households continued to prefer variable rate loans or loans with a fixed rate for up to one year. Households willingness to accept the increase in their loan repayments, caused by interest-rate rises, may be explained either by households' optimism for the development of their income, by their lack of awareness concerning the potential risks, or by their efforts to take a short-term advantage from the lower interest rates. According to stress testing results, interest rate rises would not at present have a significantly adverse effect on the ability of households to meet their liabilities towards banks.

Chart 55 New household loans by fixed rate period



- Source: NBS.
- The right axis shows the interest rate level in percent.
- The left axis shows the share of loans by fixed rate period.

Corporate credit risk

Although the volume of corporate lending increased, its share of total claims against customers declined in many banks, mainly due to the fact that retail lending in these banks grew at a faster pace.

Credit portfolio quality - enterprises

In general, there continues to be trend improvement in the quality of the corporate portfolio.

Table 9 Quality of corporate loans by industry in June 2006

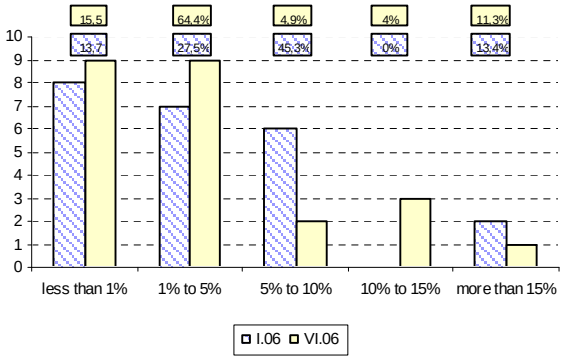
Industry	Share of industry in total corporate loans	Loans to industry by defaulted share	Change in share of defaulted loans since January 2006
Agriculture, hunting	3.60%	6.22%	7.31%
Manufacturing	28.69%	8.22%	5.90%
Electricity generation and distribution	5.68%	0.05%	0.10%
Construction	4.66%	5.93%	6.68%
Motor vehicles and motorcycles	2.17%	3.74%	3.91%
Wholesale and intermediary trade	18.50%	7.26%	4.28%
Retail trade	8.10%	2.34%	2.28%
Land transport	6.47%	0.40%	14.26%
Real estate activities	7.59%	2.12%	2.64%
Other business services	6.33%	1.70%	2.29%
Other industries	8.22%	6.50%	4.18%

- Source: NBS
- Other industries include: Forestry, Fishing, Mining of mineral raw materials, Gas production, Production and distribution of steam and hot water, Water treatment and distribution, Hotels and restaurants, Water transport, Air transport, Secondary auxiliary activities in transport, Posts and telecommunications, Rental of machines and goods for personal consumption, Computer activities, Research and development.

As a share of total corporate loans, defaulted loans declined by 4.6 percentage points to 5.1%.[14] Not only did the share of defaulted loans decrease, but, significantly for the quality of the corporate portfolio, so did the volume – by SKK 9 billion year-on-year.

[14] The volume of defaulted loans may be affected by additional methodological changes on a bank to bank basis.

Chart 56 Breakdown of corporate portfolio quality in the banking sector



- Source: NBS.
- The horizontal axis shows defaulted loans as a share of total corporate loans, broken down into 5 bands.
- The vertical axis shows the number of banks whose share of defaulted loan belongs to the respective band.
- The percentage above each bar represents the assets of the banks in that bar as a share of total assets in the sector.

Financial position of enterprises

In the analysis of enterprises according to size,[15] we focused mainly on their profitability, capitalization and indebtedness, efficiency, and liquidity.

Profitability

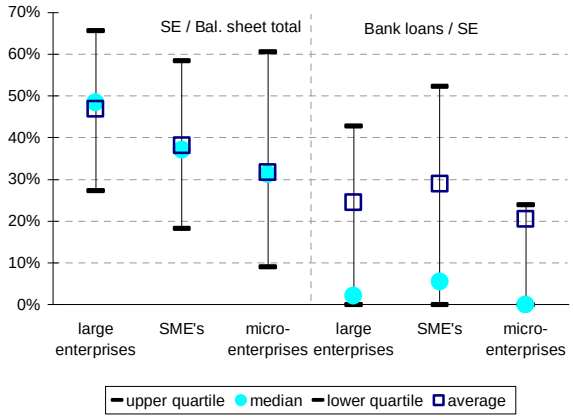
In the given period, for the samples of large enterprises, small and medium-sized enterprises (SMEs), and microenterprises, the median and mean values of enterprises' profitability ratios were found to be similar. Nor did the statistical test confirm divergence in distributions.

There was, however, a correlation between enterprise size and the extent of the spread of profitability. The sample of large enterprises had the smallest spread, and microenterprises the largest. That spread represents a risk which is in this case inversely proportional to enterprise size. Such a statement is consistent with the fact that loans to large enterprises have lower risk margins than do those to SMEs.

Indebtedness and capitalization

The analysis of capitalization (the ratio of shareholders' equity to the balance sheet total)[16] confirmed the greater extent of own funds in larger enterprises, where the average median and average values represented 47% and 48%, respectively. Capitalization was lower in SMEs and in microenterprises.

Chart 57 Capitalization and indebtedness of enterprises according to size



- Source: Slovak Statistical Office, own calculations.
- The figures in the chart (medians, quartiles) are averages of quarterly values for 2005 and the first quarter of 2006.
- The chart covers a complete statistical sample of enterprises, and therefore includes those which do not have bank loans.
- If an enterprise reported negative shareholders' equity and simultaneously had a bank loan, it was deemed to be 100% indebted.
- SE – shareholders' equity.

The average median of the ratio of bank loans to shareholders' equity showed that all three categories include a number of enterprises

[15] The statistical sample of 3,400 enterprises was broken down into three groups according to volume of revenues (r):
large enterprises: r ≥ SKK 1 bn
SMEs: SKK 30 m ≤ r < SKK 1 bn
microenterprises: r < SKK 30 m.

[16] Reference capitalization value: where the ratio of own funds to the balance sheet total is greater than 40%, the capitalization may be considered very good, whereas a figure of less than 10% is insufficient.

which either do not have bank loans or are marginally indebted. In the microenterprises category, enterprises which do not have bank loans even outnumber those which do. The relatively low degree of bank borrowing among large enterprises may be because large enterprises have more options for financing (e.g. issuing bonds, funds from the parent company ...) and, unlike SMEs, are not directly reliant on bank loans.

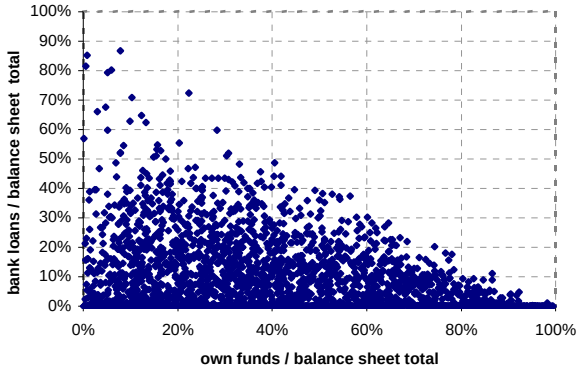
Table 10 Capitalization and indebtedness of enterprises according to size

	SE / Bal. sheet total			Bank loans / SE		
	average median	average	spread	average median	average	spread
large	48%	47%	0.06	2%	24%	0.12
SMEs	37%	38%	0.08	3%	25%	0.15
micro	31%	32%	0.15	0%	15%	0.13

- Source: Slovak Statistical Office, own calculations.
- The table covers a complete statistical sample of enterprises, and therefore includes those which do not have bank loans.

The category of microenterprises differs from the other two in having overall lower indebtedness and weaker capitalization, which leads to the contention that it has a higher degree of business liabilities.

Chart 58 Shareholders' equity and bank loans in comparison with the balance sheet total

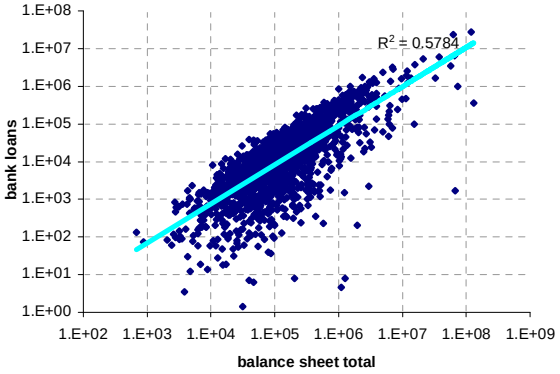


- Source: Slovak Statistical Office, own calculations.

The ratio of shareholders' capital to the balance sheet total cannot therefore be considered as the main criterion for the extending of bank credits.

Comparing the ratio of bank loans to the balance sheet total and the ratio of shareholders' equity to balance sheet total did not demonstrate a correlation between the values of equity and bank loans.

Chart 59 Bank loans and the balance sheet total



- Data are in SKK thousands, logarithmic scale.
- Source: Slovak Statistical Office, own calculations.
- The chart includes only enterprises which have bank loans.

Comparing the ratio of bank loans to the balance sheet total, a relatively strong connection can be observed between the amount of borrowing and the balance sheet total.[17] This is further supported by the relatively small spread of this ratio in each of the three enterprise samples (Table 2). In general, therefore, differences in the indebtedness of various enterprises exist not in the ratio of bank loans to the balance sheet total, but in the ratio of bank loans to shareholders' equity. For that reason, the ratio of bank loans to equity is a better indicator of the rate of bank borrowing. In the said sample

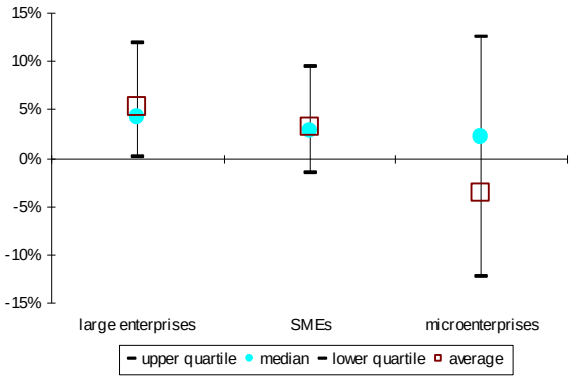
[17] In the sample of enterprises including only enterprises with bank loans, the average was 14.5% and the spread 0.017.

of enterprises, this ratio was greater than 1.5[18] for 7.3% of enterprises.

Efficiency

The efficiency of enterprises measured, as the ratio of the current period's profit to sales was more of a problem with smaller enterprises. This was seen in their lower average and median values and particularly in their substantially greater spread.

Chart 60 Profit to sales ratio by enterprise size - efficiency



- Source: Slovak Statistical Office, own calculations.
- The figures in the chart (medians, quartiles) are averages of quarterly values for 2005 and the first quarter of 2006.

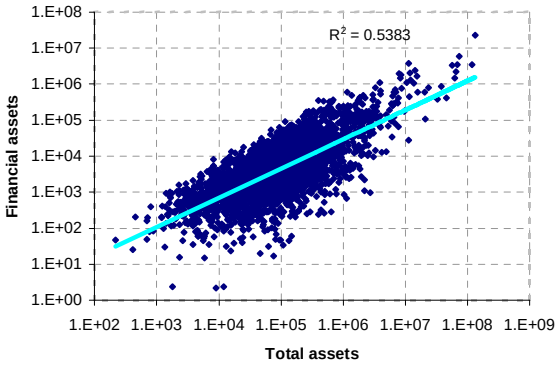
Liquidity

The liquidity ratio – the ratio of financial assets (especially bank accounts and vault cash) to total assets – was practically identical in the samples of large enterprises and SMEs. The microenterprises sample had a slightly higher value and a greater spread.

.

[18] If the ratio of bank loans to equity is greater than 1.5, it is considered to be excessive.

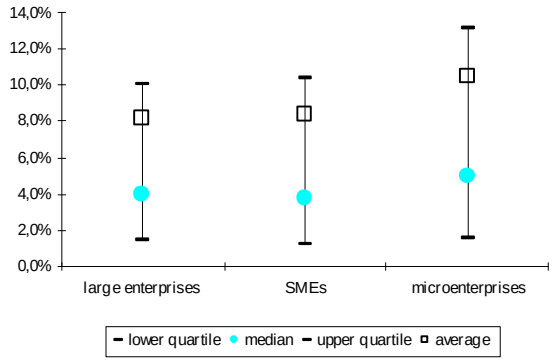
Chart 61 Financial assets and the balance sheet total



- Data are in SKK thousands, logarithmic scale.
- Source: Slovak Statistical Office, own calculations.

In general, however, the liquidity ratio is among the most evenly distributed ratios in terms of enterprises size. In the overall sample of enterprises, the volume of liquid assets increased along with the volume of total assets.

Chart 62 Ratio of financial assets to total assets by enterprise size - liquidity



- Source: Slovak Statistical Office, own calculations.
- The figures in the chart (medians, quartiles) are averages of quarterly values for 2005 and the first quarter of 2006.

In general, the credit risk pertaining to the financial position of enterprises is greater in microenterprises than in large enterprises. This is indicated not only by the worse mean values of several ratios, but often also by the spread of these values. Microenterprises also featured a

lower rate of bank borrowing, and this means there is greater scope for demand. Larger enterprises, on the other hand, have access to alternative forms of financing. In line with these facts, smaller enterprises generally have higher risk margins and the large enterprise segment sees greater competition.

Credit portfolio quality in other sectors[19]

As regards its portfolio of loans to other sectors, the banking sector reported a relatively high quality, although the quality of the credit portfolio for non-residents did deteriorate over the course of the year.

Table 11 Credit portfolio quality for other sectors

		Loans to sole traders	Loans to non-banking financial companies	Loans to general government	Loans to non-residents
VI.06	non.perf. loans relative to loans in sector	5.6%	0.1%	0.0%	2.2%
	share of customer loans	2.4%	10.1%	3.8%	2.6%
I.06	non-perf. loans relative to loans in sector	6.8%	0.1%	0.0%	0.2%
	share of customer loans	2.4%	9.5%	5.0%	3.1%

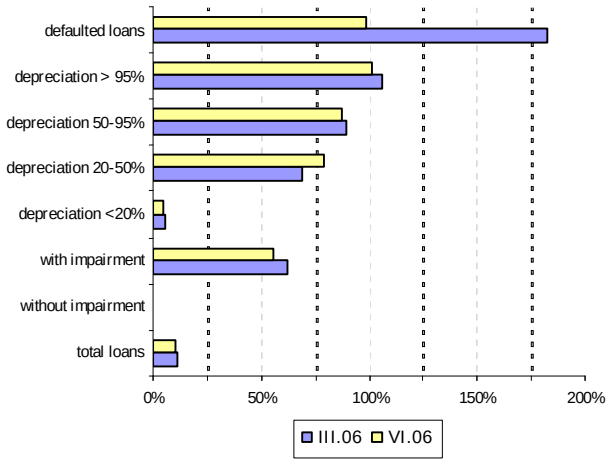
- Source: NBS

The effect of methodological changes on the classification of claims

As of 1 January 2006, a new NBS decree on the classification of assets and liabilities entered into force. In this regard, it is interesting to see how the new methodology has been reflected in the classification of claims in the banking sector.

Chart 63 compares provision coverage in March and June 2006. Because of the reporting changes, it is not possible to include 2005 data in this chart. Provision coverage for defaulted loans declined slightly between December 2005 and June 2006, from 105% to 98%. Under the new methodology, defaulted loans do not form a separate category, but include the categories of loans with impairment and loans without impairment. For the category of doubtful and loss-making loans there is no equivalent in 2006. These categories may be compared to claims with impairment that are depreciated by more than 50%. In this comparison, provision coverage hardly changed from the previous year, when it represented 97% for doubtful loans and 53% for non-standard loans. Provision coverage is stable for customers-natural persons and volatile for legal persons. This is why the coverage of defaulted loans also saw a sharp increase in March 2005.

Chart 63 Provision coverage



- Source: NBS.
- The horizontal axis shows the provisions as a share of the unsecured lending in the given category of loans.

Market risks

Foreign exchange risks

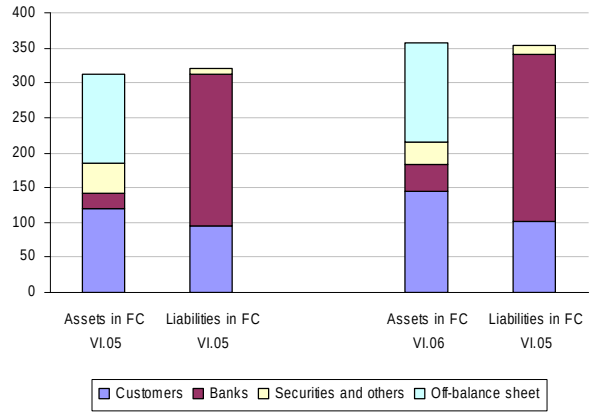
When assessing the exposure of banks to foreign exchange risk, it is important to look at how the values and volatility of exchange rates

[19] The volume of defaulted loans may be affected by additional methodological changes on a bank to bank basis.

have developed and at the size of banks' open positions in different currencies.

The development of the foreign exchange market, evaluated on the basis of exchange rates against main currencies, did not show any significant differences in comparison with 2005. The Slovak currency appreciated only slightly: the average values of the SKK/EUR and SKK/USD exchange rates for the first half of 2006 declined by, respectively, 2.6% and 4.4% in comparison with their averages for the second half of 2005. At the same time, the Slovak koruna lost a little value against the Czech koruna. In terms of time development, the volatilities of the different exchange rates did not record any major fluctuations.

Chart 64 Structure of assets and liabilities denominated in foreign currency



- Source: NBS.
- Data are in SKK billion.
- Liabilities towards banks include funds of the Slovak Ministry of Finance deposited with banks through ARDAL, since these are similar in character to deposits of banks.

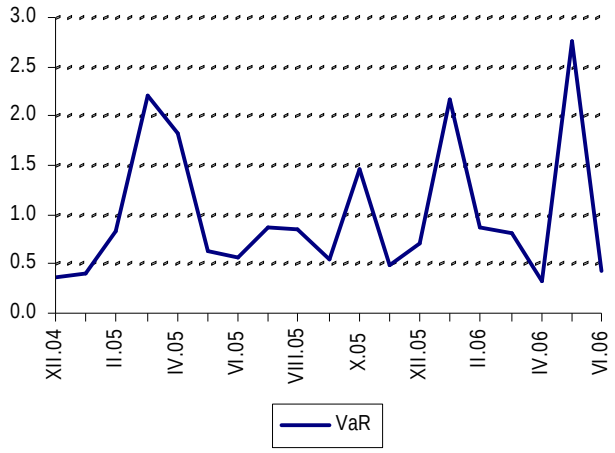
Because of the discrepancy between the currency structure of their activities on the asset side and their financing on the liabilities side, banks have an open foreign exchange balance sheet position. This was substantially short, owing to the large volume of foreign exchange funds from foreign banks (amounting to SKK 184 billion in June) and the short-term foreign exchange deposits of general government (SKK 49 billion), while banks deposited a large part of them with the NBS in Slovak koruna. The inflow of funds from the foreign interbank market did not change significantly year-on-year (down by 6%), though the volume of short-term funds of general government increased. On the asset side, there was an increase in foreign currency loans to customers, especially to enterprises (up by 21% year-on-year) and to financial companies (by 74%). The open balance sheet position represented 9% of the balance sheet total; branches of foreign banks reported the highest share owing to the substantial volume of funds from their banking groups.

In order to close the open foreign exchange position on the balance sheet, banks used derivative transactions (currency swaps, spot and forward conversions). Overall, therefore, the foreign exchange position was basically closed (SKK –91 million). This applies not only to the aggregate foreign exchange position, but also to the position in a majority of banks, which during the first half of 2006 did not exceed 2% of the balance sheet total. Banks therefore appear to have negligible exposure to foreign exchange risk.

The analysis based on the open foreign exchange position does, however, pose some problems that need to be more closely examined. First, the closed foreign exchange position does not exclude discrepancy in terms of foreign currencies. Given the low correlation between different exchange rates, banks could incur a loss even on a closed foreign exchange position. By dividing the foreign exchange position into different currencies, it is possible to calculate the loss (VaR) which should not be exceeded in 99% of cases. At the same time, it is assumed that the division of future exchange rate movements may be simulated by using the movements over the past year (250 working days) and that the portfolio will remain

unchanged for a period of 10 days.[20] The calculated VaR is shown in Chart 65. For most banks, the VaR during the first half of 2006 did not exceed 1% of own funds.

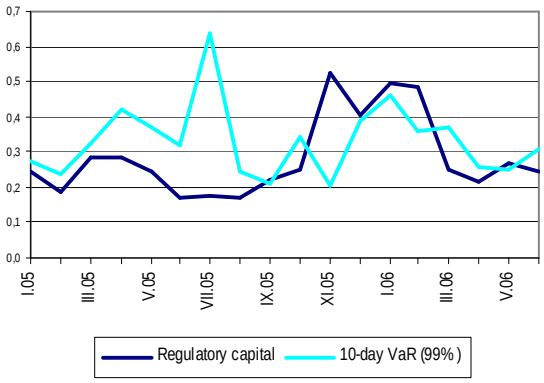
Chart 65 10-day VaR (99%)



- Source: NBS, own calculations.
- Data are in SKK billion
- The chart includes all banks and branches of foreign banks.

The size of the regulatory capital held by banks in order to cover potential losses from foreign exchange risk corresponded approximately to the VaR. Since banks, however, had a low exposure to foreign exchange risk, none of them reported the VaR at more than 1% of the total capital.

Chart 66 VaR and regulatory capital in comparison

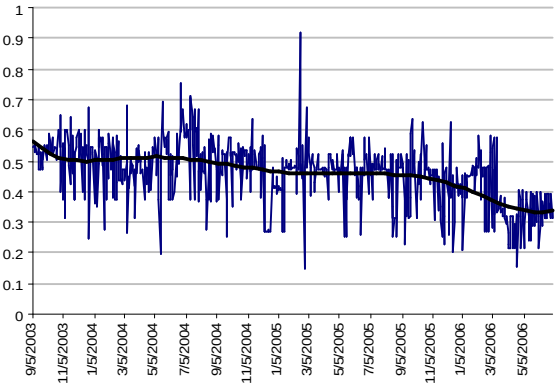


- Source: NBS, own calculations.
- Data are in SKK billion.
- The chart shows both the regulatory capital figures in accordance with NBS Decree no. 4/2004 and the size of VaR.
- The chart does not include data for branches of foreign banks, or banks which use their own models to calculate market risks.

A second problem with the analysis is that it does not take into account the time aspect of the correspondence or the discrepancy between assets and liabilities in different currencies. Even though reliable data are not available for this analysis, it may be assumed that a proportion of the medium-term or long-term foreign currency loans are financed by short-term foreign exchange funds from the interbank market. Although a change in the exchange rate is followed by both instruments being immediately revalued in accordance with accounting policies, there could be a risk that the liquidity of the foreign exchange interbank market declines. As foreign exchange funds mature, banks are forced to seek alternative ways of hedging their assets (in the form of foreign exchange liabilities or currency derivatives), while an increase in the spread between the buy and sell price on the foreign exchange market could cause losses to banks.

[20] For the VaR calculation, only overnight losses were simulated and the resulting figure was then multiplied by $\sqrt{10}$.

Chart 67 Price spread of annual forward contracts (SKK/EUR)

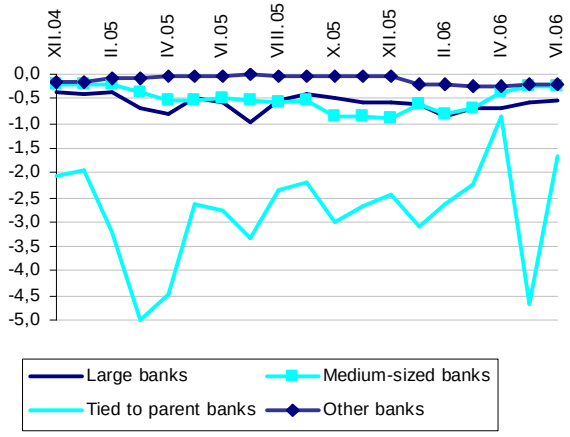


- Source: Reuters.
- The data represent the percentage share of the spread in the forward exchange rate.

The size of the spread, which to a large extent depends on the liquidity of the market in the given instrument, actually represents transaction expenses related to trading in this instrument. On the other hand, the spread between the buy and sell prices quoted for forward exchange rates have been steadily falling since 2004. Liquidity is higher in the markets for shorter-maturity forwards, although the market in longer-maturity instruments has shown the greater increase in liquidity. On the forward market in SKK/EUR conversions, for example, the ratio of this spread to the forward exchange rate declined from 0.19% to 0.17% year-on-year for the two-month maturity, from 0.47% to 0.33% for the ninth-month maturity, and from 0.46% to 0.34% for the annual maturity. At the same time, no movement of greater significance was recorded in the actual SKK/EUR rate.

While affirming that the banking sector has little exposure to foreign-exchange risk from balance sheet transactions, since it hedges them with currency derivatives, the above analysis leaves out four types of instruments which banks report on their off-balance sheets: commitments to provide or accept loans, guarantees and (currency) options accepted and provided, and value accepted into safekeeping.

Chart 68 Time development of VaR taking into account loan commitments and guarantees

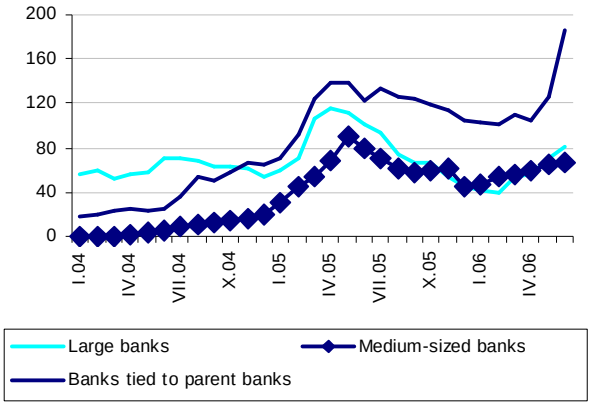


- Source: NBS, own calculations.
- Data are in SKK billion.

In June 2006, 30% of the total volume of commitments to provide loans and 95% of the volume of commitments to receive loans were in foreign currency. The open foreign exchange position in these loan commitments was long and represented 19% of the banking sector's balance sheet total. Banks were not usually hedging the position. Since it is not revalued in response to exchange rate changes, it does not affect the foreign exchange losses or gains. On the basis of data on the hedging of balance sheet positions, however, it may be assumed that banks will probably hedge these open positions when they are transferred to the balance sheet. This therefore represents the same problem as the discrepancy in foreign exchange positions discussed in the previous part.

There was likewise no hedging of positions arising from guarantees provided or accepted in foreign currencies. Overall, this position was short, at the level of 3% of assets. In some banks, however, it exceeded the balance sheet total. This is related to the connection between foreign exchange and credit risk – the banks could be exposed to foreign exchange risk only where a credit event occurs.

Chart 69 Volume of underlyings for options



- Data are in SKK billion.
- Source: NBS.

Currency options cannot, as non-linear instruments, be included in the analysis since there is a shortage of information on their parameters. In June 2006, the foreign exchange positions arising from their underlyings were seen to be closed in a majority of banks. It may be assumed that banks are hedging their option positions by concluding option transactions on the interbank market. This assumption is confirmed by the fact that around 50% of the total volume of underlyings for option contracts are related to transactions with foreign monetary financial institutions. This is the case both with the banking sector as a whole and among individual banks.

Whereas the volume of option transactions declined in the second half of 2005, it increased sharply again in the first half of 2006.

Not only did underlyings of currency options rise in volume, so did the underlyings of currency derivatives, especially currency swaps. That said, the size of the open foreign exchange positions hedged by these instruments remained largely unchanged.

Apart from their direct exposure to foreign exchange risk, which appears to be insignificant, banks are indirectly exposed to the effects of exchange rate fluctuations. As mainly enterprises and financial companies receive a rising volume of foreign currency loans, their repayment ability could come under threat in the event of weakening of the domestic currency. However, the data needed to make a more detailed analysis of this situation are not available.

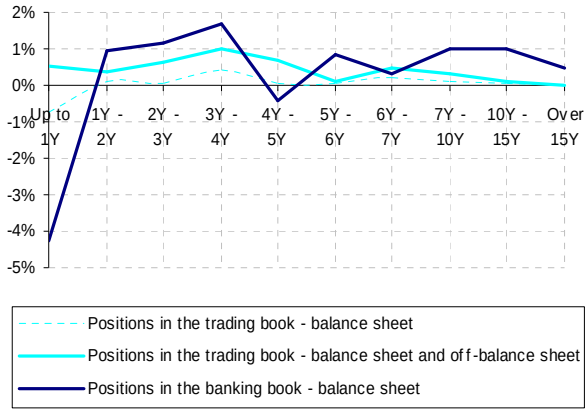
Interest rate risk

In measuring interest rate risk, we focus on the sensitivity of interest rates expressed as a fluctuation in the economic values of all interest-sensitive assets and liabilities. Unlike with foreign exchange risk, sensitivity is therefore not expressed in terms of impact on profitability. Indeed, interest rate changes would have a direct and immediate effect on profitability only in regard to revaluation of assets and liabilities to fair value against the profit or loss. The revaluation of assets held for sale would be reflected only in the size of the shareholders' equity. Assets held to maturity would not be revalued at all. Where an asset is held by a bank to maturity, the possible change in its fair value will gradually diminish and by the maturity date, the fair value will match the nominal value. When evaluating interest rate risk, however, the change in the revaluation of all assets and liabilities to fair value is taken into account. The change in the net economic value of the balance sheet need not therefore appear in the financial results. Where, for example, a bank provides a loan with a fixed interest rate of 5%, the fair value of this loan will decline in the event that the market rates increase, since the interest collected by the bank will be lower in comparison with the market rates. The longer the fixed rate for the loan, the greater will be decline in the fair value of the loan. This change will be reflected in a lower economic value, but not in the reported results (provided that the loan is reported at amortized value).

This approach does not, however, indicate the effect of interest rate movements on the net interest income of banks. In fact, a change in rates results in a gradual change in interest

income or expenses for balance sheet items that include a short fixed rate. This is immediately reflected in the profit and loss account. The possible effect on banks' interest rate margins is not taken into account either, and nor is the potential change in customer demand for loans or deposits, in other words the net interest income of banks.

Chart 70 Net position of interest-sensitive assets and liabilities



- The horizontal axis shows the periods of the residual fixed rate or residual maturity
- The vertical axis shows the ratio of open positions to the overall balance sheet total.

