



NÁRODNÁ BANKA SLOVENSKA

**Report on the Results  
of the  
Slovak Financial Sector Analysis  
for 2005**



# Introduction

The analysis is divided into two parts. The first is an analysis of the financial sector as at 31 December 2005 itself, which, as far as the banking sector is concerned, follows on from the analysis conducted as at 30 June 2005, and which for the insurance sector and other financial market institutions, relates to the 2004 and 2005 reports published by the Financial Market Authority (UFT). The second part focuses on a specific subject meriting special attention. Both parts of the analysis are drawn from several information sources.

Financial information on particular institutions is primarily obtained from the banking supervision information system MIM, the system STATUS, and documents processed by the NBS's Section for Supervision of Capital Market, Insurance, and Pension Savings. Additional sources included the Statistical Office of the Slovak Republic (ŠÚ SR), Eurostat, the European Central Bank (ECB), and other external sources and commercial information systems. The document includes a summary and definitions of the most important terms.

The banking sector is the main focus of the analysis, as befits its position. Besides evaluating fundamental trends, this part of the analysis addresses the risks to which banks are exposed. As far as other sectors are concerned, the analysis is more aimed at evaluating the fundamental structural changes. Data for an in-depth risk-oriented analysis of these sectors is not available for 2005.

The logical structure, definition of terms and overall character of the analysis is inspired by analyses made by several central banks of European Union (EU) Member States and by the ECB. Unless stated otherwise, all financial amounts are given in SKK.



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## Analysis summary

The Slovak financial sector reported positive trends in 2005. There was a year-on-year volume increase in both assets and assets under management. The change in individual sectors as a share of the overall financial sector reflected the decline in interest rates as well as other factors. Despite a falling share, the banking sector retained its dominant position and accounted for as much as 84% of the total assets and managed assets in the financial sector. Interest in collective investment and pension savings increased, and the insurance sector also reported growth.

The profits of financial market institutions increased, as did the returns on managed assets. Both the banking sector and insurance sector were more profitable in comparison with 2004. There was performance improvement in selected collective investment funds, especially riskier funds.

As regards the banking sector, the most important financial market sector, it had a favourable situation in 2005 with sectoral trends influenced by the positive economic development. The volume of assets under management increased, their structure was transformed, and the banking sector's profit rose.

Strong economic growth and an improving financial situation in certain economic sectors resulted in a greater volume of client loans. The positive trends were apparent in the increased lending in almost all sectors. The growth was influenced above all by household lending. There was also a significant rise in the volume of lending to the corporate sector and non-banking financial companies. In December 2005, client loans accounted for 38% of banks' assets.

Although securities held by banks increased in volume over the year, they fell as a share of banks' assets. Banks owned mainly government securities, and this holding increased slightly in volume from the beginning of the year. There was also a volume rise in banks' holdings of mortgage bonds, bonds issued by foreign banks, and equity securities. On the other hand, the holdings of corporate bonds and Treasury bills declined.

Funds from foreign banks continued to increase in 2005, both in absolute and relative terms. Nevertheless, it is essential for the sector's stability that the majority of banks have at their disposal domestic funds from clients, which are sufficient to finance lending growth. In Slovakia, in contrast with the banking sectors of certain new EU Member States, the financing of client loans with funds from foreign banks has not yet been necessary to any great extent. As for client funds themselves, they increased in comparison with the beginning of the year. Household deposits, representing the main component of liabilities (especially of large and medium-sized banks), fell during the course of the year until December, when they rose back sharply to January's level. Banks licensed to provide mortgages continued to raise funds from mortgage bond issues. The volume of funds raised from bank bonds other than mortgage bonds also rose.

The volume of funds that the NBS sterilized, either in its own accounts or through the issue of NBS bills into the banks' portfolio, increased substantially, especially in the first half of 2005. The sterilization measures were primarily related to NBS interventions in the foreign-exchange market, the aim of which was to prevent excessive appreciation of the Slovak koruna against the euro. Appreciating pressure on the domestic currency was induced also by the inflow of short-term foreign funds supported by expectations for koruna strengthening and by the interest rate differential between rates on foreign interbank markets and the NBS rate on sterilized funds. A significant part of the sterilized funds comprised funds of the Agency for Debt and Liquidity Management (ARDAL). As an average

share of total banking sector assets in 2005, banks' assets invested in the NBS stood at 31.6% and interest revenues from the NBS accounted for 22% of total interest revenues in the banking sector.

The banking sector made a net profit of SKK 13.9 billion for 2005, up by 13% year-on-year. The decline in net interest income was offset by non-interest income, notably the rise in net income from fees and from trading in financial instruments. The household sector's importance to banking sector profitability increased: whereas the net interest margin declined year-on-year in the corporate, financial company and interbank operation sectors, it rose slightly in the retail sector.<sup>1</sup> The profit reported by certain banks was significantly affected also by other facts, for example, the net creation of reserves or provisions in December 2005.

In 2005, banks held enough capital to cover potential risks arising from their business activities. The level of capital adequacy declined during 2005, mainly due to the substantial increase in lending on the asset side and therefore in risk-weighted assets. Although on a downward trend, the capital adequacy ratios in the Slovak banking sector are some of the highest among EU banking sectors.

The banking sector's exposure to risks remained basically unchanged in 2005. Profitability growth and satisfactory capital adequacy created the expectation that banks could cope with possible risks.

The most important financial risk to which banks were exposed in 2005 was credit risk. Amid the dynamic growth in household lending, the related credit risk is a key issue. Despite the increase in household debt, the continuing positive macroeconomic development makes it possible to expect that households will, for the time being, be able to pay their liabilities and there will not therefore be a significant impairment in the quality of banks' credit portfolios. Households are generating sufficient income and hold a high volume of financial assets. What does appear risky is the increasing competition between banks and the relaxing of the standards under which loans are provided, since this could result in lending to riskier household categories. Another potential risk is the growing interest rate sensitivity of households, especially their capacity to cope with an increase in the interest burden following a rise in interest rates.

The positive macroeconomic development is also reflected in corporate sector risk. Although the volume of loans increased, the corporate sector debt ratio hardly changed at all. The default rate for corporate loans remained stable during the course of 2005. This positive development was seen in the better quality of the corporate credit portfolio. It remains to be seen what effect exchange rate fluctuations will have on enterprises' foreign exchange positions and competitiveness, and therefore their credit risk. As with households, the growth in corporate lending and competition between banks could lead to the credit risk of banks' corporate clients being underestimated.

Most banking assets are placed in risk-free investments, in NBS and government bonds. That said, holdings of riskier securities increased slightly in 2005 and this trend will probably continue in coming years given the banks' falling interest margins.

The banking sector had a low level of direct exposure to market risks.

The foreign exchange risk of the banking sector in terms of banks' open foreign exchange positions was not significant in 2005. The banks' foreign exchange position was affected mostly by funds from foreign banks, reflected in the growth in foreign exchange loans or in the creation of an open short foreign exchange position on the balance that was hedged by off-balance-sheet derivative transactions. Most of the increase in funds from foreign banks came from the branches of foreign banks. In several banks, an open foreign exchange position was created, especially through the foreign exchange positions arising from receivables and liabilities from guarantees and liabilities on future loans.

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<sup>1</sup> Retail – the sector of households, sole traders and non-profit organizations serving households.

Likewise there was a low interest rate risk in terms of open interest rate positions. The banks' interest rate positions were mostly closed, which mitigated the adverse effects of interest rate fluctuations.

The liquidity risk in the banking sector in 2005 was largely affected by the change in the time structure of assets and liabilities. In most banks, the total volume of sight deposits and their share of deposits increased. On the other hand, due to competition, the trend of long-term lending to households (mostly for housing) continued and the maturity on corporate loans was partially extended. Receivables against clients as a share of total assets rose in 2005, from 34% to 38%, and partially replaced the more liquid government bonds, whose share of assets fell from 16% to 14%. Interbank market funds, which in most EU countries represent a liquidity cushion, accounted for only between 2% and 5% of total assets. As regards the majority of short-term funds, the banks either placed them in sterilization repo tenders with the NBS or used them to purchase NBS bills; a large part of the sterilized volume comprised short-term deposits of foreign banks.

The banking sector also reported relatively high stability in simulations of how banks would be affected by exceptional but plausible changes. Banks proved most vulnerable under scenarios involving a significant impairment of their credit portfolio, and were less vulnerable to exceptional changes in market factors.

In the insurance sector, written premiums, the most important tracked indicator, increased by 7.5% in 2005 to reach SKK 52 billion. This was the lowest increase since tracking began in 1993 and it was caused by a sharp decline in growth in non-life insurance, to 3.4%. On the other hand, the increase in life insurance accelerated to 13.6%, favourably affected by a tax allowance introduced in 2005. Despite this, non-life insurance still dominated the Slovak insurance market with a 58% share of total written premiums. In the insurance markets of advanced European economies, by contrast, life insurance is dominant. Non-life insurance consists mainly of motor insurance with compulsory contractual insurance of motor vehicles and motor accident insurance altogether accounting for 68% of non-life written premiums.

Consolidation of the insurance market is continuing, though last year it was only reflected in the movement of insurance stock between insurance companies, and not in mergers of insurance companies. Allianz's market share in written premiums fell to 36.5%, continuing a downward trend from a share of 81% in 1995.

Insurance benefit expenses declined (for the first time since tracking began in 1996) by 1.4% to stand at SKK 17 billion. While these expenses increased in life insurance, they fell in non-life insurance by 9%. The decrease in the loss burden amid the current (albeit relatively slight) increase in written premiums was positively expressed in the total profit made by insurance companies, which grew by 42% year-on-year to SKK 3.1 billion.

The technical reserves of insurance companies as at 31 December 2005 amounted to SKK 84 billion for year-on-year growth of 15%. As regards the placement of technical reserves, there were no significant changes and they continue to be placed in low-risk assets. In fact, 51% of them are invested among Slovak Government bonds, bonds issued by other EU Member States, the NBS and other central banks, bonds guaranteed by the Slovak Government, and bonds issued by the European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD) and the International Bank for Reconstruction and Development (IBRD). A further 39% are either invested in listed bonds or deposited in bank time accounts.



The number of foreign entities operating as a securities dealer and conducting business in Slovakia under the single European licence system increased significantly in 2005, with the licensing process having been simplified following Slovakia's accession to the EU. However, transactions for clients continued to be performed almost exclusively by banks and registered a decline in volume over the course of the year. Most of the trading involved forward transactions and money market instruments. The volume of managed assets fell slightly. The capital adequacy of Slovak securities dealers met the prescribed minimum with a sufficient reserve.

In the collective investment sector, the net value of assets managed in open-end mutual funds increased by 78% during 2005 and there were also changes in their structure. Investors gradually began depositing their new money into riskier funds. Whereas in 2004 the biggest-selling funds were monetary funds, in 2005 they were initially bond funds and by the end of year share funds and funds of funds. High yields on foreign stock exchanges supported sales of foreign share funds, whose market share increased in 2005 from 13% to 17%.

The implementation of pension reform was launched in 2005. The pension fund management companies began to collect the first contributions to pension accounts and by the end of the year had assets of SKK 9 billion under management. All the fund management companies made a loss due to the high input expenses and the fact that a small volume of savings were managed in the first year of the new pension system. Most savers opted for riskier funds with the long-term appreciation expected to be higher.

#### **Box 1 Macroeconomic environment**

Financial sector stability was substantially supported by the macroeconomic environment.

The Slovak economy's positive trends continued in 2005, creating favourable conditions also for the financial sector. For 2005, Slovakia's economic growth in constant prices represented 6.1 %, a pace that surpassed that of several neighbouring countries. The GDP dynamics reflected the development of domestic demand, within which gross fixed capital formation reported the main increase.

As regards households, employment began to rise and income continued to increase. Real wages registered substantial growth in comparison with previous years. Consumer perceptions of the economy also picked up, and this fact along with the positive macroeconomic development and wide range of bank credit services, was reflected in lending growth. The corporate sector also reported positive trends and an increase in profitability.

In 2005, the National Bank of Slovakia reduced interest rates from 1 March. By the end of the year, however, expectations for an interest rate rise were prevalent. Long-term interest rates also declined in 2005, except in the last quarter.

During 2005, the domestic currency reported volatile development against the EUR and depreciated against the USD and CZK. In November 2005 Slovakia entered ERM II.

The global economic environment also progressed positively. Improved economic performance was reported by the United States and Asian countries, though euro area countries had lower economic growth.

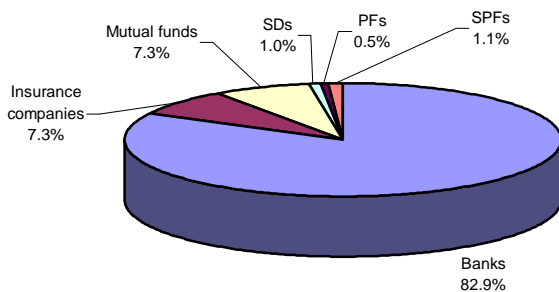
Rising oil prices continued to have an adverse effect, heightening fears for global economic development. The markets were influenced by low interest rates and high liquidity.

# Basic characteristics of the Slovak financial sector in 2005

## Development of the Slovak financial sector

In 2005, the Slovak financial sector comprised banks, insurance companies, asset management companies (collective investment), pension fund management companies and securities dealers (SDs). The volume of assets managed by financial market institutions in 2005 amounted to SKK 1,697.3 billion. Year-on-year, the financial sector grew by 23%.

**Chart 1 Financial institutions by share of assets and managed assets of the financial sector in 2005**



- source: NBS
- for banks and insurance companies, the share is evaluated by net assets, and for other sectors, by value of managed assets
- SDs – non-bank securities dealers
- PFs – pension funds
- SPFs – supplementary pension funds

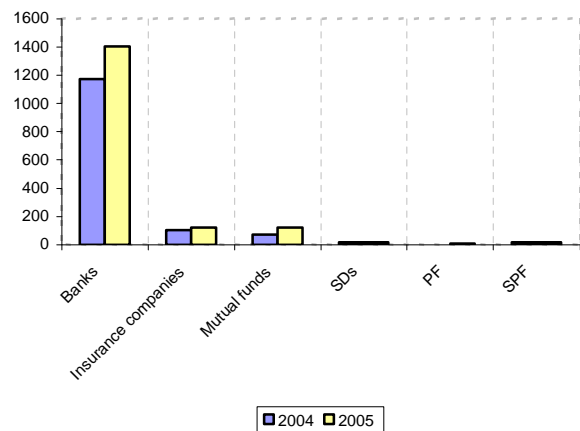
The banking sector had a dominant position in the Slovak financial market in 2005. As at December 2005, it held assets worth SKK 1,404 billion, representing 83% of the assets and managed assets in the financial sector (Chart 1). The significant position of the banking sector is the result of an historical development in which banks functioned as the principal financial intermediary. The model based on a dominant banking sector is typical in most European

economies<sup>2</sup>. At the same time, the banking sector recorded the highest volume increase in assets year-on-year. Nevertheless, the banks' share of financial sector assets declined slightly (from 85% in 2004).

Insurance companies were the second most important component of the financial sector, accounting for 7.3% of its assets and managed assets. The volume of assets held by insurance companies increased by 17%.

Collective investment through mutual funds has had a growing position in recent years. Mutual funds as a share of the financial sector increased from 5.3% in 2004 to 7.4% in 2005. This growth is mainly related to low interest rates in financial markets and clients' efforts to earn higher interest on disposable funds by means of riskier investments.

**Chart 2 Volume of assets managed by financial institutions**



- source: NBS
- the data represent the net asset value of the individual sectors in SKK billion
- SDs – non-bank securities dealers
- PFs – pension funds
- SPFs – supplementary pension funds

<sup>2</sup> In the US, by contrast, direct financial intermediation is dominant – clients acquire funds or invest surplus money directly in financial markets.

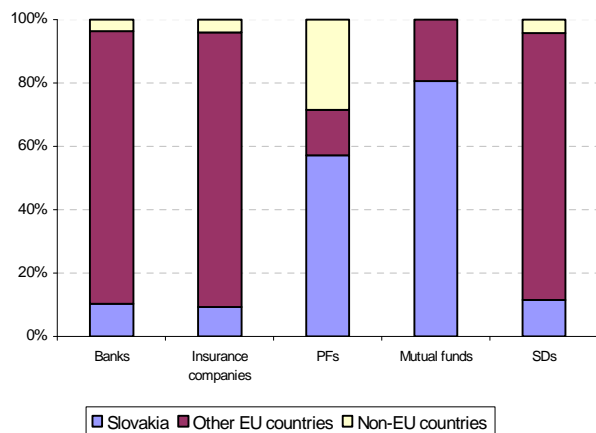
Non-bank securities dealers have a relatively small share of managed assets. Their share declined year-on-year despite a slight increase in the volume of managed assets.

Pension fund management companies, being a new type of business, had the lowest share of managed assets in the Slovak financial sector, less than one percent of the total volume. They are, however, reporting high growth and may be expected to increase their share in coming years.

### Ownership structure of the financial sector

Institutions of the Slovak financial sector are to a large extent owned by foreign institutions, predominantly from EU Member States.

**Chart 3 Foreign and domestic investors by share of registered capital of financial institutions in 2005**



- source: NBS
- share of foreign owners refers to the share of the primary owner
- data for insurance companies are from 2004

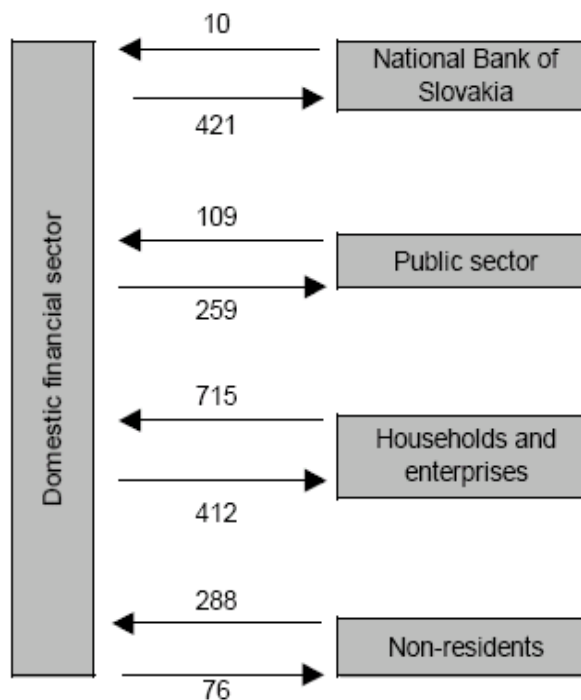
Slovak capital has a generally low share of the financial sector's own funds. Its only notable share is in asset management companies and pension fund management companies. However, there is a low share of Slovak capital even in these companies, since it is the primary owners that are surveyed and in several cases the primary

owners are domestic institutions owned by foreign capital.

### Financial intermediation

Since the main function of the financial sector is financial intermediation between entities that have funds at their disposal and entities that require capital, the depiction of these relationships indicates the character of the respective financial sector (Table 1).

**Scheme 1 Relationships in the financial sector and other sectors in December 2005**



- source: NBS
- data are in SKK billion

Funds acquired by the financial sector came mainly from real economic entities. At the end of 2005, the balance of deposits of the household sector, corporate sector and public sector in the financial sector stood at SKK 857 billion. Most of this amount (SKK 704 billion) was placed in banks. The volume of financial sector funds placed in the real economy came to approximately SKK 466 billion. The financing of

individual sectors of the real economy was performed exclusively through banks.

The financial sector's very important transactions were those made with the NBS. In 2005, the average deposit of domestic banks in the NBS stood at SKK 421 billion. There was minimal financing of financial sector entities through the NBS.

In regard to foreign financial entities, financing was dominated by the inflow of funds from foreign banks through domestic banks (the average for 2005 was SKK 270 billion). In the other direction there was mainly lending from domestic banks to foreign banks (on average SKK 39 billion).

The main economic entities (households, enterprises and public sector) keep a substantial part 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 total assets managed by financial market institutions (Charts 1 and 2).

The financial sector is also receiving money through mutual funds, whose popularity in Slovakia has risen in recent years, not least because of the decline in interest rates. Fund holders are mostly households that have reacted against the low interest on bank deposits. Households also keep some of their financial assets in the form of life insurance and pension savings.

**Table 1 Selected financial relationships between economic entities (average is for 2005)**

in SKK billion	NBS	Domestic financial sector					Domestic non-financial sector			Non-residents			
		Domestic banks	Insurers	PFs and SPFs	Mutual funds	Other	Households	Corporates	General government	Non-resident banks	Non-resident mutual funds	Non-resident general government and international institutions	Other
NBS		5				5	0.2	0.1		154		276	71
Domestic banks	421	38	0.04		0	42	142	270	259	39		4	33
Insurers		31			1.1								
PFs and SPFs		18											
Mutual funds		0.1											
Other		20											
Households	0.5	355	26	26	91								
Corporates	0.3	216	26		0.8					22			
General government	20	108			0.7								
Non-resident banks	19	270											
Non-resident mutual funds													
Non-resident general government and international inst.	1	18											
Other													

No direct relationship

Data not available

- source: NBS
- data are in SKK billion
- PFMC – pension fund management company
- SPIC – supplementary pension insurance company
- AMC – asset management company
- **rows:** financial assets (loans, provided deposits and securities) invested in the institutions in the columns
- **columns:** liabilities (deposits and received loans) towards institutions in the rows
- the breakdown of written premiums for households and other counterparties is a generalization
- data on the relationships of non-bank financial institutions and their relationships with the non-financial sector pertain to December 2005

The importance of banks within the financial sector is highlighted by the fact that other financial market institutions, including insurance companies and foreign banks, have investments in them. Banks may therefore mediate financial flows not only between real economic entities and the financial sector but also between individual financial institutions.

Insurance companies have a special place in the financial system since their insurance activities provide the most basic level of economic stability. In addition, they offer households the opportunity of long-term investment in the form of life insurance, which accounts for the majority of written premiums in the household sector.

Table 1 gives a schematic view of household financial assets. Besides standard bank deposits and life insurance, mutual funds are a significant item. On the basis of their share in domestic

funds, households may be assumed to have a high share in foreign funds. At present, pension savings account for the smallest volume of household financial assets, though their position will increase significantly as the pension reform is gradually implemented.

Table 1 also includes fields indicating where a financial relationship exists between entities but for which data is not available. A typical example is the activity of foreign banks and foreign asset management companies – it may be rightly assumed that a specific link exists although no detailed data is available.

The relationships between households, enterprises and public sector are not addressed in the analysis of the financial sector and therefore this data is not given in the lower right section of the table.

# 1 Banking sector

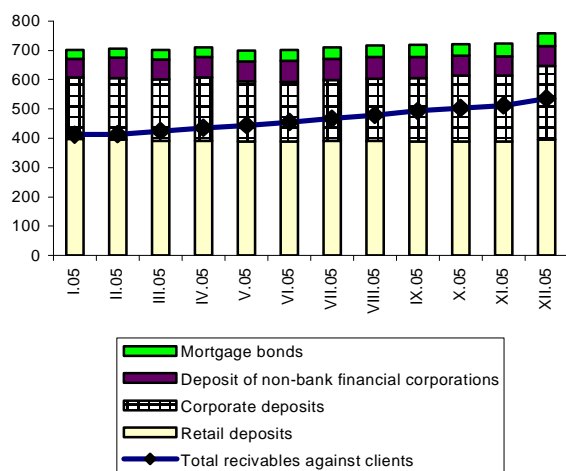
## Main changes and trends in liabilities

Although funds from foreign banks rose as a share of total liabilities during 2005, from 14% to 22% (SKK 302 billion), it is significant for the analysis of liabilities that a majority of banks have at their disposal domestic funds from clients, which are sufficient to finance lending growth. In Slovakia, in contrast with the banking sectors of certain new EU Member States, the financing of client loans with funds from foreign banks has not yet been necessary to any great extent.

While client funds as a share of total liabilities fell from 66% to 60%, their volume increased (from SKK 795 billion to SKK 842 billion), especially due to deposits of enterprises and non-residents. Household deposits, representing the main component of liabilities (especially of large and medium-sized banks), fell during the course of the year until December, when they rose back sharply to January's level. Therefore a clear trend of household deposits being transferred from banks to other financial institutions cannot be confirmed.

Banks licensed to provide mortgages continued to issue mortgage bonds. The volume issued in 2005 was less than in 2004 (SKK 12.6 billion compared to SKK 14.9 billion), and the development of mortgage bond volume in the second half of 2005 had a somewhat concave curve. Four banks issued bonds other than mortgage bonds.

**Chart 4 Client deposits and financing of loans**



- source: NBS
- amounts in SKK billion
- public sector deposits are not included in the chart since ARDAL accounts for most of them.

Even with a very prudent approach (deducting around SKK 80 billion of ARDAL short-term deposits and the total of all receivables against clients), the banking sector as a whole is able to provide for banking activities from domestic

funds. Banks use foreign exchange funds from foreign banks more for closing positions in regard to the provision of foreign exchange corporate loans; unlike the situation in, for example, the Baltic countries, they do not use them to cover shortages in deposits (Box 2).