Since assets far outweigh liabilities in the longer maturity periods, it should be the case that rising interest rates, and especially increases for longer maturities, adversely affect banks by reducing net economic value. Overall, however, the interest rate risk of the banking sector in June 2006 was low. Both assets and liabilities report a relatively low interest rate sensitivity, which results from their short duration.

Interest rate sensitivity of individual asset and liability items

Interest rate sensitivity represents a simulated change in the fair value of individual asset and liability items in the event of a parallel rise in interest rates by 1 basis point. The most sensitive items reported on the asset side are those distributed in the longer maturity periods – securities and loans. The interest rate sensitivity of securities increased in the second half of 2005, but declined in the first half of 2006. Interest sensitivity dropped in nearly all banks in the first half of 2006, the reason being that a relatively large part (around 43%) of newly issued government bonds comprised variable-coupon bonds.

On the liabilities side, issued securities showed the greatest sensitivity, though they did not account for a significant part of the portfolio. The largest item by volume, customer deposits, reported only low sensitivity.

Table 12 Interest rate sensitivity of selected asset and liability aggregates of the banking sector, in SKK

	VI.05	XII.05	VI.06
interbank market and NBS – assets	-0.0007%	-0.0006%	-0.0007%
asset transactions with customers	-0.0095%	-0.0102%	-0.0119%
securities transactions	-0.0168%	-0.0203%	-0.0183%
interbank market and NBS – liabilities	0.0052%	0.0047%	0.0036%
liability transactions with customers	0.0047%	0.0050%	0.0055%
other liability transactions	0.0286%	0.0265%	0.0217%

- Source: NBS.
- The figures in the table represent the percentage change in the value of interest-sensitive asset and liability items in the event of a parallel rise in interest rates by 1 basis point.

Liquidity risk

The factors that affected liquidity risk in 2005 did not change in the first half of 2006. These involved, on the one hand, the development of standard banking activities that result directly from the time discrepancy between assets and liabilities, and, on the other hand, the strong factor of the interbank market.

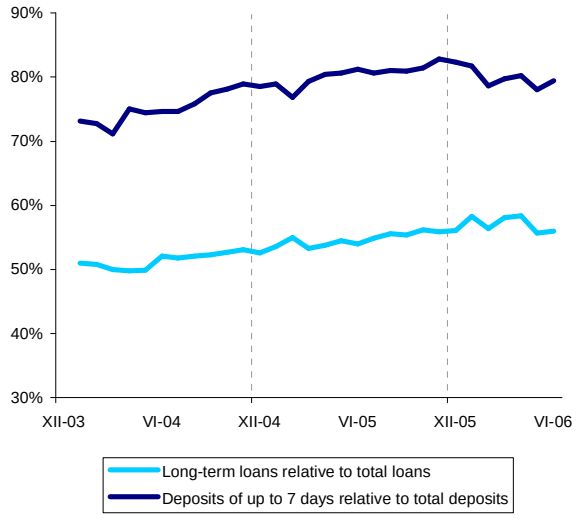
Liquidity risk is related to the deepening time discrepancy between assets and liabilities. The extent to which the increase in long-term lending is reducing the liquidity cushion in the banking sector is not clear. Nor can it be ruled out that since banks are convinced about the sufficiency of the liquidity cushion's size, they are supporting long-term lending. The liquidity

risk in this case depends on the functioning of the liquidity cushion – whether it is set and maintained at a sufficient level and also on the assumption that the entities to which it applies invest in liquid assets to a lesser extent.

Time discrepancy between assets and liabilities

Financial intermediation almost always leads to a time discrepancy between the intermediary's claims and liabilities. This is a natural consequence of the fact that intermediation concerns not only volumes but also maturities. The time discrepancy is increased by the provision of long-term loans to households and investment loans to enterprises. That said, the ratio of long-term customer loans to overall lending stopped rising at the end of 2005. Likewise, deposits with a maturity of up to 7 days ceased increasing as a share of total deposits, reflecting the growth in time deposits in response to interest rate movements.

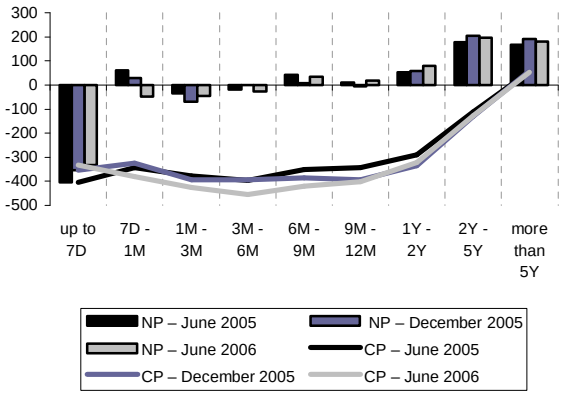
Chart 71 Customer loans and deposits by maturity



- Source: NBS.

The time discrepancy between assets and liabilities is not only related to long-term lending and the increase in current account balances. The overall position is affected mainly by the interbank market and to a large extent also by securities. A favourable change was the decrease in the very short position in the shortest maturity, which resulted from the slower increase in liabilities than in assets under this maturity.

Chart 72 Net and cumulative balance sheet position of the banking sector



- Source: NBS.
- Data are in SKK billion.
- NP – net position.
- CP – cumulative position.

In contrast, assets with the next maturity (from 7 days up to 1 month) declined, which resulted in a change in the position from long to short.

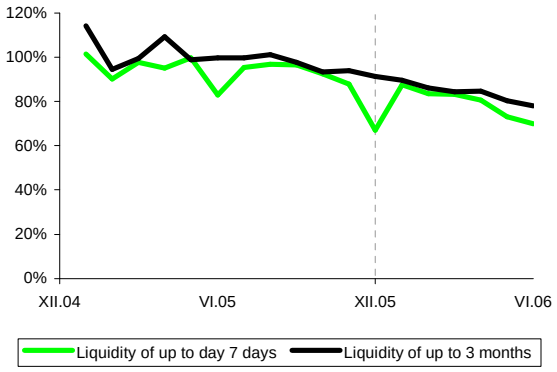
Despite the decrease in the short position in maturities of up to 7 days, the cumulative balance sheet position in liquidity declined still further.

The increasing time discrepancy on banks' balance sheets is also seen in change in the median values of liquidity ratios for up to 7 and 3 months,[21] which have declined as a result of the said development.

[21] The ratios are defined as the ratio of liquid assets to volatile funds, where liquid assets include vault cash, the bank's current accounts held with other banks, all Treasury bills or government bonds that are not subject to a lien, including those which the bank acquired in repo transactions, all claims against customers and banks with a residual maturity of up to 7 day or up to 3 months, and where volatile funds represent the sum of liabilities

Altogether, the predominance of long-term loans (Chart 71), the widening of the time discrepancy between assets and liabilities (Chart 72) and the decline in liquidity ratios (Chart 73) does not describe the whole situation of liquidity risk in the banking sector. The degree to which banks are exposed to this risk is not indicated by the maturity discrepancy between assets and liabilities. The second part of the information on liquidity risk is contained in the analysis of the liquidity cushion.

Chart 73 Liquidity of up to 7 days and up to 3 months



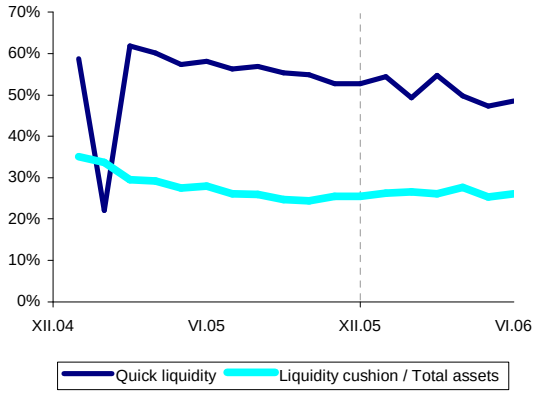
- Source: NBS
- The chart shows the median of the ratios for individual banks, not including branches of foreign banks and building societies.

Liquidity cushion

It is therefore likely that the most important factor in liquidity risk continues to be trading by domestic banks between each other, with foreign banks and with the National Bank of Slovakia, and investments in certain securities. Interbank transactions, because of their short maturity, and certain securities, owing to their liquidity, constitute the cushion against liquidity risk.

The problem with the liquidity cushion is its weak application in the context of systemic risk. The liquidity cushion itself is based on the assumption of trading in given instruments. In the event of a systemic threat to the banking sector, the willingness of banks to trade will also be jeopardized.

Chart 74 Quick liquidity and the ratio of liquid assets to total assets



- Source: NBS

For the purposes of this analysis, the liquidity cushion is defined as the sum of the funds on domestic interbank market and the net positions of domestic banks vis-à-vis the NBS,[22] vis-à-vis foreign banks,[23] and vis-à-vis the central government.[24] The sum did not include, for example, credit lines of domestic banks to their parent banks, owing to shortage of liquidity in the euro area.

The median of the quick liquidity ratio had an overall declining trend, while the ratio of the liquidity cushion to total assets stopped decreasing at the end of last year. The upholding of the liquidity cushion's share of total assets resulted from a reduction in the short position of domestic banks vis-à-vis foreign banks (by SKK 52 billion between December 2005 and June 2006 – domestic

against banks and customer with a maturity of up to 7 days or up to 3 months.

[22] Net position vis-à-vis the NBS = the volume of loans to and deposits with the NBS, and purchases of NBS bills, less deposits and loans from the NBS.

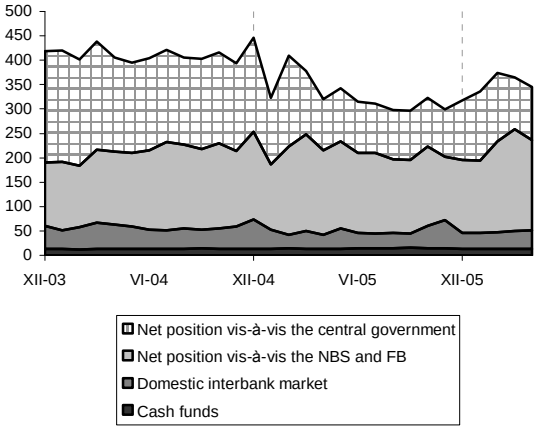
[23] Net position vis-à-vis foreign banks = the volume of loans to and deposits with foreign banks, less deposits and loans from foreign banks.

[24] Net position vis-à-vis the central government = government bonds + State Treasury bill – deposits of ARDAL.

banks accepted fewer deposits and provided more loans to foreign banks), while the long positions of domestic banks towards the NBS declined by only SKK 1 billion.

It is significant for the banking sector that the liquidity cushion remained at a relatively stable level in the first half of 2006.

Chart 75 Composition of the liquidity cushion



- Source: NBS
- Data are in SKK billion.
- FB – foreign banks

Stress testing

The previous section identified some of the risks to which the banking sector is exposed. The main focus of this section is therefore on estimating the sensitivity of banks to exceptional but plausible changes in market conditions from the view of such risks.

A simulation of credit risk effects showed that the capital adequacy ratio of most banks would not fall below 8% in the event of an increase in defaulted loans, even if the rise were to be several times higher than the highest historical month-on-month change. A similar conclusion applies to the scenario where the banks' default rate would correspond to the share of defaulted loans in the portfolio taking into account the average month-on-month increase in lending volume.

As regards liquidity, the riskiest scenario appears to be the unexpected withdrawal of a large share of customer deposits or the outflow of funds from foreign banks. This is related to the growing dependence of some banks on financing long-term assets of low liquidity with funds that are potentially highly volatile. As for the sensitivity estimate for both scenarios, it can be said that most banks would retain a sufficient liquidity cushion in the event that 20% of customer deposits or 90% of deposits of non-resident banks were withdrawn. Several banks would, however, experience a relatively large change in particular liquidity ratios (in comparison with historical data).

Stress testing of exceptional effects related to market risks confirms that the banking sector has relatively little exposure to these risks. Most banks did not incur a loss representing more than 1% of own funds even where the koruna's exchange rate against the euro and against other currencies was simulated to undergo an extreme depreciation or appreciation of 15% over a period of 10 days. Interest rate fluctuations would have more unfavourable effects, especially in some banks where the banking book includes a large volume of securities with a long fixed rate. A rise in interest rates would expose most banks to an adverse effect.

Credit risk

Credit risk, as the most significant risk in banks' business, is assessed by analysing the sensitivity of the capital adequacy ratio to changes in the credit portfolio's quality, which are derived from certain assumptions and from the development of this quality in the past. Two types of assumption are used in this regard, and they lead to two stress-test scenarios:

Scenario 1: Credit crunch

The first scenario simulates a substantial worsening of the financial position of banks' customers. For this reason, it is assumed for the next period that banks significantly restrict new lending. In this scenario there is therefore no change in the value of risk-weighted assets. It is assumed that the rise in defaulted loans will be caused solely by non-defaulted loans falling into the defaulted category, resulting from the said deterioration in the financial positions of enterprises and households.

Under this scenario, the largest percentage month-on-month increase in value of defaulted loans (Δ) during the first half of 2006 is calculated. The stress-test is then based on the assumption that such an increase, adjusted by multiplier M, also occurs in the following period. The value of defaulted loans for the next period is then worked out as follows:

$$NPL_{t+1} = NPL_t * (\Delta * M + 1),$$

It is assumed for the simulation that this increase in defaulted loans is entirely reflected in a loss, and that the bank's own funds are reduced by this loss.

When interpreting the results of this scenario, two basic assumptions should be taken into account – the 100% creation of provisions for each loan that falls into the defaulted category,

and the fact that the expenses for these provisions are deducted in full from own funds.[25] In addition, this stress-test scenario is significantly limited by the amendment to the Decree on the Classification of Assets and Liabilities (related to the fact that banks started reporting under IAS/IFRS standards from 1 January 2006), which allows the value Δ to be calculated only from data for the first half of 2006. During this period, however, banks could have made additional transfers in various lending categories, not in connection with the actual change in their quality, but with the said legislative amendment.

Scenario 2: Granting of loans with a higher default rate

The second scenario is based on growing competition pressure in connection with a relatively high pace of lending growth. It therefore simulates the situation where banks, in seeking to increase market share, provide more loans and at the same time increase the share of lending to less solvent customers. This leads in future to such customers defaulting on loan repayments, the result of which will be a higher share of defaulted loans in the portfolio of new loans.

The first step is to calculate the maximum share of defaulted loans in total loans for the first half of 2006. This share of defaulted loans forms the basis for estimating the default rate of new loans in future. Their relationship is represented by the coefficient M_1, which is used to simulate the increase in this share.

A further assumption is the continuing increase in total lending volume, whose average month-on-month absolute change is multiplied by the coefficient M_2. This rise in lending is at the same time included with a risk weight of 100% in the increase of risk-weighted assets. The M_2 multiplier may be interpreted as the growth in the bank's lending activities, but equally as an extension of the time period during which the stress-test scenario continues to apply. The volume NPL_{t+1} is then calculated using the following formula:

$$NPL_{t+1} = NPL_t + \mathrm{Max}\left\{\left(M_1 * \max_i \frac{NPL_i}{total_i}\right) * \right.$$
$$\left. * \left(M_2 * \frac{1}{11}\sum_{j=Aug05}^{Jun06} total_j - total_{j-1}\right), 0\right\},$$

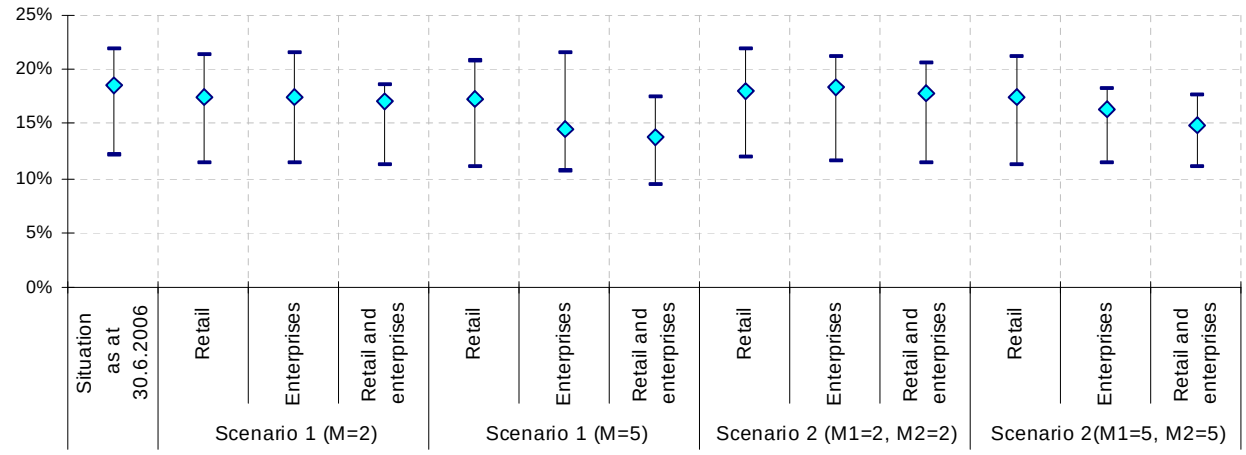
where $total_t$ represents the total volume of loans provided in time t.

For calculating the impact of this stress-test scenario on capital adequacy, the bank's own funds are reduced. It is again assumed that the value of the increase in defaulted loans will appear as a loss (LGD = 100%). At the same time, the volume of risk-weighted assets will rise, assuming that new loans have a risk weight of 100%.

The interpretation of the results should take into account, apart from the assumptions mentioned in the first scenario, the assumption that the share of defaulted loans which results from credit risk management in the past is used to estimate defaulted loans in the present. This assumption may not, however, be correct if the bank has changed the management of credit risk or if the bank has sold or written off part of its defaulted claims.

[25] It is not taken into account that the bank made a certain profit for the first half of 2006 which is not included in the volume of own funds but which can be used to cover a loss, or part thereof, caused by defaulted loans. This approach is taken because the size of the profit depends on the period under review, and therefore its inclusion would make it impossible to compare the results, e.g. for June and December.

Chart 76 Comparison of the impacts that different credit risk scenarios have on the distribution of capital adequacy ratios in the sector



- Source: NBS.
- The chart shows the lower quartile, median, and upper quartile of the distribution of estimated capital adequacy ratios in the sector following the application of the individual scenarios.

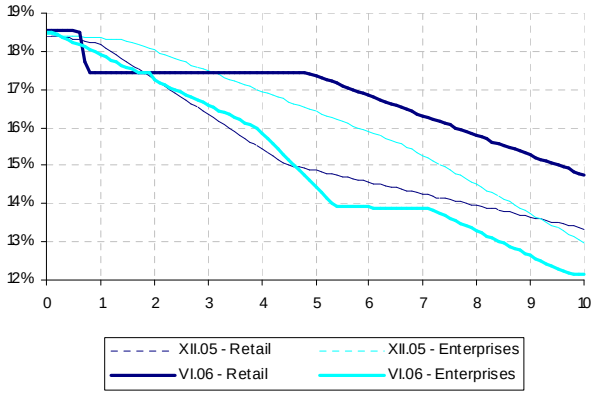
The impacts of stress-test scenarios for credit risk

Each scenario was monitored for its impact on the most important portfolios – retail loans and loans to enterprises. As the outline of the scenarios makes clear, we consider a period of one month during which the changes in capital adequacy could arise. Chart 76 represents the impacts of both scenarios in two versions – moderate (with multipliers of 2) and severe (with multipliers of 5).

The first scenario shows that, on the basis of past values for first-half of 2006 increases in defaulted loans in individual banks, a majority of banks would not be significantly affected even by a several-fold increase in the month-on-month growth in the volume of defaulted claims. Such a result is to be desired, since the opposite case would mean that a recurrence of the highest rise in defaulted loans (or a greater multiple increase) could significantly reduce the bank's capital adequacy ratio, even within the one-month period.

After comparing the first scenario's impact in December 2005 and in June 2006, it may be said that its impacts on the retail loan portfolio declined. On the other hand, these impacts are more significant in the enterprises loan portfolio.

Chart 77 Comparison of the impacts of scenario 1 on the median capital adequacy ratio in June 2006 and December 2005



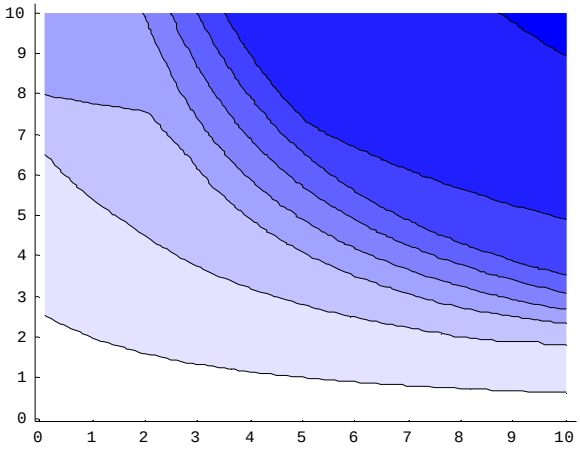
- Source: NBS.
- The horizontal axis shows the values of parameter *M*.
- The vertical axis shows the medians of the distribution of estimated capital adequacy ratios in the sector, following the application of scenario 1.

The conclusions from the second scenario differ to those from the first. It is difficult to compare the second scenario's overall impact on

the banking sector with that of first scenario, since a different approach is taken to measuring the sensitivity to credit risk. The group of banks that would be most exposed under the scenario is also different.

Over one month the scenario produces a negligible effect, but over 12 months (M_2=12) the simulated capital adequacy ratio would in some banks decline to the 8% limit for M_1=2 and M_1=3. For the banks in question, this means that if the loans which fail during the year equated to two or three times the current value of defaulted loans and if the banks created provisions for 100% of this amount, their capital adequacy ratio would reach the 8% limit.

Chart 78 Impact of scenario 2 on the median capital adequacy ratio for the parameter values M_1 and M_2



- Source: NBS
- The horizontal axis shows the M_1 parameter values, and the vertical axis the M_2 parameter values.
- The coloured areas of the graph indicate the median of banks' capital adequacy ratios, from the range 18%-19% (bottom left) to the range 10%-11% (top right). The different strata indicate a change of 1 percentage point in the median ratio.

Liquidity risk

The testing of liquidity risk involves special limitations. A typical problem is the ambiguity of the link between liquidity risk and capital adequacy. Even if a bank incurs a loss related to liquidity problems (for example, the rapid selling of securities), it is not easy to simulate this situation. Moreover, the scenarios do not take into account either existing credit lines to other banks and the parent bank, or the core deposits.

That is why the test is carried out not on capital adequacy, but on three selected ratios of liquidity (the ratios of quick liquidity, liquidity up to 7 days, and liquidity up to 3 months).[26] Each indicator is calculated as a share of the liquid assets and volatile funds in the respective category. The size of the shock was considered in regard to the absolute value of the average month-on-month change in these indicators. As with credit risk, the objective is not to quantify effects; it is rather to identify the banks that would be worst affected in the given scenario, and to briefly analyse the reasons. It is at the same time possible to identify the banks, which experienced significant changes (negative or positive) during the first half of 2006.

For the stress testing of liquidity risk, three basic scenarios were selected. The first two are standard, in variations used by central banks in the EU. The third attempts to reflect the situation in the Slovak banking sector.

Scenario 1: Decline in government bonds by 10%

This is a straightforward simulation in which the value of government bonds and Treasury bills in the bank's portfolio (not including securities acquired as collateral in repo transactions) is reduced in all three ratios by 10%. One reason for the decline in the value of government bonds could be an increase in interest rates.

Scenario 2: Decline in customer deposits by 20%

This applies to an unexpected withdrawal of a proportion of customers' deposits. The volume of liquid assets is reduced by the same amount. As regards liabilities, it is assumed that customers' funds are reduced equally in all maturities. Volatile funds therefore decrease by the amount

[26] The ratios are defined in the part "Liquidity risks".

of 20% of all liabilities towards customers (for the first ratio), by 20% of liabilities towards customers, which have a residual maturity of up to 7 days (for the second ratio) and up to 3 months (for the third ratio).

Scenario 3: Outflow of short-term funds from the banking sector for external reasons

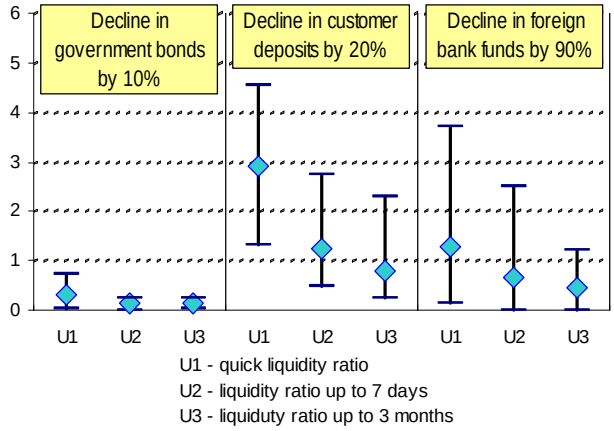
This simulates the situation where investors decide to reduce substantially their position in Slovak banks regardless of the domestic conditions. In simplified form, it involves a 90% decline in the deposits of non-resident banks. Such a situation could come about by, for example, investors simply deciding to place their short-term funds in other higher-yielding markets.

Under this scenario, liquid assets are reduced by 90% of the value of deposits of non-resident banks. For liabilities, it is assumed that funds with the shortest residual maturity are the first to leave; therefore the said volume (90% of foreign banks' deposits) is also deducted from volatile funds, although by an amount not exceeding the size of banks' current accounts (for the first ratio), by the amount of banks' deposits with a maturity of up to 7 days (for the second ratio) and up to 3 months (third ratio).

Since the actual value of the ratios may only be used to a limited extent to assess liquidity, the stress test results are focused on the relative (as opposite to absolute), changes in the ratios. The scenario's significance of each portfolio was determined by comparing two values. The first was the percentage change in the value of the ratio caused by applying the scenario relative to the figure as at 30 June 2006. The second was the average month-on-month percentage change in the value of the same ratio during the second half of 2005 and the first half of 2006. In this approach, a change in the ratio under a certain scenario was not considered significant if was at a similar level to the usual month-on-month changes.

The first scenario does not have a significant impact on banks. A depreciation of government bonds by 10% would have the biggest impact on those banks that have a high proportion of government bonds in their balance sheet. On the other hand, the same high share of government bonds gives these banks the most stable liquidity ratios with a low average month-on-month change.

Chart 79 Comparison of the impacts of individual scenarios for liquidity risk



- Source: NBS.
- The chart shows the lower quartile, median, and upper quartile of the distribution of the share of liquidity ratio changes after applying the individual scenarios to the average month-on-month changes for the second half of 2005 and first half of 2006.

The scenario describing a run on 20% of customer deposits would most affect medium-large banks. That is because these banks have a higher ratio of customer loans to the balance sheet total, which reduces the share of liquid assets. In addition, the funds of medium-large banks are short-term, and that makes this group of banks the most sensitive to this scenario.

Scenario 2 would have the strongest impact on the quick liquidity ratio (Chart 79). This stems mainly from the definition of the ratio, with volatile funds being deemed to include all customer deposits. In fact, however, the results of the scenario in regard to this ratio are similar to the results for the other two ratios. The group of

building societies represent an exception – a run on 20% of customer deposits despite the long-term character of the deposits would have a relatively large impact on their quick liquidity ratio.

In assessing the impact of a 90% decline in the deposits of non-resident banks, the aim is actually to identify the banks that use the deposits of non-residents to finance illiquid assets. In these banks, the volume of liquid assets would not suffice to cover the 90% withdrawal of non-resident banks' deposits.

It may be said that the banking sector as whole would be more affected by the scenario of a run on 20% of customer deposits.

Foreign exchange risk

The stress testing of foreign exchange risk takes two approaches when designing the stress-test scenarios:

- an approach assuming that the historically "worst" fluctuations in exchange rates will recur in the stipulated period;
- an approach based on simulated changes in exchange rates, where the simulation uses an expert estimate of the development of one exchange rate and of the mutual correlations between exchange rates estimated from historical data.

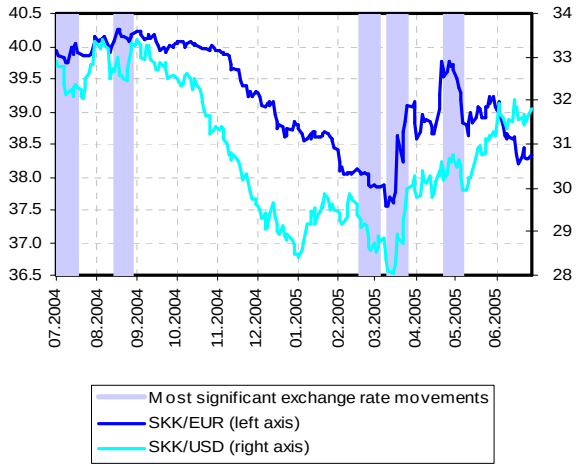
The stress testing is based on the quantification of the size of a loss calculated as the product of an simulated change in the exchange rate and the value of the open position, and of the change in the capital adequacy ratio following the deduction of this loss from own funds.

Scenarios 1 to 3: **Historically "worst" exchange rate changes**

This approach to the design of the stress-test scenario is based exclusively on the historical data of exchange rates (from 1 July 2004 to 30 June 2006) where the tracked period is 10 working days. The selected 10-day period therefore takes account of the assumption that positions will not be immediately closed in the event of sudden and substantial changes in exchange rates. When calculating the loss as at a given day, it is assumed that the "worst" relative changes in exchange rates are repeated over the following 10 days.

The first option is to select the same 10-day period for the whole banking sector. It is selected so that if exchange rates changed by the same rate as in this period, the banking sector as a whole would suffer the largest loss. In this case, the banking sector as a whole would make its largest loss upon a recurrence of the exchange rates in the period from 7 March 2006 to 20 March 2006 (scenario 1), or the period from 14 April 2005 to 28 April 2005 (scenario 2). In both periods there was significant weakening of the Slovak koruna against the EUR (by 3.7% and 2.8%, respectively) and against the USD (by 7.1% and 3.0%). The impacts of both scenarios on the distribution of banks' capital adequacy are shown in Chart 81.

Chart 80 Exchange rate of the EUR and USD in 2005



- Source: NBS

The second option is to select the 10-day tracking period on a bank-by-bank basis (scenario 3). The 10-day period selected for each bank was the one during which there was an exchange rate movement that would cause the bank the largest loss. Although the results of this scenario cannot

be aggregated for the whole banking sector, this approach may be used to supplement the VaR calculation. Whereas the VaR states the assumed loss that should not be exceeded in 99% of cases, based upon the historical performance of exchange rates, the stress scenario gives the potential loss in the event of a recurrence of the historical performance that would at the present time be the least favourable.

Scenarios 4 and 5: **Simulated exchange rate movements taking into account correlations**

An inherent drawback of stress scenarios based solely on the observation of the historical performance of exchange rates is their limited potential to predict future development. This limitation is even more pronounced when attempting to predict exceptional events, since their occurrence within historical data is too rare. That is why it is necessary to base the design of stress-test scenarios also on simulations or assumptions for exchange rate development. There is then the question of how the movement of one exchange rate will be reflected in the estimated movements of other exchange rates. It should be taken into account that mutual correlations exist between individual exchange rates, and that during periods of substantial exchange rate fluctuations (hectic periods), these may differ from correlations estimated from historical development.

Table 13 Estimated correlations between exchange rates and simulated changes in exchange rates used in stress testing (scenarios 4 and 5)

	CHF	CZK	DKK	EUR	GBP	HUF	JPY	PLN	SEK	SIT	USD
correlation in quiet period	72%	28%	98%		44%	17%	36%	5%	50%	84%	36%
correlations in hectic periods	94%	68%	99%		81%	41%	76%	28%	86%	98%	71%
estimated change upon the koruna weakening against the euro by 5%	4.9%	2.8%	4.9%	5.0%	4.4%	2.2%	4.7%	1.4%	4.5%	4.8%	4.9%
estimated change upon the koruna strengthening against the euro by 5%	-5.0%	-2.6%	-4.9%	-5.0%	-4.5%	-2.5%	-5.2%	-1.6%	-4.5%	-4.9%	-5.5%
estimated change upon the koruna weakening against the euro by 15%	14.8%	8.3%	14.7%	15.0%	13.4%	6.8%	14.7%	4.3%	13.5%	14.6%	15.3%
estimated change upon the koruna strengthening against the euro by 15%	-14.9%	-8.1%	-14.7%	-15.0%	-13.5%	-7.1%	-15.2%	-4.5%	-13.4%	-14.6%	-15.9%

- Source: NBS

The estimate of the correlation in hectic periods is derived from the historical development of logarithms of the relative exchange rate fluctuations between 2002 and 2005, on the basis of the following model:

$$\ln\left(\frac{eur_t}{eur_{t-1}}\right) \sim w\ N\left(m_{eur}, s_{eur}\right) + (1-w)\ N\left(\tilde{m}_{eur}, \tilde{s}_{eur}\right),$$

where eur_t is the exchange rate EUR/SKK in the period *t*. It is assumed that the logarithms of changes in the EUR exchange rate arise with a probability of ω from the quiet period (simulated by a normal distribution) and with a probability of 1- ω from the hectic period (simulated by another normal distribution with a greater standard deviation) – which is represented to a lesser extent and is indicated by sudden fluctuations in exchange rate values and by jagged growth in volatility. The model parameters (including ω probability of the quiet period) were estimated from historical data of a time series of exchange rates for the period 2002-2005. With this model, it is then possible to calculate the conditional correlations between the exchange rates provided that the data are from the hectic period, which can be assumed when simulating the exceptional movements. [27]

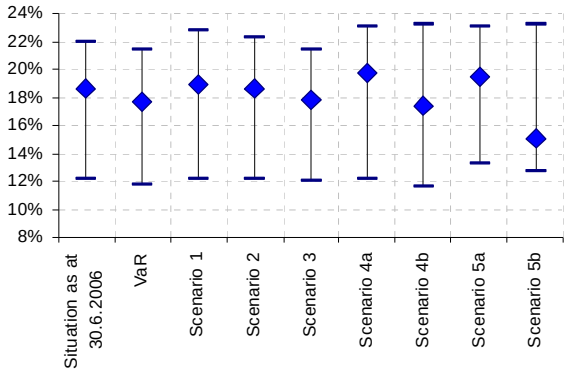
[27] A description of the method is given in the following article by Jurča, P. and Rychtárik, Š.: Stress Testing of the Slovak Banking Sector, Biatec 04/2006,

As mentioned in the part "Foreign exchange risk", the foreign exchange position of most banks is basically closed, insofar as it does not include the open position in guarantees and in commitments to provide or receive loans recorded on the off-balance sheet. Stress testing shows that most banks would not incur an exchange rate loss representing more than 1% of own funds even where the Slovak koruna undergoes extreme depreciation or appreciation against the euro and then against other currencies. No bank would report a decline in the capital adequacy ratio to below the 8% limit.

Although it could be concluded from Chart 81 that strengthening of the Slovak koruna would be more likely to have a small adverse impact on the banking sector as a whole, this actually results from the higher losses made by a smaller group of banks. In fact, if the koruna appreciated by 15%, as many as 12 banks would record a profit. Regarding branches of foreign banks, for which the impact cannot be examined using changes in the capital adequacy ratio, a majority of them would not, even in an exceptional scenario, make a loss representing more than 0.5% of the balance sheet total.

The situation would, however, be different if the calculation of the open foreign exchange position included off-balance-sheet claims and liabilities arising from loan commitments and guarantees. Some banks would then see a sharp decline in the capital adequacy ratio. In fact, though, the loss on these transactions would not show up in the accounts as an exchange rate loss.

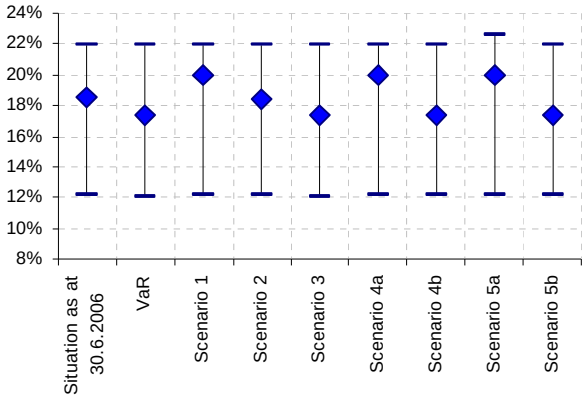
Chart 81 Comparison of the impacts that foreign exchange risk scenarios have on the distribution of capital adequacy in the sector, taking into account guarantees and loan commitments



- Source: NBS.
- The chart shows the lower quartile, median, and upper quartile of the distribution of estimated capital adequacy ratios in the sector following the application of individual scenarios.
- The calculation did not include branches of foreign banks.
- Description of scenarios:
  - Scenarios 1 and 2: development of exchange rates in the period from 7 March 2006 to 20 March 2006, and in the period from 14 April 2005 to 28 April 2005
  - Scenario 3: the least favourable development of exchange rates over 10 days (within the period from 1 July 2004 to 30 June 2006) on a bank-by-bank basis.
  - Scenario 4: Weakening / strengthening of the koruna against the euro by 5%.
  - Scenario 5: Weakening / strengthening of the koruna against the euro by 15%

NBS; and in the Report on the Results of the Slovak Financial Sector Analysis for 2005.

Chart 82 Comparison of the impacts that foreign exchange risk scenarios have on the distribution of capital adequacy in the sector, not taking into account guarantees and loan commitments



- Source: NBS.
- The chart shows the lower quartile, median, and upper quartile of the distribution of estimated capital adequacy ratios in the sector following the application of individual scenarios.
- The calculation did not include branches of foreign banks.
- Description of scenarios:
  - Scenarios 1 and 2: development of exchange rates in the period from 7 March 2006 to 20 March 2006, and in the period from 14 April 2005 to 28 April 2005
  - Scenario 3: the least favourable development of exchange rates over 10 days (within the period from 1 July 2004 to 30 June 2006) on a bank-by-bank basis.
  - Scenario 4: Weakening / strengthening of the koruna against the euro by 5%.
  - Scenario 5: Weakening / strengthening of the koruna against the euro by 15%

Interest rate risk

Whereas the stress testing of foreign exchange risk focused on simulating the impact of exceptional exchange-rate movements on a bank's profitability and then on the capital adequacy ratio, the stress testing of interest rate risk is methodologically different. It does not simulate the effect of revaluation on profitability, but the effect of the change in the so-called net economic value. The stress testing, however, involves estimating the change in revaluation to the fair value of all assets and liabilities, not only those revalued to fair value in accordance with accounting standards. In order to compare the size of this change with the impact of foreign exchange risk, the impact on the change in capital adequacy is simulated. The reduction in the economic value is deducted from the amount of own funds. A second limitation of the stress testing is that the impact on the change in economic value is simulated only for balance sheet items; derivatives and other off-balance sheet items are not taken into account.

Table 14 Stress-test scenarios for interest rate impacts

Scenario	Description
Scenario 1	Parallel rise in interest rates in SKK by 200 (or 500) basis points
Scenario 2	Rise in short-term interest rates in SKK by 200 (or 500) basis points
Scenario 3	Rise in long-term interest rates in SKK by 200 (or 500) basis points
Scenario 4	Parallel rise in interest rates in EUR by 200 basis points

- Source: NBS.

Like the scenarios for credit risk and foreign exchange risk, those for interest rate are used in two versions: moderate and severe. The moderate version assumes that interest rates change by 200 basis points, and the severe version simulates a move by 500 basis points.

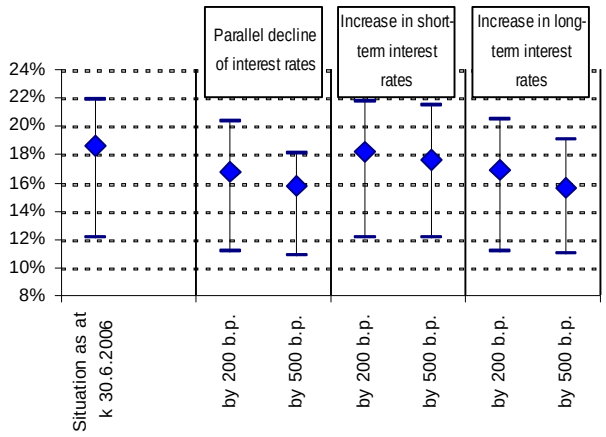
Of the scenarios for SKK interest rate changes (scenarios 1 to 3), it is the parallel change in interest rates that would have the greatest estimated impact on banks. According to an analysis of the principal components of the correlation matrix of interest-rate changes for two-year historical data (1 July 2004 to 30 June 2006), parallel changes represented 56% of all changes. The steepening of the curve (decline in short rates and increase in long rates) represented 21% of all changes.

Most banks would see a drop in economic value of their balance sheet in the event of an increase in interest rates. Banks would be particularly sensitive to a rise in long-term interest rates. In fact, their rise would result in the revaluation of assets and liabilities under longer periods of residual fixed interest rates.

The impact of this on the change in economic value would be greater than the impact of a revaluation of assets and liabilities under short fixed-rate periods.

On the other said, the scenario of a decline in interest rates would impair economic value in only three banks.

Chart 83 Comparison of the impacts that interest rate risk scenarios have on the distribution of capital adequacy in the sector



- Source: NBS.
- The chart shows the lower quartile, median, and upper quartile of the distribution of estimated capital adequacy ratios in the sector following the application of individual scenarios.

2 Insurance sector

The written premium for the first half of 2006 totalled SKK 26.6 billion, the written premium in life insurance totalled SKK 11.3 billion and the written premium in non-life insurance totalled SKK 15.3 billion. These figures, however, cannot be compared with the written premium reported for the first half of 2005, due to methodological changes in reporting the written premium in connection with the application of International Accounting Standards. The market share of the largest three insurance companies by written premium fell again, from 67.5% to 60.7%, continuing the gradual trend of declining market concentration. Indemnity costs rose by 16.6% against the same period a year earlier, to SKK 10 billion. Insurance companies' profits in the first half of 2006reached SKK 2.9 billion. Insurance companies thus in total created a 52% larger net profit than in the comparable period a year earlier. No substantial changes occurred in the placing of technical reserves, where these remained in low-risk assets.

Insurance market

As at 30.6.2006 the Slovak insurance market was served by 24 insurance companies (of which 14 universal, 5 life and 5 non-life), the Slovak Insurers' Bureau and 4 branches of foreign insurance companies providing their services in the SR on the basis of a licence granted in their home state. The number of insurance companies fell by one, where 2 insurance companies were wound up and 1 established. The insurance company Vzájomná životná poisťovňa Sympatia, a. s. (VŽP) was wound up and returned its licence on 30.1.2006, its non-life insurance portfolio was transferred to the Union insurance company and the life insurance portfolio to the ING Životná poisťovňa and Credit Suisse Life & Pensions Poisťovňa, a. s. insurance companies, the latter returning its licence on 26.5.2006 and transferring its insurance portfolio to the company Credit Suisse Life & Pensions Pojišťovna, a. s., operating in the Slovak Republic via its branch Winterthur pojišťovna a.s. Conversely, on 6.2.2006 the company AEGON Životná poisťovňa, a.s. was licensed for the first half of 2006, though has yet to report any written premium. The establishment of AEGON Životná poisťovňa, a.s. cannot, however, be seen as the arrival of a new subject onto the Slovak insurance market, since AEGON Levensverzekering, N. V. has already been providing its services in the SR on the basis of the free provision of services via a branch, meaning that this represents merely a change of its form of operation in the Slovak insurance market. In the first half of 2006 preparations were being made to transfer the insurance portfolio from AEGON Levensverzekering, N. V. to AEGON Životná poisťovňa, a.s.

On the basis of an application by the Q B E poisťovňa, a.s. insurance company, and following the granting of prior consent by the National Bank of Slovakia, the company's licence to perform insurance activity was amended to omit life insurance sectors, resulting in an increase in the number of non-life and a decrease in the number of universal insurance companies operating on the Slovak insurance market.

Upon fulfilling the set conditions insurance companies seated in any state of the European Union or European Economic Area can pursue business in the Slovak Republic on the basis of the licence granted to them in their home state. These insurance companies can decide to pursue business in the Slovak Republic either on the basis of their right to establish branches (4 insurance companies from other member states) or on the basis of their right to the free

provision of services (approx. 230 insurance companies from other member states).

The insurance market infrastructure also includes insurance brokers and reinsurance brokers. With effect as of 1.9.2005 a register of insurance agents and reinsurance brokers, administered by the NBS, was established under Act No. 340/2005 Coll. on insurance brokerage and reinsurance brokerage and amending certain acts.

Data for 2006 are reported for the first time according to IFRS/IAS International Accounting Standards and thus are not comparable with the preceding years', which were reported according to Slovak accounting standards.

A continuing gradual decline in concentration is seen in the insurance market. The market share of Allianz – Slovenská poisťovňa again fell, when its written premium for the first half of 2006 formed a 31.4% share, falling from 40.5% for the same period a year earlier. In 1995 the company had held a 78% market share. The second largest insurance company by total written premium remains Kooperatíva, which increased its market share on the same period a year earlier from a 19.6% to 22.3%. The market share of the three largest insurance companies fell from 67.5% to 60.7%.

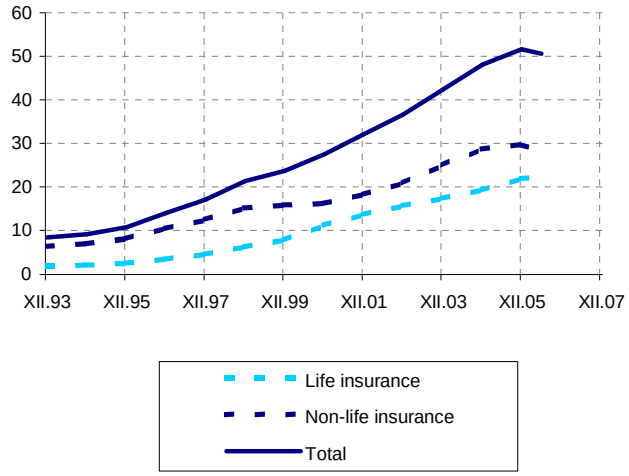
Written premium

The written premium for the first half of 2006 totalled SKK 26.6 billion, the written premium in life insurance totalled SKK 11.3 billion and the written premium in non-life insurance totalled SKK 15.3 billion.

These values, however, cannot be compared with the values of the written premium reported for the first half of 2005. Since 1.1.2006 methodological changes in reporting the written premium have been made in connection with the application of International Accounting Standards. One of the main differences in reporting the written premium under the new method compared to that used a year ago is the manner of accounting for bonuses – under previous accounting procedures bonuses had been included in the written premium, even if this in fact concerned discounts provided; under the new procedures these bonuses are not included in the written premium. The previous method thus meant that the reported written premium was permanently overvalued, since it included also bonuses that customers had not actually paid to insurance companies. Thus before any international comparison of the written premium can be made, it would be necessary to deduct the level of these bonuses from the written premium reported as at 30.6.2005. This, however, is not possible, since under the old method insurance companies included the level of these bonuses in their profit and loss statements under the item "Bonuses and discounts, excluding reinsurance", which contains also other components besides these bonuses. A substantial part of this account is, however, formed by these bonuses, therefore it is possible to arrive at a broadly correct idea of the growth in the written premium in the first half of 2006 so that the written premium reported as at 30.6.2006 is compared with the written premium reported as at 30.6.2005 reduced by the value reported in the account "Bonuses and discounts, excluding reinsurance". Such a comparison shows that in life insurance the written premium for the first half of 2006 rose by 5.5% and fell by 2.3% in non-life insurance, where the total written premium grew slightly by 0.9%. This then represents a slowdown in the rate of growth seen in 2005, when life insurance reported growth in the written premium of 17%, non-life insurance 3.4%, and insurance as a whole 7.5%.

A further difference in the new method against that used a year earlier is that certain policies do not, according to the Civil Code, meet the definition of an insurance policy laid down by IAS/IFRS International Accounting Standards, and are reported as investment contracts.

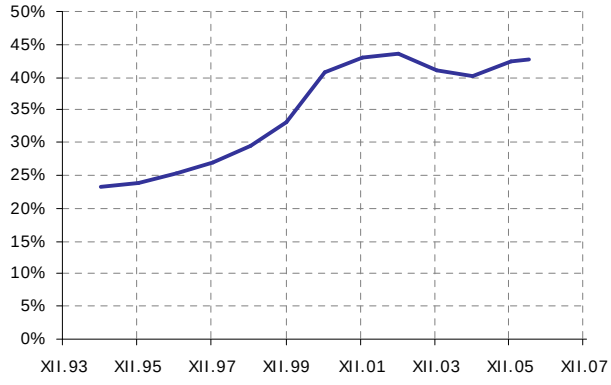
Graph 84 Written premium



- source: NBS
- data in SKK billion

Non-life-insurance represents 57% of the total written premium (a fall from 58% in 2005). Of non-life-insurance, 65% is formed by car insurance – statutory automobile liability insurance and motor-hull insurance.

Graph 85 Share of life insurance in total written premium

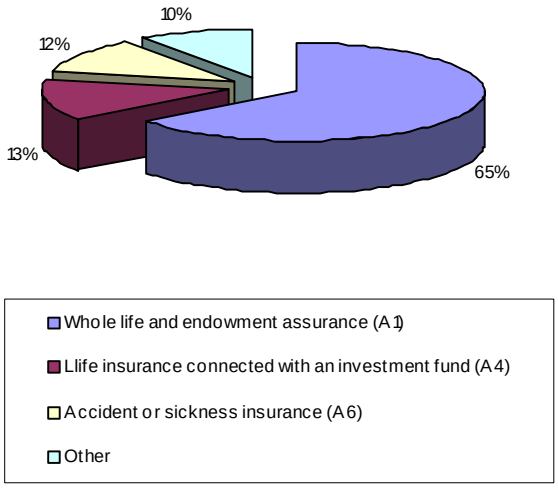


- source: NBS

Written premium by insurance sector

Insurance companies report written premiums broken down into 6 sectors in the case of life insurance and 18 sectors in the case of non-life insurance. A complete list of these 24 sectors can be found in the chapter "Terminology and Abbreviations Used". In the interest of brevity the names of certain insurance sectors are abbreviated (a list of the abbreviated titles used can likewise be found in the chapter "Terminology and Abbreviations Used").

Graph 86 Breakdown of life insurance into insurance sectors

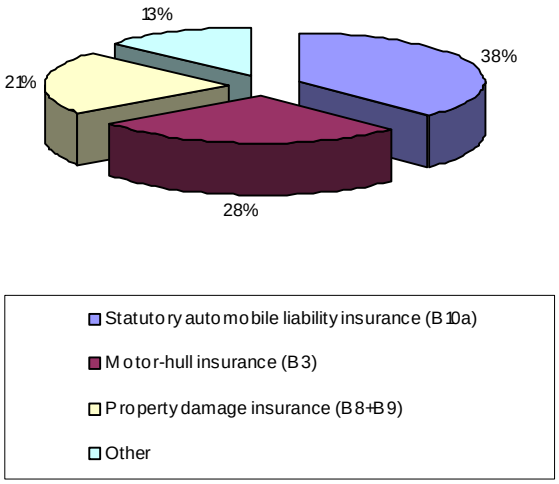


- source: NBS
- names of the insurance sectors are abbreviated and their complete wording can be found in the part "Terminology and Abbreviations Used"

The largest of the life insurance sectors – whole life and endowment assurance (A1) grew year-on-year by 10% and, with an SKK 7.4 billion premium, represents a 65% share of life insurance. It was also the fastest growing of the life insurance sectors. The second largest sector – life insurance connected with an investment fund (A4) reported a fall in the written premium of 13.5%. The year-on-year development of these two insurance sectors, however, is distorted by the fact that certain contracts were reclassified from A4 to A1. It is therefore likely that the growth, or fall in the written premium in the A1 and A4 sectors is overstated, though the extent of this overstatement cannot be determined from available data. The third largest sector –

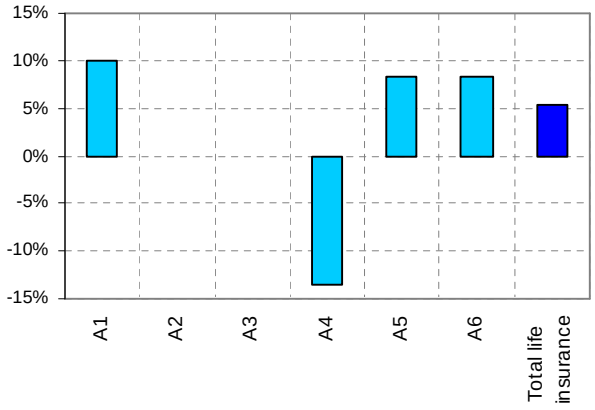
accident and sickness insurance, in the case that forms supplementary life insurance, created growth of 8.4%.

Graph 87 Breakdown of non-life insurance into insurance sectors



- source: NBS
- names of the insurance sectors are abbreviated and their complete wording can be found in the part "Terminology and Abbreviations Used"

Graph 88 Year-on-year changes in written premium in life insurance sectors

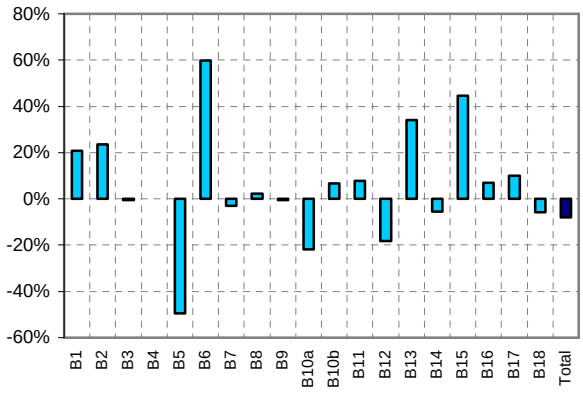


- source: NBS

Care must be taken in interpreting the changes in the non-life insurance sectors, due to the mentioned change in the methodology used in reporting the written premium, since the bonuses provided in non-life insurance (5.75%) were substantially larger than those in life insurance (0.25%) and the calculation used for determining the year-on-year growth in the written premium for life and non-life insurance as a whole cannot, however, be used at the level of individual insurance sectors. It can, though, with some justification be assumed that a substantial part of the bonuses granted in non-life insurance were granted in statutory automobile liability insurance (B10a) and motor-hull insurance (B3), and therefore with some degree of precision a direct comparison can be made of the reported written premium in non-life insurance sectors other than the two aforementioned.

Although the written premium in non-life insurance fell in absolute terms by SKK 1.25 billion, though statutory automobile liability insurance (B10a) alone reported a fall of SKK 1.61 billion. When statutory automobile liability insurance (B10a) is excluded, the written premium for non-life insurance grew by 4%. In those non-life insurance sectors other than automobile insurance (i.e. excluding B10a and B3 – motor-hull insurance) the written premium grew even faster – by 7.7%, while in 2005 it reported a fall of 1.9%.

Graph 89 Year-on-year change in written premium in non-life insurance sectors

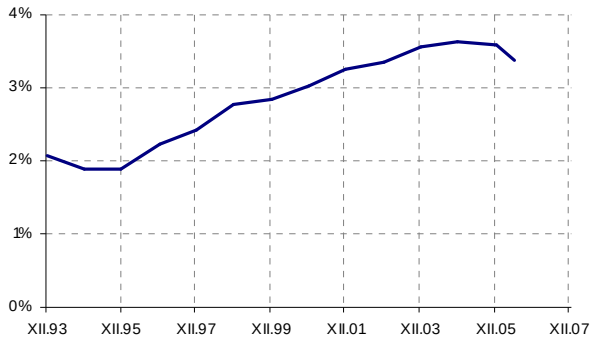


- source: NBS

Share of the written premium in GDP

The proportion of the written premium to GDP fell year-on-year from 3.59% at the end of 2005 to 3.38% in the first half of 2006. This is the lowest value since 2002. This indicator recorded a gradual growth over the period 1993-2003 from 2% to 3.5%, remaining broadly steady at this level until 2005, and has now begun to fall. This indicator is substantially below the EU 15 average (8.5%).

Graph 90 Share of written premium in GDP



- source: NBS

Written premium ceded to reinsurers

Reinsurance serves to allow an insurance company to cede part of the risk it covers. If insurance companies, via a reinsurance policy, cede a part of the insured risk to reinsurance companies, this is termed passive reinsurance. Passive reinsurance of Slovak insurance companies is performed primarily by foreign reinsurance companies.

Active reinsurance, where insurance companies perform, besides insurance activity, also reinsurance, i.e. they reinsure other insurance companies, has traditionally been performed only by Kooperativa and Allianz – Slovenská poisťovňa, and this only in non-life insurance. For over four years now, however, Slovak insurance companies have not reported any written premium from active reinsurance.

Of the total written premium in the first half of 2006 the written premium ceded to reinsurers totalled SKK 5.4 4 billion, forming a 20.5% share in the total written premium, meaning that the proportion of the ceded premium in the total written premium remains roughly constant, having fallen year-on-year by 1.4 percentage points. A large part of the ceded written premium pertains to non-life insurance, where SKK 4.8 billion was ceded, i.e. 31% of the written premium in non-life insurance (an increase from 29.6% a year earlier).

Table 15 Written premium ceded to reinsurers

	1st half year 2006	1st half year 2005	Change	Share in wr. prem. 2006	Share in wr. prem. 2005
Total	5 477 630	5 507 771	-0.5%	20.6%	20.2%
Life insurance	679 447	612 324	11.0%	6.0%	5.7%
Non-life insurance	4 798 182	4 895 447	-2.0%	31.4%	29.6%

- source: NBS
- data in SKK ’000

Indemnity costs

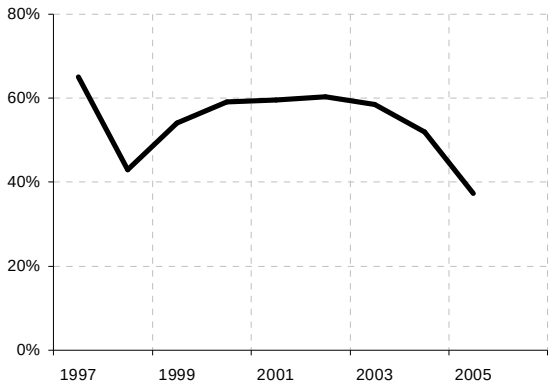
Following a fall in 2005 (the only fall recorded since 1996) the first half of 2006 saw a renewed rise in indemnity costs, of 16.6% in comparison with the same period a year earlier, to SKK 10 billion. In line with the trend observable since 1999 indemnity costs grew significantly faster in life insurance (by 28.5%) than in non-life insurance (8.6%) The long-term averages for indemnity cost growth for the period 1996-2005 are 13.9% in life insurance, 9% in non-life insurance and 10% for insurance as a whole. The rate of growth in life insurance indemnity costs for the first half of 2006 is thus significantly above the long-term average.

In analysing the development of indemnity cost growth it is, however, necessary to take into consideration not only the development of this indicator, but also the development of the written premium, changes in technical reserves for indemnity (TR) and changes in the gross technical reserves for the premium in future periods (GTRF), namely the earned premium. This gives the loss ratio, which is calculated as a percentage share:

- the sum of indemnity costs and changes in the gross technical reserve for indemnity (TR) and
- the written premium in the gross amount after deducting the change in the gross technical reserve for the premium in future periods (GTRF), namely the earned premium.

The aforementioned methodological change in reporting the written premium also has an influence on the calculation of the loss ratio – the overstatement of the written premium in past years means that earlier calculations understated the loss ratio. Despite this, it is clear that the loss ratio fell slightly year-on-year in the automobile liability insurance sector (B10a) and rose in the motor-hull insurance (B3) and property damage insurance (B8+B9).

Graph 91 Loss ratio since 1997



Source: NBS

Table 16 Loss ratio of the largest non-life insurance sectors

	30.VI.06	30.VI.05
Total non-life insurance	44%	39%
Automobile liability insurance (B10a)	40%	42%
Motor-hull insurance (B3)	57%	42%
Property damage insurance (B8+B9)	46%	25%
Other	26%	51%

- source: NBS
- written premium in SKK billion, written premium only for non-life insurance

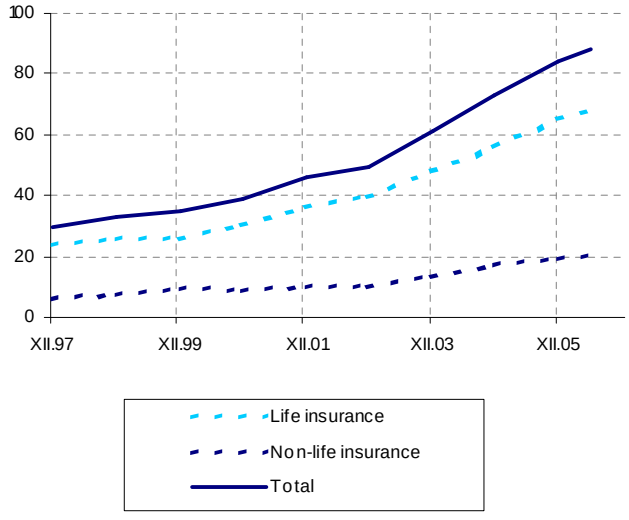
Technical reserves

Due to the changeover to IAS/IFRS International Accounting Standards a reserve for settling extraordinary risks cannot be created (despite the fact that up to 30 June 2006 it had been possible to create this reserve under the Insurance Act).