## Client funds

Liabilities towards clients represented the main item of the banking sector's liabilities in 2005. Although they increased during the year, they fell as a share of total liabilities, from 66% to 60%.<sup>3</sup> It is also seen in the weighted average deposits-to-loans ratio<sup>4</sup>, which declined from 170% at the beginning of the year to 143%. This ratio has so far confirmed the sufficiency of the domestic client funds needed to finance further

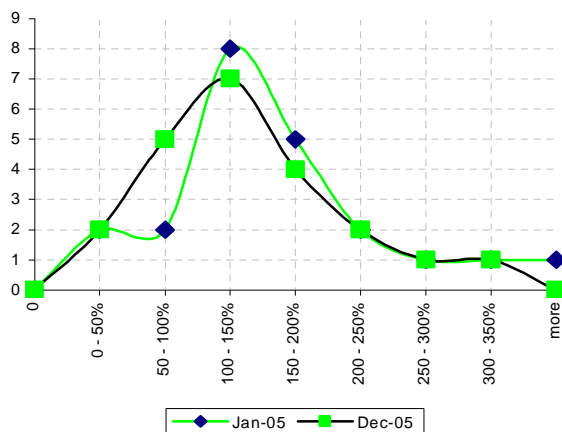
<sup>3</sup> This trend has continued since 2004 which began with this share at more than 70%.

<sup>4</sup> The deposits-to-loans ratio is defined as the ratio of the sum of total deposits (retail, corporate, financial company, public sector other than ARDAL) and issued bonds to loans (retail, corporate, financial company and public sector).

lending growth and has not as yet threatened dependence on funds from abroad.

The deposits-to-loans ratio fell year-on-year in 16 banks.

**Chart 5 Distribution of deposits-to-loans in the sector**



- source: NBS  
 - vertical axis: number of banks

**Retail deposits**

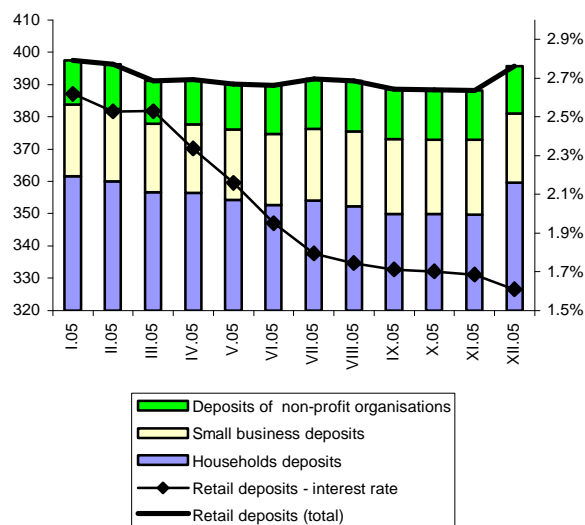
A continuing trend in 2005 was the decline in time and savings deposits (especially in foreign currency) and the growth in non-time deposits. Unlike in previous analyses, a continual decline in retail deposits cannot be identified: they rose in December by 10 billion to SKK 396 billion (compared to 397 billion in January). The turnaround came in time accounts, which rose slightly in December after 11 months of decline. Combined with long-term growth in current accounts, which up to then had merely been mitigating the decline in time deposits, this brought about a substantial increase in total retail deposits.

It should be noted that this increase was caused solely by household deposits, which by the year-end had increased in all large and medium-sized banks and also, given the state bonus, in building societies.

In building societies, this phenomenon is clearly seasonal, though not so in other banks.

During the same period in 2004, these deposits stagnated or declined. The growth in such deposits cannot be explained by interest rates, and nor is it related to the increase in lending (rather linear), which could have been reflected in the account balances designated to be drawn on. Apart from that, an increase in household investments in mutual funds meant that it did involve the transfer of funds to banks, either. The only but not complete explanation is the slight decline of household deposits in money market mutual funds.

**Chart 6 Structure of retail deposits**



- source: NBS  
 - amounts are in SKK billion  
 - left vertical axis: volume of deposits, beginning from SKK 320 billion  
 - right vertical axis: average interest rate in percent

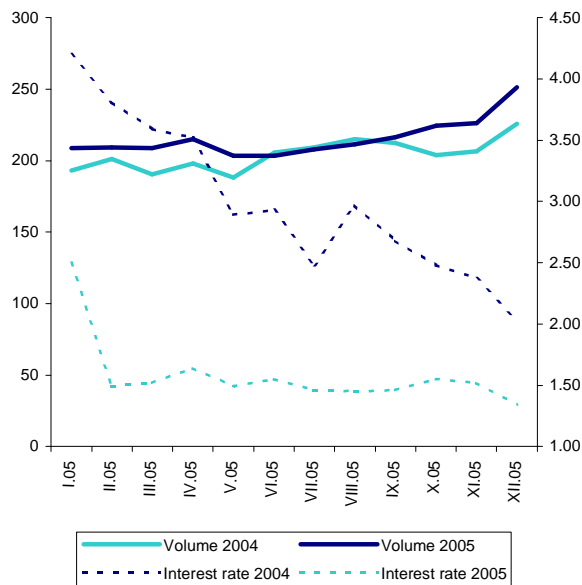
**Funds of non-financial companies**

Deposit account balances of non-financial companies increased slightly in 2005 and continued to be the second most significant item of client deposits.

Their development indicates certain seasonality – the volume of corporate deposits is highest in December. In both 2004 and 2005, the December figure was higher than the average for the other 11 months, by 18% and 11%

respectively. The growth in corporate deposits occurred mainly in non-time koruna deposits.

**Chart 7 Volume of deposits and related interest rates**



- source: NBS
- amounts are in SKK billion
- left vertical axis: volume of deposits in SKK billion
- right vertical axis: average interest rate in percent

A comparison with the development in 2004 indicates the weak correlation between the volume of corporate deposits and the development of interest rates. Doubts about their effect are also raised by the growth in foreign exchange deposits.

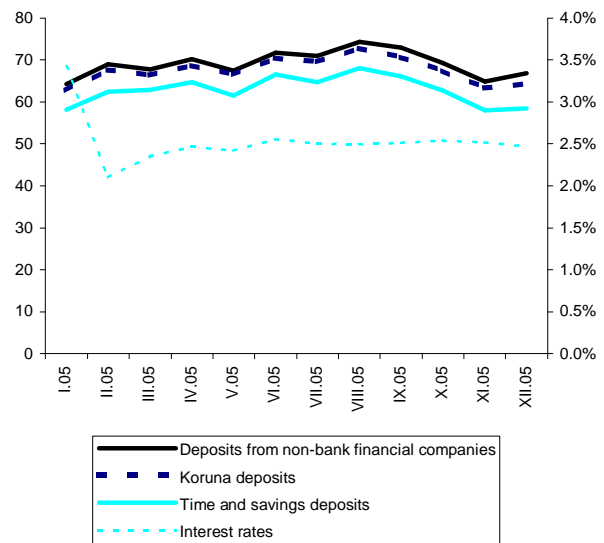
The rise in volumes of household and corporate deposits at the end of the year (up in total from SKK 576 billion in November to SKK 611 billion in December) appears to be a consequence of the overall increase in liquidity in the real economy.

### Deposits of non-bank financial companies

Deposits of financial companies have a distinctive character in comparison with corporate deposits. The majority of funds of financial companies are placed in time and

savings deposits and almost all of them are denominated in Slovak koruna (Chart 8).

**Chart 8 Structure of financial company deposits and interest rates**



- source: NBS
- amounts are in SKK.
- left vertical axis: volume of deposits
- right vertical axis: average interest rate in percent

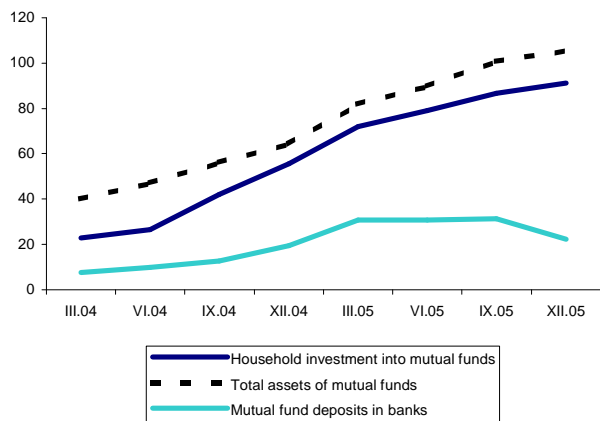
Funds deposited in banks by other financial companies were the fastest growing item of liabilities up to March 2005. From the beginning of 2004 to June 2005 they increased from SKK 37.8 billion to SKK 71.7 billion with mutual funds playing a significant part within this trend. On the other hand, deposits of insurance companies and pension funds (accounting for half of the deposits of financial companies), as well as other financial intermediaries, were more volatile and no trends could be identified in this regard. In the second half of 2005, deposits of mutual funds began slightly to decline. Chart 9 shows the gradual fall in deposits of mutual funds as a share of their assets and also the decline in the volume of deposits.

When in 2004 and the first half of 2005 mutual funds made deposits with banks that fully offset the decline in household deposits, it was not due to the loss of these funds in the banks. It



probably represented a temporary investment of funds, and not financing of banking activities.

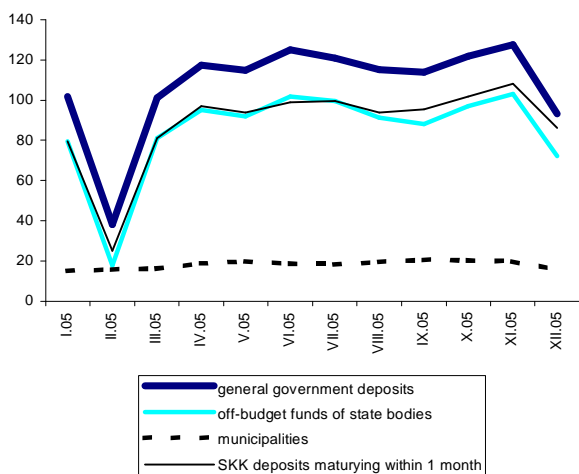
**Chart 9 Mutual fund deposits in banks**



- source: NBS
- amounts in SKK billion

## Public sector deposits

**Chart 10 Structure of public sector deposits**



- source: NBS

After household deposits and corporate deposits, public sector deposits are the third largest item of liabilities. The majority, around 80%, comprises off-budget funds of state bodies, the main depositor of which is ARDAL (the Agency for Debt and Liquidity Management). An almost identical volume of public sector koruna funds have a contractual maturity of up to 1

month, since banks place them directly into NBS sterilization repo tenders (this is confirmed by the withdrawal of ARDAL funds in February, when the NBS did not perform a tender).

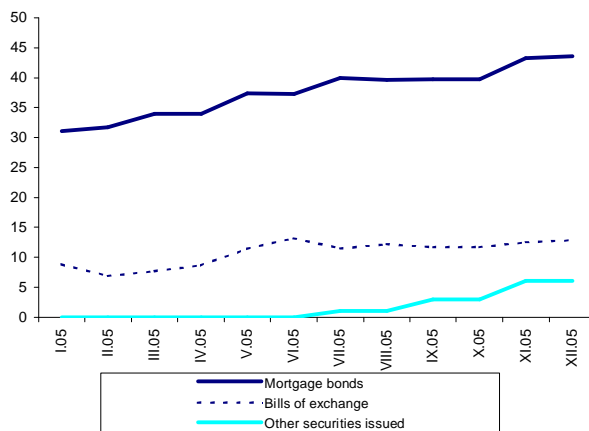
A part of public sector deposits cannot therefore be considered a stable source of financing for banking activities; they are mostly accounted for by ARDAL, whose behaviour is more like that of banks. ARDAL deposits are usually placed in NBS sterilization repo tenders.

## Non-resident deposits

A rising trend of non-resident deposits continued in most banks in 2005 (up from 9 billion to 22.2 billion). In large and medium-large banks, they do not at present account for more than 2% of total client deposits. The growth in non-resident deposits was therefore not related to the development of average interest rates. As with deposits of foreign banks, it was rather due to the placing of these funds with the NBS (the interest rate differential) in connection with expectations for strengthening of the Slovak koruna against the euro.

## Funds raised from securities issues

**Chart 11 Securities issued by banks**



- source: NBS

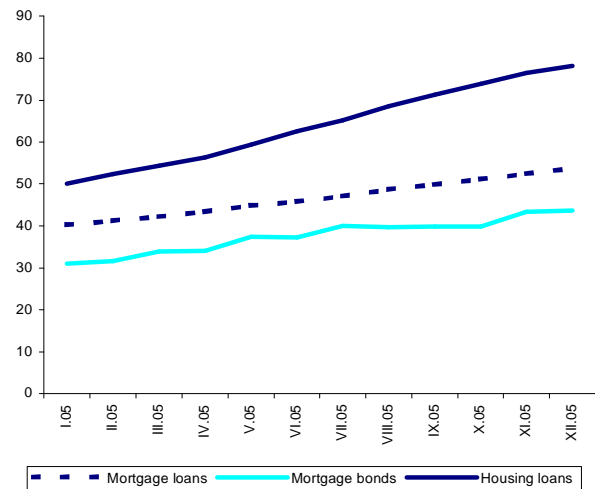
During the first half of 2005, mortgage bonds were the only long-term securities issued by banks. By the end of the year, four banks had issued other bonds.

The issuing of mortgage bonds in the sector continued, but, unlike in 2004, it lagged behind the volume of housing loans since an ever larger part of housing loans are accounted for by loans other than mortgages.

The reasons for providing other housing loans are related to their non-purpose character and the absence of the requirement to issue mortgage bonds.

The volume of bills of exchange issued in the banking sector increased from the beginning of 2004 to the mid-point of 2005. In the second half of 2005, this volume stood at between SKK 11.6 billion and SKK 13.2 billion, or less than 1% of total liabilities.

**Chart 12 Housing loans, mortgage loans and mortgage bonds**

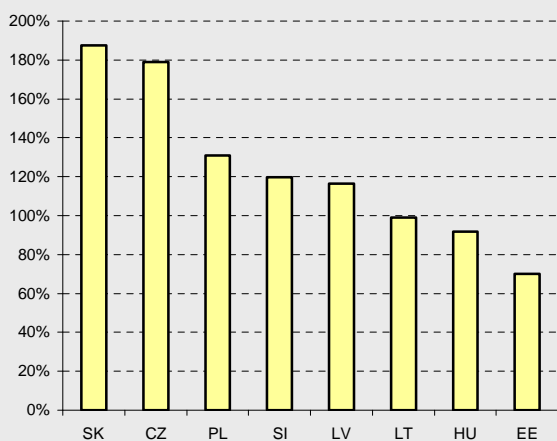


- source: NBS
- Loans provided by building societies are not included in the chart

**Box 2 Client funds and the financing of lending growth**

Given the relatively high pace of growth in household lending, the attention of the International Monetary Fund and national regulators has been drawn to the question of its financing.

**Chart 13 Deposits-to-loans ratio in 2004**



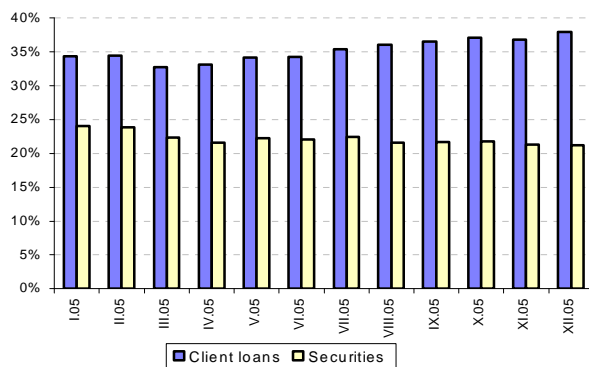
Concerns were largely directed at the financing of the credit expansion through foreign funds deposited by parent banks. Such financing exposes the bank to a higher liquidity risk, since funds from the interbank market are typically short-term and more volatile. Another problem could be the fact that these funds are often denominated in foreign currencies, which eventually forces the banks' clients to open foreign exchange positions. Overall macroeconomic instability could pose a substantial problem insofar as it arises from the disproportionate indebtedness of banks' clients in comparison with their financial activities. Sufficiency of domestic deposits could indicate that banks' clients have a balanced and appropriate credit burden.

## Main changes and trends in assets

The positive economic development and improving financial situation of enterprises and households, on the one hand, and the wider range of offers from banks, on the other hand, led to a large rise in the volume of loans provided to clients. Positive trends were reflected in the increased lending in all sectors, with the growth driven mainly by household lending. The indebtedness of the corporate sector and financial companies increased significantly. In December 2005, client loans accounted for 38% of banking assets.

Although securities held by banks increased in volume over the year, they fell as a share of banks' assets. Banks owned mainly government securities, and this holding increased slightly in volume in comparison with the beginning of the year. There was also a volume rise in banks' holdings of mortgage bonds, bonds issued by foreign banks, and equity securities. On the other hand, the holdings of corporate bonds and Treasury bills declined.

**Chart 14 Loans and securities as a share of banks' assets**



- source: NBS  
- Shares of gross asset values

### Client loans

The total gross value of client loans increased over the year by more than 27%. This substantial rise was also reflected in client loans as a share of total gross assets, which increased from 34% in January to 38% in December 2005.

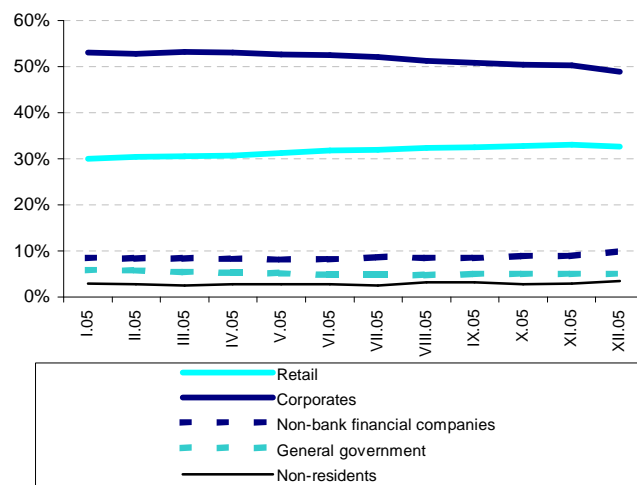
The banks' readiness to finance clients and client demand for loans is related to the overall economic development, macroeconomic stabilization, positive expectations, and competition in the banking environment.

Lending to all the main sectors increased in volume. There was a significant rise in the

banks' exposure to the corporate sector. Retail lending kept up its fast growth, and the volume of lending to non-bank financial companies and the public sector rose.

The retail sector, non-bank financial companies and non-residents strengthened their position within the credit portfolio.

**Chart 15 Credit portfolio of the banking sector**



- source: NBS

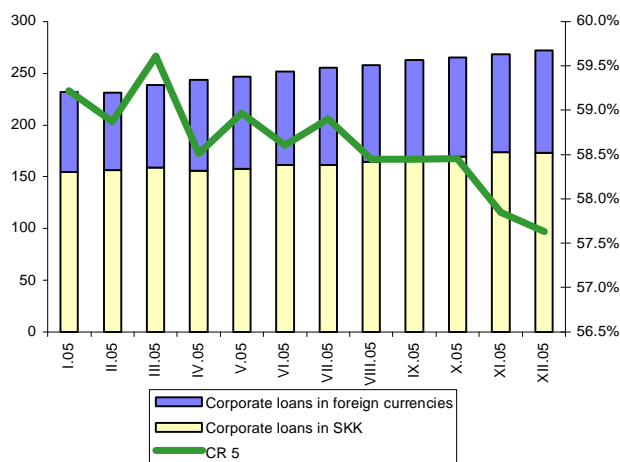
Long-term lending increased mainly through investment loans and housing loans. Also operating loans and current account overdrafts had a rising trend.

## Corporate loans

Despite corporate loans declining as a share of total lending volume (49% in December), they remain the most significant category in the banking sector's credit portfolio. The volume of loans to the corporate sector increased over 2005 by almost 18%, with koruna loans up by 12% and foreign exchange loans by 29%.

The lending growth was largely due to the positive macroeconomic development, reduction in interest rates, rising corporate demand for loans, the improving financial situation of enterprises, and the strong competition between banks in this segment.

**Chart 16 Growth and concentration in the corporate lending market**



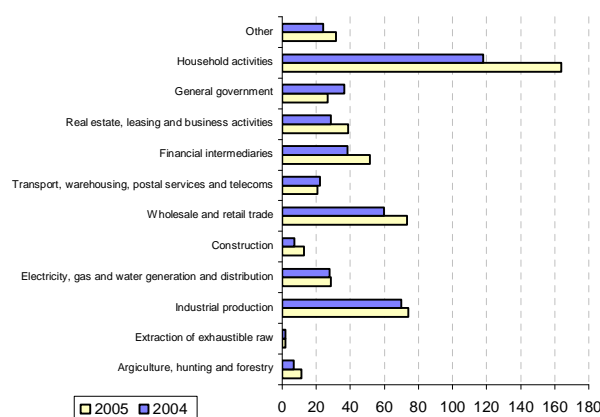
- source: NBS
- left axis: data are in SKK billion
- right axis: a share of the five largest banks in corporate lending

Enterprises financed their investment requirements to a greater extent. The volume of operating loans recorded stable development. This was also related to the time structure of corporate lending with the main increase in long-term loans.

Over the year, those banks with largest share of the corporate lending market decreased their share, as mainly medium-large and small banks gradually strengthened their position.

As regards foreign-exchange corporate loans (whose share of total corporate loans stood at 37% in December 2005), a significant share of them was largely linked with the export side of the corporate sector, though it could also be related to the appreciation of the domestic currency.

**Chart 17 Corporate lending by sectors**

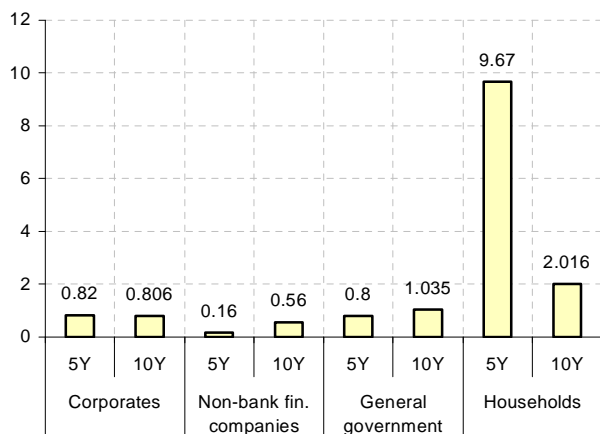


- source: NBS
- left axis: data are in SKK billion
- the 2005 data pertain to November

Chart 17 shows the breakdown of lending by sectors. The volume of lending increased year-on-year in almost all sectors, except for the public sector and for transport and telecommunications. According to the Herfindahl Index, the concentration of lending in regard to its sectoral structure increased from the beginning of 2005 to the end of November from 1452 to 1550.

To offset the relatively low interest margins in corporate lending, banks used mainly non-interest income, especially in the form of fees.

**Chart 18 Interest margins on loans in December 2005**



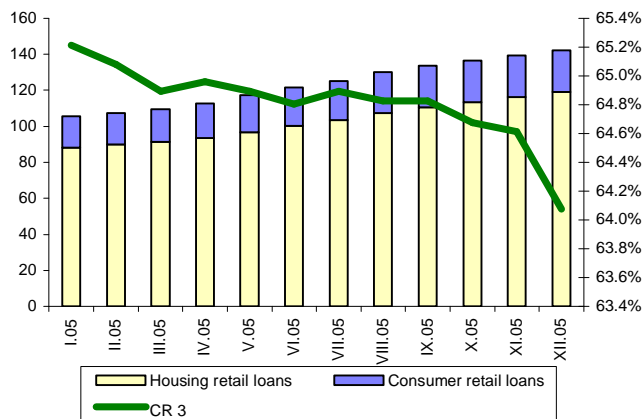
- source: NBS
- left axis: values are in % and show the difference between interest rates on new loans with a maturity of up to 5 years or more than five years and the yields on 5-year or 10-year government bonds
- figures above the bars are in percent

### Retail loans

In absolute terms, retail lending increased over 2005 by more than corporate lending did (retail loans rose in volume by almost 51 billion while corporate loans increased by 41 billion). This was reflected in the growing importance of retail lending within overall lending, and by December, retail loans accounted for almost 33% of all loans.

The growth in retail lending was supported mainly by housing loans and to a lesser extent by consumer loans. Mortgage loans made up the largest share of housing loans, 45% in December. There was a substantial increase in the share of other housing loans, up to 20% of housing loans, while building loans decreased. Several banks reported a move away from mortgage loans to other housing loans, for which it is not necessary to issue mortgage bonds and which are not strictly tied to a specific purpose and a maximum loan-to-value ratio. Credit cards also increased, though their share of total retail loans was low (1.2% in December).

**Chart 19 Growth and concentration in the retail lending market**



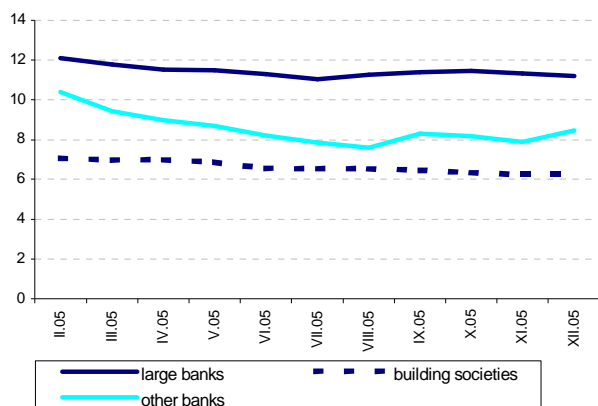
- source: NBS
- left axis: data are in SKK billion
- right axis: the three largest banks as a share of retail lending

More than 90% of retail lending is accounted for by household lending, which increased over the year by 40%. The pace of household lending rose from the beginning of the year. The year-on-year increase stood at 38% in January and 42% in December.

Banks are drawn to the household lending market because of the higher interest margins, especially on shorter maturities, the non-interest income from fees, and the relatively low credit risk attached to mortgage loans.