Insurance companies' technical reserves as at 30 June 2006 totalled SKK 88 billion, meaning a year-on-year growth of 11.8%. This represents a slowdown in the creation of technical reserves from 15% for 2005. The growth in reserves in non-life insurance again slowed to a year-on-year rate of 8%, against the situation in 2005 when they grew by 13%, and by 22% and 30% respectively in 2003 and 2004. Life insurance reserves reached SKK 68.4 billion, a slight fall in the year-on-year rate of growth from 16.8% as at 31.12.2005 to 13.2% as at 30.6.2006.

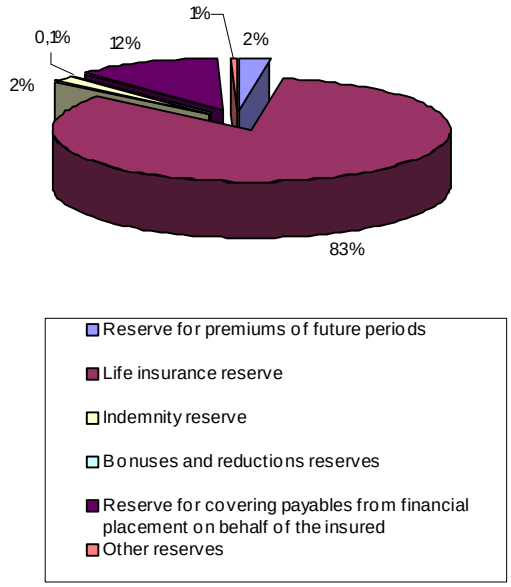
The lower creation of reserves was favourably reflected in the insurance sector's profit creation.

Graph 92 Reserves since 1997



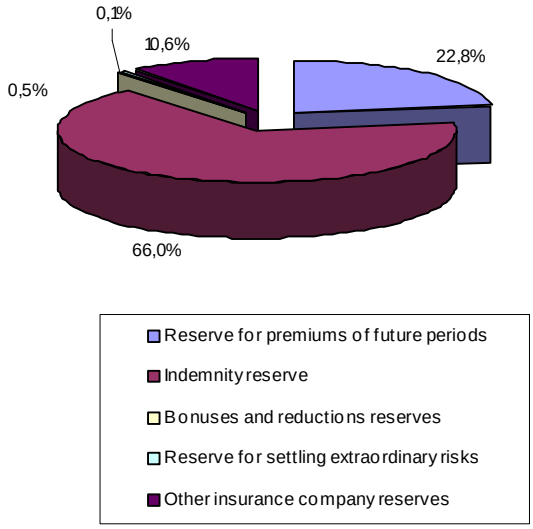
- source: NBS
- data in SKK billion

Graph 93 Structure of life-insurance reserves



- source: NBS

Graph 94 Structure of non-life insurance reserves

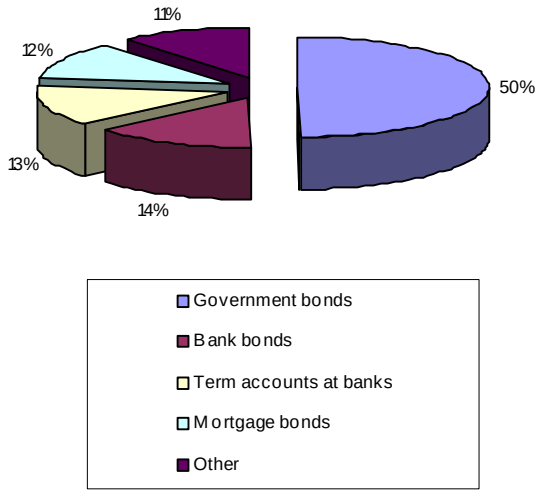


- source: NBS

Financial placement of technical reserve funds

Total created technical reserves less the technical reserve for covering payables from financial placement on behalf of the insured[28] rose to SKK 80.2 billion as at 30.6.2005 and were covered by assets totalling SKK 84.5 billion, i.e. 105.3% of created technical reserves less the technical reserve for covering payables from financial placement on behalf of the insured. The share of reserves placed in SR and other EU government bonds; bonds of the NBS and other central banks; bonds guaranteed by the SR Government; EIB, EBOR and MBOR bonds fell from 55% to 50%. 39% of reserves were placed in bank bonds, mortgage bonds or bank deposits (representing a growth from 37% as at 31.12.2005). Reserves are thus still placed largely in low-risk assets.

Graph 95 Placement of technical reserves

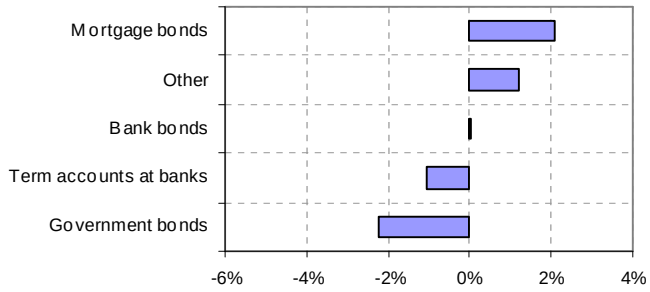


- source: NBS
- the term "government bonds" means bonds of the SR and other EU member states; bonds of the NBS and other central banks; bonds guaranteed by the SR; EIB, EBOR and MBOR bonds

[28] This is a technical reserve created in life insurance connected with an investment fund in the insurance sector A4. It is also termed a unit-linked reserve. The policyholder bears the economic risk of the investment, therefore the placing of technical reserve fund is monitored after deducting the unit-linked reserve.

The share of assets placed in real estate rose slightly from 3.3% as at 31.12.2005 to 4.0% as at 30.6.2006, and in equities from 0.13% as at 31.12.2005 to 0.16% as at 30.6.2006.

Graph 96 Change in placement of technical reserves between 31.12.2005 and 30.6.2006

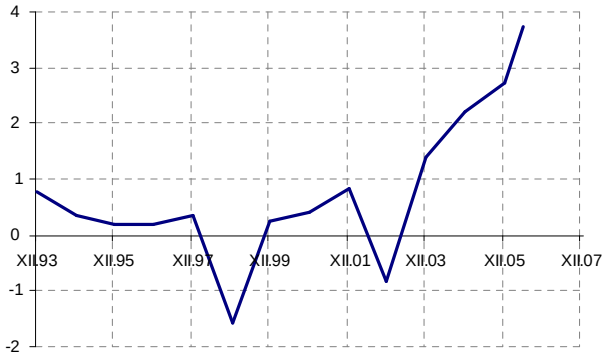


- source: NBS

Financial position of the insurance sector

Insurance companies' profits in the first half of 2006 totalled SKK 2.9 billion. Insurance companies thus in total created a net profit 52% greater than in the comparable period a year earlier. The reported profit is also greater than the profit for the whole year of 2005. Profitability indicators rose: ROA grew from 1.7% in the first half of 2005 to 2.19% and ROE from 9.07% to 12.6% (both indicators non-annualised).

Graph 97 Total profit of insurance companies



- source: NBS
- cumulative profit for the past 12 months as at the given date
- data in SKK billion

The pre-tax profit grew even more: by 73%, from SKK 2.1 billion to SKK 3.6 billion. This growth, however, is caused wholly by the favourable development in the creation of reserves in life-insurance – their creation in the first half of 2006 was SKK 1.8 billion lower than for the first half of 2005. While the earned premium in life and non-life insurance grew, its growth in both cases was lower than the growth in indemnity and operating costs.

Table 17 Year-on-year change in basic income categories for the insurance sector as a whole

		30.6.2006	*30.6.2005*	*Change*
(a)	Profit / loss for the accounting period (b+c)	2 933 862	1 929 524	52%
(b)	Extraordinary net profit	0	-184	
(c)	Profit after tax (d+e)	2 933 862	1 929 708	52%
(d)	Tax	-711 507	-177 747	300%
(e)	Pre-tax profit (f+o+x)	3 645 369	2 107 455	73%
(f)	Technical profit/loss from non-life insurance (g+j)	1 398 844	1 590 989	-12%
(g)	Revenues (h+i)	12 572 980	10 679 405	18%
(h)	Earned premium*	9 373 142	9 205 432	2%
(i)	Other revenues	3 199 838	1 473 973	117%
(j)	Expenses (k+l+m+n)	-11 174 136	-9 088 416	23%
(k)	Indemnity costs*	-4 116 469	-3 775 986	9%
(l)	Operating costs**	-3 659 169	-3 719 443	-2%
(m)	Other costs*	-1 335 882	-1 690 004	-21%
(n)	Change in the balance of other technical reserves***	-2 062 616	97 018	-2226%
(o)	Technical result from life insurance (p+s)	452 752	-837 068	-154%
(p)	Revenues and income (q+r)	11 065 766	10 766 419	3%
(q)	Earned premium*	10 629 929	10 189 087	4%
(r)	Other revenues	435 837	577 332	-25%
(s)	Expenses (t+u+v+w)	-10 613 013	-11 603 486	-9%
(t)	Indemnity costs*	-4 298 414	-3 511 854	22%
(u)	Operating costs**	-3 319 896	-3 134 665	6%
(v)	Other costs*	-366 858	-474 790	-23%
(w)	Change in the balance of other technical reserves***	-2 627 844	-4 482 178	-41%
(x)	Gross profit from other activities (y+z)	1 793 772	1 353 534	33%
(y)	Financial result	1 813 843	2 164 779	-16%
(z)	Profit/loss from other activities	-20 071	-811 245	-98%

- source: NBS
- data in SKK thousand

In the case of non-life insurance the earned premium grew by 2%, alongside a growth in indemnity costs of 9% and a slight fall in operating costs of 2%. Consequently, the technical result from non-life insurance fell by 12%. In life insurance the earned premium grew by 4%, alongside a concurrent growth in indemnity costs of 22% and in operating costs of 6%. Even despite this adverse development, thanks to the mentioned lower creation of technical reserves the technical result from life insurance grew from a loss of SKK 453 billion in the first half of 2005 to a profit of SKK 837 billion for the first half of 2006. In summary it may then be said that the favourable development of profit is a consequence of the growth in the earned premium and the concurrent fall in reserve creation in life insurance, the positive effect of which sufficiently compensates for the rapid growth in indemnity costs in life insurance, lower profit creation in non-life insurance and the fall in the financial result of 16%.

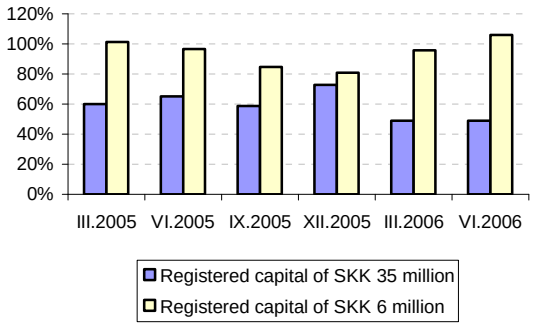
3 Securities dealers

As in 2005, as much as 95% of customer security trades in the first half of 2006 were realised via banks, though the total volume of trades fell against the same period for 2005 by 41%. The most traded instruments were bonds and forward contracts. The volume of assets managed grew by 58% to SKK 29 billion. The capital adequacy of Slovak securities dealers fulfilled the prescribed minimum level by a sufficient margin.

Capital adequacy

The capital adequacy of all non-bank securities dealers during the first half of 2006 moved at levels above the statutory limit of 8% (in the case of securities dealers with registered capital of at minimum SKK 35 million the minimum capital adequacy requirement in the first half of 2006 was 12%, in the case of securities dealers with registered capital of at minimum SKK 6 million the minimum capital adequacy requirement was 21%).

Graph 98 Average capital adequacy of non-bank securities dealer

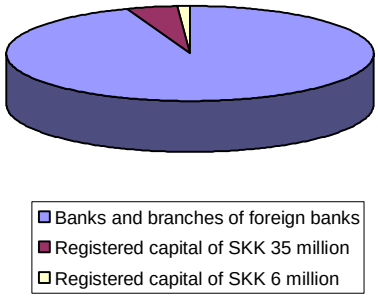


- source NBS

Investment services and asset management

The volume of customer trades in the framework of IS-1 to IS-3[29] investment services totalled SKK 723 billion in the first half of 2006. This volume fell by 41% against the same period in 2005. Of these trades 93% were performed via banks.

Graph 99 Share of individual types of securities dealer in trades for the first half of 2006



- source NBS

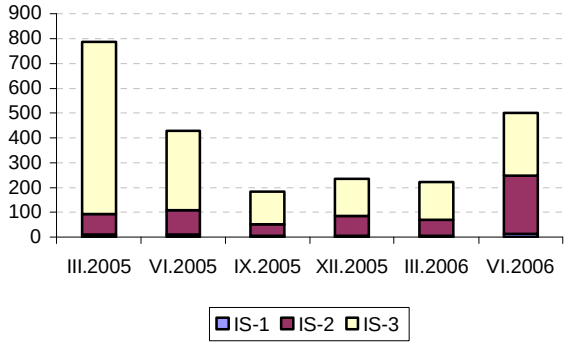
Trades were performed mainly within IS-2 and IS-3. The volume of trades on the customer's account grew significantly against June 2005. While as at 30.6.2005 trades on the customer's account (IS-2) formed only 15% of the total volume of trades, as at 30.6.2006 this figure had risen to 41%.

[29] IS-1 = investment service pursuant to Article 6(2)(a) of the Securities Act, i.e. the acceptance of a customer's instruction for the acquisition, sale, or other handling of investment instruments and the subsequent forwarding of the customer's instruction for the purpose of its performance

IS-2 = investment service pursuant to Article 6(2)(b) of the Securities Act, i.e. the acceptance of a customer's instruction for the acquisition, sale of an investment instrument and its performance on another account or on the service provider's account

IS-3 = investment service pursuant to Article 6(2)(c) of the Securities Act, i.e. the acceptance of a customer's instruction for the acquisition, sale of an investment instrument and its performance on the customer's own account

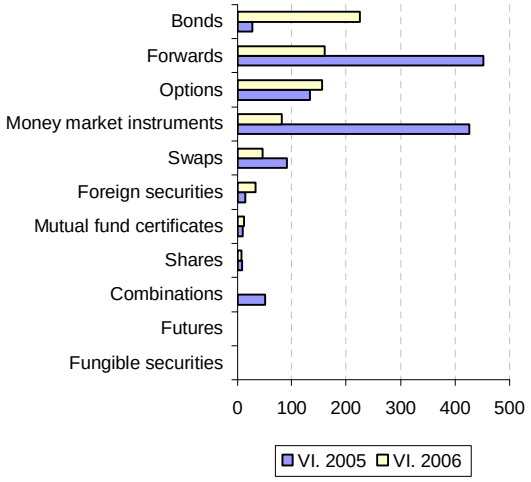
Graph 100 Volume and structure of customer trades by type of investment service.



- source NBS
- data on the vertical axis in SKK billion

The structure of instruments traded also changed. In the first half of 2005 the most traded instruments were forward contracts (SKK 452 billion) and money market instruments (SKK 426 billion), as at June 2006 trading was mostly in bonds (SKK 225 billion), forward contracts (SKK 160 billion) and options (SKK 156 billion).

Graph 101 Structure of trades by individual investment instruments

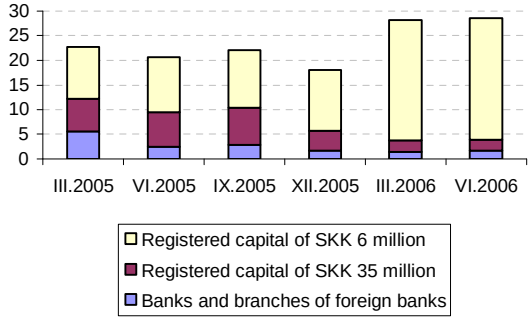


- source NBS
- data on the horizontal axis in SKK billion

As much as 95% of bond trading was done on the customer's account in the framework of IS-2, likewise 92% of share trading and 56% of trading in foreign securities was on the customer's account. The majority of derivatives trading (options 88%, forward contracts 85%, swaps 70%, combinations 100%) and likewise also 100% of money market instrument trading was done on the investment service provider's account (IS-3). All customers' instructions for handling futures contracts and the majority of trading in mutual fund certificates (71%) were forwarded to other entities in the framework of IS-3.

The volume of customer assets managed by securities dealers (including banks) grew over the course of the first half of 2006 from SKK 18 billion to SKK 29 billion. All this growth, however, was due only to one company, which as at 31.12.2005 did not report any managed assets, and as at 30.6.2006 reported managed customer assets of SKK 11 billion. Other companies mostly reported a fall or very slight growth.

Graph 102 Volume of customer assets managed by securities dealers



- source NBS
- data on the vertical axis in SKK billion

As at 30 June 2006 the NBS registered 836 investment service intermediaries, of which 48 were juristic entities, which contributed in a substantial degree to ensuring securities trading activity.

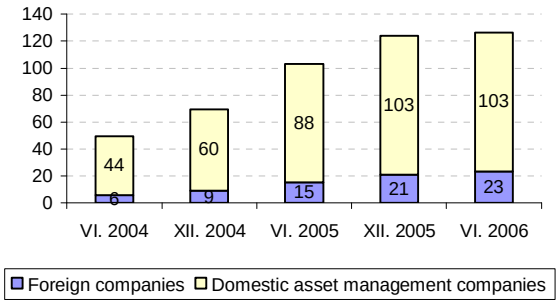
4 Collective investment

The net value of assets managed in open mutual funds remained practically unchanged over the course of the first half of 2006. Investors, however, began to gradually sell off their shares in money market and bond funds to move into riskier categories. The reason for this behaviour was primarily the rise in interest rates. This had a negative effect on the performance of bond funds, and money market funds similarly lost their advantage over term deposits. The saleability of higher-risk, mainly equity funds, increased, supported by growth in prices on European stock markets.

Money invested in mutual funds

The total net value of assets in domestic open mutual funds and assets in foreign mutual funds pertaining to sales to investors in the Slovak Republic grew over the course of the first half of 2006 only minimally, from SKK 124 billion as at 31.12.2005 to SKK 126 billion as at 30.6.2006. Growth occurred almost exclusively only in the volume of assets invested by means of foreign mutual funds, which grew by SKK 2.5 billion. The net value of assets in Slovak funds grew only by SKK 18 million.

Graph 103 Volume of investments in open mutual funds sold in the SR

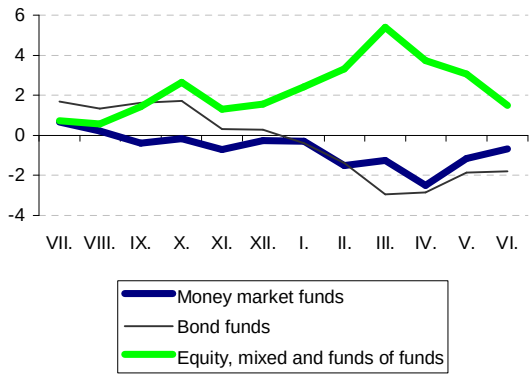


- source: NBS
- data on vertical axis SKK billion

Most of the money invested in domestic mutual funds (89%) came from purchases of mutual fund shares by households. Compared to the end of 2005, however, this share fell slightly, households' investments having formed then 92% of the volume of all money invested in domestic mutual funds. The share of non-residents' deposits was negligible (0.7%).

The significant growth in the volume of investments in mutual funds, which had lasted several years, came to an end this half-year. While in the last quarter of 2005 net sales of mutual fund certificates stood at SKK 6.4 billion, in the first quarter of 2006 this figure had fallen to SKK 988 million and in the second quarter of 2006 it even become a negative. Investors sold off their shares in the value of SKK 3.3 billion. The slight growth in the net value of assets in mutual funds was thus caused only by the performance of the funds themselves and in fact a transfer of investments into other segments had begun.

Graph 104 Monthly development of net sales of open mutual funds in the SR

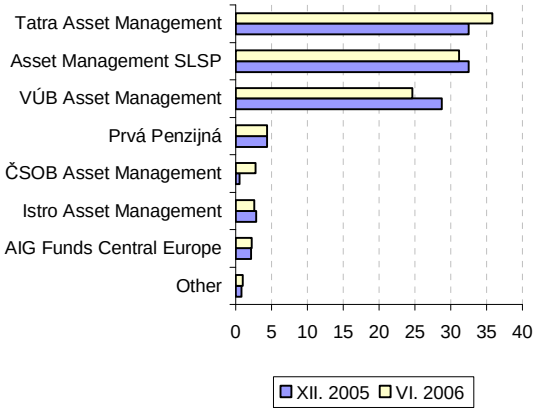


- source: SASS (association of Asset Management Companies)
- data on vertical axis in SKK billion

Over the course of the first half of 2006 the largest redemption was seen in bond funds, from which investors took out SKK 11.2 billion and money market funds, from which almost SKK 9 billion was taken out. This money was then transferred mainly into funds of funds, the net sales of which for the first half of 2006 totalled SKK 10.6 billion and equity funds, with sales of SKK 4.7 billion.

The market shares of asset management companies in the total volume of managed assets, however, were changed only minimally by this development.

Graph 105 Net value of assets in mutual funds managed by domestic asset management companies



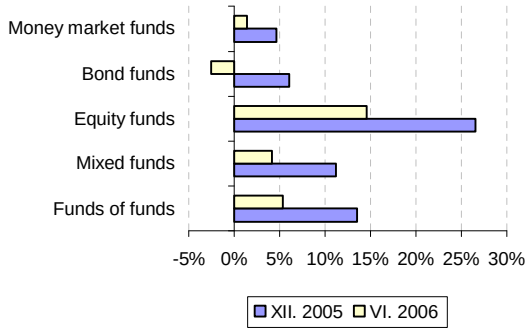
- source: NBS
- data on horizontal axis in SKK billion

All large asset management companies having net managed assets of more than SKK 1 billion achieved a profit in the first half of 2006. The average ROE for asset management companies, weighted by capital, was 14.7% (the average value in the case of banks was 9.8%).

Mutual funds' performance

As at 30.6.2006 open mutual funds reported a lower year-on-year performance than at the end of 2005. The rise in interest rates in the first half of 2006 led to a fall in bond prices and this was reflected in the performance not only of bond funds but also other funds having bonds in their portfolio (all other than equity). Conversely, higher-risk groups of funds, mainly equity, gained from the continuing growth on European stock markets, though not as quickly as in 2005.

Graph 106 Comparison of average annual performances of open mutual funds by individual category

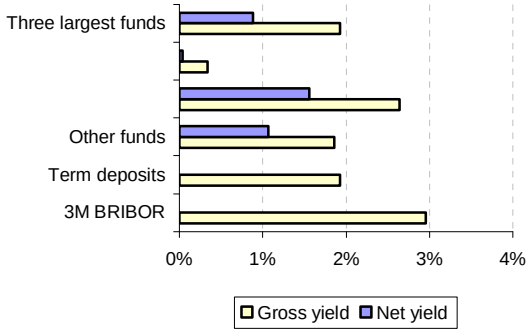


- source: NBS
- data on the horizontal axis in % per year
- funds are equally weighted

The performance of funds was also influenced by the strengthening of the Slovak koruna against foreign currencies. Securities denominated in American dollars lost year-on-year 3.9% on the exchange rate as at 30.6.2006, while those denominated in euro lost 0.13%.

Approximately a third of the investments in mutual funds are in money market funds denominated in SKK, where 84% of these investments are in the three largest funds. The gross yield of money market funds should be primarily determined by the interbank interest rate (BRIBOR in the case of SKK).

Graph 107 Comparison between one-year yields of money market funds, the interbank rate and term deposits

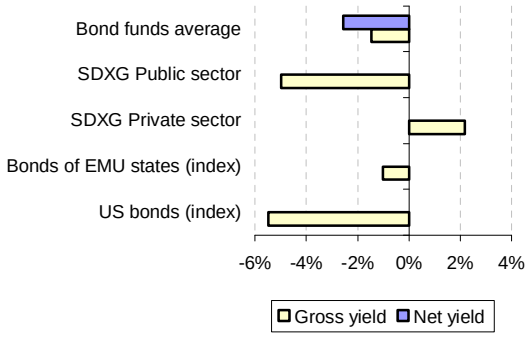


- source: NBS
- data on vertical axis in % per year
- rate on term deposits is the average rate for the past 12 months
- other funds are weighted by the volume of their assets

From among the three largest funds only one fund achieved the level of the rate on the interbank market; the other two funds achieved a yield of 1%, or 2.6% lower. The other money market funds likewise achieved a gross yield of approximately 1% lower than the interbank interest rate. It is, however, necessary to deduct the management and depository fee (on average 0.8%) from the gross yield. Consequently over the past 12 months the appreciation of money market funds was even lower than that of term accounts at banks.

More than a quarter of the total volume of assets was invested in bond funds, where the largest funds invested mainly in government and corporate bonds from the SR and other EU states. Other funds invested in a broad spectrum of bonds issued in the EU and USA. The gross yield of bond funds should more or less copy the development of bond indices.

Graph 108 Comparison between one-year yields of bond funds and bond indices

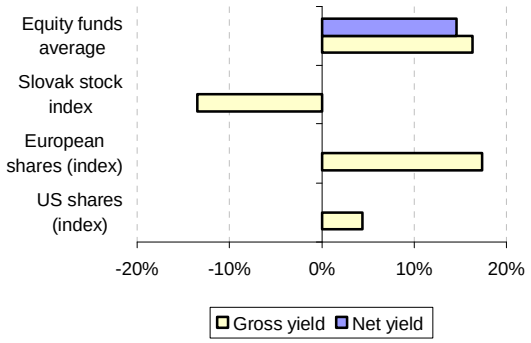


- source: NBS
- data on horizontal axis in % per year
- the yield on the Slovak bonds is determined on the basis of the SDX Group index – a development index (quoted on the Bratislava Stock Exchange), the yield on bonds of EMU states on the basis of the MSCI EMU Sovereign TR index and the yield on USA bonds on the basis of the MSCI US Treasury TR index
- all funds are equally weighted in the average yield

The interest rate rise in Europe and particularly the USA caused a fall in bond prices. The year-on-year yield on Slovak bonds moved in the range from -5% (public sector bonds) to 2.2% (private sector bonds). The yield on bonds in euro area countries was -1%, on bonds in the USA -5.5%. The yield of individual funds moved in a broad range given by the yield on market indices depending on the investment strategy of the given fund.

SKK 15 billion was invested in equity funds. The yield on these funds was influenced mainly by prices on European and American stock exchanges, since trading is minimal on the Slovak stock market.

Graph 109 Comparison between one-year yields of equity funds and development of market indices



- source: NBS
- data on the horizontal axis in % per year
- the yield on Slovak shares is determined on the basis of the SAX index (quoted on the Bratislava Stock Exchange), the yield on European equities is determined on the basis of the DJ Euro Stoxx 50 TR index and the yield on American equities on the basis of the S&P 500 TR index
- all funds are equally weighted in the average yield

The gross yield in the largest equity funds achieved, and even exceeded, the yield determined by market indices; on average equity funds achieved gross revenue of 16.3%, which is comparable with the rise in the European DJ Euro Stoxx 50 index.

Portfolio management

Over the course of the first half of 2006 the average monthly volume of assets managed in customer portfolio management represented SKK 3.82 billion, where of all asset management companies that can provide this service (8); an 82.36% share was held by just one asset management company.

The investment service of the safekeeping and administration of mutual fund certificates was provided over the course of the first half of 2006 by only two asset management companies, the first with an average volume of SKK 2.21 billion and the other with an average volume of SKK 0.48 billion.

5 Pension saving

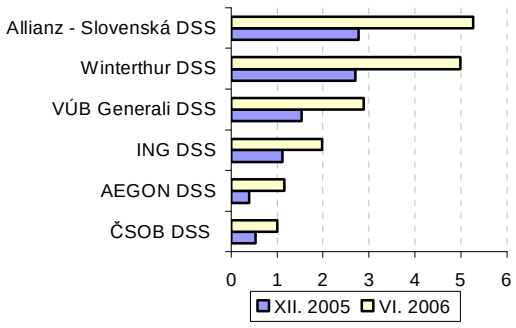
The first half of 2006 was the last deadline for voluntary entry into the second pillar of the new pension system. As at 30.6.2006 pension fund management companies registered 1.39 million savers. The volume of assets invested via pension funds over the course of this period almost doubled to SKK 17.27 billion. Three supplementary pension insurance companies completed their transformation to supplementary pension companies and as at June 2006 managed SKK 14.9 billion in their funds.

Money invested in pension funds

The first half of 2006 was the deadline for those insured at the state-owned Social Insurance Company to enter the second pillar in pension security and to conclude a contract with a pension fund management company (PFMC). This possibility was taken up by a further 279 000 persons; as at 30.6.2006 pension fund management companies registered 139 million savers.

The volume of assets managed on pension accounts by means of PFMCs almost doubled from the end of 2005 to SKK 17.27 billion. The market shares of individual PFMCs, however, did not change significantly. The three largest asset management companies administer as much as 76% of all pension fund assets (78% as at 31.12.2005).

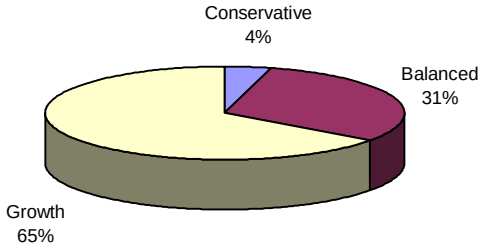
Graph 110 Net value of pension funds' assets for individual pension fund management companies



- source: NBS
- data on horizontal axis in SKK billion

Most investment (65%) is in growth pension funds, which represent a higher-risk form of investment and the highest forecast appreciation of funds over the long-term. Balanced funds form a 31% share and conservative funds only a 4% share in the total volume.

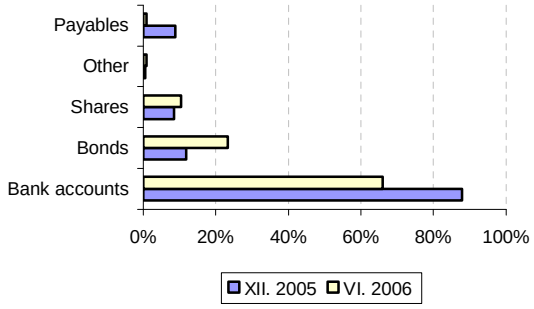
Graph 111 Share of individual types of funds in the total volume of their assets



- source: NBS

Even despite the fact that most investment is managed in growth funds, as much as 66% of assets are formed by money invested on bank accounts. Pension funds have thus still not yet begun to apply their investment strategies. Since the year-end only the share of bonds in total assets has increased significantly (from 12% to 23%).

Graph 112 Share of individual types of investment in total volume of assets managed

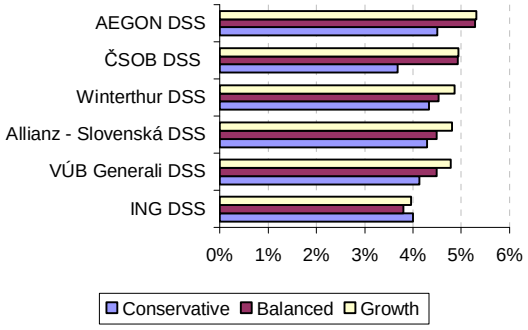


- source: NBS

Pension funds' performance

The yield on pension funds since their creation has moved as at 30.6.2006 in the range 3.7% to 4.5% for conservative funds, 3.8% to 5.3% for balanced funds and 4.0% to 5.3% for growth funds. Pension funds' investments are still, however, fairly conservative. Bank accounts form 66% of assets, bonds 23%. Therefore the differences between the performances of individual types of funds are as yet relatively small.

Graph 113 Yields on pension funds since their commencement for individual pension fund management companies and types of funds



- source: NBS
- data on the horizontal axis is the fund's yield since its creation, determined on the basis of the size of a pension unit as at 30.6.2006

As in 2005, all pension fund management companies made a loss in the first half of 2006, which was caused by high entry costs.

Supplementary pension saving

In the first half of 2006 the transformation of three supplementary pension insurance companies (SPICs) into supplementary pension companies (SPCs), which manage supplementary pension funds, was completed. As at 30.6.2006 the three SPCs registered in total 673 000 savers, with total assets invested in their funds of SKK 14.9 billion. These are invested in a similar manner as in the case of pension funds: 57% is formed by bank accounts and 39% by bonds.

One SPIC that has not yet completed its transformation is DDP Stabilita. Its application for a licence for establishment and SPC activity was delivered to the National Bank of Slovakia in the first half of the year and its transformation should be completed at the start of 2007.

6 Financial market infrastructure

Stock exchange

Trading on the Bratislava Stock Exchange in the first half of 2006 totalled SKK 313 billion, which represents a fall of 37% against the same period a year earlier. The number of trades likewise fell in comparison with the first half of 2005, by 29%, representing 4660 concluded trades. Over the first six months of 2006 new issues were accepted on the Bratislava Stock Exchange markets in a total volume of SKK 38.9 3 billion, of which government bonds formed a 58% share, and mortgage bonds a 36% share. The total market capitalisation remained practically unchanged from December 2005 and currently stands at SKK 564 billion.

Central Securities Depositary

The main activities of the Central Securities Depositary are the registration of non-bearer securities; owners of non-bearer securities on the owners' accounts; data on securities on members' customer accounts; the assignment, changing and cancellation of ISIN; and ensuring the clearing and settlement of stock exchange trades in investment instruments[30].

As at 30.6.2006 the Central Securities Depositary registered in total 3427 issues of securities of 2523 issuers in the total nominal value of SKK 1 147 billion, representing double the capitalisation of the Bratislava Stock Exchange.

The scope of records kept on accounts under the Securities Act as at 30.6.2006 was as follows:

- 1 168 838 shareholders' accounts established pursuant to regulations to date (Article 164(3) of the Act),
- 20 customer accounts administered pursuant to Article 106 of the Securities Act, on which it registered data on securities whose owners were registered by individual members of the Central Securities Depositary.
- 30 shareholders accounts administered pursuant to Article105 (2) of the Securities Act, of which 10 accounts were administered for entities other than Central Securities Depositary members.
- Central Securities Depository members held in their records in total 52 767 shareholders' accounts pursuant to Article 105 (3) of the Securities Act.

Deposit Protection Fund

The mission of the Deposit Protection Fund is to protect the deposits of customers at banks and at branches of certain banks. The main contribution of the regulation is its strengthening of customer confidence in the banking sector, and thereby also in the financial sector as a whole.

Of the Slovak banking sector as at 30.6.2006 all 17 banks and 2 branches of foreign banks (ČSOB and HSBC) were insured at the Deposit Protection Fund. The deposits of the other four branches of foreign banks were insured in the countries of their bank groups. Against December the main change was the transformation of the Calyon bank from a subsidiary into a branch of a foreign bank, in consequence of which it also changed insurance from the Deposit Protection Fund to the Fonds de Garantie des Dépôts.

The first half of 2006 continued the pattern of the past four years, in which no banks were insolvent to pay out deposits.

[30] A description of all the Central Securities Depository's activities is given in Act No 566/2001 Coll. on securities and investment services and amending certain acts

Investment Guarantee Fund

Money invested in this fund[31] is intended to cover customers' inaccessible assets managed by securities dealers, branches of foreign securities dealers, asset management companies and branches of foreign asset management companies. Similarly as in the case of the Deposit Protection Fund, the source of money in the Fund comprises primarily the contributions of these institutions and reimbursement is provided in the amount of 90% of the customer's assets, though at maximum EUR 20 000[32].

Over the course of the first half of 2006 no event occurred that would lead to the provision of reimbursements from the Fund.

Slovak Insurers' Bureau

The Slovak Insurers' Bureau associates insurance companies authorised to provide statutory automobile liability insurance in the Slovak Republic. The scope of the Slovak Insurers' Bureau's activity is as follows[33]:

- administration of the Insurance Guarantee Fund
- maintenance of a register of statutory automobile liability insurance
- provision of frontier insurance
- representation of domestic insurers in international institutions dealing with statutory automobile liability insurance
- concluding of agreements with foreign countries' insurers bureaux and ensuring tasks resulting from these agreements
- at the request of an injured party and on the basis of data provided by the injured party, provision of information on the manner of exercising and settling a claim for damage compensation
- registration and statistics for the purposes of statutory automobile liability insurance
- cooperation with state authorities in matters concerning liability insurance
- involvement in preventing damage in road transport and in preventing insurance fraud in statutory automobile liability insurance

Insurance Guarantee Fund

The Slovak Insurers' Bureau provides indemnity from the Insurance Guarantee Fund for damage caused by the operation of:

- an unascertained automobile
- an automobile for which the person liable is not ascertained
- an automobile for which the person liable does not have automobile liability insurance concluded
- an automobile with statutory automobile liability insurance concluded with an insolvent insurer
- a foreign automobile covered by frontier insurance
- a foreign automobile the driver of which is not subject to the obligation to conclude frontier insurance for this automobile in the Slovak Republic

Members of the Bureau pay an annual contribution[34] determined by a percentage share according to the number of automobiles insured for the preceding calendar quarter.

[31] The Fund's resources and their use is governed by Article 91 of Act No 566/2001 Coll. on securities as later amended.

[32] This maximum amount has applied since 1.5.2007. Until 30.4.2007 reimbursement had been at maximum EUR 16 000.

[33] The Bureau's activity is governed by Act No. 381/2001 Coll. on statutory automobile liability insurance as later amended.

[34] The Fund and its use are governed by Articles 20 and 24 of Act No 381/2001 Coll. on statutory automobile liability insurance as later amended.

7 Selected topics

Structured products

Over the past years we have witnessed a growing range of products from the side of banks that are a combination of a deposit and investment. We know them under the common name of the structured, guaranteed, or assured deposits. These products offer customers yields derived from the performance of financial markets, most frequently stock markets. In the case of these products the customer mostly does not undergo the risk of a depreciation of the principal, because its payment in the full amount is guaranteed by the product's seller.

The motivation of banks for offering such products is various. The most common is the effort to generate non-interest income – fees, and the effort to gain cheap long-term funds, an attractive interest-rate margin, or the bank's effort to offer customers new interesting products. In the case of these products domestic banks are mostly not exposed to market risks, since their positions are closed. There, however, does still remain the credit risk connected with the willingness and ability of the counterparty to meet its commitment towards the bank.

Interest among households in guaranteed deposits offered by asset management companies also rose. Their structure is by and large similar to guaranteed deposits at banks. Not all assured funds, however, guarantee the rate of return of the principal invested.

Basic characteristics of structured deposits

Structured deposits are a combination of a deposit and investment product, where the yield on them is constructed on the basis of the performance of an underlying financial instrument. These types of products are typically tied to market indices, shares, interest rates, exchange rates, or a combination of these.

In general these products have a maturity of several years. Although these deposits have the option of early withdrawal, the fees for doing so are very high. The customer loses not only a share in the yield, but usually also a part of the principal. Therefore it is very important to consider in these products whether the funds invested really are available throughout the whole life of the deposit.

There are also structured deposits that do not guarantee 100% repayment of the principal, and thus the customer in the case of adverse market development can lose a part of it. Conversely, it also applies that with the higher risk comes a higher potential yield. Such products are not yet, though, offered in Slovakia.

Slovak market

The structured deposits offered by Slovak banks are to a large degree influenced by the conservatism of their customers – investors. Consequently, one of the hallmarks of these products in Slovakia is the guarantee of payment in the full amount of the principal at the date of the deposit's maturity. In comparison with other countries, where the trend is towards a less-than 100% guaranteed repayment of the principal, and thereby a higher expected appreciation of the funds invested, it may be said that Slovak banks' customers are conservative investors.

At present the underlying instruments in Slovakia for guaranteed deposits are primarily stock indices such as DJ Euro Stoxx 50, S&P 500, or various baskets composed of these or other indices.

Other, though rarer, products are those with their yield tied to the strengthening of the Slovak koruna against the euro, or the

strengthening of the euro against the American dollar.

The following table summarises and gives rough comparison of the basic characteristics of structured and term deposits.

Table 18 Comparison of structured and term deposits

	Structured deposit	Term deposit
Minimum deposit	SKK 10 000 – SKK 40 000	not set
Maturity	12 – 60 months	1 – 60 months
Fees	Entry fee 1 – 3% of deposit	for account administration
Early withdrawal	lapse of the right to participate in the yield + 1 – 12% of deposit	Penalty fee, fall in interest yields (in some cases only to 0.1% p.a.)
Principal	paid upon maturity	paid at the end of the holding period
Yields	depending on the performance of the underlying financial instrument	according to the agreed fixed interest rate
Guaranteed payment	Principal + 0 – 2,6% p.a.	Principal + yield according to the agreed fixed interest rate

- source: individual banks

Structure of products offered on the Slovak market

As regards the structure of guaranteed deposits, in Slovakia 3 basic groups can be discerned:

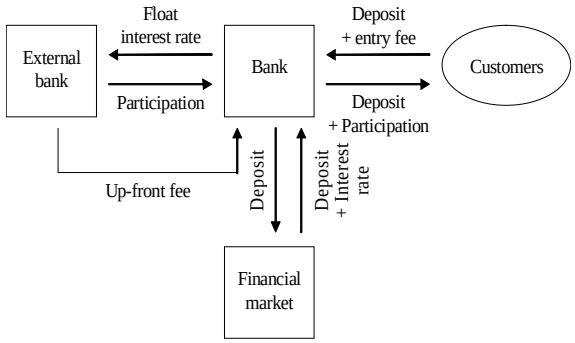
1. Bank forms product structure

The bank collects funds from investors, in the majority of cases guaranteeing them the return of the amount invested, or in some cases also a certain yield. In order to secure the return of the principal invested, the bank invests the collected funds on the financial market. These are mostly investments with a low credit risk, e.g. the depositing of funds in NBS sterilisation repo tenders. In so doing the bank ensures that at the end of the maturity of the structured deposit it will return the deposited funds to the customer.

The yield itself on a structured product is tied to a different operation. As mentioned, the amount of the yield depends on the development of a specified underlying instrument, e.g. stock indices, etc. The bank therefore enters into a derivatives trade with counterparty, in most cases the parent bank or a large foreign investment bank. The trade is based on the exchange of cash flows. This means that the bank pays the counterparty, for example, a certain one-off fee or regular payments and in return receives payments from the counterparty tied to the development of an underlying instrument. Payments tied to the performance of the underlying instrument are subsequently paid out to the bank's customers who invested in the structured products. The risk of a lower performance of the underlying instrument is thereby fully transferred to the bank's customers. The customer's participation in the yield, though, need not be just 100%. The level can be less than 100%, but likewise also more than 100%. The minimum yields guaranteed to the depositor are also derived from the various levels of participation in the appreciation of the underlying asset. In other words the bank can guarantee the customer a 1% yield, but on the other hand lower the customer's upper yield limit.

The banks' exchange of cash flows is achieved by means of swaps and options contracts.

Scheme 2 Product structure

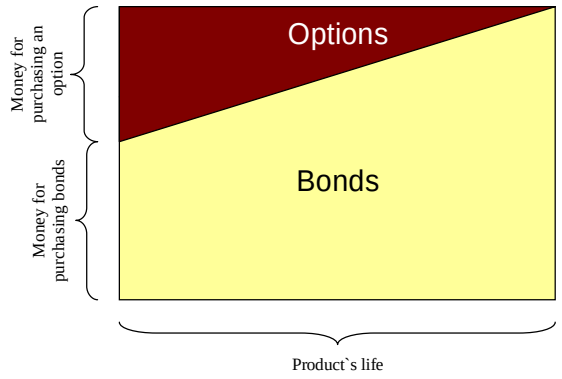


The domestic bank immediately gains several advantages in a model such as this. In the first instance yields are in the form of entry fees from customers, the up-front fee from the external bank and also the differential between the interest yields flowing from holding the principal and the interest payments made to the counterparty, which in most cases are tied to an

interbank rate (in the case of swap contracts). No less important is also the fact that the bank through such an approach gains long-term funds, which are used for liquidity management.

An alternative to the preceding structure may be a combination of bonds and options. By purchasing bonds with the same maturity as the structured deposit, the bank secures the return of the principal to customers. Bonds are purchased in such a nominal amount that the sum paid out upon their maturity is identical to the total volume of funds invested by customers in the given product. Any minimum guaranteed yield is also likewise secured by bonds. The remaining funds are used for directly purchasing options (without concluding a swap contract), which secures participation in the appreciation of the underlying asset.

Scheme 3 Product structure comprising bonds and options



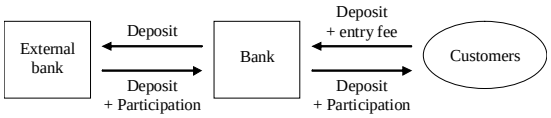
In this case, too, it applies that participation in the appreciation of the underlying financial instruments need not be 100%. The participation in this case is influenced in particular by market interest rates and the length of time for which the funds are tied up in the given product. Both these factors significantly influence the volume of funds needed for purchasing bonds to secure the payment of the principal on maturity, or respectively the guaranteed minimum yield.

In the case of a guaranteed product structured in this manner the sole source of the bank's profit is the customer's entry fee.

2. Bank features only as intermediary

The bank intermediates for a commission, in the form of an entry fee received from customers, the sale of a third party's product by means of its branch network. In such a case the bank consequently is not involved in forming the given product and features only as an intermediary.

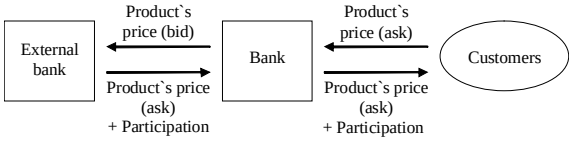
Scheme 4 Product structure



3. Bank features as reseller in structured products

The bank sells the product to a customer and subsequently purchases the product for a lower price from its counterparty. As in the previous case, the bank here, too, features only as an intermediary.

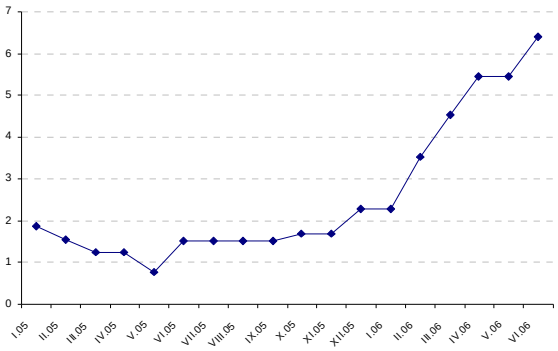
Scheme 5 Product structure



Development of retail structured deposits in Slovakia

Products of this type began to multiply in number particularly over the past year. The volume of retail funds in these deposits is currently four times the level in June 2005, now totalling SKK 6.4 billion and representing 1.5% of all retail deposits.

Graph 114 Growth in the volume of retail funds in structured deposits



- source: individual banks offering structured deposits
- data in SKK billion

From the customers' aspect these products offer potentially higher yields than classic term deposits, and from the banks' aspect they offer the possibility to gain long-term funds under acceptable conditions and the profits connected with them, or the possibility to increase their profits on the basis of commissions from intermediating in the sale of this type of product. As a result of this it may be expected that this trend in providing guaranteed deposits will continue in the future.

Guaranteed funds

Recently guaranteed funds have been finding their way from the side of various banks' asset management teams to the Slovak customer. Although the name might certainly mislead us into thinking so, these are not always products that would fall under the heading of guaranteed deposits.

Very often these funds are managed according to the CPPI model (Constant Proportion Portfolio Insurance)[35], the aim of which is also to secure repayment upon maturity of the whole principal deposited in the fund. This, however, it is not guaranteed by the CPPI method. This model fails in the case of a sudden collapse in the price of risky financial instruments in which mutual funds invest. In the case of adverse development on financial markets it may occur that even the amount of the initial investment might not be paid out to the customer at the end of the fund's life.

As at the end of June 2006 assured funds were worth SKK 3.8 billion.

Risks

Structured deposits are at first glance connected with various types of risk according to the financial instrument underlying the given deposit.

In the case of structured deposits connected with stock indices, banks' customers are exposed to equity risk; where deposits are tied to the exchange rate, customers are exposed to currency risk, and so on. In the case of these products banks mostly do not undergo market risk, since they close their positions, meaning these are back-to-back operations. Any risk ensuing from offering these products on the market the banks attempt to hedge by purchasing derivatives to transfer the risk to counterparty.

As regards risks resulting to banks from offering these products on the market it may be said that all risks are reduced to credit risk. This concerns the structure in the case where the bank creates a product through a combination of bonds and options, but also in intermediating by way of purchasing the given product from its counterparty and subsequently selling the product to its customer. Most interesting, though, is the model where the bank concludes a swap contract and the principal remains in its holding. In this case, besides credit risk, interest-rate risk can also be identified, resulting from the fact that the whole volume of deposits, the principal, remains at the bank, and the bank, then, must repay from its yields the payables towards the third party with which it concluded a swap contract. Interest-rate risk is

[35] The model is described in detail in, for example, *Theory of Constant Proportion Portfolio Insurance* by F. Black and A. Perold, in the Journal of Economic Dynamics and Control, 1992

thus managed by the bank, where the bank can, through its decisions on handling the entrusted funds, influence its size of this risk.

In an effort to limit credit risk banks conclude swaps with parent banks, or large investment banks.

As mentioned earlier, credit risk is connected also with other types of guaranteed deposit structure. In this field banks almost exclusively cooperate with their parent companies. Domestic banks, however, are mostly not informed as to how their counterparty further handles these products, which only serves to increase the danger connected with credit risk.

Analysis of the household sector

With growth in the importance of households from the aspect of banks' credit risk, the importance of analytical information on this sector is also growing. Previous analyses of the household sector have been based on macroeconomic data, offering only a limited, aggregated, view of the risk from households. On the other hand microeconomic data allow the distribution of indebtedness to be analysed and the degree of risk of individual household groups to be monitored.

Analysis based on microeconomic data offers several findings.

The household sector reports a non-uniform distribution of bank loan debt, with a small number of households having a large volume of loans. Likewise in the case of monitoring debt from the aspect of income, non-uniformity can again be seen, with higher-income households having a higher volume of loans than households with a lower income.

From the aspect of banks' credit risk an important fact is that the degree of risk from loans to households is to a large degree connected with the provision of lending to lower-income groups. It is these households that report the highest proportion of repayment instalments to disposable income. They are also the most vulnerable to negative macroeconomic development. In this regard it may be said that the degree of risk from banks' lending portfolios has risen over time, the share of lending to low-income groups having grown since 2003. Likewise, the past years have seen an increase in the proportion of repayment instalments to income.

Distribution of household debt in Slovakia

In May and June 2005 the Statistics Office carried out a survey of household incomes and living conditions. The survey, as one of the first, focused also on the issue of household debt from bank housing loans. Building loans and bridging loans were excluded from the survey. In this part therefore the term housing loans will mean only loans provided to households for housing, other than building loans and bridging loans. No other debt is included in the analysis, e.g. consumer loans or overdrafts.

Even though the survey findings are more of an indicative nature (see Box 5) they give us an overview of the distribution of the various characteristics and financial indicators of the household sector.

In previous analyses of household debt we worked from aggregated macroeconomic data for the household sector[36]. Analyses based on such data are important primarily from the macroeconomic aspect, in an evaluation of aggregated indicators. However, for the purposes of evaluating the relationship of household debt to financial sector stability, more important is a view of the distribution of debt levels in the household sector. An analysis on the basis of macroeconomic data can indicate a low level of household debt, though when looking at the distribution of the same indicator we rather can speak of a concentration of debt in a certain household group.

In the following analysis we will therefore attempt to identify the degree of uniformity, or otherwise, of the distribution of household debt from the aspect of housing loans (excluding building loans and bridging loans). We will also look at how this uniformity is connected with the distribution of households by level of disposable income, or by geographical classification. From the aspect of households' credit risk it is, though, more important to monitor the distribution of the proportion of repayments to disposable income, or respectively its change in the case of a simulated increase in interest rates, or fall in incomes. A high value in certain household

[36] Report on the Results of an Analysis of the Slovak Banking Sector 2004, Report on the Results of an Analysis of the Slovak Financial Sector 2005

groups can indicate a higher credit risk in the future.

Box 5 Interpretation of results from the household income and living conditions survey

The Household Income and Living Conditions Survey (EU SILC 2005) was carried out on a sample of 6000 households, of which approx 5100 households (12 800 individuals) returned the completed questionnaire. This represents approx 0.3% of the total number of households. As regards the selection of respondents the Statistics Office proceeded according to standard methods used in similar surveys. Every household whose data stated in the questionnaire was used for the analysis was assigned a weighting expressing its representativeness with regard to the basic set of all Slovak households according to the Census of Inhabitants, Houses and Apartments carried out in 2001.

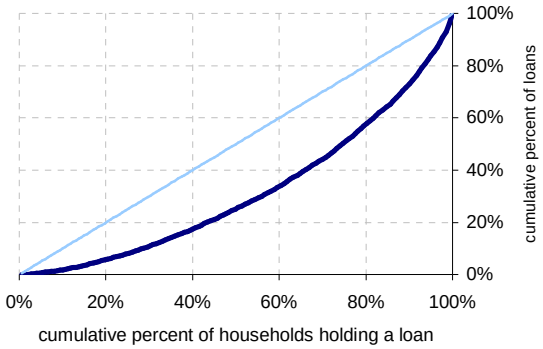
In interpreting the presented results derived from the questionnaire it is necessary to bear in mind that the primary aim of this survey was not to ascertain data on inhabitants' levels of debt. The data collected serves more as additional information on living costs concerning homeowners (apartments and houses) as an alternative ("imputed costs") to rent that must be paid by tenants. The aggregated data also shows a feature typical of similar questionnaires, that the total calculated volume of loans and the number of contracts according to the survey are lower than the data according to statements submitted by banks to the NBS. In May 2005, when the survey was carried out, the total volume of housing loans provided, excluding building loans and bridging loans, was according to banks' statements SKK 59 billion, while according to data gathered in the survey this volume was only approximately SKK 23 billion. The difference is lower in the case of contracts concluded. According to the survey, among households 55 000 contracts were concluded, while according to data from banks the figure was 60 000 (this data includes only mortgage loans already drawn). As in the case of the volume of loans, the data from the questionnaire was lower also in the case of disposable income (approximately SKK 430 billion, data for disposable income are as at the end of 2004) than macroeconomic data published by the Statistics Office (SKK 810 billion in 2004). It is necessary to bear in mind that answers to the questions are voluntary. In the case of certain questions respondents may have misunderstood the question. Those questions for which possible answers are not stated are problematic. This means that, for example, if in the case of the question on the initial level of a loan the respondent did not give an answer, we cannot know whether the household did not answer intentionally, or whether a housing loan had not actually been provided to it. Another significant shortcoming of the research data for the purpose of analysing household debt is the fact that the data include only housing loans excluding building loans and bridging loans, they do not include any consumer loans or other loans provided to households. Consequently, although the analysed data may be used for gaining a rough picture of the distribution of household debt, the data on the volumes and numbers of loans must be interpreted cautiously.

Distribution of loans according to initial amount, geographic aspect and income group

The uniformity of the distribution of loans according to their initial amount in the framework of households having a loan can be found by means of the Lorenz curve. In this case the curve shows the cumulative percentage of households holding a loan against the cumulative percent of these loans, where the data are arranged in ascending order according to the initial amount of the loan. If the distribution of loans among households were uniform, the curve would lie on the axis of the quadrant. The farther the curve is from the quadrant axis, the less uniform the distribution.

The Lorenz curve indicates a non-uniform distribution of household debt in the sample, with a small group of households holding a large percentage of the volume of loans (see Graph 115). The non-uniformity of Slovak household debt is not an extraordinary phenomenon. A similar shape of the curve can be seen in the household debt distributions of other countries[37].

Graph 115 Distribution of loans according to their initial level – Lorenz curve



- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- the volume of a loan represents the initial amount of the loan
- the graph includes only home loans other than building loans and bridging loans
- the growth includes only those households stating that they have a loan and which stated its initial amount (142 households)

From the aspect of geographical classification the largest volume of loans provided is found in the Bratislava region. According to data from the research 30% of the total volume of loans pertained to this region. According to data from banks, this figure is as much as 60%, this does, however, include all loans provided to households and is calculated using the outstanding volume of loans, and not initial amounts. As regards the number of loans, the Bratislava region's share in comparison with other regions is less marked. This may partially be explained by the higher average amount of lending, due to higher real estate prices in the Bratislava region against those in other regions: average prices of apartments and houses in 2002-2005 were approximately 130% higher than average prices in other regions. The median of the initial amount of a loan was 70% higher in the Bratislava region than compared to other regions. A further reason for the Bratislava region's dominant share as regards the volume of loans provided is the fact that households in this region have the highest disposable incomes. The differences are even more marked when taking account of household size[38].

Table 19 Distribution of disposable incomes and loans provided by region

Region	Disposable income / household size (median)	Disposable income (median)	Distribution of the no. of loans by region	Distribution of the volume of loans by region
Bratislava	127	223	18%	30%
Trnava	111	215	11%	9%
Trenčin	107	191	11%	7%
Nitra	99	178	19%	17%
Žilina	112	206	9%	8%
Banska Bystrica	109	187	8%	7%
Prešov	100	187	7%	7%
Košice	110	203	16%	15%

- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- data on disposable income are in SKK thousand
- the table includes only home loans other than building loans and bridging loans
- the volume of a loan represents the initial amount of the loan

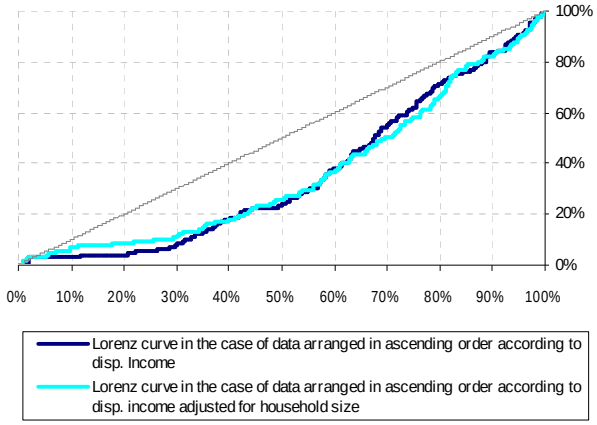
A different view of the distribution of loans is the distribution of loans according to

[37] The distribution of assets, income and liabilities across UK households: results from the 2005 NMG Research survey, Quarterly bulletin, Spring 2006

[38] Statistical tests for testing the uniformity of medians (χ^2 test, Kruskal-Wallis test) rejected, at a 1% significance level, uniformity of the median level of disposable incomes divided by household size for the Bratislava region in comparison with all other regions. On the other hand, they did not reject a mutual equality of these median values in the Trnava, Trencin, Zilina, Banska Bystrica and Kosice regions, nor the equality of medians in the Nitra and Presov regions.

individual household income groups. This distribution is not uniform (see Graph 115). The first 25% of households with the lowest disposable income have only 5% of the total number of loans provided (4% of the total volume). This holds true, though, only when we do not take account of household size. If we also take into consideration the fact that a household's essential expenses grow with the size of the household, the distribution changes. For example, in the case of a decrease in disposable income of SKK 4000 for the first adult, of SKK 2000 for each member of the family aged 14 or more years and of SKK 1200 for each family member aged less than 14 years, 16% of the total number of loans provided (14% of the total volume) pertains to the first 25% of households with the lowest income adjusted in this manner.