The household lending market in Slovakia has a typically high concentration that reflects its domination by large banks. Despite growing competition from other banks, the CR 3 index declined only slightly. Therefore the situation in the household lending market is to a large extent determined by the largest banks. Their dominance is also seen in the high level of interest rates, with the largest banks in this market charging the highest rates for new loans.

**Chart 20 Interest rates on new loans to households according to groups of banks**



- source: NBS
- left axis: data are in percent
- interest rates on new standard loans

The share of foreign exchange loans provided to households increased in 2005. But despite the growth, their significance was very low (in December, they accounted for 1% of household loans).

The growth in household lending in 2005 was positively affected by supply and demand factors. According to the results of the Lending Survey for December 2005, there is a relaxing of credit standards for housing loans and for other loans provided to households. Banks relaxed the standards mainly due to competition from other banks and the positive macroeconomic development.

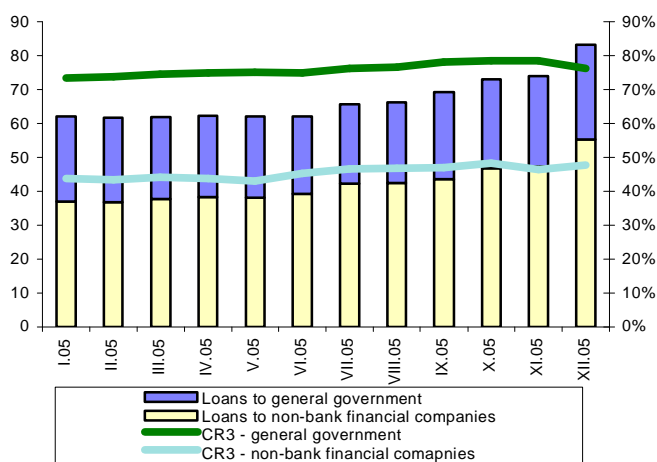
Household interest in loans was largely influenced by positive expectations for further macroeconomic development, the rise in household income, the increase in real estate prices, and higher consumer spending.

The financing of sole traders and of non-profit organizations serving households increased in 2005. Compared to the beginning of the year, lending to sole traders rose by 22% to account for 8% of retail loans. Lending to organizations serving households increased by 104%, and its share of retail lending stood at 1% in December.

### Loans to non-bank financial institutions

Loans to non-bank financial institutions in the banking sector increased by 50% over the year and their share of total loans rose to 10%. Almost the entire amount was provided to financial intermediaries (consumer credit companies, leasing companies, and so on) Banks recorded sharper growth in December with an increase in demand from clients of financial intermediaries.

**Chart 21 Growth and concentration in the lending market for the public sector and non-bank financial institutions**



- source: NBS
- left axis: data are in SKK billion
- right axis: the three largest banks as a share of the given sectors

Part of the loans was provided to banks' subsidiaries, which explains the low margins on them.

Most loans are denominated in Slovak koruna and have a maturity of up to five years.

### Public sector loans

The volume of loans provided to the public sector increased over the year by 10%. Public sector loans as a share of the overall credit portfolio fell slightly and were fluctuating at around 5% in December.

Unlike the retail market, the public sector lending market typically has low interest margins.



## Non-resident loans

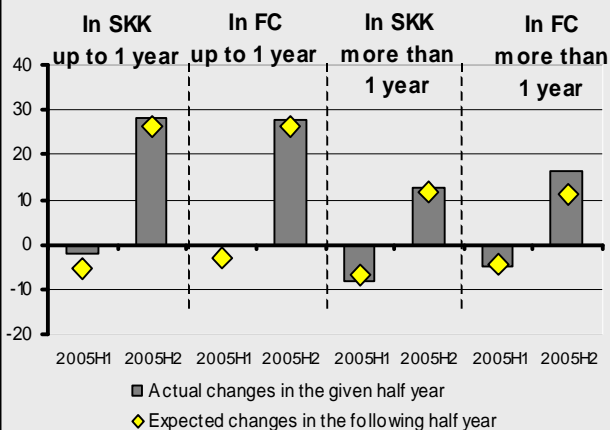
Loans to non-residents increased by 48% over the year, and their share of total loans rose to 3.3%. The concentration in this sector is

lower than in lending to other sectors (the CR 3 index stood at 49% in December 2005).

### Box 3 Lending market development according to the Questionnaire on Supply and Demand Development in the Lending Market

The questionnaire on lending market development provides regular and qualitative information on changes in credit standards and in other conditions under which loans are extended to enterprises and households. The questionnaire results also shed light on changes in credit demand from the view of banks. These surveys can therefore be of assistance when analysing fluctuations in the credit cycle and its determinants, and thus contribute to the better evaluation of financial stability. The data in the charts is given as a "net percentage share". For example, the net percentage share for banks that relaxed credit standards for retail loans is calculated as the difference between, on the one hand, retail loans from standard-relaxing banks as a share of total loans, and, on the other hand, retail loans from standard-tightening banks as a share of total loans. Simply said, the banks' individual responses represent a weighted average volume of loans of the respective type for the first half of 2005. A positive value indicates that credit standards have been relaxed.

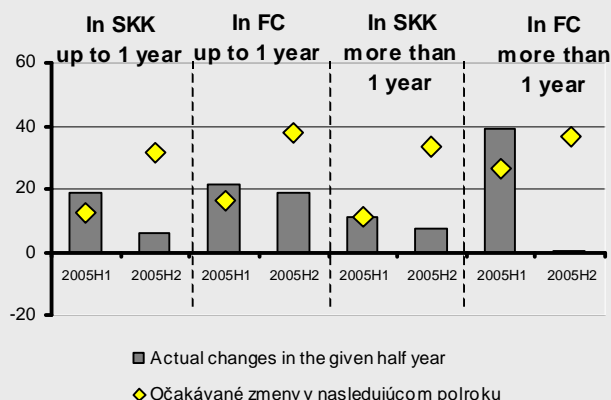
#### Chart 22 Changes in credit standards for loans to large enterprises (net percentage share)



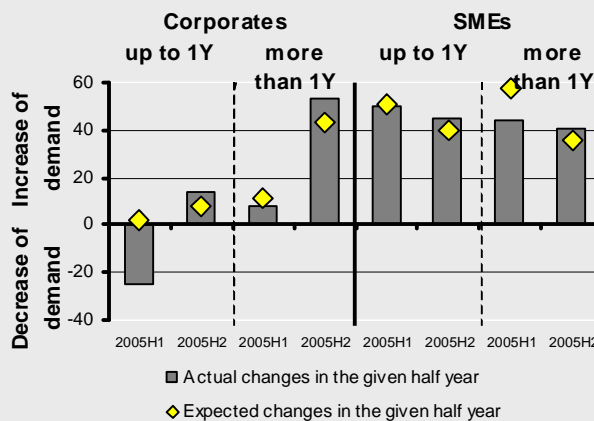
The volume of drawn loans provided to enterprises increased during the second half of 2005. According to the questionnaire data, this growth, as in the first half of 2005, was influenced more by credit demand than by the relaxation of credit standards. A higher share of banks reported an increase in credit demand from large enterprises. The main reason for the rise in demand is the financing of long-term investments and operating capital. As regards changes in credit standards, the tendency was to relax them, and unlike in the first half of 2005, to do so also for loans to large enterprises. The relaxing of credit standards was brought about mainly by external factors – competition and development of the macroeconomic situation. Banks reported a further decline in both the interest margin and received fees.

During the second half of 2005, banks registered an increase in demand for long-term loans to large enterprises. As for small and medium-sized enterprises, demand stayed at around the same level for the whole of 2005. The rise in corporate demand for loans was most often due to the need for financing of long-term investments. At the same time, the financing of operating capital assumed greater importance in the lending market. The majority of medium-large banks identified a partial effect of improving the financial position of enterprises and reducing interest rates and fees. In the lending market as a whole, however, the effect of this factor on the increase in credit demand compared with the first half of 2005 was not so significant. This reflected its declining importance within the group of banks that have the largest share of the corporate lending market.

**Chart 23 Changes in credit standards for SMEs**

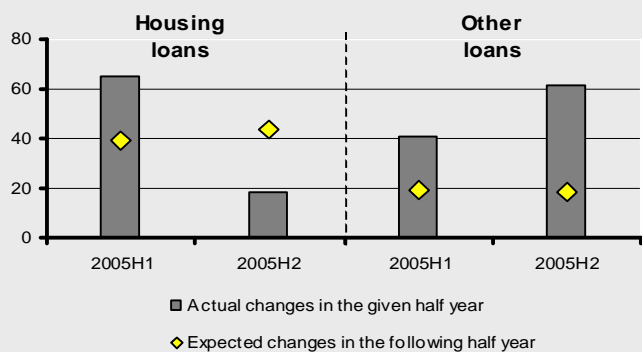


**Chart 24 Changes in demand for corporate loans**

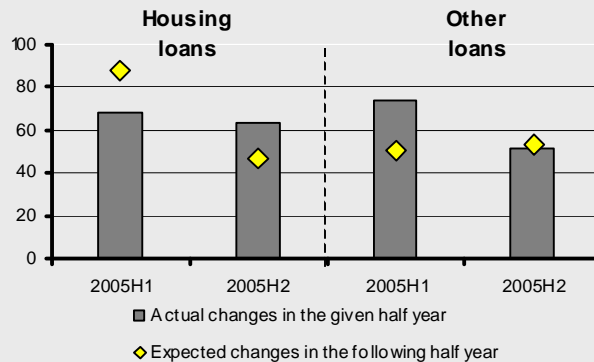


In the household lending market, too, demand was a more significant factor in the second half of 2005, largely due to the positive development in household income and the overall macroeconomic situation. Though the relaxing of credit standards continued, it was, unlike in the first half of the year, more closely attached to other household loans (other than housing loans). In relaxing credit standards, banks were mainly responding to competition from other banks. The relaxing of standards was especially reflected in the greater decentralization of the decision-making powers over lending, the faster lending process, and the easing of certain lending limits. Banks also recorded a decline in interest-rate margins.

**Chart 25 Change in credit standards for households**



**Chart 26 Change in demand for household loans**



The market share of banks that reported in the survey an increase in demand for household loans was relatively high in the second half of 2005, as it had been in the first half (81% for housing loans and 67% for other loans provided to households). The rise in demand was supported by higher income, higher consumer spending, positive expectations for further macroeconomic development, and growth in real estate prices.

## Investments in securities

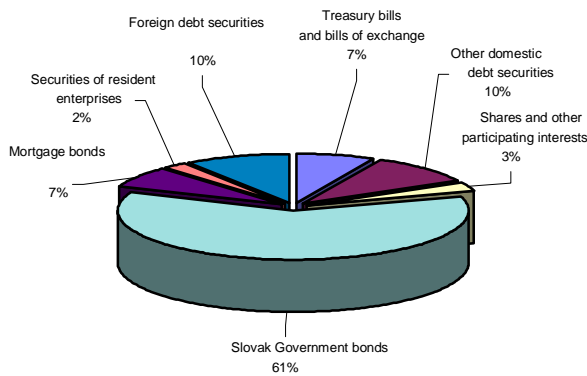
The volume of securities owned by banks in the banking sector increased only slightly (by 2% compared to the beginning of the year). With minimal growth, securities declined as a

share of banks' assets (from 25% in January 2005 to 21% in December).

Banks held mainly government bonds, while the rest of their portfolios consisted largely of foreign debt securities, mortgage bonds, other domestic bonds (issued by the central government) and Treasury bills.



**Chart 27 Structure of the portfolio of securities owned by the banking sector in December 2005**



- source: NBS

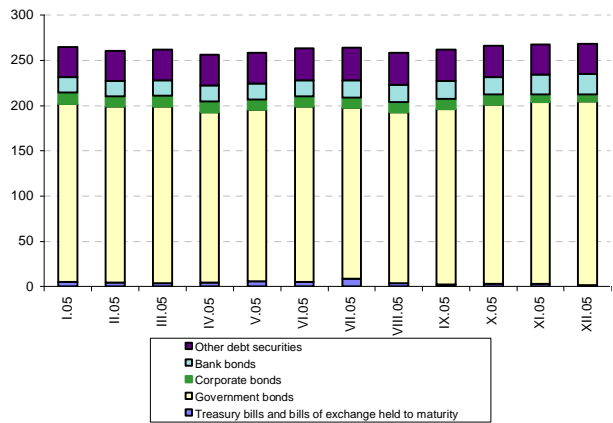
The banking sector securities that increased over the year were largely those with a lower credit risk. The volume of government bond holdings rose slightly, and the volume of mortgage bonds also increased. On the other hand, the volume of riskier securities declined, especially resident and non-resident corporate bonds. In certain banks, there was a volume rise in equity securities. Holdings of Treasury bills in the sector continued to decline.

**Debt securities**

Debt securities, are dominated by resident securities (in December, they accounted for 89% of all debt securities).

Whereas non-resident debt securities comprise mainly securities issued by banks and other issuers, resident securities are mostly government bonds, and they rose in volume by around 3% in comparison with the beginning of the year.

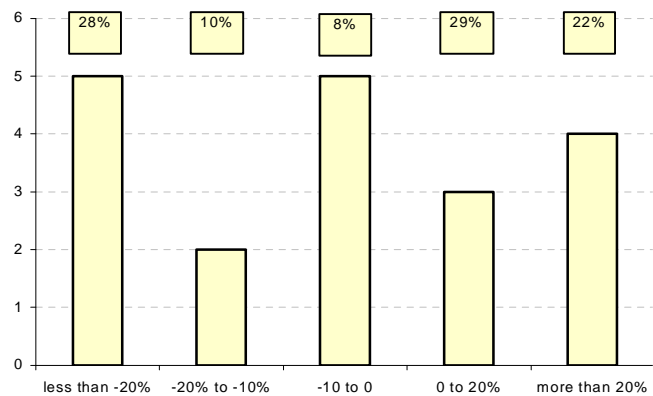
**Chart 28 Structure of resident debt securities**



- source: NBS  
 - left axis: data are in SKK billion

A majority of banks within the banking sector actually reduced their holdings of government bonds. On the other hand, banks representing a larger part of the banking sector by share of assets increased their holdings of government bonds. Clearly it was mainly smaller banks that were reducing holdings of government securities.

**Chart 29 Decline in the volume of government securities held by banks**

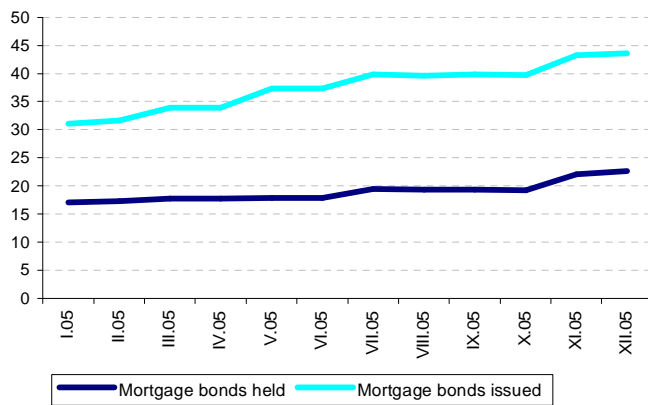


- source: NBS  
 - vertical axis: number of banks  
 - the percentage above each bar represents the assets of the banks in that bar as a share of total assets in the sector

The volume of bonds issued by banks increased substantially (by 32% over the year) with mortgage bonds accounting for most of it. This rise is related to the growth in mortgage lending and the banks' obligation to cover mortgage loans with issues of

mortgage bonds. The stepped increase in mortgage bond volume in certain months of 2005 corresponded to issues of these bonds.

**Chart 30 Issues and purchase of mortgage bonds**



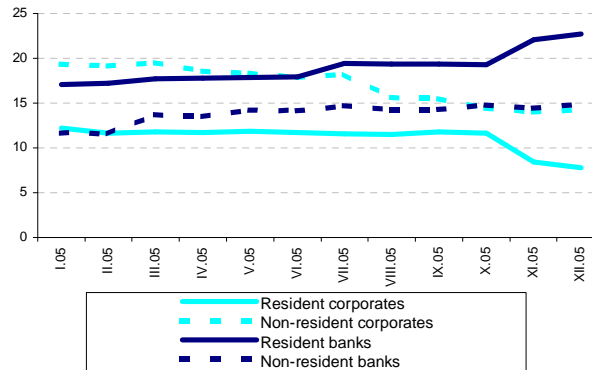
- source: NBS  
 - vertical axis: data are in SKK billion

Banks' holdings of debt securities issued by foreign banks also increased (by 27% over the year), as did the volume of collateralized securities. On the other hand, there was a decline in the volume of residential and non-residential securities issued by corporates. The sector's holdings of foreign corporate bonds decreased by 26%.

The banking sector reduced its holdings of Treasury bills. This was related to the new strategy of ARDAL for financing the state budget deficit. ARDAL lowered the volume of

issued Treasury bills and is making greater use of funds from the State Treasury.

**Chart 31 Bank and corporate securities in the banks' portfolio**



- source: NBS  
 - vertical axis: data are in SKK billion

**Equity securities**

In December 2005, equity securities accounted for 3% of the total volume of securities held by banks. Although these assets are of relatively minor significance, several banks recorded an increase in holdings of them. Residential equity securities accounted for most of the volume of equity securities (66% in December 2005), and increased by 16% over the year.

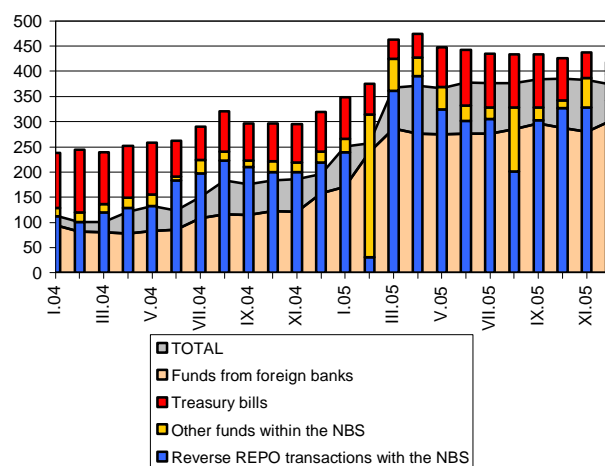
Holdings of non-residential equity securities rose by more than 60% in comparison with the beginning of the year.

## Interbank market

Although the NBS reduced the basic interest rate from 4% to 3% from 1 March 2005, an interest rate differential persisted between the interest rate set by the NBS and the rates set by the ECB and Czech National Bank (CNB). Along with the NBS's willingness to sterilize funds from the interbank market (except in February 2005) and expectations for strengthening of the Slovak koruna, this represented a major factor in the development of the interbank market. The volume of assets at the NBS increased sharply in the first half of 2005. An increase in banks' liabilities was recorded both in funds from the foreign interbank market, mostly deposits of banks from the recipient's own banking group, and in deposits of ARDAL. In the second half of the year, the volume of these operations rose still further among those banks tied to their own banking group, but fell within the group of large banks. Deposits and loans between domestic banks are less significant, their volume declined year-on-year.

A substantial increase in the volume of interbank market transactions was recorded in 2005, especially in the first half. This development was related to both the two-week sterilization repo tenders and the issue of NBS bills into the banks' portfolio, which took place after foreign-exchange interventions. The only interruption of sterilization repo tenders was in February 2005. From 22 March 2005 to the end of 2005, the NBS accepted the banks' entire demand in sterilization repo transactions, which increased substantially in comparison with 2004 (from SKK 219 billion to SKK 342 billion year-on-year). The rise in demand was due to the persisting interest rate differential between the rates of the ECB and NBS. The differential stood at 100 basis points (b.p.) between March and November, before falling to 75 b.p. in December. The CNB also had a lower rate than the NBS (in December, the differential was 100 b.p.), while the interest rates of the Fed and the central banks of Hungary and Poland were higher than the NBS's. The interest rate differential was the main factor behind the inflow of funds from foreign banks, mainly from banks belonging to the recipient's own banking group. Another significant reason was the expectations for strengthening of the Slovak koruna, especially over the long term.

**Chart 32 Development of the most important interbank assets and liabilities and off-budget funds of the general government**



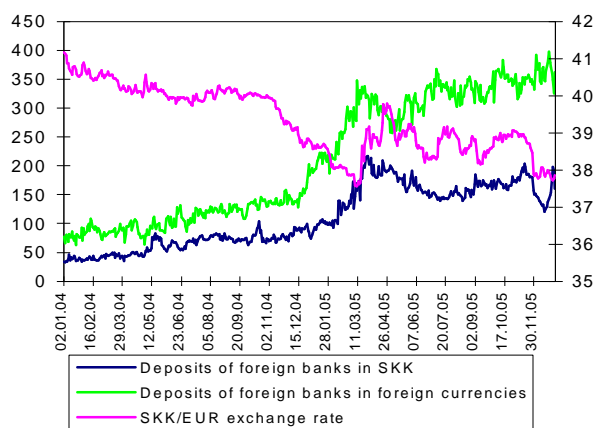
- source: NBS
- according to data published by the NBS at [www.nbs.sk](http://www.nbs.sk), sterilization repo transactions amounted to SKK 0 billion as at 28 February 2005 and SKK 281 billion as at 31 August 2005.
- mutual transactions between domestic banks are not included in the chart

This description of the volume of banks' positions with the NBS (including NBS bills in the banks' portfolio) for the first quarter applied to the group of large banks, the group of banks tied to their own banking group and partly to the group of medium-sized banks. However, the later development was different among individual groups of banks. Whereas the NBS positions of the large banks' group gradually

declined in volume, there was an opposite development among those banks tied to their own banking group.

Most of the funds which banks deposited with the NBS were funds acquired from the foreign interbank market or deposits of ARDAL<sup>5</sup>. Their volume during the year developed analogously to the volume of funds sterilized with the NBS. Deposits received by banks from their own banking group accounted for more than two thirds of deposits from foreign banks. Funds from foreign banks were mostly denominated in EUR, USD and SKK. Compared to December 2004, USD funds from foreign banks as a share of total funds from non-resident banks increased year-on-year from 17% to 30%, while the share of EUR funds decreased from 50% to 40%. The main cause of this may have been the diverse development of the exchange rates EUR/SKK and USD/SKK: the EUR/SKK rate did not follow a clear trend and its volatility was higher than in 2004; on the other hand, the koruna gradually appreciated against the USD during 2005.

**Chart 33 Volume of foreign banks' deposits and the SKK/EUR exchange rate**



- source: NBS
- right vertical axis: data are in SKK billion
- left vertical axis: data are in SKK/EUR

<sup>5</sup> In terms of their volume, volatility and interest rates, ARDAL deposits are more akin to interbank transactions than to client transactions, and therefore they are analysed in this section along with interbank transactions.

As for the volume of funds from foreign banks and ARDAL, its development among individual groups of banks was analogous to the trend on the assets side: during the first four months, the volume of these funds increased among the large banks, among the banks tied to their own banking group, and among medium-sized banks. Whereas these funds remained stable among medium-large banks up to the end of 2005, they declined among large banks between August and December (from 150 billion to 97 billion) and increased among banks tied to their own banking group (from SKK 170 billion to SKK 238 billion). Building societies did not acquire any funds in this way. In terms of maturity, funds from foreign banks and ARDAL deposits are largely short-term (up to 3 months).

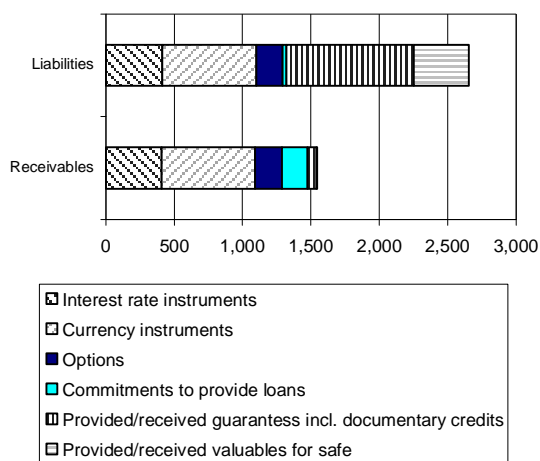
The volume of deposits and loans in the domestic interbank market (the NBS excluded) was relatively lower than the volumes of funds from foreign banks and funds deposited with the NBS. The average volume of these deposits and loans fell from SKK 43.3 billion in 2004 to SKK 37.8 billion in 2005. The most substantial change occurred in December when their volume increased to SKK 56.6 billion. The Slovak banking sector has seen a falling trend in this volume since the beginning of 2003, which could be due to the high volume of funds, which the NBS has sterilized from the interbank market. That said, when the NBS suspended sterilization repo transactions in February 2005, it was responding to the reduction in the liquidity of the interbank market, which had been reflected in a widening of the spread between the BRIBID and BRIBOR by as much as 50%.

With the exception of the said reverse repo transactions, interbank transactions were mostly unsecured. There were certain banks, however, in which the value of received collateral increased sharply. Therefore the total value of collateral for securing receivables against banks (excluding collateral received in repo transactions) increased year-on-year, from SKK 4.4 billion to SKK 134.8 billion.

## Off-balance sheet

A large part of the off-balance sheet comprises the value of instruments underlying currency and interest rate transactions, with which banks often close open positions established during trading with banks or clients. In 2005, currency transactions increased significantly due to the growth in funds from foreign banks denominated in foreign currencies, which are converted into the domestic currency. Most of these funds were deposited into repo transactions with the NBS, resulting in a rise in the volume of recorded securities received as collateral in these transactions. Related to the increase in lending there is a growth in the value of the real estate that banks received as collateral for loans and of the commitments for provided loans.