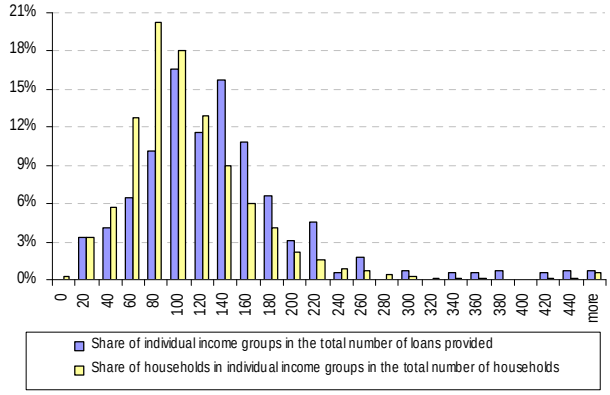
Graph 116 Distribution of debt according to disposable income – Lorenz curve



- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- the graph includes only home loans other than building loans and bridging loans
- data on the horizontal axis, expressing the cumulative percent of households holding loans, are arranged in ascending order according to disposable income (adjusted for household size reduced by current expenses)
- the vertical axis gives the cumulative percent of loans

If we then take household size and necessary expenses into consideration, we can come to the conclusion that low-income groups are not excluded in the provision of bank loans. This conclusion can at the same time be confirmed also by comparing the distribution of the number of households and the number of loans provided to households according to individual income groups. Although it is true that in the case of lower-income groups the share of households is higher than the share of loans provided while the opposite is true in higher-income groups, in the lowest income groups the share of households corresponds to the share of loans provided.

Graph 117 Distribution of the number of households and loans provided according to income groups

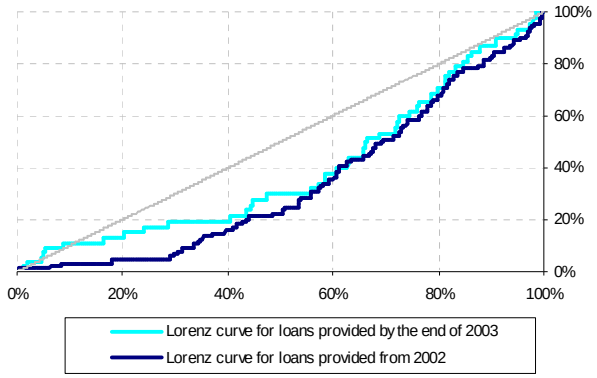


- source: SR Statistics Office, SILC05005 UDB versions 12.07.06, NBS
- data on the horizontal axis in SKK '000 and express income groups according to disposable income recalculated for household size
- the graph includes only home loans other than building loans and bridging loans
- the volume of a loan represents the initial amount of the loan

Since the Household Income and Living Conditions Survey was carried out by the SR Statistics Office in 2005 for the first time, the development of the distribution in loans over time can be monitored only partially according to the year in which the loan was provided. Graph 117 shows a comparison of the distribution of the number of households arranged according to disposable income (adjusted for household size) for loans provided

up to the end of 2002 and for loans provided in 2003. This comparison shows that if we take household size into consideration, the relative share of loans to lower-income categories has grown. If household size is not taken into account, then the provision of loans to households in lower-income categories is not so significant, overall however, the distribution of these loans according to income group is more uniform.

Graph 118 Distribution of debt depending on the date of loan provision – Lorenz curve



- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- the graph includes only home loans other than building loans and bridging loans
- data on the horizontal axis expressing the cumulative percent of households holding loans are arranged in ascending order according to disposable income (adjusted for household size reduced by current expenses)
- the vertical axis gives the cumulative percent of loans

Distribution of the repayments to disposable income ratio

For repaying loans households primarily use their disposable income. The level of loan instalments in proportion to disposable income is therefore substantial from the aspect of households' ability to repay loans

The proportion of housing loan monthly repayment instalments to monthly disposable income in the sample monitored was 20.9%. The median level was 14.3%.

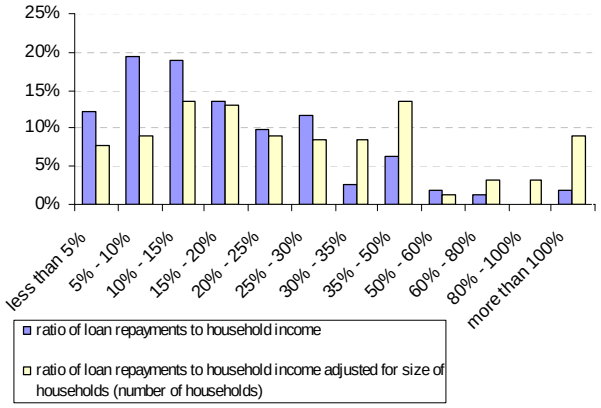
Table 20 Loan instalments to disposable income

	average	first quartile	median	third quartile
loan instalments to disposable income	20.9%	8.2%	14.3%	25.1%
loan instalments to disposable income when household expenses are taken into account	24.3%	12%	20.8%	35%

- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS

We get a different view of households' ability to meet their commitments towards banks if we adjust household incomes by current expenses, taking account of the number of household members. In the text below we will work with incomes adjusted in this manner, since they offer us a more realistic view of the household sector risk. Calculated in this way the average proportion of loan instalments to income is more than 24%. The number of households for which the level of repayments exceeds their incomes after deducting current expenses grew significantly. The number of households with repayments exceeding their incomes was 9% (before deducting expenses approximately 3% of the sample fell into this category). Households with a repayment / income proportion of above 100% were found in the first two income groups (up to SKK 60 000), where they formed 66% of the number of households in the given income groups. These households held 12% of the total volume of loans.

Graph 119 Instalment / income proportion of households before and after deducting expenses

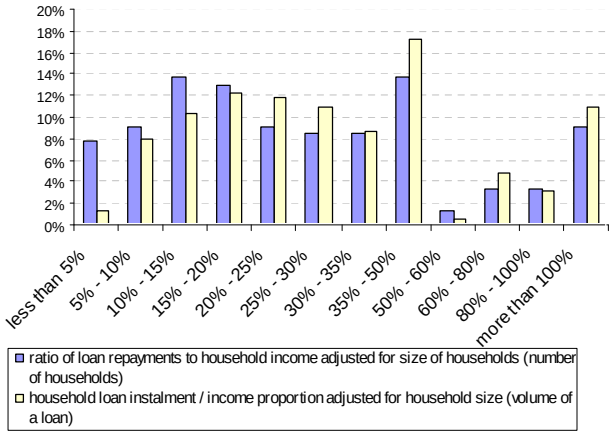


- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- the horizontal axis gives the proportion of loan repayment instalments to household incomes
- the vertical axis gives the shares of households in the individual categories of the repayment instalment / income proportions in the total number of households

From the aspect of banks' credit risk the group of households with a high share of repayment instalments in their incomes is crucial. This household group is the most sensitive to negative changes either on the side of incomes or repayment instalments.

Households with a high share of repayment instalments in income (above 60%) held 16% of the total volume of loans. In other words approximately 16% of the volume of loans was provided to a risk category of households that presently have, or in the case of negative future shocks will have, problems with loan repayment.

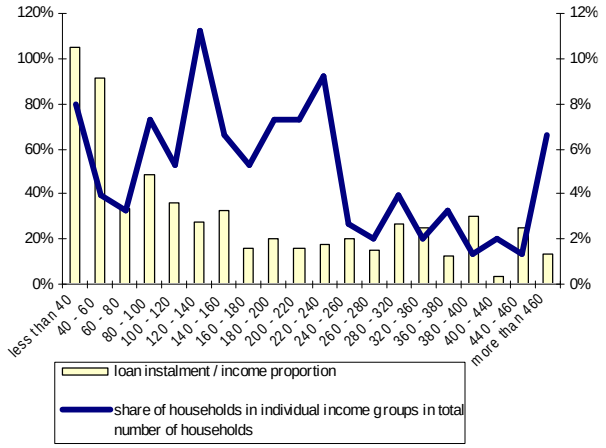
Graph 120 Distribution of the loan instalment / income proportion by household number and loan volume



- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- the horizontal axis gives the proportions of repayment instalments to household incomes
- the vertical axis gives the shares of households in individual repayment instalment / income proportion categories in the total number of households

Interesting is also the view of the distribution of the loan repayment / income proportion from the aspect of income groups. Households most burdened by repayment instalments are those belonging to the lowest income groups. The lowest income groups are thus the most vulnerable in the case of negative shocks on the side of incomes or repayment instalments. On the other hand, it is necessary to mention that low income groups have the lowest weight from the aspect of macroeconomic stability.

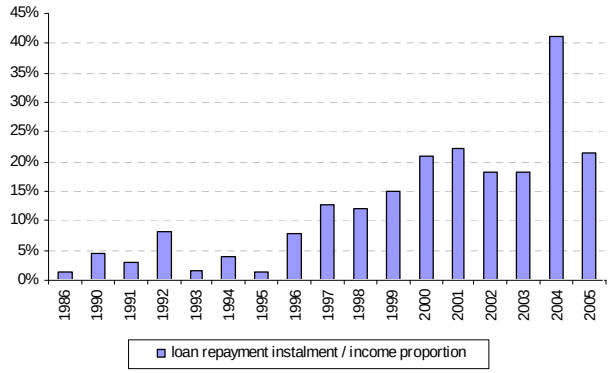
Graph 121 Loan instalment / disposable income proportion by income category



- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- the left vertical axis gives the repayment instalment / income proportions
- the right vertical axis gives the share of households in individual income groups
- data on the horizontal axis in SKK '000 and express income groups according to disposable income adjusted for current expenses

In comparing the repayment instalment / income proportion over individual years when the loans were provided, a greater willingness to undergo risk, from both the side of households as well as banks, can be seen. We assume that the behaviour of households and banks is influenced particularly by positive expectations regarding future incomes. The size of the repayment instalment / disposable income proportion in the sample monitored has grown with the year the loan was provided. The highest repayment instalment / disposable income proportion is seen with loans provided in later years. The proportion grew significantly particularly in 2004[39].

Graph 122 Loan repayment instalment / income proportion by year of loan provision



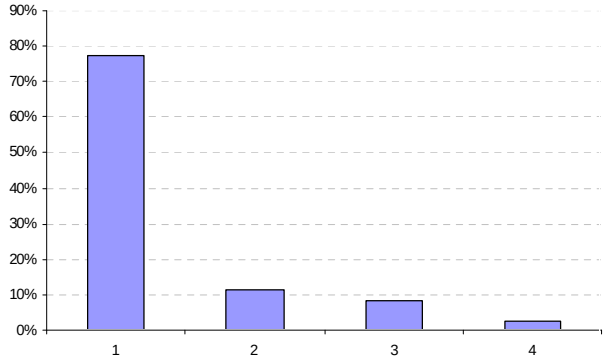
- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- the vertical axis gives the repayment instalment / income proportions in the individual years the loans were provided

In analysing households' ability to meet their commitments towards banks by means of the repayment instalment / income proportion it is necessary to mention that households in making repayment instalments can also use their financial and non-financial assets. The survey did not contain questions on the level and structure of households' financial assets. Aggregated data for the household sector, however, indicate a sufficient volume of financial assets, where the proportion of financial liabilities to assets at the end of 2004 was more than 60%. Financial assets are, furthermore, formed by liquid items, particularly bank deposits.

On the basis of the survey we cannot ascertain the volume of non-financial assets, though we can confirm that owner-occupiers form a majority of households in Slovakia. Moreover, according to data from the research all households to which a loan was provided were property owners. No loans were provided to households that lived only in sublet accommodation or did not own an apartment or house.

[39] Data for 2005 are influenced by the small number of households to which a loan was provided in 2005. Likewise the values in a year may be influenced by the small number of loans in the given years.

Graph 123 Form of real estate ownership by households in Slovakia



- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- key to vertical axis:
- 1- owner of an apartment in own house
- 2 – owner of an apartment in personal ownership in an apartment building
- 3 – tenant, subtenant paying rent
- 4 – accommodation is provided at a price lower than the market price
- the vertical axis gives the percentage shares of individual forms of ownership

Impact of a rise in interest rates on households' loan repayments

In assessing the possible negative impacts on households' ability to meet their commitments we shall focus on a possible increase in loan instalments in the case of a rise in interest rates, and also on a fall in incomes, or a growth in expenses.

An important factor from the aspect of households and their ability to meet their commitments towards banks is not just their generation of incomes, but also the development of interest rates, since a growth in interest rates leads to higher repayment instalments. A rise in repayment instalments can also have an impact on consumption, since increased interest payments restrict households' final consumption. The degree of households' sensitivity to a rise in interest rates is given by the proportion of floating-rate loans, or of loans with a fixed rate of up to one year. Households in Slovakia have one of the highest proportions of short-term interest rate fixation in the EU. In June 2006 such loans represented more than 80% of all loans to households.

Simulated interest rate rise

In testing the impact of a change in interest rates we simulate a rise in rates by 2 percentage points and 5 percentage points. While the first may be seen as a realistic scenario, the aim of the second scenario is to ascertain what impact an extreme rise in interest rates would have on banks.

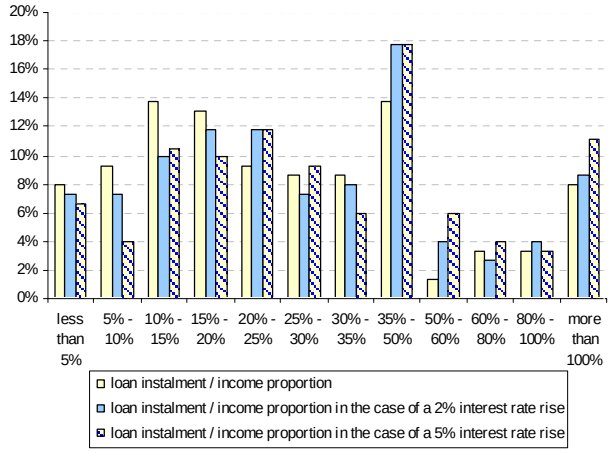
Table 21 Impacts of an interest rate rise on the loan instalment / disposable income proportion

	Average	First quartile	Median	Third quartile	Credit a risk"
instalments to disposable income	24.3%	11.5%	20.8%	35%	9%
instalments to disposable income in interest rate rise of 2 percentage points	28%	13%	24%	41%	10.3%
instalments to disposable income in interest rate rise of 5 percentage points	31.4%	15%	27%	46%	12.3%

- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- credit-at-risk is the share of the volume of lending provided to households with an instalment / income proportion exceeding 100% in the total volume of lending

In simulating a rise in interest rates no significant impact from an increase in repayment instalments on households' ability to repay bank loans was found in the case of the sample monitored. Although a shift in the distribution to the right was recorded in the case of a rise in interest rates of 2 or 5 percentage points, this was without significant changes. The number of households having an instalment / income proportion of above 100% would not change significantly in the case of a 2 percentage point interest rate rise. In the case of an interest rate rise of 5 percentage points this number of households would rise from 8% to 11%.

Graph 124 Distribution of the impact in an interest rate rise on the loan instalment / disposal income proportion



- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- the horizontal axis shows households' instalment / income proportions
- the vertical axis shows the shares of households in individual categories of the instalment / income proportions in the total number of households

Simulation of a fall in incomes

For repaying loans households use primarily their disposable incomes. A secondary source may be financial assets, which may though be of various degrees of liquidity. Therefore their use for repaying loans may be limited.

A fall in disposable incomes, whether through a decrease in the flow of incomes, or a growth in current expenditures, thus may influence households' ability to meet their commitments towards banks.

In simulations of a fall in incomes we analysed the impact of a fall in households' disposable incomes of 20%, and an extreme fall in incomes of 50%.

A fall in disposable incomes of 20% would cause a growth in the average proportion of instalments to income from 24% to 30%. In the case of a 20% fall in incomes the percentage of households with instalments exceeding incomes would rise from 8% to 11%.

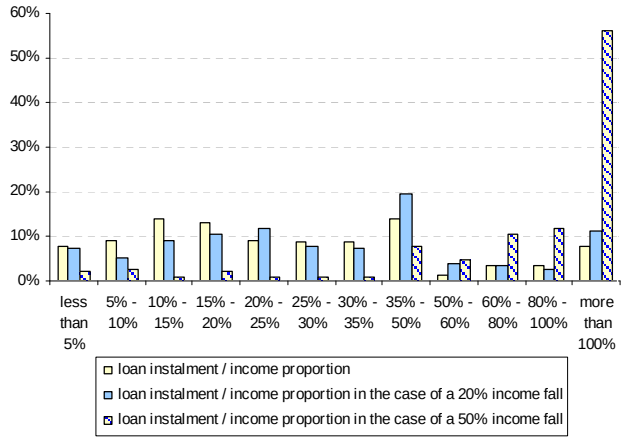
Table 22 Impacts of a disposable income fall in the loan instalment / disposable income proportion

	Average	First quartile	Median	Third quartile	"Credit a risk"
loan instalments to disposable income	24.3%	11.5%	20.8%	35%	9%
loan instalments to disposable income in a 20% income fall	30.4%	14%	26%	44%	12.2%
loan instalments to disposable income in a 50% income fall	122%	58%	104%	176%	66.8%

- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- credit-at-risk is the share of the volume of lending provided to households with an instalment / income proportion exceeding 100% in the total volume of lending

A substantially more significant impact would be caused by a 50% fall in incomes. In the case of such a fall in disposable incomes as many as 56% of households would not be able to cover their repayment instalments from their incomes.

Graph 125 Distribution of the impact of a fall in disposable income, or rise in expenditures on the loan instalment / disposable income proportion



- source: SR Statistics Office, SILC05005 UDB version 12.07.06, NBS
- the horizontal axis shows households' instalment / income proportions
- the vertical axis shows the shares of households in individual categories of the instalment / income proportions in the total number of households

Register of bank loans and guarantees

In many advanced European countries the idea of setting up a credit register as a source of information for banks in providing loans or guarantees to business and non-business subjects (customers), and for the ongoing monitoring of their payment discipline in the banking sector arose in the mid-20th-century. For example, France set up a register in practice in 1946, in Italy in 1962, in Germany in 1964. In banking the credit register has become a common instrument for collecting, processing and utilising information of this type.

The National Bank of Slovakia started the Register of Bank Loans and Guarantees (hereinafter "the Register") on 1 August 1997. The Register encompasses customers – juristic and natural persons (sole traders), and other non-business juristic persons resident or non-resident – to whom banks or branches of foreign banks in the Slovak Republic have provided credit or a guarantee. Over the period 1997 – 2003 information from the Register was not greatly used from the side of banks (on average 700 inquiries on customers per month). Since 2004, however, a positive reversal has been seen and interest in the Register has increased, particularly in consequence of consolidation of the Register's database, the implementation of organisational measures, an increase in banks' reporting discipline and thereby also a substantial increase in the veracity of data held in the Register. Later improvements included a change to the Register's content and structure, with the introduction of a new more sophisticated version of the system's application software into operation.

The Register, which by law is operated and administered by the National Bank of Slovakia, plays a significant supporting role in the prudent conduct of business by banks and branches of foreign banks, and also in supervision over their operation in the SR banking sector. The Register is an information source with a monthly data processing cycle for:

a) banks and branches of foreign banks in
- obtaining summary positive and negative information on subjects in the banking sector that have received credit and are currently recorded in the Register, and
- obtaining information on potential customers (acquisition activity) of banks and branches of foreign banks for the purpose of future credit business;

b) the National Bank of Slovakia in the field of
- obtaining information on credit exposure (also on payables provided by banks) of individual business subjects (customers) in the banking sector,
- obtaining information on the credit burden in interconnected groups of entities that have received credit, including their company partners,
- obtaining information and various overviews on current and past loans/payables provided at banks and branches of foreign banks for analytical purposes and
- monitoring banks and branches of foreign banks from the aspect of fulfilling their statutory reporting duty.

The Register of Bank Loans and Guarantees has been in continual development according to the current needs of the National Bank of Slovakia, the SR banking sector, and European Community recommendations.

The system underwent the most important transitions in the Register's history in 2003/2004. The Register's database was consolidated and structured according to NBS Instruction 12/1996 of 12 August 1996 laying down the manner of keeping the Register of Bank Loans and Guarantees and the notification scope of data entered in the Register of Bank

Loans and Guarantees. The purpose of the consolidation was to adjust the system so that the identification of entities recorded together with encumbrances for the banking sector in the Register was clear according to a single identifier, thereby removing the problem of registering the same customer under various legal forms. A later amendment to NBS Instruction No. 2/2003 of 30 May 2003 on the Register of Bank Loans and Guarantees as later amended was the basis for changes in the content and structure of records from notifications by banks and branches of foreign banks into the Register, where these changes extended the Register to include:

- the registration of juristic business entities – non-resident to which the banking sector provided credit or guarantees, including a country identifier,
- a more detailed specification of the manner/type of security for the credit,
- scoring of the loan provided to a registered subject (customer) according to payment discipline and other criteria based on a complex financial analysis of the customer by the bank,
- the number of days in arrears in repaying a debt.

The Register as a program system has two basic parts:

1st part: For banks and branches of foreign banks

Data input and output – the customer part – is an interactive link between the bank, or branch of a foreign bank, and the Register's central database. Using the customer part bank employees import data into the Register's central database, and can request information from it on individual customers and their credit burdens, or update already registered records.

Banks and branches of foreign banks can send monthly notification data on an ongoing basis and non-stop every working day until the 15th of the following month. Likewise they can send a request for information on a customer's total credit burden. Banks and branches of foreign banks send data on the loans, guarantees and other liabilities accepted by means of six types of notification (services) in electronic form (the notifications of Registration of a Loan/Guarantee, Update of a Loan/Guarantee, Cancellation of a Loan/Guarantee, Registration/Update of a Customer, Cancellation of a Customer, or Update of Owners). Daily and monthly reports are automatically sent to them by the system on the amount of data received and processed, and also information on the results of the input control check and results of the monthly processing of input data from the given bank. Every 16th day in the month all notifications from the whole banking sector for the preceding month undergo monthly processing. Data processed in the APS Register are subject to data protection regulations and form a banking secret. Data transmitted between a bank and the National Bank of Slovakia, where the Register's central database is located, is secured by several forms of protection, ensuring maximum security and maintaining banking secrecy.

The Register's central database holds two groups of data on customers' credit burdens, or respectively the payables provided to them by banks

a) positive: corporate licence number identifier (IČO) (according to the SR Register of Business Entities) for a resident, or the equivalent unique identifier for a non-resident (NIČO), the business name/surname of the customer, the customer's legal form, type of contract, date of concluding the contract, country, bank (name of bank at which the customer has the loan), contract number, date of loan maturity, or end of a contract's force, value (volume, limit) of the loan/payable, current balance, monetary currency, value of

the loan security, types of security, loans status (live, terminated),

b) negative: principal in arrears, interest in arrears, loan score and number of days in arrears.

Table 23 Overview of use of the Register of Loans and Guarantees for the 1st half of 2006 (as at 30.6.2006)

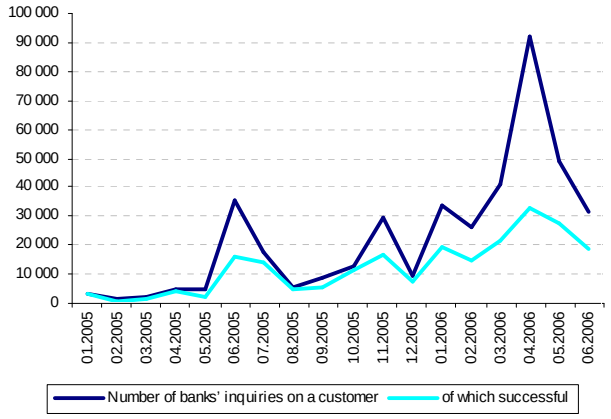
Number of banks and branches of foreign banks using the Register of Bank Loans and Guarantees (other than the NBS)	24
Number of the Register's users - at banks and branches of foreign banks - at the National Bank of Slovakia	216 205 11
Number of banks' inquiries on a customer - of which successful*	273 102 128 795
Average number of banks' inquiries on a customer - of which successful*	45 517 21 466
Number of inquiries of banks and branches of foreign banks to the NBS on shortcomings in the banking sector customers' records	64
Number of notifications on new loans and payables	21 985
Number of customers with live loans registered at the Register - of which residents - of which non-residents	48 808 48 679 129
Number of customers with live payables / guarantees - of which residents - of which non-residents	1 813 1 778 35
Number of registered live loans - of which non-residents	73 680 219
Number of registered live payables / guarantees - of which non-residents	4 250 56
Value (volume) of registered live loans - of which residents - of which non-residents	671 bill. 640 bill. 31 bill.
Value (volume) of current balances of registered live loans - of which residents - of which non-residents	421 bill. 406 bill. 15 bill.
Value (volume) of registered live payables / guarantees - of which residents - of which non-residents	45 bill. 41 bill. 4 bill.

- source: Register of Bank Loans and Guarantees, NBS
- * successful enquiries from banks on a customer are enquiries in which the customer's sought in the Register of Bank Loans and Guarantees was found either with or without a loan/guarantee.

The Register's application program system is accessible only to competent employees at commercial banks and branches of foreign banks, and certain employees of the National Bank of Slovakia, who respond to comments sent, or enquiries (methodological, consultation) from banks, and oversee the functionality and operability of the whole system. Since, using the customer part, it is possible to see records that have been sent into the central database, but not yet undergone regular monthly processing, there is still here a relatively simple possibility of how to contribute to improving the final quality of records.

Remote systematic controls of records in the Register, including respective analyses, represent a form of supervision over banking and stock broking, aimed at improving the overall quality of records in the Register's database, raising their predicative value and in the end result reducing operating and credit risk in the banking sector.

Graph 126 Number of inquiries on a customer in the Register of Bank Loans and Guarantees for the period 01/2005 – 06/2006



- source: Register of Bank Loans and Guarantees, NBS

2nd part: For the National Bank of Slovakia

Application for the Administration and Monitoring of the Register's Activity and a part for Credit Burden Information on Customers and Interconnected Groups of Customers.

The first application is intended for managing data processing processes in the Register, monitoring activities in the Register and data archiving. It is intended for the Register's administrator, the methodologist in the field of bank loans (administration of

reference data) and other users authorised to monitor activities in the Register. Using this module it is possible to export data on customers and loans/payables, providing a source of information for further special analyses. This application also gives a complete overview of the statistical characteristics on the Register database itself and its utilisation.

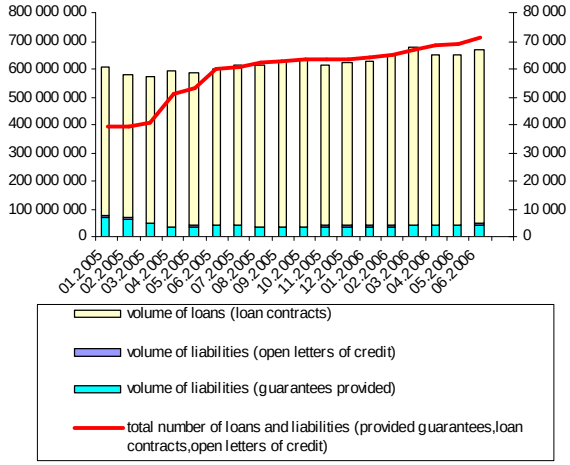
The second part of the Register is used to provide an overview on a customer or bank. It provides the same information on customers as that in the framework of the APS Register, accessible to commercial banks, plus information on interconnected groups of customers and their company partners. By means of several variant views it is possible to obtain complete information on a customer and its loans/payables at individual banks in the SR banking sector, and similarly to obtain a view of a specific bank and its customers according to selected criteria.

The availability of detailed information from the Register's system allows banking supervision staff to prepare the necessary analyses, contributing to a better overview of events on the financial market in the banking sector and contributing in no small measure also to improving the monitoring of credit risk management by banks and branches of foreign banks.

The graph below shows the development of the number and volume of loans/payables in the SR banking sector and the growing number of loans. It can be seen that banks and branches of foreign banks are providing juristic and natural persons – sole traders – with smaller loans in a larger number.

Loan contracts, documentary letters of credit and provided guarantees are the clearly dominant classes of products at banks. The values shown include both residents and non-residents, with residents forming approximately 90% of the individual values.

Graph 127 Loans & guarantees in the Slovak banking sector



- source: Register of Bank Loans and Guarantees, NBS
- the right vertical axis shows the total number of loans and payables
- the left vertical axis shows the total volume of loans and payables in SKK '000

Although the Register of Bank Loans and Guarantees rests on several binding laws, the reliability of data and its predicative value is to a large degree dependent on the data notified into the Register's central database by banks and branches of foreign banks and on communication between the National Bank of Slovakia and banks. The Register's database contains much data suitable for further analyses that could contribute to better and simpler regulation of credit risk in the banking sector, and of other types of related risks.

8 Annexes
A Information on the structure of the financial market
A.1 Data on numbers of institutions
A.1.1 Number of financial institutions in June 2006

	Number of institutions as at 30.6.2006	Number of institutions as at 31.12.2005	Change
Number of banks in the SR	17	18	-1
savings banks	3	3	0
banks holding mortgage licence	9	9	0
other banks	5	6	-1
Number of branches of foreign banks in the SR	7	6	1
of which: on the basis of an NBS licence	1	1	0
on the single banking passport principle	6	5	1
of which: branches of foreign banks holding mortgage licence	1	1	0
Number of branches of foreign banks contributing to the Deposit Protection Fund	2	2	0
Number of foreign bank representative offices in the SR	10	9	1
Number of branches (organisational units) of banks in the SR	705	692	13
Number of lower organisational units in the SR	473	457	16
Number of branches of Slovak banks in other countries	1	1	0
Number of Slovak banks' representative offices in other countries	1	1	0
Number of foreign entities freely providing cross-border banking services	118	104	14
of which: banks	113	99	14
of which: foreign financial institutions	3	3	0
Slovak banks providing free cross-border banking services abroad	1	1	0
of which: electronic-money institutions	0	0	0
Number of employees of banks and branches of foreign banks	19753	19850	-97
Number of insurance companies in the SR	24	25	-1
of which: insurance companies providing only life insurance	5	5	0
insurance companies providing only non-life insurance	5	4	1
insurance companies providing both life and non-life insurance	14	16	-2
Insurance companies providing services on the basis of the freedom to provide services	256	200	56
of which: Without establishing a branch	252	196	56
of which: Via a branch	4	4	0
Number of insurance companies in the SR providing statutory automobile liability insurance	8	8	0
Number of pension fund management companies	6	8	-2
Number of supplementary pension companies	3	0	3
Number of supplementary pension insurance companies	1	4	-3
Number of domestic asset management companies in the SR	10	10	0
of which: asset management companies with an extended licence under § 3 (3) of Act on Collective Investment (ACI)	7	7	0
Number of domestic mutual funds:	110	100	10
of which: open mutual funds	63	51	12
closed mutual funds	47	49	-2
special mutual funds	0	0	0
Number of foreign asset management companies and foreign entities of collective investment operating in the SR on the basis of a licence under § 75 of the ACI:	2	3	-1
of which: via a branch in the SR	1	2	-1
without establishing a branch	1	1	0
Number of foreign asset management companies and foreign entities of collective investment operating in the SR on the basis of a single European passport:	17		
of which: foreign asset management companies	6		
within which: number of foreign mutual funds	61		
number of sub-funds	63		
of which: foreign investment companies	11		
within which: number of sub-funds	224		
Number of securities dealers	35	36	-1
of which: banks and branches of foreign banks	15	15	0
Number of foreign entities operating in the SR as securities dealers	251	204	47
of which: via a branch in the SR	2	2	0
without establishing a branch	249	202	47
Number of Slovak securities dealers providing services abroad	9	9	0
Number of investment services brokers in the SR:	852		
of which: juristic persons	53		
natural persons	799		

The banking sector and stock broking

On 10 February 2006 the National Bank of Slovakia registered a representative office of the foreign bank BANCA MONTE DEI PASCHI DI SIENA SPA, Italy. The total number of representative offices of foreign banks thus rose to ten.

On 1 March 2006 the branch of a foreign bank, J & T BANKA, a. s., commenced activity on the basis of a single banking passport. The branch's deposits are insured at the Czech deposit protection fund, Fond Pojištění Vkladů, Prague, Czech Republic.

In its decision of 15 May 2006 the National Bank of Slovakia granted preliminary consent to the winding up of CALYON BANK SLOVAKIA a. s. as a result of the bank enterprise's sale, it having been purchased by the foreign bank CALYON S. A., France. The company had decided to change the operation of the company CALYON BANK SLOVAKIA a. s., controlled by it, in the SR and transfer all its activities to the newly created branch of CALYON S. A. At the same time the NBS granted prior consent to the sale of the bank enterprise and the sale of the securities dealer enterprise to the seller CALYON BANK SLOVAKIA a. s. and the buyer CALYON S. A. France.

In its decision of 31 May 2006 the National Bank of Slovakia granted a licence for the provision of investment services to the company Money Market Brokers, o.c.p., a. s., Bratislava.

In its decision of 29 June 2006 the National Bank of Slovakia granted preliminary consent to the company Stredoeurópsky maklérsky dom, o.c.p., for return of a licence for the provision of investment services.

Insurance sector

The number of insurance companies fell by one, through the winding up of 2 insurance companies and the establishment of 1 insurance company. The insurance company Vzájomná životná poisťovňa Sympatia, a. s. (VŽP) was wound up and returned its licence on 30.1.2006, its non-life insurance portfolio was transferred to the Union insurance company and the life insurance portfolio to the ING Životná poisťovňa and Winterthur Poisťovňa, a. s., the latter returning its licence on 26.5.2006 and transferring its insurance portfolio to the company Credit Suisse Life & Pensions Pojišťovna, a. s., operating in the Slovak Republic via its branch Winterthur pojišťovna a.s. Conversely, on 6.2.2006 the company AEGON Životná poisťovňa, a.s. was licensed for the first half of 2006, though has yet to report any written premium. The establishment of AEGON Životná poisťovňa, a.s. cannot however be seen as the arrival of a new entity onto the Slovak insurance market, since AEGON Levensverzekering, N. V. already provides its services in the SR on the basis of the free provision of services via a branch, meaning that this represents only a change of its form of operation on the Slovak insurance market. In the first half of 2006 preparations were being made to transfer the insurance portfolio from AEGON Levensverzekering, N. V. to AEGON Životná poisťovňa, a.s.

A.2 Data on the ownership structure of supervised subjects

A.2.1 Individual countries' shares in the registered capital of individual types of financial institutions as at 30.6.2006

	Banks	Insurance companies *	Pension fund management companies	Asset management companies	Securities dealers
Slovakia	10.44	8.47	44.62	70.47	16.31
EU states (excl. SR)	85.80	87.67	27.82	21.53	79.6
Czech Rep.	7.90	1.21	6.44	10.34	1.27
France		0.99			
Holland	1.40	13.38	18.62		0.09
Luxembourg	28.37	0.00	2.76		31.05
Hungary	4.55	1.26			4.98
Germany	1.95	40.43			
Austria	36.04	17.53			36.34
Italy	4.29	0.00			4.69
Portugal	0.17	0.00			
United Kingdom	1.14	8.07			1.19
Other		4.80		11.2	
Countries outside EU	3.76	3.86	27.56**		4.09

Data in the table represent individual countries' shares in the registered capital of financial institutions according to the prime owner. Data in percent.

- ** Switzerland
- * data as at 31.12.2005

Banking sector

As at 31 March 2006 Tatra banka, a. s. reported registered capital reduced by the value of priority shares (SKK 47.5 million) in accordance with adopted International Accounting Standards.

At Istrobanka, a .s. a change of shareholder was recorded – Bank für Arbeit und Wirtschaft und Österreichische Postsparkasse, AG, Austria - in accordance with the granted prior consent of the National Bank of Slovakia, and which arose through the merger of the companies Bank für Arbeit und Wirtschaft Aktiengesellschaft Österreichische Postsparkasse Aktiengesellschaft and Kapital & Wert Bank Aktiengesellschaft, Austria.

Istrobanka, a. s. reported as at 30 June 2006 registered capital increased by SKK 225.0 million and Tatra banka, a. s. by SKK 71.3 million.

The share of banks' registered capital held by foreign investors was reduced through the winding up of Calyon Bank Slovakia a. s. as a consequence of the bank enterprise's sale.

B Analytical data

B 1 Banks and branches of foreign banks

B 1.1 Asset and liability structure of banks and branches of foreign banks (fin. data in thousands of SKK)

	Total volume (as at 30.6.2006)	Share of a foreign currency	y/y change	Share in balance-sheet total	CR3	CR5	HHI
ASSETS TOTAL (gross)	1 533 151	14%	10%	100%	50%	68%	1 125
TOTAL LOANS TO CUSTOMERS	611 402 042	24%	28%	40%	47%	61%	974
Loans to retail	209 949 478	1%	38%	14%	63%	81%	1 604
of which: Loans to households	193 428 945	1%	39%	13%	65%	82%	1 657
Loans to enterprises	300 764 695	36%	20%	20%	40%	59%	909
Loans to non-banking financial companies	61 845 637	24%	58%	4%	48%	66%	1 074
Loans to general government	23 082 575	26%	1%	2%	75%	89%	2 616
Loans to non-residents	15 759 657	79%	24%	1%	52%	74%	1 290
TOTAL OPERATIONS ON THE INTERBANK MARKET	541 419 443	7%	4%	35%	53%	76%	1 284
of which: Operations with the NBS and foreign issuing banks (incl. NBS bills)	421 241 873	0%	-3%	27%	59%	78%	1 433
TOTAL SECURITIES	310 143 312	10%	-5%	20%	73%	79%	1 883
Securities issued by residents	258 916 419	5%	-4%	17%	76%	82%	2 046
Bills and bills of exchange held to maturity	2 663 685	17%	-52%	0%	99%	100%	5 884
Government bonds	197 228 514	5%	2%	13%	76%	82%	2 203
Corporate bonds	7 497 922	25%	-36%	0%	66%	89%	1 851
Bank bonds	22 639 041	0%	26%	1%	69%	82%	1 840
Other debt securities	23 088 098	0%	-33%	2%	100%	100%	9 923
Asset securities	5 799 159	0%	-16%	0%	83%	91%	3 339
Securities issued by non-residents	30 274 451	52%	-20%	2%	72%	86%	2 140
Debt securities	26 955 671	52%	-24%	2%	74%	90%	2 175
of which: issued by banks	13 343 769	21%	-6%	1%	77%	95%	2 697
of which: issued by general government	3 088 995	100%	-7%	0%	73%	99%	2 232
of which: other issuers	10 522 907	76%	-41%	1%	82%	96%	3 157
Asset securities	3 318 780	56%	36%	0%	99%	100%	4 795
of which: issued by banks	26 869	56%	23%	0%	100%	100%	4 518
of which: other issuers	3 291 911	56%	36%	0%	99%	100%	4 799
Derivatives – positive fair value	20 952 442	13%	13%	1%	62%	80%	1 571
TOTAL LIABILITIES	1 472	24%	10%	100%	50%	68%	1 117
TOTAL DEPOSITS AND LOANS ACCEPTED FROM CUSTOMERS	900 345 937	21%	11%	61%	57%	70%	1 280
of which: deposits insured at the Deposit Protection Fund	453 327 420	11%	12%	31%	61%	75%	1 561
Deposits and loans accepted from the retail	429 374 362	10%	10%	29%	62%	75%	1 621
Deposits and loans accepted from households	390 106 167	11%	11%	26%	62%	76%	1 637
Deposits and loans accepted from enterprises	232 129 621	19%	14%	16%	54%	68%	1 410
Deposits and loans accepted from fin. co's other than banks	74 048 556	3%	3%	5%	57%	74%	1 365
Deposits and loans accepted from general government	147 691 268	33%	18%	10%	71%	90%	2 195
Deposits and loans accepted from non-residents	17 102 130	59%	-9%	1%	46%	65%	1 080
TOTAL SOURCES FROM BANKS	345 170 828	55%	6%	23%	58%	77%	1 398
Sources from the NBS and foreign issuing banks	15 507 438	0%	159%	1%	97%	100%	4 704
Sources from non-resident banks	282 271 227	65%	2%	19%	56%	78%	1 411
TOTAL SECURITIES ISSUED	89 985 632	7%	31%	6%	54%	75%	1 333
Mortgage bonds	48 890 065	5%	31%	3%	69%	87%	1 947
Bills of exchange	15 673 629	9%	19%	1%	61%	78%	1 661
Other securities issued	7 079 584	0%	x	0%	86%	100%	2 656
Derivatives – negative fair value	18 342 354	12%	1%	1%	66%	83%	1 700
Risk-balanced assets of the banking book	549 646 974		11%	37%	57%	69%	1 283
Risk-balanced assets of the trading book	17 959 852		-30%	1%	59%	84%	1 629
Other risk-balanced assets	3 734 440		-57%	0%	77%	91%	2 526
Own funds	80 792 451		3%	5%	49%	67%	1 077

The calculation of CR 3, CR 5 and HHI covers only those institutions having a positive value of the given item.
In the case of all institutions having an equal share, the *HHI* value would be 417, were the number of institutions 24.
Assets are expressed in the gross value; equality with liabilities is achieved by deducting the value of depreciation charges and provisions.

B 1.2 Revenues and expenditures of banks and branches of foreign banks (in thousands of SKK)

	Value (as at 30.6.2006)	y/y change	CR3	CR5	HHI
(a) TOTAL OPERATING COSTS (b + e + f)	14 268 665	4%	57%	69%	1 271
(b) Administrative costs (c + d)	12 122 286	6%	57%	69%	1 261
(c) Purchased performances	5 714 572	3%	54%	66%	1 178
(d) Staffing costs	6 407 714	8%	60%	72%	1 359
(e) Depreciation / amortisation of movable and immovable assets	2 051 697	-3%	59%	71%	1 434
(f) Taxes and fees	94 682	39%	60%	71%	2 089
(g) GROSS INCOME (h + l)	24 749 282	13%	59%	72%	1 330
(h) Net interest income (j - i)	15 618 578	5%	60%	70%	1 394
(i) Interest costs	15 844 297	28%	51%	73%	1 268
(j) Interest yields	31 462 875	15%	53%	69%	1 220
(k) of which: Interest yields from securities	5 969 872	-29%	71%	78%	1 801
(l) Net non-interest income (m + n + o + p)	9 130 704	29%			
(m) Revenue from shares and ownership interests	332 648	311%	97%	100%	4 495
(n) Net income from fees	5 584 383	7%	66%	78%	1 628
(o) Net income from trading	4 381 546	10%			
(p) Other net operating incomes	- 1 167 873	-47%			
(q) NET INCOME (g - a)	10 480 617	26%			
(r) Net creation of prov's and net income from deprec. of recvbls	1 651 553	1018%			
(s) Net creation of reserves	- 628 836	60%	-140%	-149%	8 263
(t) NET PRE-TAX PROFIT (q - r - s)	9 457 900	10%	64%	77%	1 569
(u) Extraordinary profit	0				
(v) Income tax	1 361 058	39%	66%	82%	1 726
(w) NET PROFIT AFTER TAX (t + u - v)	8 096 842	6%	64%	78%	1 567

The calculation of CR 3, CR 5 and HHI covers only those institutions having a positive value of the given item.
In the case of all institutions having an equal share, the *HHI* value would be 417, were the number of institutions 24.

B 1.3 Profitability indicators of banks and branches of foreign banks and their distribution in the banking sector

	Denominator-weighted average (30.6.2006)	Denominator-weighted average (30.6.2005)	Average weighted by the volume of assets	Minimum	Lower quartile	Median	Upper quartile	Maximum
ROA	0.58%	0.59%	0.59%	-15.01%	0.17% (9%)	0.33% (23%)	0.69% (12%)	1.66% (57%)
ROE (excl. branches)	9.73%	9.70%	10.71%	1.53%	4.50% (8%)	5.42% (6%)	8.03% (12%)	14.39% (53%)
Cost-to-income ratio	57.68%	62.10%	59.05%	-2748.89%	52.04% (12%)	58.35% (50%)	73.86% (27%)	236.25% (12%)
Relative significance of interest incomes	63.12%	67.87%	58.22%	-780.37%	50.80% (21%)	62.97% (23%)	78.53% (46%)	153.77% (10%)
Net interest spread	1.05%	1.10%	1.09%	-0.22%	0.56% (21%)	0.85% (9%)	1.39% (42%)	2.35% (29%)
retail	2.73%	3.27%	0.22%	-222.42%	1.50% (14%)	1.99% (11%)	2.93% (19%)	9.82% (54%)
enterprises	1.26%	1.25%	1.27%	0.19%	0.78% (21%)	1.36% (9%)	1.52% (37%)	2.53% (30%)
financial companies	1.10%	0.64%	2.64%	-0.87%	0.07% (28%)	0.64% (14%)	1.51% (25%)	38.14% (27%)
banks incl. the NBS and bills	-0.12%	0.16%	-0.01%	-1.16%	-0.25% (13%)	-0.02% (41%)	0.12% (8%)	0.36% (38%)
Net interest margin	1.09%	1.12%	1.11%	-0.19%	0.79% (20%)	1.02% (9%)	1.41% (59%)	4.31% (11%)

Figures in brackets below the quartile values represent the share of banks (measured by volume of net assets) for which the value of the indicator lies between the value of the given quartile and the previous quartile.

B 1.4 Risk and capital adequacy indicators of banks and branches of foreign banks and their distribution in the banking sector

	Denominator-weighted average (30.6.2006)	Denominator-weighted average (30.6.2005)	Average weighted by volume of assets	Minimum	Lower quartile	Median	Upper quartile	Maximum	Number of breaches
CREDIT RISK									
Share of defaulted loans in the total volume of loans to customers	3.69%	4.74%	4.03%	0.00%	0.55% (11%)	2.93% (43%)	3.96% (30%)	14.72% (16%)	
Retail (share in loans to retail)	3.24%	3.29%	3.16%	0.00%	0.44% (11%)	3.27% (45%)	5.39% (26%)	16.67% (18%)	
Enterprises (share in loans to businesses)	5.09%	6.97%	5.45%	0.00%	0.02% (9%)	3.21% (27%)	5.10% (43%)	21.80% (20%)	
Financial companies (share in loans to financial companies)	0.11%	0.15%	0.09%	0.00%	0.00% (55%)	0.00% (0%)	0.00% (18%)	2.61% (22%)	
Share of provisions in the volume of defaulted loans to customers	105.90%	88.01%	111.35%	1.29%	72.58% (5%)	102.41% (23%)	116.20% (24%)	186.84% (40%)	
Large asset exposure (weighted) / own funds (excl. branches)	207.55%	0.00%	215.63%	0.00%	88.75% (7%)	248.46% (39%)	326.55% (23%)	385.74% (11%)	
Large asset exposure within groups (number of breaches)									2
Share of claimable value of securities in the total volume of defaulted loans to customers	13.90%	15.29%	12.87%	0.00%	2.47% (24%)	6.83% (20%)	27.26% (19%)	100.00% (24%)	
CURRENCY RISK									
Forex open balance-sheet position / own funds (excl. branches)	-59.50%	0.00%	-78.57%	-255.75%	-20.76% (56%)	-0.18% (5%)	14.70% (7%)	195.59% (12%)	
Forex open off-balance-sheet position / own funds (excl. branches)	107.29%	0.00%	125.87%	-269.04%	-15.46% (12%)	0.00% (5%)	90.06% (28%)	681.34% (35%)	
Total forex open position / own funds (excl. branches)	47.78%	0.00%	47.30%	-249.28%	-10.99% (10%)	1.15% (6%)	46.77% (29%)	696.03% (35%)	
Total forex open position / own funds (excl. branches)	45.61%	-56.62%							
VaR / own funds (excl. branches)	-0.46%	-3.64%	-0.33%	-5.72%	-0.45% (9%)	-0.19% (22%)	-0.09% (26%)	0.00% (24%)	
INTEREST RATE RISK									
Total interest-rate open position up to 1 month / own funds (excl. branches)	-227.08%	-232.81%	-247.60%	-757.05%	-450.16% (46%)	-94.17% (4%)	48.17% (9%)	510.79% (22%)	
Total interest-rate open position up to 1 year / own funds (excl. branches)	-26.17%	-131.91%	-23.04%	-244.06%	-98.90% (22%)	13.67% (28%)	87.36% (24%)	221.40% (7%)	
Total interest-rate open position up to 5 years / own funds (excl. branches)	-148.57%	-131.88%	-157.02%	-500.71%	-253.46% (43%)	-49.28% (10%)	29.95% (9%)	263.75% (19%)	
LIQUIDITY RISK									
Share of immediately liquid assets in highly volatile funds	8.60%	26.84%	280.16%	0.87%	4.05% (26%)	4.51% (43%)	9.77% (11%)	44818.31% (16%)	
Share of liquid assets (incl. collateral from reverse repo trades) in volatile funds	64.18%	69.77%	77.40%	0.45%	32.53% (11%)	49.52% (25%)	64.14% (44%)	272.89% (20%)	
Indicator of fixed and illiquid assets (excl. branches)	43.67%	45.60%	48.50%	5.68%	13.63% (9%)	36.51% (19%)	56.36% (24%)	73.63% (28%)	0
Share of loans in deposits and issued securities	61.74%	54.57%	69.37%	29.29%	52.58% (41%)	71.64% (35%)	110.42% (17%)	569.30% (8%)	
Total liquidity position current up to 7 days /assets	-30.29%	-36.23%	-30.29%	-69.24%	-47.99% (35%)	-18.45% (33%)	0.76% (17%)	20.63% (15%)	
Total liquidity position estimated up to 7 days /assets	1.86%	-8.65%	1.86%	-65.84%	-7.94% (23%)	-0.03% (27%)	8.05% (18%)	38.19% (32%)	
Total liquidity position current up to 3 months /assets	-37.67%	-34.55%	-37.67%	-85.29%	-47.70% (40%)	-28.73% (27%)	-0.81% (18%)	12.80% (14%)	
Total liquidity position estimated up to 3 months / assets	-4.48%	-8.25%	-4.48%	-85.29%	-24.50% (7%)	-2.69% (42%)	9.20% (31%)	30.62% (19%)	
CAPITAL ADEQUACY									
Capital adequacy (excl. branches)	14.32%		14.04%	10.13%	12.12% (43%)	18.57% (24%)	21.91% (7%)	28.47% (6%)	0
Share of Tier I in own funds (excl. branches)	89.61%		88.97%	60.56%	83.76% (10%)	88.94% (41%)	97.81% (23%)	99.14% (7%)	
Share of own funds in balance-sheet total (excl. branches)	8.17%		6.83%	3.85%	5.73% (57%)	9.56% (7%)	12.12% (9%)	19.28% (7%)	
Share of potential loss in own funds in reaching 8% capital adequacy (excl. branches)	44.09%		38.98%	21.06%	34.02% (43%)	56.93% (24%)	63.49% (7%)	71.90% (6%)	

Figures in brackets below the quartile values represent the share of banks (measured by volume of net assets) for which the value of the indicator lies between the value of the given quartile and the previous quartile.

B 2 Insurance companies

B 2.1 Net profit and profitability indicators of insurance companies (data on profit in thousands of SKK)

	Value as at 30.6.2006	Value as at 30.6.2005	Y/y change	Share in total written premium	CR3	HHI 30.6.2006	HHI 30.6.2005
Total net profit	2 933 862	1 929 520		11.04%	81%	4290	4295
Gross profit from non-life insurance	452 752	782 034		1.70%	81%	2762	2828
Gross profit from life insurance	1 398 476	1 997 855		5.26%	91%	7187	7220
Gross operating expenses to written premium	27.10%	20.37%					
ROA	2.19%	1.70%					
ROE	12.06%	9.07%					

The calculation of CR 3, CR 5 and HHI covers only those institutions having a positive value of the given item.
In the case of all institutions having an equal share, the *HHI* value would be 400, were the number of institutions 25.

B 2.2 Written premium (in thousands of SKK)

	Value as at 30.6.2006	Value as at 30.6.2005	Y/y change	Share in total written premium	CR3	HHI 30.6.2006	HHI 30.6.2005
Total	26 639 745	27 319 859		100.00%	61%	1687	1990
Life insurance	11 328 445	10 760 846		42.62%	53%	1248	1374
Whole life and endowment assurance (A1)	7 367 558	6 695 279		27.72%	57%	1334	1396
Insurance connected with an investment fund (A4)	1 499 920	1 734 766		5.64%	90%	3886	2804
Accident or sickness insurance (A6)	1 316 511	1 214 853		4.95%	68%	1692	1714
Other	1 144 457	1 115 949		4.31%	81%	3324	3963
Non-life insurance	15 311 301	16 559 013		57.38%	74%	2425	2772
Automobile liability insurance (B10a)	5 773 079	7 382 448		21.72%	80%	2840	3344
Motor-hull insurance (B3)	4 202 696	4 218 966		15.81%	79%	2528	2765
Property damage insurance (B8+B9)	3 298 448	3 223 857		12.26%	72%	2426	2539
Other	2 039 882	1 733 742		7.59%	59%	1771	1673
Share of written premium to GDP	3.38%	3.59%					

The calculation of CR 3, CR 5 and HHI covers only those institutions having a positive value of the given item.
In the case of all institutions having an equal share, the *HHI* value would be 400, were the number of institutions 25.

B 2.3 Written premium ceded to reinsurers (in thousands of SKK)

	Value as at 30.6.2006	Value as at 30.6.2005	Y/y change	Share in total written premium	CR3	HHI 30.6.2006	HHI 30.6.2005
Total	5 477 630	5 507 771	-0.55%	191.31%	70%	2394	
Share in written premium	20.56%	20.16%					
Life insurance	679 447	612 324	10.96%	32.21%	88%	2728	
Share in written premium	6.00%	5.69%					
Non-life insurance	4 798 182	4 895 447	-1.99%	159.11%	72%	2607	
Share in written premium	31.34%	29.56%					

The calculation of CR 3, CR 5 and HHI covers only those institutions having a positive value of the given item.
In the case of all institutions having an equal share, the *HHI* value would be 400, were the number of institutions 25.

B 2.4 Indemnity costs (in thousands of SKK)

	Value as at 30.6.2006	Value as at 30.6.2005	Y/y change	Share in total written premium	CR3	HHI 30.6.2006	HHI 30.6.2005
Total	10 076 429	8 646 552	16.54%	36.96%	72%	2480	2571
Life insurance	4 445 414	3 459 281	28.51%	16.73%	71%	2850	3178
Whole life and endowment assurance (A1)	3 098 122	2 250 797	37.65%	11.66%	74%	2788	2983
Insurance connected with an investment fund (A4)	357 187	273 727	30.49%	1.34%	97%	7467	5157
Accident or sickness insurance (A6)	239 194	215 600	10.94%	0.90%	66%	1754	1830
Other	750 910	719 158	4.42%	2.83%	95%	7602	7261
Non-life insurance	5 631 014	5 187 271	8.55%	20.23%	77%	2511	2555
Automobile liability insurance (B10a)	2 011 605	1 792 511	12.22%	6.65%	80%	2805	3334
Motor-hull insurance (B3)	2 380 109	2 256 226	5.49%	8.95%	77%	2292	2310
Property damage insurance (B8+B9)	844 010	706 934	19.39%	3.14%	84%	3528	2855
Other	395 291	431 600	-8.41%	1.49%	68%	2275	1972

The calculation of CR 3, CR 5 and HHI covers only those institutions having a positive value of the given item.
In the case of all institutions having an equal share, the *HHI* value would be 400, were the number of institutions 25.

B 2.5 Loss ratio in non-life insurance

	Value as at 30.6.2006	Value as at 30.6.2005
Total	41.68%	38.88%
Automobile liability insurance (B10a)	34.99%	41.66%
Motor-hull insurance (B3)	56.61%	42.27%
Property damage insurance (B8+B9)	31.64%	24.76%
Other	10.51%	51.29%

B 2.6 Technical reserves structure of insurance companies (in thousands of SKK)

	Value as at 30.6.2006	Value as at 30.6.2005	Y/y change	Share in total reserves	CR3	HHI 30.6.2006	HHI 30.6.2005
Total	80 463 893	72 831 944	10,48%	100.00%	66%	2168	2690
Life insurance	68 435 588	58 165 491	17,66%	68.32%	66%	1960	2488
Reserve for covering payables from financial placement on behalf of the insured	8 001 364	5 590 307	43,13%	9.05%	82%	3479	4151
Non-life insurance	20 029 669	19 298 333	3,79%	22.63%	84%	4403	5118
Share of technical reserves to GDP	5.87%	5.48%					

The calculation of CR 3, CR 5 and HHI covers only those institutions having a positive value of the given item.
In the case of all institutions having an equal share, the *HHI* value would be 400, were the number of institutions 25.

B 2.7 Placement of insurance companies' technical reserves of except for reserves for covering payables from financial placement on behalf of the insured (in thousands of SKK)

	Value as at 31.12.2005	Value as at 30.6.2005	y/y change	Share in total reserves	CR3	HHI 31.12.2005	HHI 30.6.2005
Government and central bank bonds of SR / EU states or guaranteed by the SR, EIB, EBOR and MBOR bonds	41 954 869	43 445 846	-3.43%	49.67%	60%	1470	3413
Bank bonds	11 560 484	11 448 181	0.98%	13.69%	70%	1960	1881
Term accounts at banks	11 381 265	12 140 888	-6.26%	13.47%	72%	2605	3770
Mortgage bonds	10 224 229	8 389 370	21.87%	12.10%	60%	1713	3650
Other	9 344 860	8 270 577	12.99%	11.06%	57%	1605	3184

The calculation of CR 3, CR 5 and HHI covers only those institutions having a positive value of the given item.
In the case of all institutions having an equal share, the *HHI* value would be 400, were the number of institutions 25.

B 3 Old-age pension saving

B 3.1 Pension fund management companies as at 30.6.2006

	Market share *	NAV of funds (in thousands of SKK)	Number of customers
Allianz - Slovenská DSS	30%	5 264 855	424 790
Winterthur DSS	29%	4 988 741	375 152
VÚB Generali DSS	17%	2 882 381	196 984
ING DSS	11%	1 981 752	150 310
AEGON DSS	7%	1 151 860	154 829
ČSOB DSS	6%	995 607	88 130

(*) Market shares are calculated according to the total net asset value (NAV) of funds of the given pension fund management company.
NAV – Net Asset Value

B 3.2 Economic result of pension fund management companies as at 30.6.2006 (in thousands of SKK)

	Revenues	Expenditures	Profit/loss	ROA	ROE
Allianz - Slovenská DSS	47 190	175 450	-128 260	-9%	-9%
Winterthur DSS	52 149	160 383	-108 234	-5%	-6%
VÚB Generali DSS	29 376	110 758	-81 382	-24%	-27%
ING DSS	29 419	140 293	-110 874	-24%	-25%
AEGON DSS	11 926	730 812	-718 886	-153%	-266%
ČSOB DSS	12 490	91 641	-79 151	-14%	-16%

B 3.3 Pension funds (in thousands of SKK)

	NAV as at 30.6.2006	NAV as at 30.6.2005
Total	17 265 196	1 644 676
Conservative	735 864	76 812
Balanced	5 293 035	513 780
Growth	11 236 297	1 054 084

NAV – Net Asset Value

B 3.4 Structure of pension funds' investments of (in thousands of SKK)

	Value as at 30.6.2006	Share of EUR	Share of other foreign currencies	Value as at 30.06.2005
Total	17 265 196	6.72%	5.00%	-
Accounts at banks	11 395 007	0.22%	0.40%	-
Bonds	4 041 404	0.00%	0.00%	-
Shares	1 819 360	54.26%	45.58%	-
Other	166 974	92.67%	0.13%	-
Payables	157 549	13.71%	6.67%	-

B 3.5 Supplementary pension companies as at 30.6.2006

	Market share *	NAV of funds (in thousands of SKK)	Number of customers
ING Tatry - Sympatia DDS	55%	8 191 003	375 060
DDS Tatra banka	31%	4 632 579	170 292
Winterthur DDS	14%	2 124 631	128 000

(*) Market shares are calculated according to the total net asset value (NAV) of funds of the given pension fund management company.
NAV – Net Asset Value

B 3.6 Economic result of supplementary pension companies as at 30.6.2006 (in thousands of SKK)

	Yields	Expenses	Profit/loss	ROA	ROE
ING Tatry - Sympatia DDS	116 513	85 256	31 257	31.00%	58.00%
DDS Tatra banka	17 956	18 502	-546	-0.57%	-1.00%
Winterthur DDS	14 036	17 437	-3 401		-30.10%

B 3.7 Supplementary pension funds (in thousands of SKK)

	NAV as at 30.6.2006	NAV as at 30.6.2005
Total	14 948 213	
Contribution	14 372 172	
Payroll	576 041	

NAV – Net Asset Value

B 3.8 Investment structure of supplementary pension funds (in thousands of SKK)

	Value as at 30.6.2006	Share of EUR	Share of other foreign currencies	Value as at 30.06.2005
Total	14 948 213	1.15%	4.07%	-
Accounts at banks	8 573 174	0.30%	0.30%	-
Bonds	5 884 420	0.00%	0.00%	-
Shares	728 768	20.01%	79.99%	-
Other	17 302	0.00%	0.00%	-
Payables	255 451	0.00%	0.00%	-

B 4. Collective investment

B 4.1 Asset management companies as at 30.6.2006

Asset management company	NAV of mutual funds (in thousands of SKK)	Market share
Total	104 456 509	100.00%
Tatra Asset Management	36 011 794	34.48%
Asset Management SLSP	31 205 335	29.87%
VÚB Asset Management	24 561 665	23.51%
Prvá Penzijná	4 207 088	4.03%
ČSOB Asset Management	2 789 683	2.67%
Istro Asset Management	2 531 143	2.42%
AIG Funds Central Europe	2 232 085	2.14%
OTP Asset Management	494 382	0.47%
Investičná a dôchodková	297 872	0.29%
KD Investments	125 462	0.12%

NAV – Net Asset Value

B 4.2 Expenditure, revenues and profitability indicators of domestic asset management companies as at 30.6.2006 (in thousands of SKK)

Asset management company	Yields	Expenses	Profit/loss	ROA	ROE
Total	895 832	745 778	150 054	13.14%	15.11%
AIG Funds Central Europe	26 264	25 293	971	1.40%	1.53%
Asset Management SLSP	248 401	212 323	36 078	19.68%	27.30%
ČSOB Asset Management	51 631	26 406	25 225	19.10%	20.09%
Investičná a dôchodková	6 090	6 061	29	0.04%	0.04%
Istro Asset Management	22 007	14 948	7 059	8.85%	9.47%
KD Investments	2 401	9 871	-7 470	-13.13%	-13.45%
OTP Asset Management	2 247	6 234	-3 987	-9.92%	-10.20%
Prvá Penzijná	39 443	24 698	14 745	14.35%	16.26%
Tatra Asset Management	275 504	207 721	67 783	21.72%	25.41%
VÚB Asset Management	221 844	212 223	9 621	10.03%	12.50%

B 4.3 Structure of mutual funds as at 30.6.2006 (in thousands of SKK)

Fund type	Market share	Net asset value	Number of funds	CR3 *	CR5 *	HHI *	HHI if uniform distribution
Total mutual funds	100.00%	127 516 324	461	24%	34%	352	24
Domestic	81.92%	104 456 491	110	34%	48%	677	159
Money market funds	31.79%	40 535 637	9	85%	94%	3102	1111
Bond funds	22.22%	28 335 303	16	66%	85%	1790	625
Equity funds	4.32%	5 512 335	10	87%	93%	3546	1000
Mixed funds	7.98%	10 181 737	14	56%	82%	1448	714
Funds of funds	13.83%	17 636 093	13	46%	65%	1157	769
Other funds	0.84%	1 075 129	1	100%	100%	10000	10000
Closed funds	0.93%	1 180 257	47	-	-	-	-
Foreign (**)	18.08%	23 059 833	351	25%	33%	335	29
Money market funds	2.91%	3 715 288	23	82%	92%	4421	435
Bond funds	3.64%	4 638 072	85	45%	63%	1026	118
Equity funds	7.32%	9 332 539	166	44%	58%	906	60
Mixed funds	0.61%	772 249	28	94%	97%	3327	357
Funds of funds	0.38%	482 826	24	92%	97%	6660	417
Other funds	3.23%	4 118 859	24	33%	51%	747	417
Special funds	0.20%	257 000	1	-	-	-	-

(*) Market concentrations are calculated only for open mutual funds (do not include closed and special funds)
(**) For foreign mutual funds the net asset value represents units sold in the Slovak Republic
The calculation of CR 3, CR 5 and HHI covers only those institutions having a positive value of the given item. In the column “HHI if uniform distribution” the HHI value is that which would express the concentration in the case of a uniform distribution of the net asset value in the given group of funds.