**Chart 34 Structure of the off-balance sheet as at December 2005**



- source: NBS
- data are in SKK

### Currency and interest rate instruments

The value of instruments underlying currency and interest rate instruments on the banking sector's off-balance sheet amounted to 91% of total assets. Banks used these instruments largely for hedging open positions of foreign-exchange or interest-rate risk<sup>6</sup>. The value of instruments underlying currency transactions recorded the largest increase year-on-year. The largest amount comprised fixed forward transactions (especially swaps in

<sup>6</sup> See the chapter "Risks in the banking sector" for further details

USD), spot transactions (especially spot trades in EUR) and currency options.<sup>7</sup>

In December, instruments underlying currency options represented 97% of the total value of instruments underlying options transactions. Their volume peaked in the second quarter of 2005 (having risen by 150% from December 2004 to May 2005), which could be explained by the upsurge in client demand for these instruments in relation to the rising volatility of exchange rates (see Chart 52). These transactions were not significant in regard to hedging the open foreign exchange position, since almost all banks performed them with a basically closed foreign exchange position resulting from these operations.

On the other hand, the value of instruments underlying fixed forward transactions with currency instruments increased in both the first half and second half of the year, with a year-on-year rise of 118%. The volume of these transactions increased above all in those banks, which reported a rise in funds from foreign banks, denominated in foreign currency. The purpose of these transactions was to reduce the open foreign exchange positions.

As for the value of instruments underlying transactions with interest rate instruments, most banks reported a more-or-less stable level during the year. An exception was the group of banks tied to their own banking groups.

<sup>7</sup> Source: NBS Monetary Survey

### **Other off-balance-sheet transactions**

Apart from currency and interest rate instruments, banks did not record in their off-balance sheet any other transactions in derivative instruments (commodity, share or credit derivatives).

Besides instruments underlying derivative transactions, received guarantees accounted for a substantial part of the off-balance sheet liabilities and their volume increased year-on-year from SKK 666 billion to SKK 951 billion. Behind much of this growth was collateral that banks received in reverse repo transactions. Its increase accounted for 58% of the growth in received guarantees. The increase in other

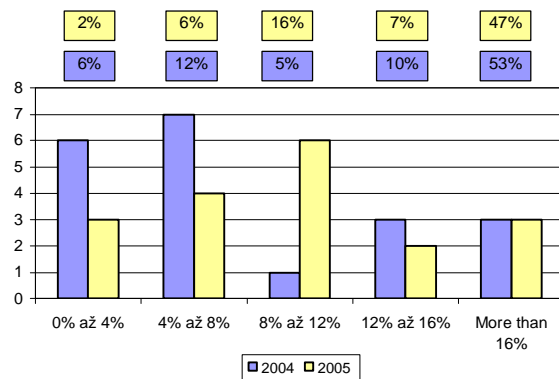
guarantees was largely due to the growth in loans for which banks required collateral (especially housing loans). The increase in real-estate guarantees accounted for 31% of the total growth in received guarantees. With the high increase in provided loans, there was also a rise in the volume of loan commitments. These probably apply mainly to undrawn facilities in overdraft accounts or to approved but undrawn housing loans which may be drawn following submission of the relevant documents on the purpose of the drawing. The main volume increase in these items occurred within the group of medium-large banks (up by 56%) and unclassified banks (up by 53%).

# Profitability

The banking sector reported a net profit of SKK 13,9 billion for 2005, representing an increase of 13% year-on-year. The group of large banks accounted for two thirds of the sector's total profit. A decline in net interest income was offset by non-interest income, mainly by a rise in net income from fees and from trading in financial instruments. The household sector increased its contribution to the banking sector's profit: whereas the net interest margin declined year-on-year in the corporate, financial company and interbank operation sectors, it recorded a slight increase in the retail sector. Despite the fact that the volume of interest income from receivables against the NBS and NBS bills rose to 22% of total interest income, there was even a fall in the interest margin for interbank transactions. The operating efficiency of the banking sector deteriorated year-on-year. Operating efficiency is greater in larger banks, which achieve economies of scale. The profit reported by certain banks was significantly affected also by other facts, for example, the net creation of reserves or provisions in December 2005.

The average return on equity (ROE) weighted by volume of own funds represented 16.8% for 2005, compared to 15.7% for 2004.<sup>8</sup> Not all banks reported a profit, however, and total losses stood at SKK 19.4 mil.

**Chart 35 Distribution of ROE in the banking sector**



- source: NBS
- vertical axis: 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

The highest ROE was reported by the group of large banks, with a year-on-year increase from 20.7% to 24.3%. In the other groups of banks, the ROE stood between 8% and 10%.

The average return on assets (ROA) weighted by volume of assets decreased year-on-year from 1.16% to 1.02%. This was mainly due to growth in interbank transactions, the returns on which are lower than the returns on client transactions. That is also why the lowest ROA is reported by the group of banks tied to their own banking group (0.48% for 2005, down from 0.77% year-on-year). A higher ROA was registered in the group of medium-large banks (0.59%) and large banks (1.46%), though the ROA for both groups fell slightly year-on-year. By contrast, there was a year-on-year rise in ROA for the group of other banks (from 0.66% to 1.39%), in the group of building societies the change was not significant (from 1.26% to 1.25%).

<sup>8</sup> The average ROE does not include financial results reported by the branches of foreign banks.



**Table 2 Year-on-year changes in basic income categories**

	31.12.2004	31.12.2005	Change
(a) TOTAL OPERATING COSTS (b + e + f)	26 341	28 010	6%
(b) Administrative costs (c + d)	21 850	23 490	8%
(c) Purchased performances	11 071	11 361	3%
(d) Staffing costs	10 779	12 129	13%
(e) Depreciation of tangible and intangible assets	4 351	4 393	1%
(f) Taxes and fees	140	128	-9%
(g) GROSS INCOME (h + i)	43 018	42 674	-1%
(h) Net interest income (j - i)	31 526	29 694	-6%
(i) Interest expenses	26 585	24 824	-7%
(j) Interest revenues	58 111	54 517	-6%
(k) of which: interest revenues from securities	20 452	16 255	-21%
(l) Net non-interest income (m + n + o + p)	11 492	12 980	13%
(m) Income from shares and business interests	280	98	-65%
(n) Net income from fees	9 370	11 243	20%
(o) Net income from trading	5 950	8 060	35%
(p) Other net operating income	-4 109	-6 421	56%
(q) NET INCOME (g - a)	16 678	14 663	-12%
(r) Net creation of provisions and net income from writing off receivables	2 629	-1 037	-139%
(s) Net creation of reserves	-221	-542	146%
(t) NET PROFIT BEFORE TAX (q - r - s)	14 269	16 243	14%
(u) Extraordinary profit	-200	0	-100%
(v) Income tax	1 788	2 321	30%
(w) NET PROFIT AFTER TAX (t + u - v)	12 281	13 921	13%

- source: NBS

- data are in SKK million

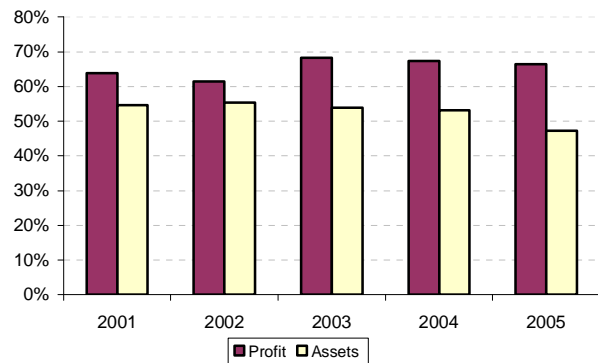
## Concentration

While the three largest banks accounted for around 47% of the sector's total assets at the end of 2005, their share of its total profit stood at 69%. From 2003, as a result of competition in the banking sector, these three banks had a falling share of the total profit. The decline in this share was, however, not as great as the fall in their share of total assets. Indeed, the largest banks managed to increase their share of net interest income (from 54% in 2003 to 63% in 2005), largely by reducing their share of total interest expenses (from 51% in 2003 to 44%). Their share of net non-interest income also increased slightly (from 63% in 2003 to 65%).

On the other hand, the profit generated by the group of banks tied to their own banking group decreased year-on-year as a share of the total profit, from 17.4% to 12.5%. The total profit of this group fell from SKK 2.1 billion for 2004 to SKK 1.8 billion for 2005. This could be due to

the decrease in the interest margin on interbank transactions, which make up a sizeable share of these banks' activities (cf. chart 38).

**Chart 36 Development of the large banks' group by its share of total assets and profit**



- source: NBS

## Net interest income

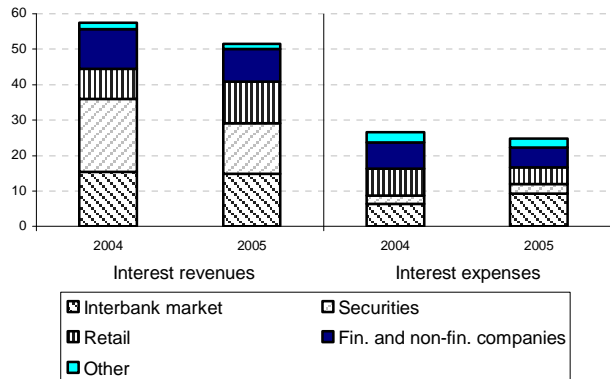
The volume of net interest income in the Slovak banking sector decreased year-on-year from SKK 31.5 billion to SKK 29.7 billion. (by 5.7%). Amid declining interest rates, banks recorded a fall in interest revenues and interest expenses, of 6.2% and 6.7%, respectively.

The decline in interest income reflected mainly a fall in interest income on securities (by 31%), which represents 26% of total interest revenues, and a decrease in interest income from financial and non-financial companies (by 20%). On the other hand, owing to the high volume increase in funds sterilized by the NBS in reverse repo transactions, interest revenues from the NBS rose by 7% year-on-year. As at December 2005, this accounted for 22% of total interest income. Meanwhile, interest revenues on retail loans increased by as much as 39% – again, largely due to the high growth in the volume of these loans.

Interest expenses declined mainly because of a decrease in interest expenses paid to enterprises (down by 31%, despite rising in volume by 9%) and to retail clients (by 38%). On the other hand, banks' interest expenses, which represented the largest component of total interest expenses (37%), increased by almost one half.



**Chart 37 Structure of interest revenues and expenses**

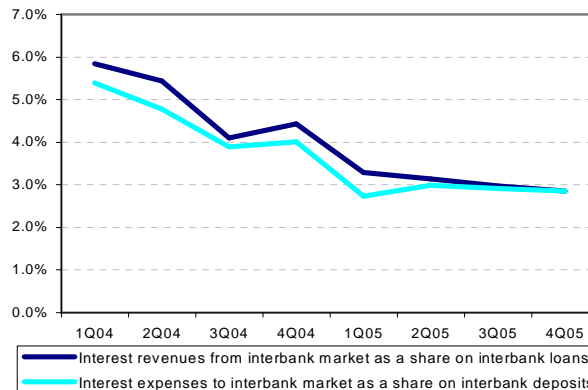


- source: NBS
- data are in SKK billion

As has been noted, there was in 2005 a significant rise in the volume of funds sterilized by the NBS, mainly through sterilization repo transactions or the issue of NBS bills into the banks' portfolio<sup>9</sup>. These funds mostly came from funds acquired on the foreign interbank market. However, the interest margin on these transactions decreased in 2005 almost to zero, which indicates that the major part of the profit on interbank transactions is transferred to foreign banks. Banks may in future be expected to continue their interest in interbank transactions, provided that there is still the interest rate differential and a willingness from the NBS to sterilize funds in repo transactions. Given the low margin on these transactions, it remains to be seen how significant an effect they will have on the banking sector's profitability.

<sup>9</sup> The calculation of the interest margin includes also revenues from compulsory minimum reserves and other exposures towards the NBS, though its volume is less significant.

**Chart 38 Profitability and cost of interbank transactions**



- source: NBS
- the profitability of interbank assets was calculated as an annualization of the ratio of the interest revenues for the given quarter to the average volume of interbank assets (including deposits and loans with the NBS and purchased NBS bills)
- the cost of interbank liabilities was calculated in a similar way

The situation is different in the retail sector, where the average net interest margin (weighted by volume of assets) increased year-on-year, from 6.1% to 6.4%. After taking into account income from bank fees, which are also relatively high in this sector, the real profitability of these transactions is even higher. On the other hand, the calculated interest margin does not factor in the high operating costs connected with activities in the retail sector (especially costs of the distribution network). Banks are seeking to curb such costs by, for example, encouraging clients to use electronic banking services<sup>10</sup>. The actual level of the interest margin is at the same time affected by the requirement to issue mortgage bonds for the provision of mortgage loans. Their cost is in fact higher than that of retail deposits.

Although it is possible to speak of a slight rise in the interest margin in the retail sector, not all banks reported an increase and the margin varied

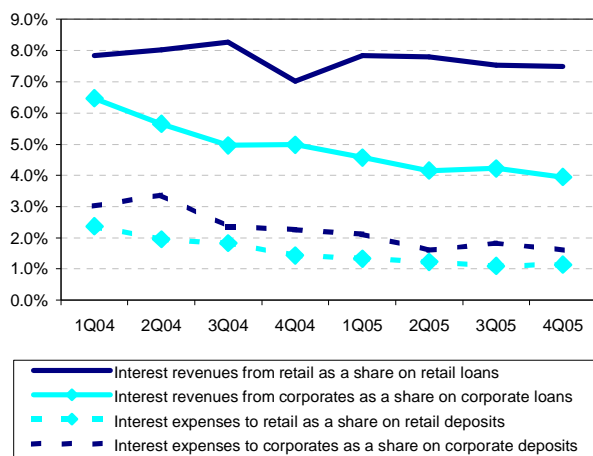
<sup>10</sup> According to data from the Statistical Office of the Slovak Republic (ŠÚ SR), the average fee for a payment received through electronic banking is approximately 30% cheaper than one received the standard way; as regards sending a payment or changing a standing order, the average difference is as much as 60%.

among the banks operating in this sector. The largest interest margin was achieved by the banks with the highest share of the retail sector, while the lowest margins were recorded by the group of building societies.

Despite continuing lending demand from households and small businesses, it is likely that competition between banks will put downward pressure on the interest margin, though the profitability of the retail sector will remain attractive.

The net interest margin in the corporate sector is substantially lower than that in the retail sector. Its average value (weighted by volume of assets) reached 2.4% at the end of 2005, which represents a fall of 0.5 percentage points year-on-year. The lower margin in the corporate sector is largely due to the fact that the competition between banks is stronger here than in the retail sector, as well as the market saturation in terms of demand (particularly for loans), which forces banks to lower interest rates.

**Chart 39 Profitability and cost of client transactions**



- source: NBS
- the profitability of loans was calculated as an annualization of the ratio of interest income for the given quarter to the average gross value of loans (including non-performing loans)
- the cost of deposits was calculated in a similar way

The financial companies' sector recorded an interest margin decline even larger than that in the corporate sector. The average interest margin (weighted by volume of assets) fell from 2.7% in 2004 to 0.9% in 2005. This was due to the strong competition in the sector and the fact that several financial companies are directly owned by banks or their parent companies.

### Net non-interest income

Non-interest income, especially net fees, represent an ever more significant part of income from banking activities. The volume of net income from fees increased by 19% year-on-year, from SKK 9.3 billion to SKK 11.2 billion. Most banks reported a rise in net income from fees.

Fee income rose partly due to higher prices for banking services and also because of the increase in the number of transactions and the number of different products that bank clients are using. At the same time, the volume of paid fees has been more-or-less stable over the longer term.

### Transactions in securities, foreign exchange transactions and derivatives transactions<sup>11</sup>

Although the decline in interest rates in 2005 caused a fall in interest income from debt securities and in the interest margin on them, there was an increase in the market value of securities revalued at fair value (excluding securities with a variable interest rate or with short duration). This change in the fair value was reflected either directly in the financial results (regarding securities held for trading) or in a change in the shareholders' equity (regarding securities available for sale)<sup>12</sup>. Despite the

<sup>11</sup> Net income from foreign-exchange and derivative transactions is analysed together, since a large volume of derivatives consist of the currency derivatives that banks use to hedge the foreign exchange risk.

<sup>12</sup> Since both securities portfolios were revalued in 2004 through the income statement, the non-interest income from securities includes for the sake of year-on-

increase in non-interest income from securities, from SKK 2.8 billion to SKK 2.9 billion, the total volume of net income from securities fell from SKK 20.9 billion to SKK 16.5 billion.

Compared with 2004, the banks' net income from foreign exchange and derivatives transactions increased from SKK 3.2 billion to SKK 6.7 billion. Their volume rose steadily in majority of banks during the year, despite the changing volatility of exchange rates and changes to interest rates, which confirms the assumption that these banks use derivatives mainly for hedging risks.

### **Increase in operating costs**

Operating costs for the banking sector as a whole increased by 6% year-on-year. Of this growth, the increase in staffing costs accounted for 81% with the average costs per employee rising by 11%. The group of large and medium-sized banks reported a rise of 7% in operating costs, while the group of unclassified banks had the highest increase (14% year-on-year) and the group of building societies the lowest (1%). In general, it may be said that a reduction in operating costs occurred mainly in those banks that reported a decline in net interest and non-interest income. At the same time, several banks registered savings on operating costs as a significant part of their profit. On the other hand, some of the banks that increased their interest and non-interest income saw their operating costs rise.

The operating efficiency of the banking sector, measured by operating costs as a share of net income from banking activities, deteriorated year-on-year. The average cost-to-income ratio (weighted by volume of assets) increased from 62.9% to 68.4%. The median values are even higher (rising from 74.3% to 77.7%), which means that the operating efficiency of smaller banks is worse than that of larger banks, which achieve economies of scale.

### **Provisions, assignment and write-off of receivables**

Net income from the write-off or assignment of receivables and from the reversal or creation of provisions recorded a negative figure of SKK -1,5 billion in 2005. In some banks, the net creation of provisions represented a significant part of the bank's profit.

Net income from the reversal of provisions stood at SKK 542 million. In several banks, however, this net income was negative (i.e. the costs of creating provisions in these banks were higher than the income from reversing the provisions) and substantially affected the profit.

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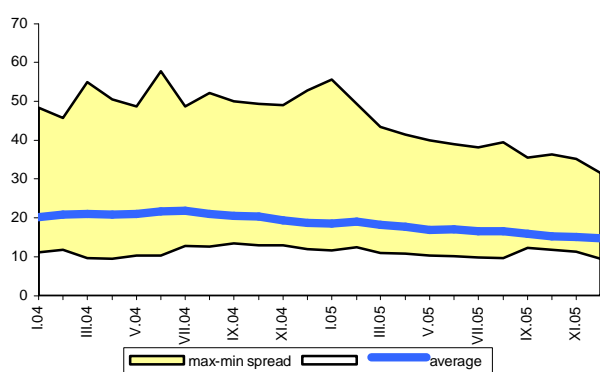
year comparability income reflected directly in the shareholders' equity.

## Capital adequacy

The capital adequacy of the banking sector fell in 2005. This was largely due to substantial growth in risk-weighted assets, caused mainly by an increase in lending. Despite its declining trend, the capital adequacy of the Slovak banking sector is one of the highest among EU banking sectors. At the end of 2005, the capital adequacy of all banks was above the minimum level of 8%.

The capital adequacy of the banking sector continued a falling trend during 2005 and stood at 14.8%<sup>13</sup> in December, having decreased by almost 20% since January.

**Chart 40 Development of capital adequacy**

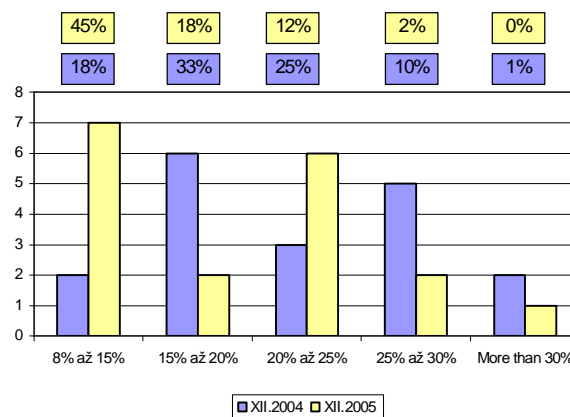


- source: NBS
- vertical axis: capital adequacy ratio in percent
- the chart shows the development of the maximum, minimum and average capital adequacy of the banks' weighted assets
- the risk-weighted assets of branches of foreign banks are not included

Almost all banks reported a decline in capital adequacy. The banking sector's movement towards lower capital adequacy ratios may be seen in Chart 41. In December, as much as 45% of the banking sector (in terms of banks' assets) had a capital adequacy of below 15%.

Capital adequacy declined mainly due to the increase in risk-weighted assets (RWAs), especially the rise in loans.

**Chart 41 Breakdown of capital adequacy in the banking sector**



- source: NBS
- vertical axis: 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 is caused not only by the rise in RWAs, but also by the banks' efforts to manage capital requirements more efficiently. In other words, banks are seeking to manage their risks while holding a smaller volume of capital. This trend is also related to the introduction of more sophisticated risk management methods in banks. The overall decline in capital adequacy should therefore be evaluated in context of the risk management level in banks.

The volume of own funds for the whole banking sector was stable in 2005, though individual banks did record changes in own funds.

Banks reported a high quality of own funds, most of which comprised Tier 1 capital.

<sup>13</sup> The average value weighted by banks' risk-weighted assets, not including the risk-weighted assets of branches of foreign banks.

## **Box 4 EU banking sectors in 2005**

### **Euro area banking sectors**

Banking sectors in the euro area showed positive trends in 2005. Banks were reporting high profitability, and capital adequacy was also satisfactory. The positive development in profitability has several causes. Despite a decline in interest margins banks profited from the high growth in new loans in both the household sector and corporate sector.

Most banking sectors recorded an increase in net interest income. The fact that banks are becoming more focused on non-interest income was reflected in the growth in income from trading and fees. Income from trading was largely supported by the positive development in capital markets. Banks also profited from the decline in the creation of provisions. In some banking sectors, banks benefited from a reduction in operating costs. Progress was also made in the area of risk management. Banks made greater use of both instruments of the credit risk transfer market, and more advanced methods of stress testing.

### **Other EU banking sectors**

The positive economic growth in the United Kingdom, Sweden and Denmark was reflected in the profit growth reported by the banking sectors in the three countries. In these sectors, as in other banking sectors, corporate lending and household lending continued to increase. Non-interest income raised substantially, especially income from trading and fees. In the United Kingdom, non-interest income overtook interest income as a share of total income.

Most of the new EU Member States reported higher economic growth in comparison with the other Member States. Interest income represented the most significant segment of profit (despite the fact that most countries recorded a decline in interest margins), with its growth supported by the increase in lending. However, the importance of interest income fell due to the rise in non-interest income (especially fees and income from trading). The banking sectors in the new Member States reported a rise in operating costs, especially staffing costs. In most of these sectors, the creation of provisions declined. Due to the strong growth in lending, capital adequacy in the new Member States decreased. In connection with the increase in lending, several banking sectors recorded a rise in financing from foreign interbank funds.

## Risks in the banking sector

*Risk in the banking sector in 2005 did not change significantly in comparison with 2004. Growth in profitability and a satisfactory level of capital adequacy created the assumption that the banks are able to cope with the risks undertaken.*

*The most significant financial risk to which banks were exposed in 2005 was credit risk. In connection with the dynamic rise in household lending, credit risk in this segment represents a key issue. Despite the increase in household debt, the continuing positive macroeconomic development makes it possible to expect that households will be able to pay their liabilities and there will not be a significant impairment in the quality of banks' credit portfolios. Households are generating sufficient income and hold a high volume of financial assets. What does appear risky is the increasing competition between banks and the relaxing of the standards under which loans are provided, since this could result in lending to riskier household categories. Another potential risk is the growing interest rate sensitivity of households, especially their capacity to cope with an increase in the interest burden following a rise in interest rates.*

*The positive macroeconomic development is also reflected in corporate sector risk. The default rate for corporate loans remained stable during the course of 2005, and this positive development was seen in the better quality of the corporate credit portfolio. It remains to be seen what effect exchange rate fluctuations will have on enterprises' foreign exchange positions and competitiveness, and therefore their credit risk. As with households, the growth in corporate lending and competition between banks could lead to the credit risk of banks' corporate clients being underestimated.*

*A large part of banking assets are placed in the NBS and government bonds. Holdings of riskier securities increased slightly and this trend will probably continue in coming years given the banks' falling interest margins.*

*The direct foreign exchange risk in the banking sector in terms of banks' open foreign exchange positions was not significant in 2005. The banks' foreign exchange position was affected mostly by funds from foreign banks, reflected in the growth in foreign currency loans or in the creation of an open short foreign exchange position on the balance that was hedged by off-balance-sheet derivative transactions. In several banks, an open foreign exchange position was created by various off-balance sheet transactions.*

*The banking sector interest risk, measured by sensitivity to interest rate changes, was low in 2005, both in terms of assets and liabilities. In regard to their next revaluation or fixing, most interest-sensitive assets and liabilities had a maturity period of up to one year.*

*The liquidity risk in the banking sector in 2005 was largely affected by the change in the time structure of assets and liabilities. In most banks, the total volume of sight deposits and their share of deposits increased. On the other hand, due to competition, the trend of long-term lending to households (mostly for housing) continued and the maturity on corporate loans was partially extended. Receivables against clients as a share of total assets rose in 2005 from 34% to 38% and partially replaced the more liquid government bonds, whose share of assets fell from 16% to 14%. Interbank market funds, which in most EU countries represent a liquidity cushion, accounted for only between 2% and 5% of total assets. Banks placed most of the short-term funds in NBS sterilization repo tenders, while a large part of the sterilized volume comprised short-term deposits of foreign banks.*

## Credit risk

### Credit risk of households

#### Increase in household lending

Loans to households accounted for 29.9% of total client loans at the end of 2005. The volume of household lending rose during the year by 39.9%.