B 4.4 Net sales of open mutual funds as at 30.6.2006 (in thousands of SKK)

	3 months	1 year	Cumulative	Number of funds	CR3	CR5	HHI	HHI if uniform distribution
Total open mutual funds	-3 282 893	1 043 380	112 689 285	413	45%	58%	973	24
Domestic	-3 068 362	-1 911 409	93 261 278	63	53%	68%	1 299	159
Money market funds	-4 143 284	-9 600 277	38 553 508	9	100%	100%	9 970	1111
Bond funds	-5 362 628	-2 326 470	27 091 221	16	100%	100%	10 000	625
Equity funds	506 076	2 833 657	5 528 229	10	90%	99%	3 855	1000
Mixed funds	356 079	3 554 811	3 610 028	14	91%	98%	3 627	714
Funds of funds	5 575 396	3 626 871	17 533 263	13	60%	80%	1 923	769
Other funds	-	-	945 029	1	-	-	-	10000
Foreign	-214 531	2 954 789	19 428 008	350	45%	56%	870	29
Money market funds	-606 233	-2 039 363	3 323 013	23	98%	100%	4 544	435
Bond funds	-716 630	-1 114 845	3 616 453	85	98%	99%	7 723	118
Equity funds	988 212	4 776 906	7 906 841	166	56%	69%	1 258	60
Mixed funds	107 970	332 449	751 460	28	98%	100%	5 309	357
Funds of funds	22 217	132 733	458 521	24	99%	100%	3 595	417
Other funds	-10 067	866 909	3 371 720	24	85%	97%	2 669	417

The calculation of CR 3, CR 5 and HHI covers only those institutions having a positive value of the given item. In the column "HHI if uniform distribution" the HHI value is that which would express the concentration in the case of a uniform distribution of the net asset value in the given group of funds.

B 4.5 Average performances of open mutual funds as at 30.6.2006 (% p.a.)

	3 months			1 year			3 years		
	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max
Total open mutual funds	-22.73%	-2.21%	13.59%	-13.88%	6.98%	72.96%	-16.70%	1.23%	46.62%
Domestic	-9.37%	-2.15%	0.83%	-8.05%	0.97%	15.28%	-6.39%	2.85%	14.07%
Money market funds	-0.92%	0.06%	0.83%	-0.08%	0.89%	1.70%	1.28%	2.83%	3.45%
Bond funds	-6.04%	-1.65%	0.60%	-8.05%	-2.95%	1.34%	-6.39%	0.92%	6.84%
Equity funds	-9.37%	-3.92%	-1.19%	-1.43%	7.34%	15.28%	3.37%	5.85%	12.54%
Mixed funds	-6.43%	-2.97%	-0.06%	-4.94%	2.48%	13.23%	0.00%	3.92%	14.07%
Funds of funds	-4.40%	-2.30%	0.17%	-0.17%	-0.06%	0.00%	-	-	-
Other funds	-	-	-	-	-	-	-	-	-
Foreign	-22.73%	-2.22%	13.59%	-13.88%	7.85%	72.96%	-16.70%	0.97%	46.62%
Money market funds	-2.12%	1.09%	3.16%	-3.13%	1.55%	7.11%	-15.53%	-5.36%	4.19%
Bond funds	-8.51%	-1.40%	8.15%	-13.88%	-2.49%	12.86%	-16.70%	-6.43%	7.91%
Equity funds	-22.73%	-3.40%	13.59%	-9.13%	14.92%	72.96%	-16.68%	6.25%	46.62%
Mixed funds	-5.57%	-0.16%	1.95%	-5.10%	5.51%	20.43%	-16.67%	-3.26%	2.73%
Funds of funds	-9.46%	-2.68%	0.74%	-1.39%	6.07%	12.79%	-3.70%	1.71%	9.94%
Other funds	-7.94%	-2.03%	3.72%	-6.49%	4.43%	18.21%	-	-	-

B 4.6 Asset structure of domestic mutual funds as at 30.6.2006 (in thousands of SKK)

	Money market funds	Other funds
Total	41 329 942	64 653 045
Deposits at banks	11 414 442	7 776 355
Securities other than shares and mutual fund certificates	29 481 724	32 678 047
Shares and mutual fund certificates	0	13 241 931
Shares and other ownership interests	0	10 024 635
Financial derivatives	0	182 878
Other assets	433 776	749 199

B.4.7. Structure of services provided under Article 3 (3) of the Collective Investment Act

Asset management company	Portfolio management				Safekeeping and administration of mutual fund certificates (in thousands of SKK)	
	Number of contracts		Volume of assets managed (in thousands of SKK)			
	30.6.2006	30.6.2005	30.6.2006	30.6.2005	30.6.2006	30.6.2005
Total asset management companies	264	5	3 816 194	6 088 295	2 691 632	416 142
AIG Funds Central Europe	245	0	807	0	0	0
Asset Management SLSP	1	0	308 798	0	0	0
ČSOB Asset Management	4	1	3 142 837	2 498 454	2 209 106	416 142
Investičná a dôchodková	9	0	30 791	0	0	0
OTP Asset Management	0	0	0	0	482 526	0
Tatra Asset Management	0	1	0	3 533 498	0	0
VÚB Asset Management	5	3	332 961	56 343	0	0

B 5 Securities dealers

B 5.1 Basic characteristics of securities dealers as at 30.6.2006 (in thousands of SKK)

	Volume of trades	Market share	Volume of assets managed	Market share
Banks and branches of foreign banks	683 569 243	95%	1 705 601	6%
Registered capital of SKK 35 mill.	32 394 356	4%	2 190 553	8%
Registered capital of SKK 6 mill.	7 319 054	1%	24 648 689	86%

Securities dealers are divided in the table by the size of their registered capital.

B 5.2 Market concentrations by securities dealers' trading volumes (*)

	Number of traders	CR3	CR5	HHI
Total	38	65%	83%	1887
Banks and branches of foreign banks	18	68%	87%	2078
Registered capital of SKK 35 mill. (**)	10	92%	98%	5074
Registered capital of SKK 6 mill. (**)	10	76%	100%	2487

(*) Market concentrations are calculated from data for the second quarter of 2006

(**) Securities dealers that are not banks and have the minimum registered capital of SKK 35 or 6 million. The difference between these two categories of securities dealers lies in the fact that the securities dealers with minimum registered capital of SKK 6 million are not licensed for providing IS-3 investment services (accepting a customer's instruction for the acquisition or sale of an investment instrument and its execution on the own account)

The calculation of CR 3, CR 5 and HHI covers only those institutions having a positive value of the given item.

In the case of all institutions having an equal share, the *HHI* value would be 400, were the number of institutions 36; *HHI* would be 400 if 15 institutions; *HHI* would be 1000 if 10 institutions; and 909 if 11 institutions.

B 5.3 Volume of trades by individual investment services as at 30.6.2006 (in thousands of SKK)

	IS – 1	IS – 2	IS – 3
Total trades	20 889 931	298 885 578	403 507 143
Shares	312 149	7 227 339	354 876
Bonds	529 126	213 398 609	11 247 045
Mutual fund certificates	8 268 029	3 454 394	0
Fungible securities	0	0	0
Foreign securities	11 338 359	18 342 299	3 348 035
Money market instruments	0	62 611	81 381 063
Futures	442 268	0	0
Forwards	0	24 294 782	135 989 249
Swaps	0	13 754 224	32 679 800
Options	0	18 351 321	137 836 063
Combinations	0	0	671 012

IS-1 – acceptance of a customer's instruction to acquire, sell or otherwise handle the investment instrument and the subsequent forwarding of the customer's instruction for the purpose of its realisation.
IS-2 – acceptance of a customer's instruction to acquire or sell the investment instrument and its realisation on an account other than the provider's account.
IS-3 – acceptance of a customer's instruction to acquire or sell the investment instrument and its realisation on own account.

B 5.4 Capital adequacy

	Min	Median	Max
Registered capital of SKK 35 mill.	12%	101%	313%
Registered capital of SKK 6 mill.	21%	119%	30414%

B 6 Stock exchange

B 6.1 Market capitalisation as at 30.6.2006 (in thousands of SKK)

	Listed	Open market	Total	Proportion to GDP
Total securities	468 327 801	95 790 245	564 118 046	37%
Shares	79 261 380	73 790 425	153 051 805	10%
Bonds	389 066 421	21 999 820	411 066 241	27%

B 6.2 Volume of trades in the first half of 2006 (in thousands of SKK)

	Listed	Not listed	Total
Total securities	312 833 59	519 815	313 353 41
Shares and mutual fund certificates	162 16	518 752	680 91
Price-making trades	70 14	150 848	220 98
Direct trades	92 02	367 904	459 92
Bonds	312 671 43	1 063	312 672 49
Price-making trades	3 050 75	1 063	3 051 82
Direct trades	309 620 67	0	309 620 67

B 6.3 Development of market indices

Date	SDXGroup – public sector	SDXGroup - private sector	SAX
23.12.2004	110,16	109,48	326,63
31.03.2005	115,22	111,3	448,69
30.06.2005	117,81	113,21	436,11
30.09.2005	118,95	114,73	459,74
23.12.2005	117,06	115,6	413,31
31.03.2006	114,94	116,28	417,17
31.06.2006	111,93	115,67	377,21

B 7 Central Securities Depository

B 7.1 Number of registered issues and issuers by individual types of securities

Securities type	Number of issues	Number of issuers *	Volume **
Total securities	3 427	2460*	1 147 468 122
shares	2 242	1 659	539 109 015
bonds	280	198	493 006 473
mutual fund certificates	67	1	4 420 277
cooperative shares	613	511	19 930 969
National Property Fund bond	1	1	33 297 450
other securities	224	162	57 703 938

(*) The sum of issuers according to individual types of securities does not correspond to the total number of issuers for the reason that the same issuers issued several types of issues (shares, bonds).
(**) The volume of securities in thousands of SKK, converted at the NBS rate

B 8 Investment Guarantee Fund

B 8.1 Basic characteristics of the Investment Guarantee Fund (IGF, data in thousands of SKK)

Date	Fund's yields *	Fund's expenses	Fund's cumulative value	Level of customer assets	Maximum level of compensation
30.6.2006	11 456	2 148	26 694	9 257 913	1 598 459

* comprising the received contributions paid to the IGF and revenues from interest on current and term IGF account
The Investment Guarantee Fund gathers financial resources of securities dealers, foreign securities dealers, and asset management companies providing selected investment services for the purpose of providing compensations for inaccessible customer assets accepted by a securities dealer, foreign securities dealer, or asset management company for performance of an investment service, and handles the funds acquired in accordance with the Securities Act.
The Investment Guarantee Fund was established by the Act on Securities. The activity of the Investment Guarantee Fund is governed in the Securities Act by the provisions of Articles 80 to 98.

Data methodology

B 1 Banks and branches of foreign banks

B 1.1 Asset and liability structure of banks and branches of foreign banks

All assets are reported gross, i.e. not reduced by provisions.

The category "Total Interbank Market Operations" includes, besides loans and deposits provided to central banks and other banks, also NBS bills, Treasury bills and bills other than those the bank holds in the portfolio "securities held to maturity".

Data sources:

Item	Source statement from STATUS
Loans to customers	V (NBS) 33 – 12
Interbank market operations	Bil (NBS) 1 – 12
Securities	V (NBS) 8 – 12, (NBS) Bil 1 – 12
Deposits and loans accepted	V (NBS) 5 – 12
Resources from banks	Bil (NBS) 1 – 12
Issued securities	Bil (NBS) 1 – 12
Risk-weighted assets	BD (HKP) 1 – 12 (part 7)
Own funds	BD (HKR) 1 – 04

Commentary to calculation of concentration indices:

CR3 index – the share of the three banks with the highest volume of a given item in the total volume of the given item in the banking sector, where only those institutions at which the value of the given item is positive feature in the calculation

CR5 index – the share of the five banks with the highest volume of a given item in the total volume of the given item in the banking sector, where only those institutions at which the value of the given item is positive feature in the calculation

Herfindahl index (*HHI*) – defined as the sum of the square of the shares of individual banks in the total volume of a given item expressed in percent, where only those institutions for which the given item is positive feature in the calculation.

The *HHI* value may be interpreted, for example, as a concentration in a given item being equal as if there were 10 000 / HHI institutions each of which having the same volume in the given item. According to the US Department of Justice definition a market is deemed highly concentrated if the *HHI* exceeds 1800 and not concentrated if the *HHI* value is below 1000.

B 1.2 Revenues and costs of banks and branches of foreign banks

Commentary to certain items:

Net income from trading includes the net income from securities operations (other than interest income), net income from forex operations and net income from derivatives operations.

Other net operating incomes include net incomes from forfeited receivables, from the transfer of tangible and intangible assets, from a share in profit from mutual fund certificates and deposits in specie, from a transfer of mutual fund securities and deposits, from other operations and other net operating incomes.

The annualised value represents the estimated value at the end of the year assuming that the given resultant item develops uniformly over time.

The data source is the statement Bil (NBS) 2 – 12.

B 1.3 Profitability indicators of banks and branches of foreign banks and their distribution in the banking sector

Calculation of individual indicators:

- *ROA* = share of the cumulative value of net profit to the average value of net assets (Source: Bil (NBS) 2 – 12, Bil (NBS) 1 – 12)
- *ROE* = share of the cumulative value of net profit to the average value of own funds; branches do not feature in the calculation, (Source: Bil (NBS) 2 – 12, BD (HKR) 1 – 04)
- *Operating efficiency indicator* = the share of the cumulative value of operating costs to the cumulative value of the sum of net interest and non-interest income, (Source: Bil (NBS) 2 –12)
- *Relative significance of interest incomes* = the share of the cumulative value of net interest incomes to the cumulative value of the sum of net interest and non-interest income, (Source: Bil (NBS) 2 –12)
- *Net interest spread* = the difference between the share of the cumulative value of revenues (interest and non-interest) other than interest revenues from defaulted assets in the current value of loans provided to a given counterparty and the share of the accumulated value of costs in the current value of deposits provided to a given counterparty, (Source: V (NBS) 13 – 04)
- *Net interest margin* = the share of net interest incomes, less interest incomes from the defaulted assets, in the average value of net assets, (Source: Bil (NBS) 2 – 12, Bil (NBS) 1 – 12)

The values of the minimum, lower quartile, median, upper quartile and maximum express the distribution of values of the given indicator in the banking sector. The value of the lower quartile here expresses that value of the given indicator that 25% of all banks (expressed by number) have a value of the given indicator equal to at most the value of the lower quartile (or lower). Analogously, the value of the median expresses that value of the indicator that 50% of all banks have a value of the given indicator equal to at most the value of the median. Finally, the value of the upper quartile expresses that value of the indicator that 75% of all banks have a value of the given indicator equal to at most the value of the upper quartile. Since this distribution does not take into consideration the size of individual banks, this is taken into account in the percentage shares in brackets. For example, the number below the value of the first quartile expresses the share of banks (measured by volume of assets), whose value of the given indicator lies in the closed interval between the value of the minimum and the value of the lower quartile. Likewise, the number below the median expresses the share of banks whose value of the given indicator lies in the interval (closed from the right) between the value of the lower quartile and the median value.

B 1.4 Indicators of risk and capital adequacy for banks and branches of foreign banks and their distribution in the banking sector

Calculation of individual indicators:

- *Share of defaulted loans in the total volume of loans to customers* = the share of the gross value of non-standard, doubtful and loss-making loans to customers in the total gross value of loans provided, (Source: V (NBS) 33 – 12)
- *Share of provisions in the volume of defaulted loans* = the share of provisions created in the gross value of non-standard, doubtful and loss-making loans, (Source: BD (ZPZ) 1 – 04)
- *Large asset exposure (weighted) / own funds* = share of weighted large asset exposure to own funds; according to the Banks Act this share may not exceed 800% (Act No 483/2001 Coll. 39(2); does not concern branches of foreign banks, (Source: BD (HMA) 8 – 12, part C)
- *Large asset exposure within groups* – monitors the number of breaches of limits set by the Banks Act (§39(1)) as at the end of individual months, does not concern branches of foreign banks, (Source: BD (HMA) 8 – 12, part A and B)

- *Share of the claimable value of security in the total volume of defaulted loans to customers* – the indicator does not include banks that pursuant to §8 of NBS Instruction No 13/2004 have not classed receivables into individual groups due to the creation of provisions on a portfolio basis according to International Accounting Standards, (Source: BD (ZPZ) 1 – 04)
- *Forex open balance-sheet position / own funds* = share of the difference between assets and liabilities held in a foreign currency in own funds, (Source: Bil (NBS) 1 – 12)
- *Forex open off-balance-sheet position / own funds* = share of the difference between off-balance-sheet assets and liabilities (with the exception of redistribution and registration accounts and receivables/payables in entrusted funds) held in a foreign currency in own funds, (Source: Bil (NBS) 1 – 12)
- *Total open forex open position / own funds* = share of the sum of balance-sheet and off-balance-sheet forex position in own funds; a positive value for the forex position means a risk of loss from an appreciation of the domestic currency, (Source: Bil (NBS) 1 – 12)
- *VaR / own funds* = the share of a loss from a change in exchange rates, the value of which should not over the course of one day, on the basis of an historical simulation (for the period of one year), be exceeded, with a 99% probability, to own funds, (Source: M (NBS) 4 – 12)
- *Total open interest-rate position / own funds* = share of the difference between assets and liabilities with interest rate fixation or with a residual maturity shorter than the given time period (1 month, 1 year, 5 years) in the total volume of own funds, (Source: BD (HUC) 53 – 04, BD (HKR) 1 – 04)
- *Share of immediately liquid assets in highly volatile funds:* Immediately liquid assets include funds in cash and purchased NBS bills and Treasury bills other than Treasury bills held to maturity and current-account balances at central and other banks. Highly volatile funds include current accounts of central and other banks, current accounts and other non-term deposits of customers and all general government deposits, (Source: Bil (NBS) 1 – 12)
- *Share of liquid assets (including collateral from reverse repo trades) in volatile funds*: Liquid assets other than immediately liquid assets include securities received from a reverse repo trades, Treasury bills held to maturity and all purchased government bonds; their value however is reduced by pledged securities and collaterals provided in repo trades. Volatile funds include also customers' term deposits, (Source: Bil (NBS) 1 – 12, V (NBS) 8 –12)
- *Fixed and illiquid assets indicator* – the share of fixed and illiquid assets in selected liability items; according to NBS Instruction No 3/2004 this indicator may not exceed the value 1 (does not concern branches of foreign banks), (Source: BD (LIK) 3 – 12)
- *Share of loans in deposits and issued securities*, (Source: Bil (NBS) 1 – 12)
- *Total liquidity position / assets* = share of the difference between assets and liabilities in a given time period (up to 7 days, or up to 3 months) in the balance-sheet total. The calculation of the indicator does not include balance-sheet items on which a right of lien is established. Likewise, the calculation does not include off-balance-sheet items other than commitments to accept/provide credit and the values of underlying instruments in the spot and futures operations (but only those in which the underlying instrument is a financial asset that is exchanged for this underlying instrument), (Source: BD (LIK) 3 – 12)
- *Capital adequacy* = the share of own funds in risk-weighted assets (may not fall below the 8% limit), (Source: BD (HKP) 1 – 12, BD (HKR) 1 – 04)
- *Share of Tier I in own funds* = the share of registered capital less the respective part of items of reducing the value of registered and additional capital in the total volume of own funds, (Source: BD (HKR) 1 – 04)
- *Share of own funds in the balance-sheet total*, (Source: BD (HKR) 1 – 04)

- *Share of the possible loss in own funds in reaching 8% capital adequacy* = the share of the loss caused by a fall in the value of the capital adequacy indicator to 8%, in the total volume of own funds, (Source: BD (HKP) 1 – 12, BD (HKR) 1 – 04)

B 2 Insurance companies

Commentary to calculation of concentration indices:

CR3 index – the share of the three banks with the highest volume of the given item in the total volume of the given item in the banking sector, where only those institutions for which the value of the given item is positive feature in the calculation

CR5 index – the share of the five banks with the highest volume of a given item in the total volume of the given item in the banking sector, where only those institutions for which the value of the given item is positive feature in the calculation

Herfindahl index (*HHI*) – defined as the sum of the square of the shares of individual banks in the total volume of a given item expressed in percent, where only those institutions for which the value of the given item is positive feature in the calculation.

The *HHI* value may be interpreted, for example, as a concentration in a given item being equal as if there were 10 000 / HHI institutions each of which having the same volume in the given item. According to the US Department of Justice definition a market is deemed highly concentrated if the *HHI* exceeds 1800 and not concentrated if the *HHI* value is below 1000.

B 2.1 Net profit and profitability indicators for insurance companies

Gross operating costs to written premium – acquisition costs for insurance policies + administrative overheads + change in the balance of the level of transferred acquisition costs for insurance policies

Calculation of individual indicators:

ROA = share of the cumulative value of net profit to the current value of net assets

ROE = share of the cumulative value of net profit to the current value of own funds; branches do not feature in the calculation

B 2.5 Loss ratio in non-life insurance

Loss ratio is defined as the proportion of insured events happened, reported and unreported, to the earned premium

Loss ratio = (the sum of costs for insured events and changes in reserves for insurance indemnity) / (written premium – change in reserve for premium in future periods)

B 5 Securities dealers

Terms used:

IS-1 – the acceptance of a customer's instruction for the acquisition, sale or other handling of investment instruments and the subsequent forwarding of the customer's instruction for the purpose of its execution.

IS-2 – the acceptance of a customer's instruction for the acquisition, sale or other handling of investment instruments and its execution on another account or on the account of the service provider.

IS-3 – the acceptance of a customer's instruction for the acquisition, sale of an investment instrument and its execution on the own account.

B 6 Stock exchange

The source of data is the monthly Stock Exchange statistics.

9 Terminology and abbreviations

Terminology used

Households – the population, i.e. individuals' accounts

Retail – households, sole traders and non-profit companies serving prevailingly households

Enterprises – non-financial companies

Non-banking financial companies (NBFCs) – other financial companies, financial intermediaries, pension and mutual funds, insurance companies

General government – central and local government bodies

Quick liquidity ratio – immediately liquid assets / highly volatile funds

Total net position - defined as the sum of the net balance-sheet position and net off-balance-sheet position

CR n index – the concentration of the *n* largest banks, i.e. the sum of the shares of their assets in total assets.

Net balance-sheet position - defined as the difference between forex assets and liabilities in the balance sheet.

Net off-balance-sheet position - defined as the difference between forex assets and liabilities in the off-balance sheet.

Cost-to-income ratio – defined as the share of total operating costs and net income from banking activity (purchased performances + staff costs + social costs + depreciation of tangible and intangible assets + taxes and fees / revenues from shares and ownership interests + net income from fees and commissions + net income from the securities operations + net income from derivatives operations + net income from the forex operations + net income from other operations)

Household disposable income – is calculated as the sum of the components of gross personal income of all household members (gross financial income from employment and closely related incomes, and gross non-financial income from employment, gross financial gains or losses from self-employment (including royalties and fees), unemployment benefits, older-page pension benefits, the survivor's pension benefits, sickness benefits, invalidity benefits and contributions for education) plus components of the gross income at the household level (income from rented assets or land, family benefits and contributions paid to families with children, the social exclusion not classified elsewhere, housing benefits, regularly received financial transfers between households, interest, dividends, profit from capital investments in a non-registered business, income of persons younger than 16 years of age less regular property taxes, regular paid financial transfers between households, income tax, and social insurance contributions).

Long position – a position in which assets are greater than liabilities.

Herfindahl index – defined as the sum of the squares of the shares of individual banks' assets in total assets.

Short position – a position in which liabilities are greater than assets.

Cumulative gap – the sum of open positions (long or short) in certain time bands.

Liquidity up to 7 days and up to 3 months – the share of liquid assets and volatile funds, where liquid assets include cash in hand, the bank's current accounts at other banks and all Treasury bills and government bonds on which no right of lien is established, including those that the bank acquired in reverse repo trades, all claims against customers and banks with a residual maturity of up to 7 days, or up to 3 months and volatile funds are the sum of payables towards banks and customers up to 7 days, or 3 months.

Liquidity cushion – defined as the sum of cash in hand, government bonds, Treasury bills and NBS bills, loans to foreign banks,

deposits at the NBS and the volume of assets on the domestic interbank market after deducting banks' payables towards the NBS, foreign banks and the ARDAL public debt & liquidity management agency.

Loan-to-deposit – the share of loans to customers and the sum of deposits from retail, enterprises and financial companies plus issued mortgage bonds.

Loan-to-value ratio – defined as the proportion of the volume of a provided loan and the value of its security

Default rate – expresses the percentage of loans defaulting over the period monitored

Household size – is calculated as the weighted number of household members, where the first adult person has a weighting of 1, other adult persons and persons aged at least 14 years have a weighting of 0.5 and persons younger than 14 years of age have a weighting of 0.3.

Defaulted loans – loans in the case of which the bank has identified a devaluation of more than 50% or where the debtor is in more than 90 days' arrears with payment.

List of insurance categories

A - life insurance

1. Whole-life insurance, pure endowment insurance or whole-life and endowment insurance (A1)

2. Child's deferred insurance, insurance of funds for child's maintenance (A2).

3. Insurance connected with capitalisation policies (A3)

4. Insurance according to points 1 and 3 connected with an investment fund (A4).

5. Pension insurance (A5)

6. Accident or sickness insurance, if it is an additional insurance according to a type stated in points 1 to 4 (A6).

B - non-life insurance

1. Accident insurance (B1)

2. Sickness insurance (B2)

3. Non-rail land vehicle-hull insurance (B3)

4. Rail vehicle-hull insurance (B4)

5. Aircraft insurance (B5)

6. Watercraft insurance (B6)

7. Transportation and baggage insurance (B7)

8. Insurance of property other than that stated in points 3 to 7, caused by fire, explosion, storm, natural hazards other than storms, nuclear energy, land slippage or subsidence (B8)

9. Insurance of other damage to property than that stated in points 3 to 7, arisen through hailstorm or freezing, or other causes (e.g. theft), unless these causes are included in point 8 (B9)

10.a) Automobile liability insurance (B10a)

10.b) Carrier liability insurance (B10b)

11. Liability insurance for ownership or use of aircraft, including carrier's liability (B11)

12. Liability insurance for ownership or use of watercraft, including carrier's liability (B12)

13. General liability insurance for damage other than stated in points 10 to 12 (B13)

14. Credit insurance (B14)

15. Surety insurance (B15)

16. Insurance of various financial losses resulting from performing an occupation, from insufficient income, from poor weather conditions, from loss of profit, from permanent general costs, from unexpected business expenditures, from loss of market value, from loss of regular income source, from other indirect commercial financial loss and other financial losses (B16)

17. Legal protection insurance (B17)

18. Travel assistance insurance (B18)

Abbreviations

AT Austria
BE Belgium
CY Cyprus
CZ Czech Republic
DE Germany
DK Denmark
EE Estonia
ES Spain
FI Finland
FR France
GR Greece
HU Hungary
IE Ireland
IT Italy
LT Lithuania
LU Luxembourg
LV Latvia
MT Malta
NL Holland
PL Poland
PT Portugal
SE Sweden
SI Slovenia
SK Slovakia
UK Great Britain
EU European Union
MU Monetary Union