The increase in household lending was mostly accounted for by large banks, although several other banks reported a significant rise in this respect. Both housing loans and other loans recorded growth.

#### Quality of the household credit portfolio

The credit risk of households lies in the inability or unwillingness of households to repay loans. Therefore the evaluation of credit risk is based on a future perspective – the possible development of those indicators which affect the repayment of household loans.

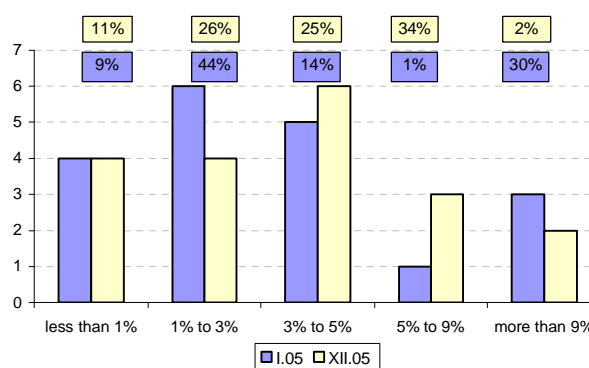
By contrast the evaluation of credit risk using the share of non-performing loans<sup>14</sup> is based on the past behaviour of households and on the assumption that their behaviour will be similar in the future.

Although the rise in household lending may be seen as positive in terms of the diversification of the banks' credit portfolio, the increase in volume of loans also has implications for their quality. The survey findings on credit market development indicate that the rise in lending volume reflects not only demand factors (income growth, positive macroeconomic development, and so on) but also supply factors. Principal among them is competition between banks, as manifested in the relaxing of credit standards and other conditions under which loans are provided. Indeed, the significant position of supply factors within lending growth could lead to impairment in the quality of the banks' credit portfolio.

<sup>14</sup> Defined as loans to client or banks that are more than 90 days past due payment.

As a share of total household loans, gross non-performing household loans fell in 2005, from 4.5% in January to 3.9% in December. As Chart 42 shows, the banks whose non-performing loans account for more than 9% of their total loans fell in both number and in their share of bank sector assets.

**Chart 42 Breakdown of gross non-performing household loans as a share of total household loans**



- source: NBS
- vertical axis: 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

When evaluating non-performing receivables as a share of total loans, it should be stressed that this ratio is to a large extent influenced both by the increase in new loans (where an impairment in quality may appear only after the passage of time), and by the sale or assignment of loss-making receivables.

Despite the improvement in the ratio of non-performing loans to total loans, the actual volume of non-performing loans increased over the 2005 by 20% (approximately SKK 1 billion) to stand at SKK 6.5 billion in December.

The volume of standard special mention loans increased by 64.3% over the course of the year, (from SKK 1.64 billion in January to SKK 2.69 billion in December). As of December, they accounted for 1.4% of total household loans.

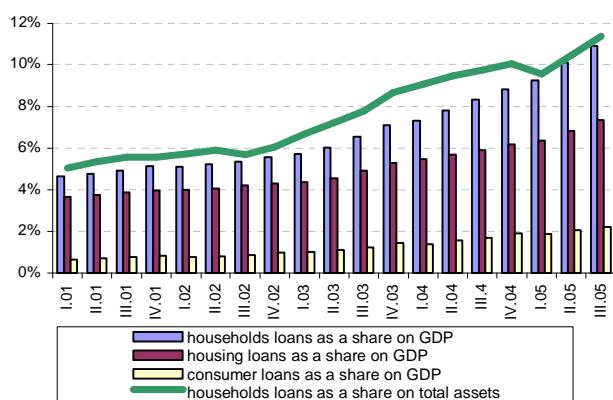


### Rise in household indebtedness

Alongside the increase in household lending, household indebtedness also rose. In the third quarter of 2005, the volume of household loans was equivalent to 11% of GDP. Most of these loans were housing loans. Even though lending as a share of GDP has risen sharply since 2003, household lending as a share of GDP is one of the lowest in comparison with other countries. In the EU, household loans in 2004 were equivalent to 57.2% of GDP with the most indebted households being in the UK (98%) and the Netherlands (77%). The share of household lending on banks<sup>15</sup>, which indicates that it is not so significant from the macroeconomic and financial stability perspectives<sup>15</sup>.

Household indebtedness also increased in relation to household financial assets. This trend indicates a reduction in those household liquid assets that could be used in emergencies for loan repayments.

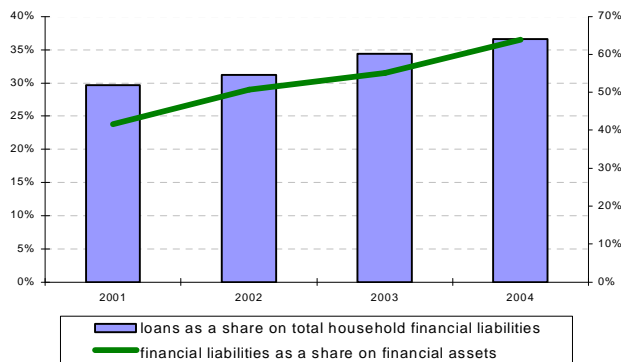
**Chart 43 Household lending in relation to GDP and banks' assets**



- Source: NBS, Statistical Office of the SR
- the percentages represent the ratio of household lending to GDP in current prices

<sup>15</sup> The comparison of household indebtedness in various countries is examined in further detail in the special topic – Household Lending Growth.

**Chart 44 Financial liabilities and assets of households**



- Source: Statistical Office of the SR
- right axis: loans as a share of total household financial liabilities
- left axis: share of financial liabilities and assets

### Interest rate risk of households

The banking sector is reporting a high share of household loans with an interest rate fixed for up to one year. In December 2005, they accounted for 82% of new household loans. Most banks reported a high share of new loans with either a floating interest rate or a rate fixed for up to one year.

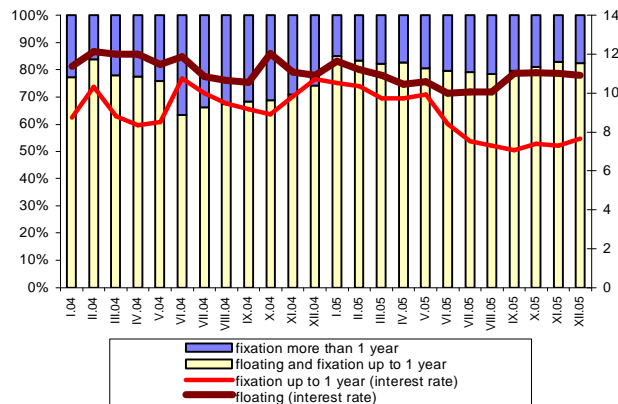
Household uptake of loans offering a short-term fixed interest rate is largely connected with the trend of falling interest rates in recent years. Households reckon on the past development of interest rates in the assumptions for future development. This short-sighted behaviour exposes them to a repayment burden in the event that interest rates rise<sup>16</sup>.

As for the banks, they are seeking to transfer the interest risk to households. On the other hand, it is the quality of the banks' credit portfolio that will be impaired if households struggle to make their loan repayments following a rise in interest rates. Even if an increase in interest rates does not have a directly negative effect on banks' stability (households are able repay loans despite the extreme situation), there will be an adverse effect on household consumption.

<sup>16</sup> The high share of loans with a short-term fixed interest rate does not have to represent a risk for households provided that at times of low interest rates they create reserves to cover an increase in repayments.



**Chart 45 New household loans according to fixed interest rate period**



- Source: NBS
- right axis: interest rates in percent
- left axis: share of loans according to fixed interest rate period

The high share of loans with short-term fixed interest is therefore making households increasingly sensitive to interest rate changes, and it is becoming more important as a channel for transmitting monetary policy to the real economy.

### Financial position of households

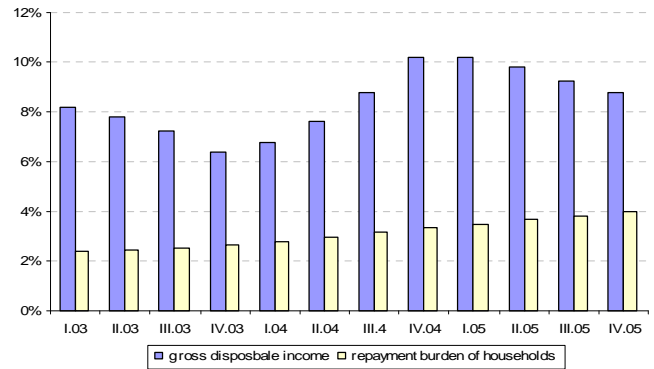
The substantial increase in household lending over recent years has been largely driven by higher household demand for loans. Household interest in this regard has been supported mainly by the overall improvement in the macroeconomic situation. This has been seen in the decline in interest rates, the growth in household income, the fall in unemployment and the rise in real estate prices.

In terms of macroeconomic figures, the income generated by households in 2005 was sufficient for the repayment of loans. In the last quarter of 2005, loan repayments<sup>17</sup> represented 4% of gross disposable household income. Although this trend is growing, it should be noted that this ratio is among the lowest in the EU<sup>18</sup>.

<sup>17</sup> Loan repayments are calculated from the time structure of loans and their interest rates.

<sup>18</sup> In 2002, the Netherlands reported this ratio at 11%, Germany 7%, and the UK 7%. Source: Macroeconomic implications of rising household debt, BIS (2004)

**Chart 46 Household loan debt burden in relation to household income**



- Source: Statistical Office of the SR, NBS, own calculations
- data for gross disposable income express the percentage growth in comparison with the same period of the previous year
- gross disposable income is defined as the difference between household current income and household expenses
- the loan debt burden is the ratio of repayments to gross disposable income; the loan debt burden is calculated from the volume of household loans broken down by their maturity and interest rates.

A different view of the household default rate is provided by microeconomic data<sup>19</sup>. These data can give a picture of the distribution of indebtedness within different income groups as well as the extent of the loan repayment burden. An analysis of this kind will be very important given the likelihood that banks react to growing competition by lending to riskier groups of households.

The ability of households to repay loans is affected not only by primary funds in the form of income but also by the amount and structure of financial assets. In the event of deepening indebtedness or loss of income, these are used for loan repayments.

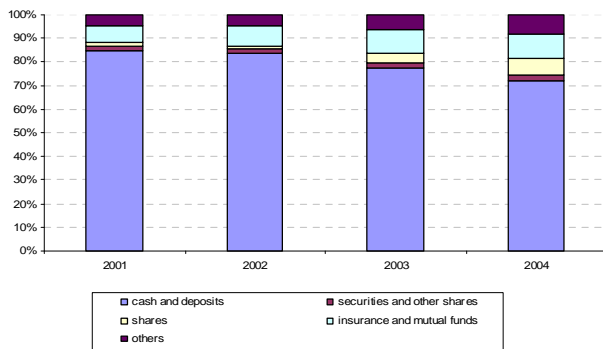
Financial assets have a dominant structure, meaning that they are mostly made up of liquid assets. However, the trend in recent years indicates a change in the structure of financial assets with households owning a greater volume

<sup>19</sup> The NBS plans to use microeconomic data for the analysis of household indebtedness in the report on the first half of 2006.

of less liquid but higher-yielding assets. The proportion of investments in shares, mutual funds and insurance is increasing.

With rising holdings of assets, the value of which depends on market developments, households are becoming more sensitive to the performance of financial markets.

**Chart 47 Structure of household financial assets**



Source: Statistical Office of the SR

## Corporate credit risk

### Rise in corporate lending

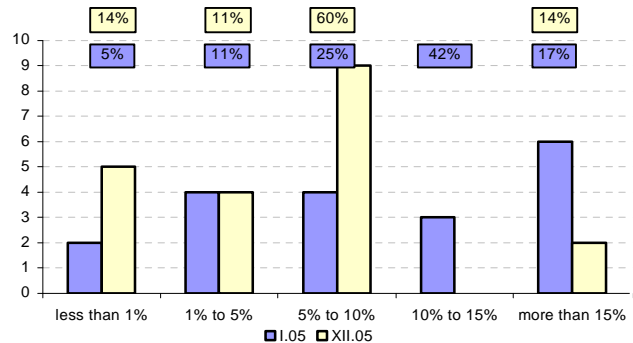
Corporate loans accounted for 49% of total loans at the end of the year. The volume of corporate lending during the year increased by 17.8% with growth in both domestic-currency and foreign-currency loans.

### Quality of the corporate credit portfolio

The quality of the corporate credit portfolio made a slight improvement, in both the share and volume of non-performing loans. Non-performing loans as a share of total corporate loans amounted to 8% in December (compared to 10% in January). Almost all banks reported an improvement in this share in comparison with the beginning of the year. As regards standard special mention receivables, they increased by 14% in 2005, from SKK 30.8 billion to SKK 35.1 billion in December.

From the view of industry classification<sup>20</sup>, the riskiest loans appeared to be those provided in industrial production.

**Chart 48 Breakdown of gross non-performing corporate loans by share of total corporate loans**



Source: NBS

vertical axis: 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

**Table 3 Quality of corporate loans by industry in November 2005**

Industry	Non-performing loans as a share of total loans	Industry share of total loans
Total industrial production	14.09%	13.83%
Transport, warehousing, postal services and telecoms	11.34%	3.90%
Agriculture, hunting and forestry	10.16%	2.13%
Wholesale and retail trade, repair of motor vehicles and consumer goods	8.55%	13.71%
Construction	7.78%	2.42%
Other community, social and personal services	4.63%	1.94%
Activities of households	4.33%	30.58%
Non-residents	3.61%	2.89%
Real estate, leasing and business activities	2.36%	7.24%
Financial intermediation	0.17%	9.60%
Public administration and defence, social insurance	0.15%	4.97%
Electricity, gas and water generation and distribution	0.10%	5.33%
Industries whose share of total loans is less than 1%	55.33%	1.46%

Source: NBS

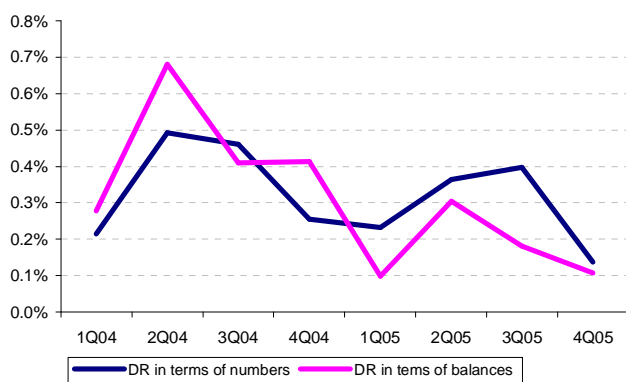
data are not included for industries whose share of total loans is less than 1%

<sup>20</sup> The only industries considered are those that account for more than 1% of total loans.

### Default rate in the corporate sector

The default rate (DR) expresses the percentage of loans that default during the reviewed period<sup>21</sup>. The default rate may be tracked in terms of either number of loans or the volume of loan balances. During 2005, the DR for number of loans exceeded the DR for balances, from which it may be concluded that the defaulted loans were mainly loans with a lower than average balance. Throughout the year, both indicators fluctuated at a low level, below 0.5%. The quarterly default rate from 2004 is shown in Chart 49<sup>22</sup>.

**Chart 49 Default rate of legal persons under the category of standard loans, special mention loans, substandard, doubtful and loss loans**



- Source: Register of Bank Loans and Guarantees, NBS, own calculations  
 - DR (default rate)

### Financial situation of the corporate sector

Despite the increasing volume of loans provided to the corporate sector, the indebtedness ratio did not change significantly. The volume of assets in the whole corporate sector rose by 21%

<sup>21</sup> The period used for the calculation is a quarter.

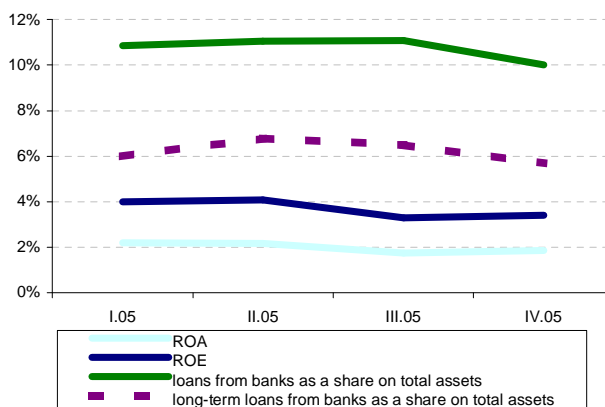
<sup>22</sup> When interpreting the chart, account should be taken of the amendment to the Decree on the Classification of Assets and Liabilities from 2005, which introduced changes to the quantitative characteristics for the classification of loans into individual categories. The arrears period for individual categories were shortened, and the definition of arrears period was modified. The change has not been significantly reflected in the chart.

between the end of the first quarter and the end of 2005. The sector recorded similar growth for the volume of shareholders' equity (up by 22%).

Therefore the ratio of bank loans to total assets declined and by the end of year stood at 10%. Among industries, the ratio of bank loans to total assets in 2005 was highest in industrial production (11.7%), followed by the generation and distribution of electricity, steam and hot water (10.1%), and by wholesale and retail trade and the repair of motor vehicles (8.3%).

The development was similar in the ratio of long-term loans to corporate assets. On the other hand, long-term loans as a share of total corporate loans increased slightly over the year and at the end of the third quarter represented almost 60% of total loans. The share of long-term loans increased mainly in the industry of generation and distribution of electricity, steam and hot water, and in the industry of transport and telecoms. This rise confirms the trend of increasing corporate interest in investment loans.

**Chart 50 Selected indicators of the corporate sector in 2005**

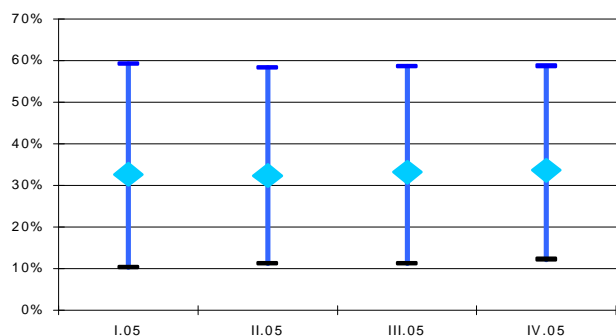


- Source: Statistical Office of the SR

Shareholders' equity as a share of total liabilities showed stable development, fluctuating between 53% and 54%. The industry in which shareholders' equity had the lowest share of total liabilities was construction (33%), followed by wholesale and retail trade and repair of motor vehicles (35%) and industrial production (48%).

The ratio of shareholders' equity to total liabilities in the corporate sector had a median value lower than the average value. This indicates that the sectoral average value is mainly influenced by larger enterprises reporting greater indebtedness in foreign funds.

**Chart 51 Ratio of shareholders' equity to total liabilities in the corporate sector**



- Source: Statistical Office of the SR, own calculations

### Quality of the credit portfolio in other sectors<sup>23</sup>

As regards non-performing loans in other sectors, banks reported the highest share in loans to small businesses (7.5%). Within lending to non-bank financial companies and lending to the general government, there was a high quality of receivables with the share of non-performing receivables at 0.13% and 0.01%, respectively. In general, these sectors are the least risky in terms of loan repayment.

**Table 4 Quality of portfolio of other sectors**

	Non-perf. loans as a share of total loans	Sector share of total loans
Loans to small businesses	7.55%	2.45%
Loans to non-bank financial companies	0.13%	9.95%
Loans to the general government	0.01%	5.01%
Loans to non-residents	2.96%	3.3%

- Source: NBS

<sup>23</sup> Sector of small businesses, sector of non-bank financial companies, general government sector, non-residents sector.

Gross non-performing loans to non-residents as a share of total loans to non-residents decreased during 2005, from 8.1% in January to 2.96% in December. This decline was largely caused by the increase in total exposures towards non-residents.

### Provision coverage

Under an NBS Decree<sup>24</sup> applicable since 31 January 2004, the unsecured part of a receivable<sup>25</sup> is stipulated as follows according to particular categories of receivables:

**Table 5 Prescribed provision coverage**

Receivable categories	Provision coverage of the unsecured part
Special mention	1 – 20%
Substandard	20 – 50%
Doubtful	50 – 95%
Loss	100%

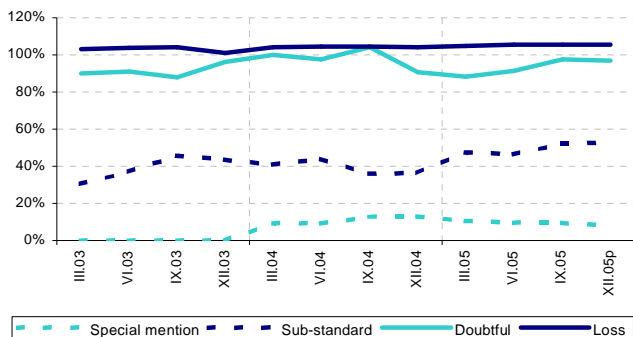
- source: NBS

Chart 52 shows the time development for the provision coverage of the unsecured part of receivables against clients. It may be concluded that over the course of 2004 and 2005, the Slovak banking sector as a whole did not record an excessive reversal of provisions that would lead to a reduction in the coverage of the unsecured part of receivables. An analogous conclusion may be drawn for receivables against banks and against the general government.

<sup>24</sup> NBS Decree no 7/2002, as amended by NBS Decree no 1/2004 and Decree no 13/2004, on the classification of assets and liabilities of banks and branches of foreign banks, their revaluation, the formation and reversal dissolution of reserves, and related reporting.

<sup>25</sup> The unsecured part of a receivable represents the difference between the gross value of the receivable and the claimable value of the security. The claimable value of the security under a lien may not exceed the amount of the receivable which it secures.

**Chart 52 Provision coverage of the unsecured part of loans**



- source: NBS
- data are not included for those banks that in 2005 proceeded to revalue receivables with provisions in accordance with international accounting standards and reported these receivables as unclassified in the report on the classification of assets and liabilities.

## Foreign exchange risk

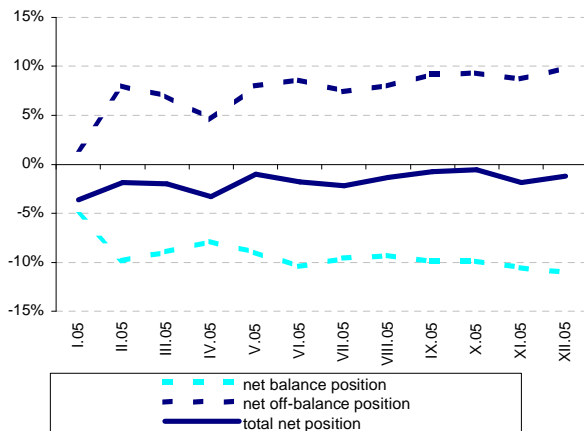
Foreign exchange risk is related to banks' open position in foreign currencies and to fluctuations in exchange rates which bring about a change in the value of foreign currency positions in the domestic currency.

The direct foreign exchange risk of the banking sector in terms of the banks' open foreign exchange position was low in 2005. The total open foreign exchange position was short<sup>26</sup> throughout 2005, which exposed the banking sector to an adverse effect in the event of depreciation of the domestic currency. The position was declining from the beginning of the year until December when it rises to 3.84% of assets. On the liabilities side, short-term foreign exchange funds from banks continued to increase. Foreign exchange loans on the assets side also rose, but to a lesser extent than did funds from foreign banks. The volume of foreign exchange loans to clients exceeded deposits (the ratio of clients' foreign currency loans to deposits stood at 115% in December 2005), which forced banks to

<sup>26</sup> A position where liabilities are greater than assets.

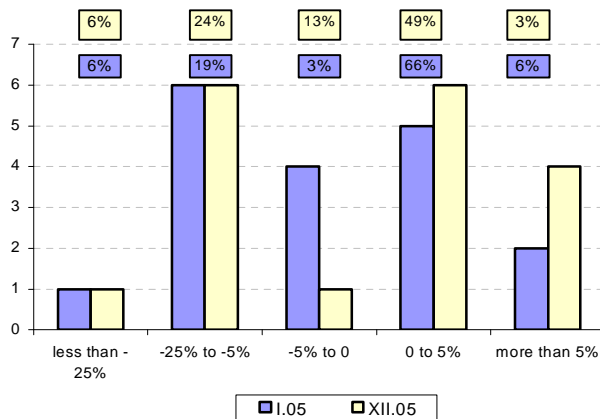
finance the increase in foreign exchange loans with funds from foreign banks.

**Chart 53 Open foreign exchange positions as a share of banks assets**



- source: NBS
- data includes branches of foreign banks
- vertical axis: open positions by their shares of the sector's total assets

**Chart 54 Breakdown of open foreign exchange positions by their shares of banks' assets**



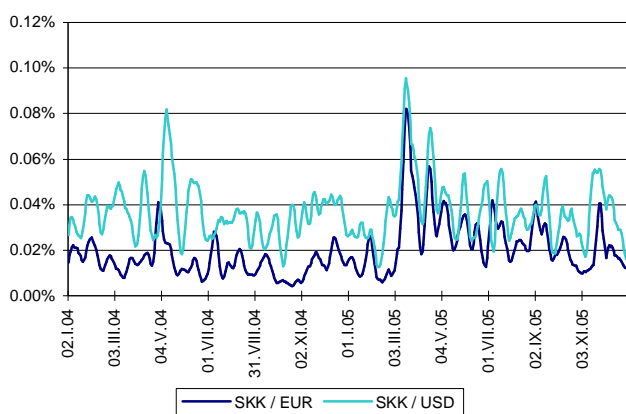
- source: NBS
- vertical axis: number of banks
- horizontal axis: open net positions as a share of assets
- the percentage above each bar represents the assets of the banks in that bar as a share of total assets in the sector
- data includes branches of foreign banks

In most banks, the balance sheet position was closed with off-balance-sheet derivative transactions. The total foreign exchange position

was open in several banks due to foreign exchange positions arising from receivables from guarantees, liabilities on future loans, guarantee liabilities, and liabilities on received guarantees.

The volatility of key exchange rates increased slightly in 2005 in comparison with 2004. Volatility rose more significantly with the EUR exchange rate. Exchange rates reported higher volatility in the first half of 2005.

**Chart 55 Volatility of the EUR and SKK exchange rates**



- source: NBS, own calculations
- the chart shows the standard deviation of the logarithms of relative changes in exchange rates  $r_t$
- the volatility was calculated from historical data, with the historically older data being assigned a smaller (exponentially declining) weight:  $\sigma_t^2 = 0,94 \sigma_{t-1}^2 + 0,06 r_t^2$

The stable development of foreign exchange risk in 2005 is also indicated by value-at-risk (VaR) figures<sup>27</sup>. VaR takes into account the volatility of exchange rates and their correlations, while the median rose from 0.38% to 1.04% of the value of own funds.

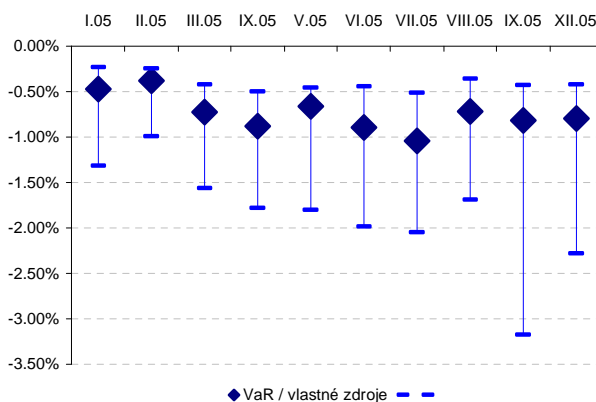
### Increase in foreign exchange funds from banks

Foreign exchange assets comprised mainly assets denominated in EUR (82% of the total), USD (11%) and CZK (5%). Over the year, foreign exchange assets increased by 17%, most

<sup>27</sup> The VaR calculation takes into account open positions in all currencies

of the rise being accounted for by foreign currency loans, which rose by 35%. Foreign currency loans were also the most significant item of foreign currency assets. As for securities denominated in foreign currency, the sector recorded a decrease over the year (in December they accounted for 15% of foreign currency assets).

**Chart 56 VaR – foreign exchange risk in the banking sector**



- source: NBS
- the indicator is the ratio of VaR to banks' own funds
- the chart shows the median values and the values of the first and third quartile
- vertical axis: data are in percent
- VaR is defined as the highest possible daily loss with the probability of 99%. An historical simulation was used in the VaR calculation.
- the results do not include branches of foreign banks

Foreign exchange liabilities, like foreign exchange assets, were largely denominated in EUR (62% of liabilities), and then USD (34%) and CZK (3%). Foreign exchange liabilities increased by 51% over the year, and mostly comprised deposits from banks (63%) and client deposits (33%). The latter increased by 25% in comparison with the beginning of the year and included mainly corporate deposits. The volume of household deposits showed stable development.

Foreign currency funds from banks had the most significant effect on banks' foreign currency



liabilities and on the overall foreign currency balance sheet position. Of their volume, foreign currency funds from non-resident banks accounted for as much as 94% in December 2005. These funds consisted mostly of short-term deposits. Foreign currency funds from banks increased by 75% over the course of the year.

The increase in these funds was related to the growth in foreign currency loans and the fact that they were invested in domestic assets in order to exploit the interest rate differential and the appreciation of the domestic currency. Banks used NBS sterilization repo tenders to deposit a large part of short-term foreign currency funds from abroad.

Largely affected by foreign currency funds from banks, the total foreign currency balance sheet position increased in 2005 to 11% of the value of banks' assets.

### **Changes in the off-balance sheet**

The open foreign currency position on the off-balance sheet largely reacted to changes in the balance sheet position. The increase in banks' short balance sheet position was hedged with derivative transactions (in December 2005, receivables arising from fixed forward transactions accounted for 70% of off-balance-sheet assets). The correlation between the banking sector's open balance sheet position and the net off-balance sheet amounted to almost 80% in 2005.

Options transactions represented a significant item of off-balance sheet foreign exchange transactions (receivables arising from options transaction represented 14% of off-balance sheet assets). Their net open position was insignificant. Banks mostly opened currency positions within options for their clients, and subsequently closed them with foreign banks.

Foreign currency receivables from future loans accounted for 7% of total off-balance sheet assets in the sector.

The off-balance-sheet foreign exchange position in banks was affected to a varying extent

by receivables from guarantees, liabilities on future loans, guarantee liabilities and liabilities on received guarantees.

### **Indirect foreign exchange risk**

Apart from the foreign exchange risk already looked at, the banking sector was exposed to indirect foreign exchange risk. This arises from the fact that banks are not directly vulnerable to an exchange rate fluctuation, but are vulnerable indirectly in the event of counterparties defaulting on loan repayments or if a change in exchange rates affects their competitiveness.

From discussions with banks, it is clear that a large part of the foreign exchange corporate loans are related to the export side of the corporate sector. Exporters hold income denominated in foreign currency, which creates a so-called natural hedge. Banks are also increasing currency positions within options, which are opened for clients in order to secure their open foreign exchange positions.

On the other hand, it may be that corporate demand for foreign exchange loans is related to the expected appreciation of the domestic currency.

Accurate data on the corporate sector's foreign exchange positions is not available at present. It is assumed that when providing foreign exchange loans, banks also assess the potential foreign exchange risk of enterprises.

### **Interest rate risk**

The direct effect that different shifts in yield curves have on banks is related to the time structure of interest-sensitive assets and liabilities. Banks are also indirectly influenced by credit risk. As regards, for example, household loans with short-term fixed interest rates, changes in interest rates affect banks by affecting the ability and willingness of households to repay the loans.

When measuring the size of the interest rate risk, the focus is on the present value of interest-sensitive assets and liabilities in regard to

different shifts in yield curves. The advantage of this approach is that it relies on the revaluation of all interest-sensitive assets and liabilities for changed interest rates and thereby on the quantification of the sensitivity of the present value of assets and liabilities to a change in interest rates. Should a bank, for example, provide a loan at an interest rate of 5%, the real value of this loan will fall when the market rates rise, since the bank will collect less interest income than it would at the market interest rates. At the same time, the decline in the loan's real value is greater where the fixed period of the interest rate is longer.

This approach does not, however, reflect the effect that interest rate fluctuations have on banks' net interest margins or net interest income. Indeed, the effect on interest income is not clear and is difficult to quantify. Were, for example, interest rates to increase over longer maturity periods, banks would profit from the rise in interest margins on new loans. An increase in long interest rates would, however, have an opposite effect on the interest margin on loans already provided. Since assets are more prevalent than liabilities among longer maturities, banks will respond to an increase in interest rates by revaluing liability items rather than asset items (a repricing risk), which will be reflected in a decline in interest margins. A rise in interest rates may also dampen demand for new loans, which will also be seen in lower interest income.

Interest rate changes also affect the value of investments in securities. As regards securities held for trading, a change in value is immediately reflected in profitability, while a change in value of securities available for sale is seen in own funds.

In 2005, the banking sector reported a low interest rate risk in terms of the sensitivity of the present value of assets and liabilities to interest rate changes. Both assets and liabilities display relatively low interest sensitivity as a result of their short duration. For the period until their next revaluation or next fixing, most interest sensitive assets (80%) and liabilities (87%) were classified

within maturity ranges of up to one year. An increase in interest rates within longer fixation buckets would have a particularly negative effect on the present value of assets and liabilities.

### **Structure of interest sensitive assets and liabilities**

Interest-sensitive items on the balance sheet were mostly denominated in the domestic currency. Of the overall volume of assets, interest-sensitive items accounted for 85%, and of overall liabilities, 72%. Banks held the more important positions in EUR (12% for assets and 17% for liabilities) and USD (1% for assets and 10% for liabilities).

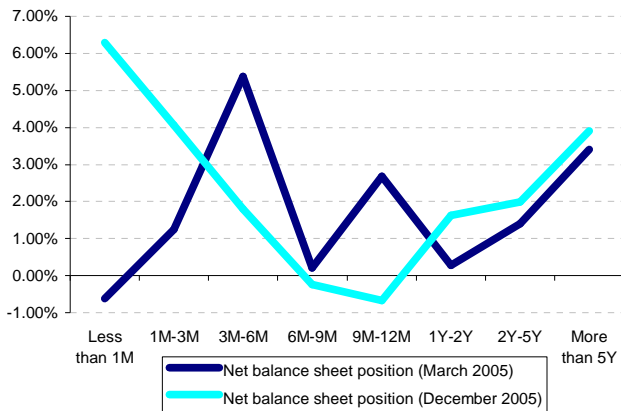
As regards interest-sensitive assets with a maturity of up to one month, they largely comprised transactions in the NBS and other banks. Securities and loans had approximately the same breakdown. As for loans, fixations of up to six months accounted for around 70% of the total and those of more than two years 16%, while for securities the respective figures were 51% and 38%.

The breakdown of liabilities by interest sensitivity is similar. Fixations of up to six months pertain to almost 90% of banks' deposits and 80% of client deposits. Other items, largely consisting of issued securities, break down into longer fixation buckets.

Chart 57 shows the breakdown of open balance sheet positions in the banking sector in 2005.



**Chart 57 Net balance sheet position of interest-sensitive assets and liabilities (in SKK)**



- source: NBS
- horizontal axis: fixation buckets
- vertical axis: net balance sheet position (non-cumulative) as a share of banks' total assets

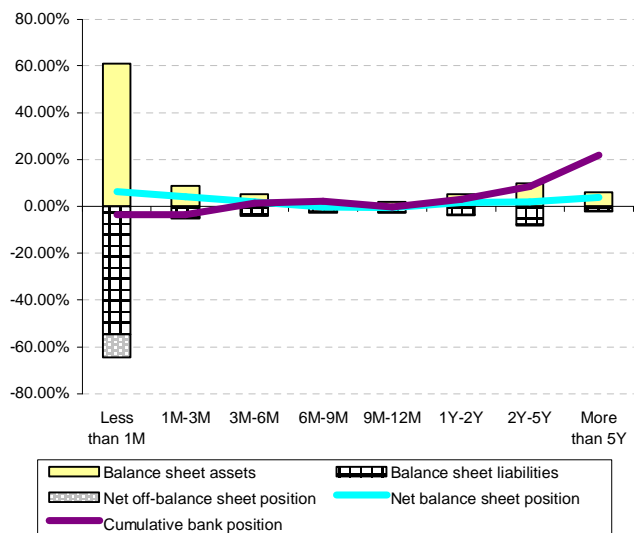
Interest-sensitive off-balance sheet positions mainly comprised derivative transactions. They accounted for almost 88% of interest-sensitive assets and 84% of liabilities.

Most derivatives were interest-rate and currency derivatives. Derivative positions were largely closed, and indeed the whole open interest rate position on the off-balance sheet was small. It was only for the fixation bucket of up to one month that the banking sector reported a more substantial open off-balance sheet position, and this largely consisted of other off-balance sheet transactions.

### Interest rate sensitivity of individual asset and liability items

As regards individual groups of items, their sensitivity to interest rate changes did not change significantly during the course of the year. On the assets side, the greatest sensitivity was reported among items with longer fixation buckets – securities and loans. As for liabilities, issued securities proved particularly sensitive, though these did not represent a significant part of the portfolio. Client deposits, the largest item in terms of volume, showed low sensitivity.

**Chart 58 Time structure of interest-sensitive items of the balance sheet and off-balance sheet in SKK**



- source: NBS
- horizontal axis: fixation buckets
- vertical axis: shares of banks' total assets

**Table 6 Interest rate sensitivity of selected aggregates of the banking sector's assets and liabilities (in SKK)**

	III.05	VI.05	IX.05	XII.05
Interbank market and NBS – assets	-0.0007%	-0.0007%	-0.0006%	-0.0006%
Asset transactions with clients	-0.0116%	-0.0095%	-0.0099%	-0.0102%
Securities transactions	-0.0203%	-0.0168%	-0.0187%	-0.0190%
Interbank market and NBS – liabilities	0.0049%	0.0052%	0.0049%	0.0046%
Liability transactions with clients	0.0046%	0.0047%	0.0048%	0.0050%
Other liability transactions	0,0329%	0.0286%	0.0254%	0.0259%

- Source: NBS
- the figures express the percentage change in the value of interest-sensitive items of assets and liabilities upon a parallel increase in interest rates by 1 basis point

## Liquidity risk

The Slovak banking sector reported a relatively high liquidity in 2005. Unlike in neighbouring countries, however, this was concentrated in the central bank and not in the interbank market, which led to its relative lessening (during 2005, at a level of between 2% and 5% of the sector's total assets).

Factors affecting liquidity risk remained largely unchanged during 2005. Those, which had the greatest effect, were foreign currency exchange rate, interest rates, lending demand and the NBS monetary policy.

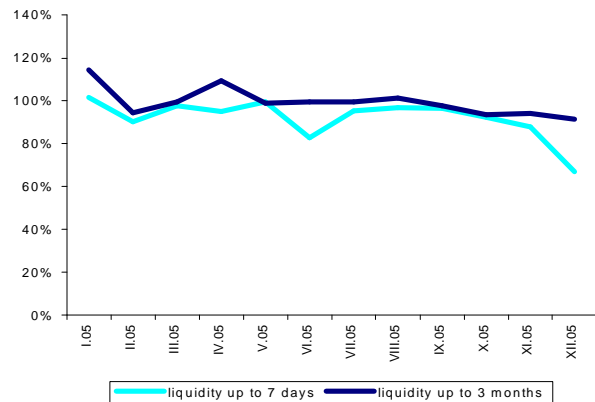
On the one hand, liquidity supporting tendencies continued, above all the inflow of short-term foreign capital driven by the interest rate differential, the strengthening of the Slovak koruna, and the opportunity to deposit of these funds in NBS sterilization repo tenders.

On the other hand, awareness of the high liquidity supported banking activities that led to widening of the time mismatch between assets and liabilities (especially the granting of long-term loans).

## Liquidity ratios

For measuring liquidity risk, the following four liquidity ratios were used: instant liquidity ratio, liquidity ratio for up to 7 days, liquidity ratio for up to 3 months<sup>28</sup>, and the ratio of fixed and non-liquid assets.<sup>29</sup>

**Chart 59 Median of liquidity ratios for up to 7 days and up to 3 months**



Source: NBS

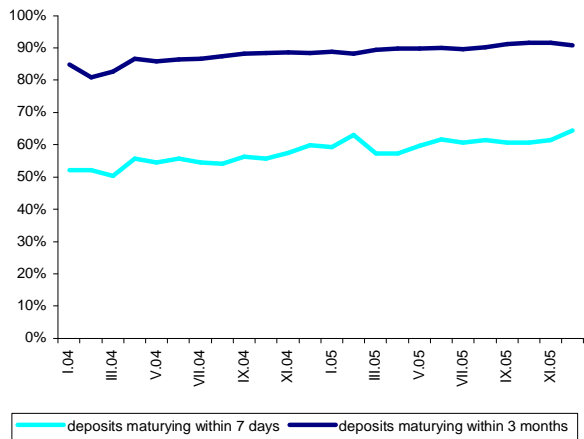
The fluctuation of the ratios was substantially affected by changes in the time structure of deposits. Amid declining interest rates, client deposits are concentrated in shorter maturity ranges. The change in the time structure is to a certain extent also affected by overall economic development, with households seeking other investment opportunities (life insurance collective investment) and greater amounts being kept in current accounts.

From the beginning of 2004 to December 2005, deposits of up to 7 days and deposits of up to 3 months increased their share of total deposits, from, respectively, 52% to 64% and 85% to 91%. The majority of client funds are held in current accounts.

<sup>28</sup> Ratios are defined in the chapter Stress Testing

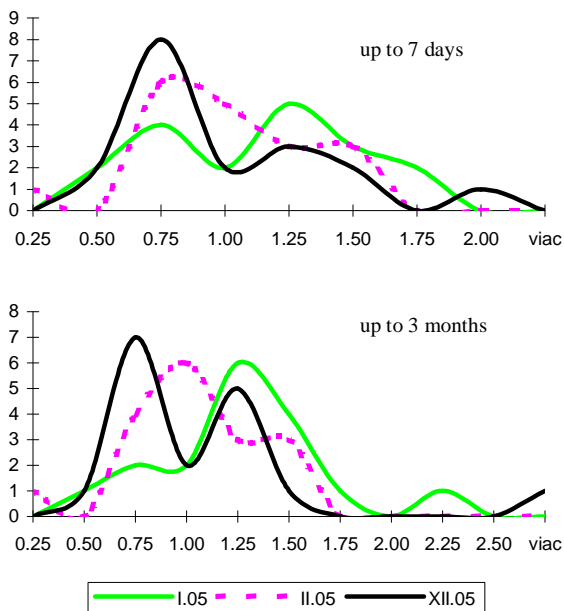
<sup>29</sup> The ratio of fixed and non-liquid assets is defined as the ratio of fixed and non-liquid assets to selected items of own funds.

**Chart 60 Deposits maturing within 7 days and within 3 months as a share of total deposits**



Source: NBS

**Chart 61 Distribution of the banking sector's liquidity ratios for up to 7 days and up to 3 months**



source: NBS

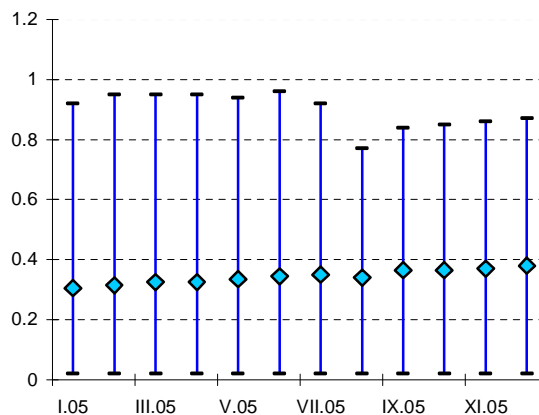
- the broken line indicates the period (February 2005) when the NBS did not perform any sterilization tenders

The rejection of a sterilization repo tender in February had a small short-term effect on both indicators (Chart 61). Both ratios declined at that time and subsequently rose after the tender was restored. In December 2005, however, the ratios

were back to below their February level. The effect of sterilization tenders not being performed may be seen in the fluctuation of the ratios' values within the sector. In comparison with January, the distribution of both ratios moved leftwards, meaning that more banks reported a lower value. In December, on the other hand, the ratios' distribution is concentrated around figures, which are lower than those in the previous February.

The instant liquidity ratio behaved analogously, its median value declining over the course of the year (almost linearly) from 59% to 53%. The NBS decision not to perform a sterilization repo tender did not affect banks' instant liquidity; the only difference was the replacement of NBS bills, which banks acquired as collateral, by short-term deposits with the NBS.

**Chart 62 Ratio of fixed and non-liquid assets – minimum, median and maximum**



source: NBS

- the chart shows the maximum, minimum and median values

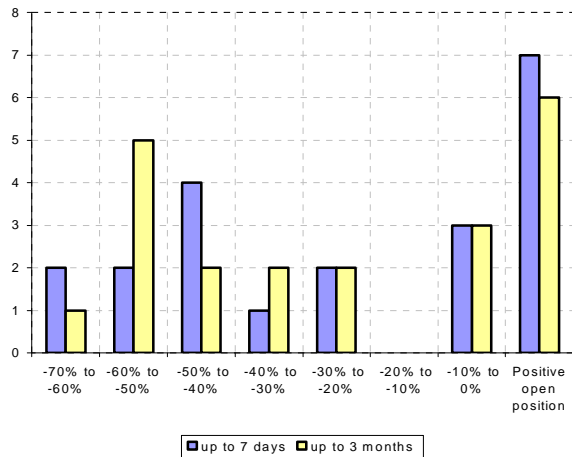
The ratio of fixed and non-liquid assets registered a slight rise in its median values.

**Gap analysis**

Another view of liquidity risk is provided by an analysis of the size of the open position in liquid funds (the mismatch between asset and

liabilities) within maturity ranges of up to seven days and three months – as with the ratios. In this analysis, the size of the open position is compared with the volume of assets of the respective bank. The reason for making the comparison with assets (and not with own sources) is the fact the open position in liquid funds cannot be interpreted as a potential loss. What therefore matters is the size relative to total assets.

**Chart 63 Breakdown of the share of open positions of up to 7 days and up to 3 months in December 2005**



- Source: NBS
- vertical axis: number of banks

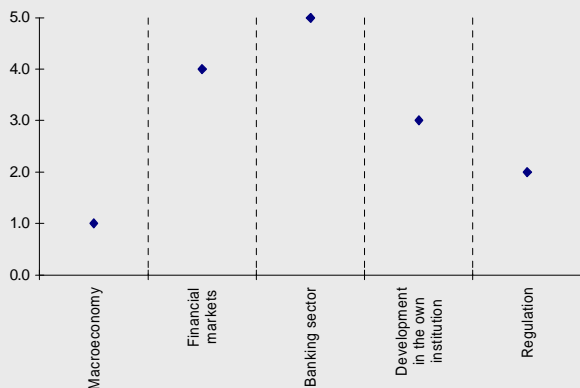
For the whole 2005, all large and medium-sized banks reported negative liquidity gap for positions maturing within 7 days or 3 months. From December 2004, the negative position as a share of total assets increased in most of these banks. This is a natural consequence of the increase in current account balances and the granting of loans with longer maturities.

Overall, as a share of total assets, the negative position in liquid funds maturing within 7 days or 3 months deteriorated over the year in 13 and 16 banks, respectively.

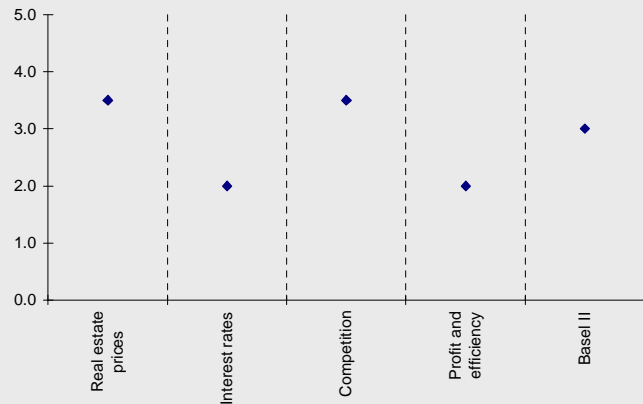
### Box 5 Main risks for the next year

Main risk categories were identified on the basis of the questionnaire survey conducted among selected Slovak banks. Within these categories, particular risks were specified and their significance was assessed using a five-point scale.

**Chart 64 Main risk categories**



**Chart 65 Specific risks in the main categories**



- Source: WGBD, Survey on EU Banks' s main risks for the year ahead
- the charts show the median values

Most banks concurred with the main category of risk that represents the environment of the domestic banking sector. In the detailed analysis, the main risk factors concern the increasing competitive pressure and fears about the entry of new players. Banks see a risk in the downward pressure on the interest margin and in the increasing risk appetite (see Box: Questionnaire on Lending Market Development). Within this category, several banks also noted the operational risk from information technologies. The second most significant category is developments in financial markets, which is dominated by the risk of fluctuation in interest rates. In addition, several banks identified the risk from derivative markets and the indirect foreign exchange risk. Own institution risks represented the third category, which was dominated by the need to improve efficiency and profitability as well as to increase the size of the institution. The fourth category – macroeconomics – largely concerned the risk of change in real estate prices and the risk of low economic growth in the euro area. As far as regulation is concerned, banks understandably consider the main challenge to be the transition to Basel II.

## Stress testing

*Under the scenario of an extreme increase in non-performing receivables in the banking sector, there was no significant decline in capital adequacy. For some banks, the ratio fell to below 8%. A more adverse effect was produced by the scenario in which the volume of received loans and the share of non-performing loans both increased. The effect on banks was especially negative where the scenario involved a higher increase in the share of non-performing loans. This brought about a substantial decline in capital adequacy in several banks.*

*Amid extreme fluctuations in exchange rates, banks would not report any significant effect on capital adequacy. The sector would be mainly sensitive to depreciation of the domestic currency.*

*The interest rate would not pose a serious problem to the banking sector. The main adversity in this regard would be caused by an increase in interest rates on longer maturities in the domestic currency.*

*Impairment of the liquidity ratio would arise mainly in the event of an excessive withdrawal of client deposits. In this scenario, it was large and medium-sized banks that were most seriously affected. An outflow of short-term funds from foreign banks would negatively affect the banking sector, and especially certain medium-large banks and banks tied to a parent company.*

The main aim of stress testing is to quantify the ability of individual banks and the banking sector as whole to cope with exceptional but plausible market conditions.

As regards credit, foreign-exchange and interest-rate risk, scenarios are used to evaluate the effect on capital adequacy by deducting from the capital the potential loss that results from applying the scenario (or by adding the potential profit to the capital).

For credit risk, consideration is given also to the effect of the stress scenarios on risk weighted assets. With liquidity risk, the effect of stress situations on the liquidity ratios is quantified.

Stress tests were applied to all banks in the sector on the basis of the banks' positions in December 2005. An exception was the stress tests for quantifying effect on capital, which were not applied to the branches of foreign banks.

When interpreting the results of stress scenarios it is important to recognize the particular limitations of stress testing. Like other models, stress tests involve a simplification of the real situation in the market. Although the aim is to design stress scenarios and to quantify them in a way that mirrors the market reality as far as possible, the complexity of the real situation necessitates working with certain assumptions and simplifications.

Stress testing of the mentioned risks was performed separately for each risk. Although the scenarios are related, they do not assume relationships between the individual risks.

## Foreign exchange risk

Stress testing of the foreign exchange risk was performed on all banks in the sector. The test focused on open foreign exchange positions in the most important currencies (EUR, USD, CHF, CZK, GBP, HUF, PLN, JPY) and fluctuations in the exchange rates of the respective currencies. Almost 100% of the selected currencies comprised balance sheet and off-balance sheet foreign exchange assets and liabilities. The foreign exchange assets were denominated mainly in EUR (82%), USD (11%) and CZK (5%), and the liabilities, similarly, in EUR (62%), USD (34%) and CZK (3%).

Off-balance sheet assets consisted mostly of items denominated in EUR (49%), USD (45%) and CZK (3%) and liabilities in EUR (58%), USD (36%) and CZK (3%).

Each scenario's effect on the foreign exchange position of a bank is given as the net open position in the currency multiplied by the relative fluctuation in the exchange rate for the change given in the individual scenarios. The sum of the changes in the net open positions in individual currencies represents the net change in the bank's

open foreign exchange position. The overall effect of the  $i$ -th stress scenario ( $D_{sci}$ ) is therefore given as follows:

$$D_{sci} = \sum_j NOP_j * sc_{ij}$$

where  $NOP$  is the net open foreign exchange position in currency  $j$ , and  $sc_{ij}$  is the  $i$ -th stress scenario for currency  $j$ . This figure is considered to change banks' capital and then the capital adequacy ratio.

For the foreign currency stress test, two approaches are taken to the design of the stress scenarios:

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

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

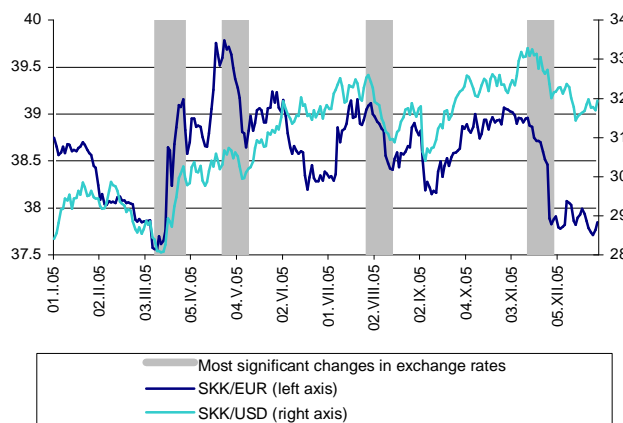
This approach to the stress test design is based exclusively on the historical performance of exchange rates (from 1 January 2004 to 31 December 2005) where the tracked period is 10 working days. The selected 10-day period assumes that positions will not be immediately closed in the event of sudden and substantial changes in exchange rates. When calculating the loss on a given day, it is assumed that "worst" relative changes in exchange rates persist for the following 10 days.

The first option is to select the same 10-day period for the whole banking sector. It is selected in such a way that a change in exchange rates the same as that in this period would result in the largest loss for the banking sector as a whole. In this case, the banking sector as a whole would make its largest loss upon a recurrence of the

exchange rate development for the period from 10 March 2005 to 24 March 2005 (scenario 1), or for 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 effects of both scenarios on the distribution of banks' capital adequacy are shown in Chart 67.

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 such an exchange rate change occurred 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<sup>30</sup>. 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 least favourable.

**Chart 66 Exchange rate of the EUR and SKK in 2005**



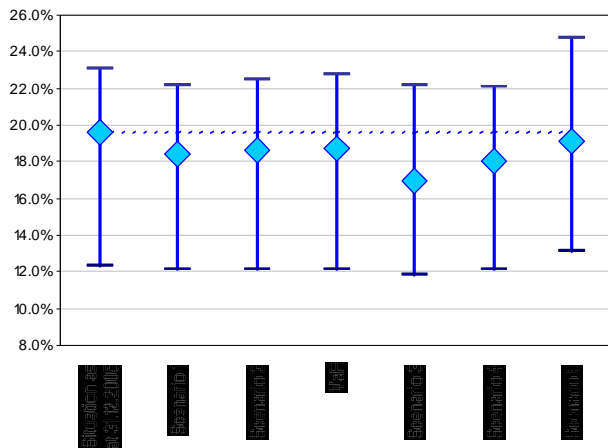
source: NBS

<sup>30</sup> The VaR calculation takes into account only open positions in EUR, USD and CZK.

**Scenario 4 and 5: Simulated exchange rate changes taking into account correlations<sup>31</sup>**

An inherent drawback of stress scenarios based solely on a comparison 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 extreme events, since their occurrence within historical data is too rare. Therefore simulations, or assumptions about exchange rate development, are also used in the design of scenarios. It must be considered 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. Further details of the methodology which takes this fact into account is given in Box 6.

**Chart 67 Comparison of the effects that foreign exchange risk scenarios have on the distribution of capital adequacy in the sector**



- Source: NBS, own calculations
- 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

**Effects of stress scenarios of foreign exchange risk**

The results of individual stress scenarios indicate that extreme changes in exchange rates should not significantly threaten the stability of the banking sector. Most banks have a volume of capital sufficient to cover any substantial exchange rate changes.

Scenario 3 had the most adverse effect on the banking sector with the median capital adequacy declining to 16.9% from an original level of 19.6%.

The effect on capital adequacy is particularly negative under scenarios with an assumed depreciation of the domestic currency. The average ratio for the sector decreased under scenarios 1, 2 and 4. With scenarios 1 and 4, there was not only a fall in the average ratio but also a decline in the median (from 19.6% to 18.4% and 18.0%, respectively). The development was the opposite in scenario 2, where the average ratio decreased but the median increased. The median was affected by the fact that a majority of banks reported a rise in the capital adequacy ratio.

Scenario 5 was based on the assumption of an appreciation in the domestic currency. Whereas the average capital adequacy ratio increased, the median for the sector slightly declined.

<sup>31</sup> Further details of the methodology used to design stress scenarios is given in the Box "Simulated exchange rate fluctuations taking into account correlations"



### Box 6 Simulated exchange rate fluctuations taking into account correlations

For estimating correlation in hectic periods, the following model was used:

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

It is assumed that the logarithms of changes in the EUR exchange rate arise with a probability of  $\omega$  from the quiet period (simulated by a normal distribution) and with a probability of  $1-\omega$  from the hectic period (simulated by another normal distribution with a greater standard deviation). It is expected that the quiet period will have a probability of between 70% and 95%, while the hectic period is represented to a lesser extent and is indicated by sudden fluctuations in exchange rate values and by stepped growth in volatility. The model parameters (including  $\omega$  probability of the quiet period) were estimated from historical time series data on exchange rates for the years 2002 to 2005.

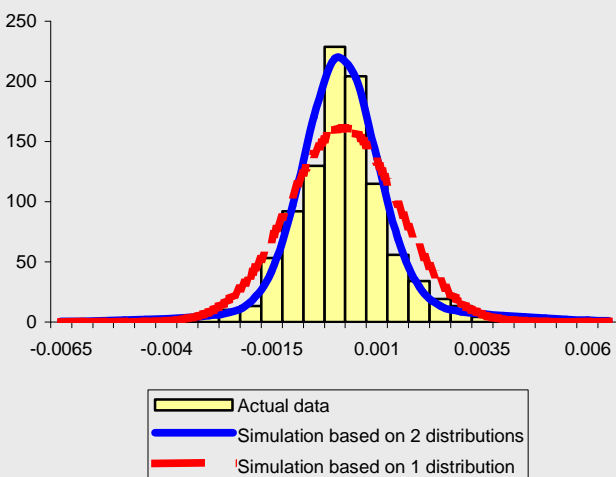
**Table 7 Estimated parameter values for the EUR/SKK exchange rate**

	Probability	Mean	Standard deviation
Quiet period	85%	-0,00012	0,085%
Hectic period	15%	0,00033	0,27%

- Source: NBS, own calculations

As Chart 68 shows, the model based on differentiating the quiet and hectic periods – highlighting especially the different volatilities – better represents the historical data than does the model based on a single normal distribution. The said model manages, moreover, to capture the "fat tails" of the historical distribution<sup>32</sup>, which are a frequently mentioned characteristic of economic time series.

**Chart 68 Comparison of a model based on a single normal distribution and a model based on a combination of two normal distributions**



- Source: NBS, own calculations

- horizontal axis: logarithmic values for fluctuations in the SKK/EUR exchange rate
- vertical axis: the number of data items in the intervals given on the horizontal axis.

<sup>32</sup> A drawback of the model is the fact that it does not reckon on autocorrelation in the time series.

It should be noted that the data distribution in the hectic and quiet periods is not based on some *a priori* definition of hectic periods (e.g. according to the size of the relative fluctuation, and so on). It is in fact the case that for each piece of data on the logarithm of exchange rate change, we are able to assign the probability that it was from the hectic period. Naturally, the greater the relative exchange rate fluctuation, the greater the probability that the data was from the hectic period – though the nature of the model means this cannot be stated unequivocally. However, by estimating this probability for all data, we calculate for a second exchange rate (e.g. USD) the conditional means and variances in the quiet and hectic periods, as well as the conditional correlations between these exchange rates in both the quiet and hectic periods<sup>33</sup>. The calculations are based on standard relationships used in the calculation of means, variances and correlations. The only difference is that each item of data is weighted by the probability that it is derived from the hectic period (or from the quiet period if the values are being calculated for the quiet period). This means that greater relative exchange rate fluctuations are included in the calculation with a greater weight than are small fluctuations, which provides for a more accurate calculation of the exchange rate correlation we are interested in. The estimated parameter values are given in Table 8. Assuming a linear correlation between the fluctuations of individual exchange rates, the following equation

$$\frac{\ln(usd_{t+10}/usd_t) - 10 \tilde{m}_{usd}}{\sqrt{10} \tilde{S}_{usd}} = \tilde{r}_{usd,eur} \frac{\ln(eur_{t+10}/eur_t) - 10 \tilde{m}_{eur}}{\sqrt{10} \tilde{S}_{eur}} + \sqrt{1 - \tilde{r}^2} e_t \quad e_t \sim N(0, \sqrt{10})$$

may be used to calculate the expected fluctuation in the USD/SKK exchange rate (and by analogy the other exchange rates) when the EUR/SKK exchange rate appreciates by 5% (scenario 5), or when it depreciates by 5% (scenario 6), while taking into account the correlation between the currencies on the assumption of a hectic period.

**Table 8 Estimated parameter values for individual currencies**

		USD	CZK	HUF	PLN	JPY	CHF	GBP
Quiet period	Mean	-0.00022	-0.00007	-0.00009	-0.00012	-0.00017	-0.00014	-0.00017
	Standard deviation	0.29%	0.15%	0.19%	0.24%	0.26%	0.12%	0.27%
	Correlation	31.4%	26.7%	21.9%	8.4%	21.9%	69.1%	39.5%
Hectic period	Mean	0.00033	0.00028	0.00007	0.00008	0.00008	0.00028	0.00024
	Standard deviation	0.40%	0.22%	0.30%	0.29%	0.35%	0.28%	0.27%
	Correlation	69.2%	66.4%	45.4%	31.5%	45.4%	93.6%	79.3%
Expectation for relative change upon a rise in EUR/SKK rate by 5% on the assumption of hectic period for EUR		+ 5.3%	+ 2.8%	+ 2.5%	+ 1.7%	+ 2.9%	+ 4.9%	+ 4.0%
Expectation for relative change upon a decline in EUR/SKK rate by 5% on the assumption of hectic period for EUR		- 5.0%	- 2.6%	- 2.6%	- 1.7%	- 3.0%	- 4.8%	- 3.9%

<sup>33</sup> Further details about the calculations may be found in the following article by Kim. J. and Finger Ch. C. – A Stress Test to Incorporate Correlation Breakdown, Journal of Risk (2000).

## Interest rate risk

The stress testing for interest rate risk was aimed solely at interest rates in SKK and EUR, due to the fact that assets and liabilities include a high share of interest-sensitive items in these currencies.<sup>34</sup> The interest rate risk stress test is specifically limited by assumptions of a shift in the curves and the fact that it does not take account of the effect on the margin.

The designing of stress scenarios for interest rate risk proceeded on the basis of historical fluctuations in interest rates (monthly changes of ten-year, two-year and one-month points on the yield curve since the beginning of 2003). The historical changes were treated so that, on the one hand, they included assumptions for the possible development of interest rates and, on the other hand, they formed stress scenarios. The actual effect of the stress scenarios was calculated as the remainder of the net present values of interest sensitive positions prior to the application of the stress scenarios and of the net present values calculated with the stress values of the interest rates. The difference between the net present values was deducted from or added to the bank's capital. Although this procedure may be used to test the effect of a rise or fall in interest rates, the banking sector as at 31 December 2005 would be adversely affected mainly by the increase in interest rates shown in Chart 69.

### **Scenarios 1 and 2: Parallel fluctuation in SKK and EUR yield curves**

For the first scenario, with the SKK yield curve, the parallel rise in interest rates is assumed to be 150 basis points, and for the second scenario, with the EUR yield curve, it is assumed to be 130 basis points.

### **Scenarios 3 and 4: Fluctuations at the ends of the SKK yield curve**

The third scenario represents a rise in interest rates of 150 basis points during the shortest interest rate fixation bucket of up to one month.

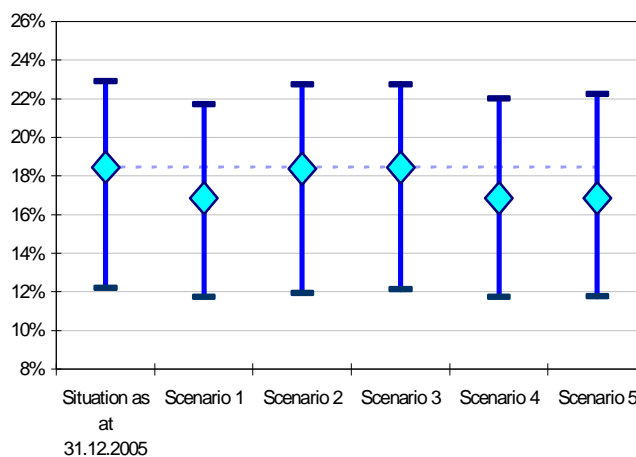
<sup>34</sup> The interest-sensitive positions were taken from banks' quarterly statements on interest rate sensitivity.

Conversely, the fourth scenario records the same interest rate increase in the longest fixation.

### **Scenario 5: Steepness fluctuation in the SKK yield curve**

The last scenario for SKK interest rates considers a change in the yield curve steepness, in other words, the fall in interest rates within one year and the rise in long-term interest. It was assumed for this scenario that the one-year interest rate did not change.

**Chart 69 Comparison of the effects that interest rate risk scenarios have on the distribution of capital adequacy in the sector**



- Source: NBS, own calculations
- 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
- Description of scenarios:
  - o scenario 1: parallel rise in the SKK curve by 150 b.p.
  - o scenario 2: parallel rise in the EUR curve by 130 b.p.
  - o scenario 3: increase in short term interest rates by 150 b.p.
  - o scenario 4: increase in long-term interest rates by 150 b.p.
  - o scenario 5: steepening of the curve

## Effects of stress scenarios on the interest rate risk

As with foreign exchange risk, the banking sector is not significantly vulnerable to extreme fluctuations in interest rates. In 2005, the banking

sector was mainly sensitive to scenarios 1, 4 and 5, in other words, to the raising of long-term interest rates. This relates to the standard structure of banking assets and liabilities where banks' assets have a longer duration than do their liabilities. The largest average decline in capital adequacy (by 1 percentage point) occurred with scenario 1 (parallel rise in interest rates by 150 b.p.). There was also applied a supplementary stress scenario that is given as standard in the interest rate risk stress test: a parallel growth in interest rates of 200 b.p. Under this scenario, capital adequacy in the banking sector fell by an average of 1.4 percentage points.

## Credit risk

Stress testing for credit risk was performed with the following scenarios:

### **Scenario 1: Loss arising from growth in non-performing receivables**

The first scenario involves analysing the effect that an increase in non-performing receivables has on capital (C), or on capital adequacy (CA). It is assumed that the increase was caused exclusively by the transition of standard and standard special mention loans into the category of non-performing loans. This means that the total volume of risk-weighted assets (RWA) remains unchanged.

A calculation is then made of the maximum percentage month-on-month growth in the value of non-performing loans (NPL) during the period under review (January to December 2005), and it is assumed that this growth, adjusted by multiplier M, occurs in the next period. The value of NPL for the following period,  $NPL_{t+1}$ , is then calculated as follows:

$$NPL_{t+1} = NPL_t * (\Delta_1 * M + 1),$$

$$\text{where } \Delta_1 = \max_t \frac{NPL_t - NPL_{t-1}}{NPL_{t-1}}.$$

The impact on capital adequacy is calculated with the formula:

$$CA_{t+1} = \frac{C_t - (NPL_{t+1} - NPL_t)}{RWA_t}.$$

### **Scenario 2: Growth in total loans with no change in the share of non-performing receivables**

The second scenario is based on recent constant growth in the value of standard loans and in the overall total of loans throughout the sector. At the same time, the value of non-performing receivables remains largely unchanged due to the increase in standard loans. The scenario simulates the fact that the risk of eventual loan default and loss to the bank could be underestimated. The first step is therefore to establish the maximum percentage change in total loans ( $\Delta$ ). It is assumed that total loans will increase during the next month by  $\Delta\%$ . Consequently

$$\Delta = \max_t \frac{sum_t - sum_{t-1}}{sum_{t-1}}.$$

The period under review is again January to December 2005. In the next step it is necessary to determine NPL as a maximum share of total loans. Under the scenario, it is expected that this share will also be attained in the next month. Consequently

$$\max NPL = \max_t \frac{NPL_t}{sum_t}.$$

The volume  $NPL_{t+1}$  is subsequently calculated with the formula

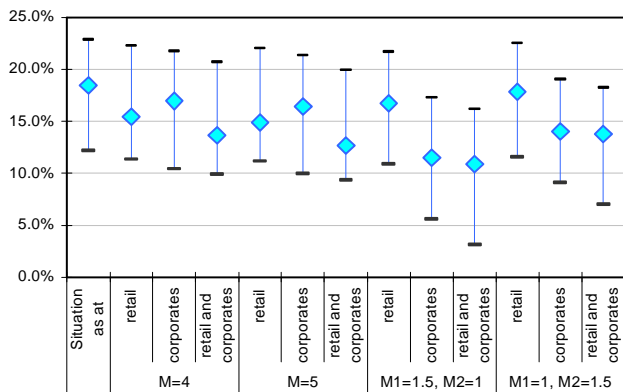
$$NPL_{t+1} = (\max NPL * M1) * (\Delta * M2 + 1) * sum_t$$

The multiplier M1, or M2 is used to model the increase in NPL as a share of total loans or the change in the size of the month-on-month increase in total loans. Finally, it is assumed that the figure by which the NPL increase is reflected in a loss (a 100% loss in the case of default) by which the bank's own funds are reduced. It is also assumed that new loans have a risk weight of 100%, which is manifested in the value of risk-weighted assets (RWA).

The new capital adequacy ratio is then calculated as follows:

$$CA_{t+1} = \frac{C_t - (NPL_{t+1} - NPL_t)}{RWA_t + \Delta * M2 * sum_t}.$$

**Chart 70 Comparison of the effects that credit risk scenarios have on the distribution of capital adequacy in the sector**



- Source: NBS, own calculations.
- 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
- M=4 and M=5 represent the first scenario, expressing the increase in non-performing receivables by the multiplier M with the value of either 4 or 5.
- M1=1.5, M2=1 represent the second scenario, expressing the increase in the share of non-performing receivables by means of the multipliers M1 and M2, where M1=1.5 and M2=1

**The effects of stress scenarios on credit risks**

Each scenario was observed for its effect on the most important portfolios – retail and corporate. The results of the first scenario show that the volume increase in non-performing receivables does not have a significant impact on banks. A majority of banks would continue to have a capital adequacy ratio of more than 10%. Under the second scenario, the capital adequacy ratio deteriorates in several banks. It is clear from the results that an increase of the M1 multiplier has a more adverse effect on banks than does an increase of the M2 multiplier. Even where M1 = 1.5, several banks suffer losses that consume their entire capital. Assuming that M2 = 1.5, the impact on capital is more moderate, although some banks would even in this case see their capital adequacy ratio fall to below 8%.

**Liquidity risk**

The liquidity risk stress test has special limitations. A typical problem is the ambiguity of the link between liquidity risk and capital adequacy. Even if a bank makes a loss due to a liquidity problem (for example, rapid selling of securities), it is not a simple matter to simulate such a situation. Moreover, scenarios do not reckon on existing credit lines to other banks or the parent bank, nor core deposits.

For this reason, the stress test was not applied to capital adequacy but to three selected liquidity ratios (the instant liquidity ratio, the liquidity ratio for up to 7 days, and the liquidity ratio for up to 3 months) and the size of the shock was assessed in regard to the average month-on-month fluctuations in these ratios. Each ratio is calculated as the share of liquid assets and volatile funds in the respective categories:

- for the first ratio, liquid assets include vault cash, the bank's current accounts with other banks and all Treasury bills and government bonds which are not subject to a lien, including those that the bank acquired in reverse repo transactions; volatile funds include current accounts maintained by the bank and all liabilities towards clients;
- for the second and third ratios, liquid assets include the liquid assets under the first ratio as well as all receivables against clients and banks with a residual maturity of up to 7 days or up to 3 months; volatile funds under these ratios are the total liabilities towards banks and clients which fall due within 7 days or within 3 months.

It should be noted that the approach towards the maturity of assets and liabilities is not quite consistent. For deposits, current maturity is used and the estimate for core deposits is not considered. For government securities and Treasury bills, an assumption of absolute liquidity is made regardless of their current or estimated maturity. Three basic scenarios were selected for the liquidity risk stress test. 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: Depreciation of government bonds by 10%**

This is a straightforward simulation where the value of government bonds and Treasury bills in the bank's portfolio (excluding securities that the bank acquired as collateral in repo transactions) is reduced by 10% for all three ratios. One reason for the depreciation of government bonds could be an increase in interest rates.

**Scenario 2: Decline in client deposits by 20%**

The volume of liquid assets is reduced by an unexpected withdrawal of some of the client deposits. As regards liabilities, it is assumed that client funds decline equally in all maturity ranges. Volatile funds are therefore reduced by 20% of all liabilities towards clients (for the first ratio), or by 20% of the liabilities towards clients with a residual maturity of up to 7 days (for the second ratio) or up to 3 months (for the third ratio).

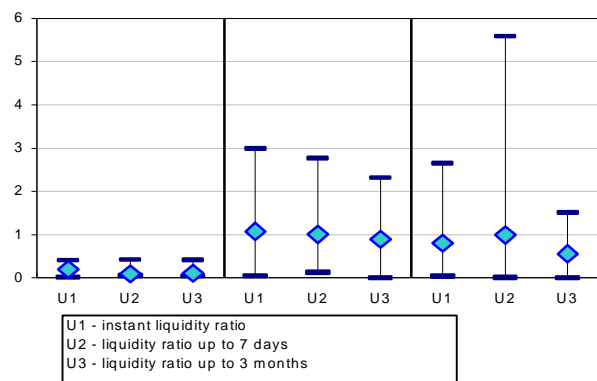
**Scenario 3: Outflow of short-term funds from the bank sector for external reasons**

This simulates the situation where investors decide to reduce substantially their positions in Slovak banks regardless of the domestic conditions. In a simplified form, the volume of deposits of non-resident banks declines by 90%. Such a situation could arise, for example, when investors simply decide to invest their short-term funds in other, more profitable 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 value (90% of foreign banks' deposits) is also deducted from volatile funds, although by an amount not exceeding the amount in banks' current accounts (for the first ratio), or the amount of banks' deposits with a maturity of up to 7 days (for the second ratio) or 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 percentage, not absolute, changes in the ratios. The scenario's significance was determined by comparing two values. The first was the percentage change in the ratio caused by applying the scenario to the figure as at 31 December 2005. The second was the average month-on-month percentage change in the value of the same ratio in 2005. Where the change in a ratio under the given scenario is similar to the usual month-on-month change, it is not considered significant.

**Chart 71 Comparison of the effects of individual liquidity risk scenarios**



- Source: NBS, own calculations
- 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 in 2005
- vertical axis: the multiple of this change

**Effects of stress scenarios on liquidity**

The first scenario – the depreciation of government bonds – did not have a significant effect on banks. In general, it may be said that the scenario for a withdrawal of 20% of client deposits had the biggest effect on large and medium-sized banks, in other words mainly retail banks. The scenario for a withdrawal of 90% of deposits of foreign banks had effect on some medium-sized banks, but also on banks tied to their own financial groups.

## 2 Insurance sector

*In the insurance sector, written premiums, the most important tracked indicator, increased by 7.5% in 2005 to reach SKK 52 billion. This was the lowest increase since tracking began in 1993 and it was caused by a sharp decline in growth in non-life insurance, to 3.5%. On the other hand, the increase in life insurance accelerated to 13.5%, favourably affected by a tax allowance introduced in 2005. Despite this, non-life insurance still dominated the Slovak insurance market with a 58% share of total written premiums. In the insurance markets of advanced European economies, by contrast, life insurance is dominant. Non-life insurance in Slovakia consists mainly of motor insurance, with compulsory contractual insurance of motor vehicles and motor accident insurance altogether accounting for 68% of non-life written premiums.*

*Consolidation of the insurance market is continuing, though last year it was only reflected in the movement of insurance stock between insurance companies, and not in mergers of insurance companies. Allianz's market share in written premiums fell to 36.5%, continuing a downward trend from a share of 81% in 1995.*

*Insurance benefit expenses declined (for the first time since tracking began in 1996) by 1.4% to stand at SKK 17 billion. While these expenses increased in life insurance, they fell in non-life insurance by 8.8%. The decrease in the insurance benefit expenses amid the current (albeit relatively slight) increase in written premiums and lower creation of technical reserves was positively expressed in the total profit made by insurance companies, which grew by 24% year-on-year to SKK 2.7 billion.*

*The technical reserves of insurance companies as at 31 December 2005 amounted to SKK 84 billion for year-on-year growth of 15%. As regards the placement of technical reserves, there were no significant changes and they continue to be placed in low-risk assets. In fact, 55% of them are placed in Slovak Government bonds and in bonds issued by other EU Member States, the NBS and other central banks, bonds guaranteed by the Slovak Government, and bonds issued by the European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD) and the International Bank for Reconstruction and Development (IBRD). A further 37% are either invested in listed bonds or mortgage bonds, or are deposited in bank time accounts.*

### **Insurance market**

As at 31 December 2005, the Slovak insurance market comprised 25 insurance companies (of which, 16 were universal, 5 life and 4 non-life insurance companies), the Slovak Insurers' Bureau, and 4 branches of foreign insurance companies – these provide services in Slovakia under a freedom of establishment that is based on a licence granted in the country where they have their registered office. The number of insurance companies remained unchanged during

2005, unlike the previous year, when two insurance companies were taken over in mergers. The number of branch offices increased by 3.

The insurance market may still, however, be described as consolidating, though more through the transfer of insurance stock between companies. Česká poist'ovňa – Slovensko (ČPS) purchased part of the life insurance stock of QBE insurance company. Along with the stock of life insurance policies, ČPS acquired ownership of QBEs branches. The application in this regard,



approved by the Financial Market Authority (ÚFT), took effect on 31 August 2005.

On 22 December 2005, the ÚFT approved the transfer of the insurance stock of Credit Suisse Life & Pensions Poist'ovňa, a.s. to Credit Suisse Life & Pensions Pojišť'ovna, a.s., which conducts activities in Slovakia through its branch Winterthur pojišť'ovna a.s. As stated in the application, the main reason for the transfer of the insurance stock was to optimize capital processes and administrative demands.

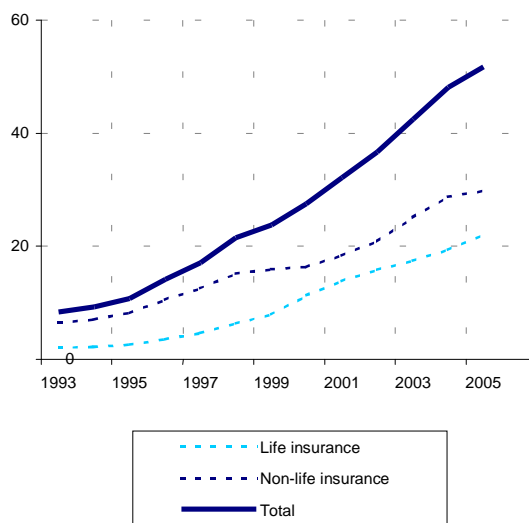
On 29 December 2005, the ÚFT approved the transfer of non-life insurance stock from Vzájomná životná poisťovňa (VŽP) to Union company, and the transfer of life insurance stock from VŽP to ING Životná poisťovňa. Then on 4 January 2006, VŽP submitted to the NBS a request for prior consent to the return of a licence for insurance activities, and it was approved.

## Written premiums

### Higher increase in life insurance

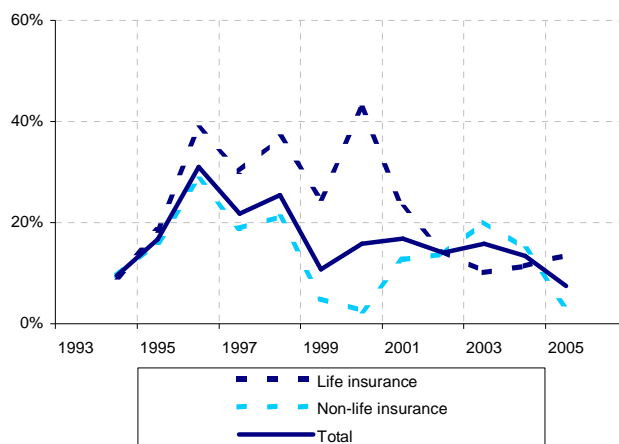
Total written premiums in 2005 amounted to SKK 51.7 billion, representing a year-on-year increase of 7.5%, the lowest since tracking began in 1993. This reflected the substantial divergence between the growth in life insurance and in non-life insurance. Whereas written premiums in life insurance increased by 13.5%, their highest rise for three years, those in non-life insurance grew by only 3.5%. The increase in non-life insurance was therefore substantially lower in comparison with previous years, which saw annual growth of more than 12% per year from 2000.

**Chart 72 Development of written premiums**



- Source: NBS  
- data are in SKK billion

**Chart 73 Year-on-year increase in written premiums**



- Source: NBS

The sharp rise in life insurance had been expected given the introduction of a tax allowance supporting it. Under the allowance's conditions, laid down by law, a person can deduct from their income tax base up to SKK 12,000 per year that they pay in life insurance premiums.

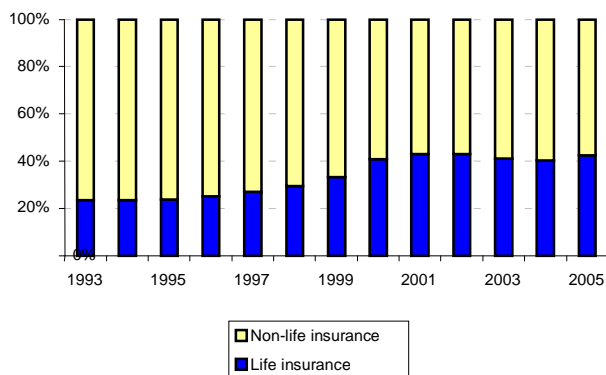
Nor did the slowdown in non-life insurance come as a surprise. It had been expected since there was strong competition among insurance



companies in compulsory contractual insurance of motor vehicles at the end of 2004.

The faster growth in life insurance resulted in its share of total written premium increasing from 40% to 42%. Nevertheless, non-life insurance continues to dominate the Slovak insurance market. By contrast, life insurance has the largest share of insurance markets in advanced EU economies, with households using it as a means of security. After rising sharply in the second half of the 1990s, life insurance has had a largely unchanged share over the past six years, fluctuating between 40% and 43%. The longer term expectation is, however, that it will increase and that life and non-life insurance will gradually reach equal share in the total written premiums.

**Chart 74 Life and non-life insurance as a share of total written premiums**

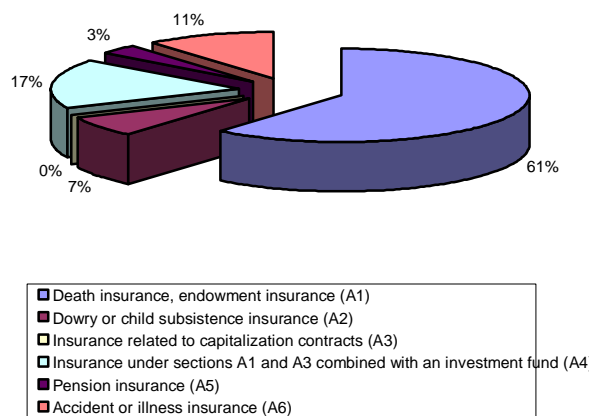


- Source: NBS

**Written premiums according to insurance classes**

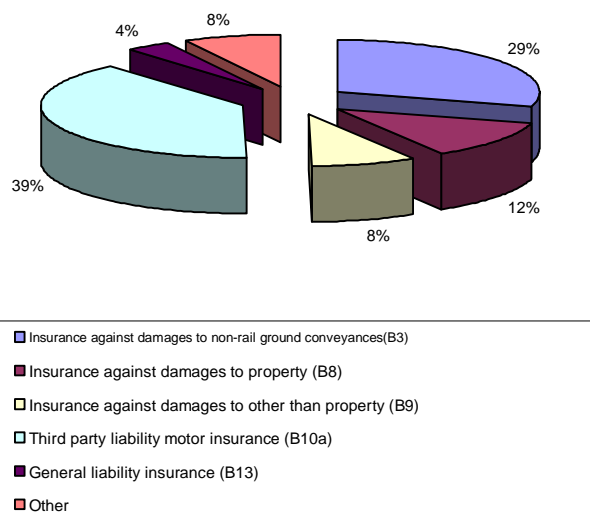
Insurance companies report written premium according to 6 classes for life insurance and 18 classes for non-life insurance. A complete list of the 24 classes may be found in the chapter "Terminology and abbreviations" on page 130. For the sake of clarity, the names of some of insurance classes have been shortened (the list of abbreviated names is given in the same chapter).

**Chart 75 Breakdown of life insurance by insurance class**



- Source: NBS  
 - The names of insurance classes are abbreviated and their full names can be found in the chapter "Terminology and abbreviations"

**Chart 76 Breakdown of non-life insurance by insurance class**

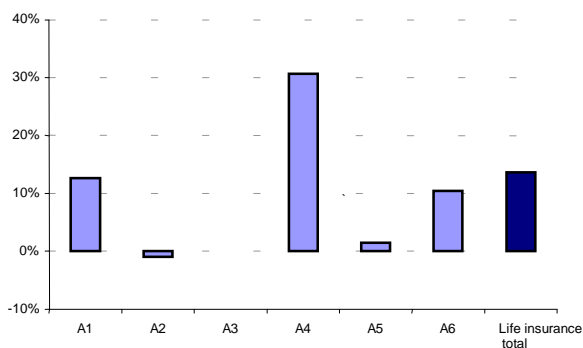


- Source: NBS  
 - The names of insurance classes are abbreviated and their full names can be found in the chapter "Terminology and abbreviations"

In life insurance, the three most important classes all reported double-digit growth. The largest of them – assurance on survival to a

stipulated age or an earlier death (A1) – increased by 12%, and with SKK 13.4 billion in written premiums, accounted for 61% of total life insurance. The sharpest increase of 31% was recorded by the second largest class – assurance linked to investment funds (A4). As for the third largest class – accident or sickness insurance, when representing supplementary insurance to some class of assurance (A6) – it increased by 11%.

**Chart 77 Year-on-year changes in written premiums in life insurance classes**

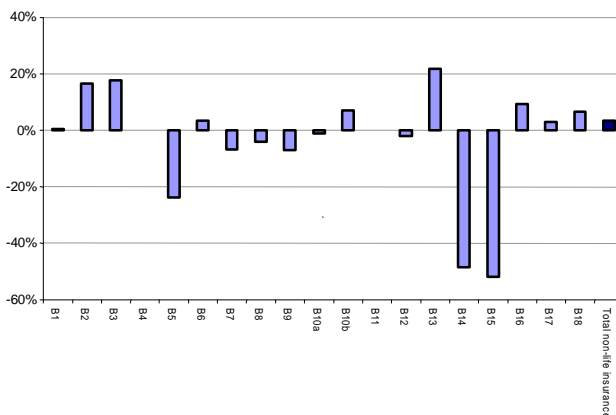


Source: NBS

Slovakia differs from advanced economies not only in that non-life insurance accounts for a high share of written premiums but in the structure of non-life insurance. As much as two thirds of non-life insurance comprises compulsory contractual insurance of motor vehicles (CCI – B10a, 39% of the market) and motor accident insurance (B3, 29% of the market). In Slovakia, there is relatively low penetration of insurance of non-motor property. Moreover, non-life insurance excluding CCI and motor accident insurance reported a decline of 2% year-on-year.

Year-on-year changes in written premiums in individual classes of non-life insurance are illustrated on chart 78.

**Chart 78 Year-on-year changes in written premiums in non-life insurance classes**

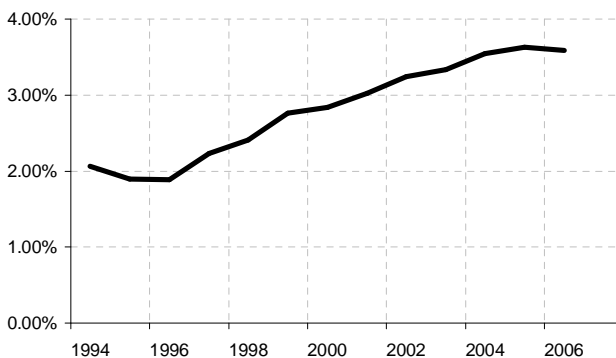


Source: NBS

**Written premiums as a percentage of GDP**

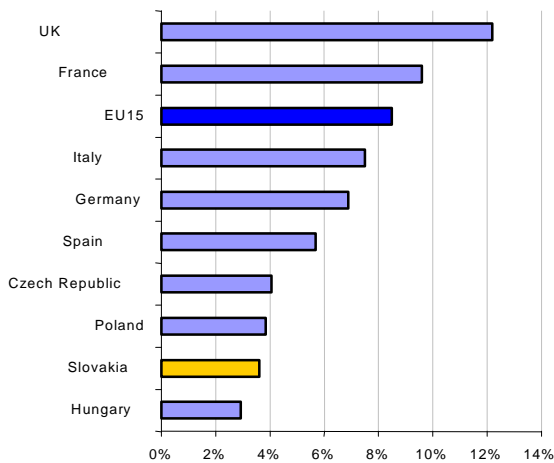
Written premiums as a percentage of GDP fell slightly year-on-year. Over the past three years they have maintained a constant level of around 3.5%. This is substantially less than the EU-15 (8.5% in 2004), though similar to the ratio in the Czech Republic, Hungary and Poland. Chart 81 shows a comparison of written premiums as a percentage of GDP in certain EU countries.

**Chart 79 Written premiums as a percentage of GDP**



Source: NBS

**Chart 80 Written premiums as a percentage of GDP in certain EU countries (situation as at 31 December 2004<sup>1</sup>)**



Source: NBS

### Written premiums ceded to reinsurers

Reinsurance is used to cede part of the risk covered by an insurance company to a reinsurer. Where an insurer cedes part of an insurance risk to a reinsurer, it is called passive reinsurance. The passive reinsurance of Slovak insurers is provided mainly by foreign reinsurers.

Active reinsurance is where an insurer provides reinsurance in addition to its other insurance activities, in other words, it insures other insurers. In Slovakia, this was in the past provided by Kooperatíva and Allianz, but for the past four years, no Slovak insurer has reported written premiums under reinsurance.

Of total written premiums in 2005, written premiums ceded to reinsurers amounted to SKK 10.3 billion, or 20% of total written premiums. That represents a decrease of 2.7% year-on-year. Non-life insurance accounted for a large part of ceded written premiums with ceded non-life written premiums standing at SKK 8.9 billion or 30% of non-life written premiums.

<sup>1</sup> The official data as at 31 December 2005 was not available at the time when this report was compiled.

**Table 9: Written premiums ceded to reinsurers as a share of total written premiums**

	Life insurance	Non-life insurance
Allianz - Slovenská poisťovňa	0.6%	12.3%
Kooperatíva poisťovňa	11.4%	45.3%
Amslico AIG Life poisťovňa	7.6%	52.9%
Česká poisťovňa – Slovensko	8.2%	50.7%

Source: NBS

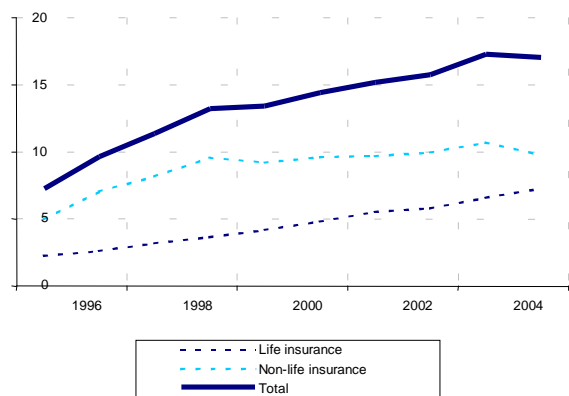
The share of written premiums ceded to reinsurers varies between categories. In non-life insurance, insurers cede relatively less of the written premiums for vehicles and relatively more of the premiums for other property (classes B8 and B9). Almost all the written premiums were ceded for classes B11, liability insurance for damage arising from the ownership or use of an aircraft (99%), and B14, credit insurance (98%).

### Insurance benefit expenses and loss burden

Insurance benefit expenses decreased by 1.4% year-on-year to SKK 17 billion. This was the first decrease in this indicator since tracking of it began in 1996. Although insurance benefit expenses in life insurance increased by 11%, continuing their roughly linear rise since 1996, those in non-life insurance fell by 4.5%, almost to their level in 2000. This contrasts sharply with written premiums in non-life insurance, which since 2000 have risen by as much as 80%.

When generally assessing the development of insurance benefit expenses, it should be noted that the market in third-party liability insurance for motor vehicles shows a deficit arising from the former system of third-party liability insurance for motor vehicles. According to an estimate made by Deloitte & Touche, this deficit amounted to between SKK 5.4 billion and SKK 7.5 as at the end of 2005. Members of the Slovak Insurers' Bureau will, through the Bureau, have to contribute towards covering the deficit.

**Chart 81 Insurance benefit expenses**



- Source: NBS  
- data are in SKK billion

**Loss burden**

As regards cost analysis, it is interesting to track the ratio of insurance benefit expenses to written premiums. Due to deferral of the period when expenses and revenues arise, this ratio is not sufficiently meaningful – insurance benefit expenses include the benefit expenses of events that occurred in previous years and, conversely, do not include insurance benefits incurred during the current year but which, for various reasons, have still not been paid. Likewise, written premiums do not have to relate to the current year.

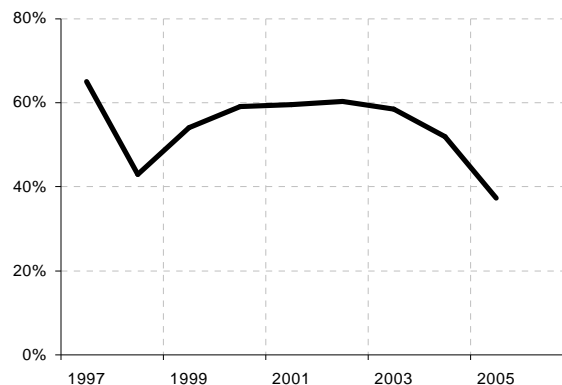
For the purpose of analysis, insurance benefit expenses and written premiums must be adjusted by a change to the respective technical reserves (the reserves for unearned premiums and reserves for insurance benefits). The ratio between indicators so adjusted, the so-called loss burden, is then examined.

The loss burden is therefore a percentage share:

- of the sum of insurance benefit expenses and the change in the technical reserve for gross insurance benefits, and
- of gross written premiums after deducting the change in technical reserve for gross unearned premiums – the so-called earned premiums.

The loss burden is only tracked in non-life insurance. After declining in 2004, to 52%, it fell sharply to 37%, the lowest level since its tracking began in 1997 as Chart 82 shows.

**Chart 82 Loss burden since 1997**



- Source: NBS

The loss burden decreased in all the principal categories of non-life insurance, especially in insurance of motor vehicles. For compulsory contractual insurance, the loss burden fell by more than 20 percentage points (from 63% to 42%), and for motor accident insurance it went down from 63% to 46%. As regards the insurance of property (the sum of sectors B8 and B9), the loss burden declined from 28.1% to 26.7%.

**Insurance benefit expenses ceded to reinsurers**

Of the total insurance benefit expenses, SKK 3.1 billion was ceded to reinsurers. That represents a decrease of 9% year-on-year. Basic facts about insurance benefit expenses ceded to reinsurers are given in Table 10.

**Table 10: Insurance benefit expenses ceded to reinsurers**

	Insurance benefit expenses ceded to reinsurers	Insurance benefit expenses total	Share
<b>Total</b>	3.1	17.0	18.2%
<b>Non-life insurance</b>	2.9	9.8	30.2%
<b>Life insurance</b>	0.1	7.3	2.0%

- Source: NBS  
- data are in SKK billion

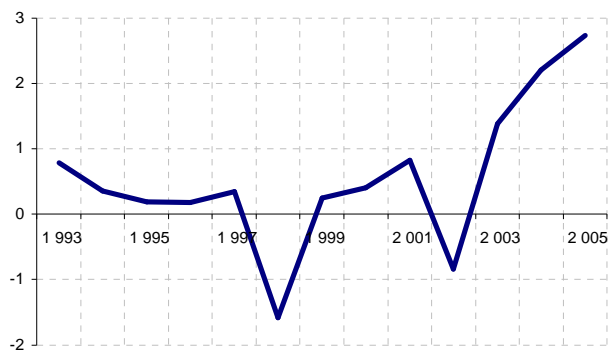
## Financial results of insurance companies

The insurance companies made a profit of SKK 2.7 billion for 2005, representing an increase of 24% year-on-year.

As Table 11 shows, gross profit from non-life insurance increased notably (by 169% year-on-year), largely due to the rise in earned premiums against a decline in insurance benefit expenses. The fall in these expenses was so substantial that total expenses went down despite operating expenses recording a rise of 13%.

Gross profit from life insurance increased by 18% year-on-year. Unlike in non-life insurance, both operating expenses and insurance benefit expenses rose in life insurance.

**Chart 83 Total profit of insurance companies**



- Source: NBS  
- data are in SKK billion

**Table 11 Year-on-year changes in basic income categories (in thousands SKK)**

	31.12.2005	31.12.2004	Change
<b>(a) Financial results for accounting period (b+c)</b>	<b>2 732 884</b>	<b>2 201 741</b>	24%
(b) Extraordinary net profit	230 246	-15 812	-1556%
(c) Profit after tax (d+e)	2 502 638	2 217 553	13%
(d) Taxes	-1 010 909	-557 336	81%
(e) Profit before tax (f+p+z)	3 513 547	2 774 889	27%
<b>(f) Gross profit from non-life insurance (g+j)</b>	<b>3 542 814</b>	<b>1 319 225</b>	169%
(g) Income (h+i)	21 531 058	20 322 781	6%
(h) Earned premium <sup>1</sup>	19 976 438	18 757 969	6%
(i) Other income	1 554 620	1 564 811	-1%
(j) Expenses (k+l+m+n+o)	-17 988 244	-19 003 556	-5%
(k) Insurance benefit expenses <sup>1</sup>	-7 665 322	-10 509 340	-27%
(l) Bonuses and discounts <sup>1</sup>	-1 997 416	-1 309 814	52%

<sup>1</sup> Excluding reinsurance

(m)	Operating expenses <sup>2</sup>	-5 742 657	-5 100 373	13%
(n)	Other expenses <sup>1</sup>	-2 516 226	-1 983 007	27%
(o)	Balance change in other technical reserves <sup>3</sup>	-66 623	-101 022	-34%
<b>(p)</b>	<b>Gross profit from life insurance (q+t)</b>	<b>1 587 730</b>	<b>1 347 838</b>	18%
(q)	Income (r+s)	31 633 577	30 955 840	2%
(r)	Earned premium <sup>1</sup>	20 448 992	18 143 063	13%
(s)	Other income	11 184 585	12 812 777	-13%
(t)	Expenses (u+v+w+x+y)	-30 045 847	-29 608 001	1%
(u)	Insurance benefit expenses <sup>1</sup>	-7 311 994	-6 652 601	10%
(v)	Bonuses and discounts <sup>1</sup>	-44 111	-28 656	54%
(w)	Operating expenses <sup>2</sup>	-5 702 645	-5 317 814	7%
(x)	Other expenses <sup>1</sup>	-8 158 892	-10 200 009	-20%
(y)	Balance change in other technical reserves <sup>3</sup>	-8,873,748	-7,408,921	20%
<b>(z)</b>	<b>Gross profit from other activities</b>	<b>-1,504,497</b>	<b>107,826</b>	<b>-1495%</b>

Source: NBS

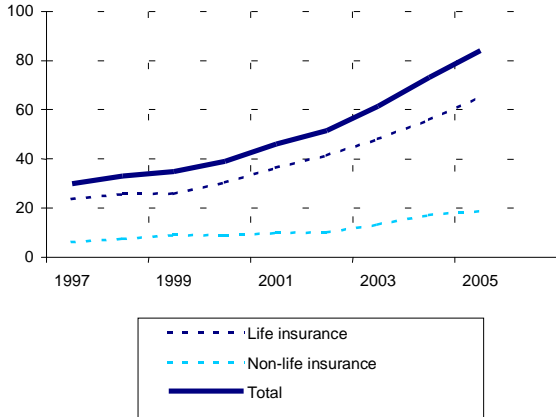
## Technical reserves of insurance companies

The technical reserves of insurance companies continued a rising trend in 2005, and amounted to SKK 84 billion as at 31 December, up by 15% year-on-year. The reserves of non-life insurance grew by a slower 11% to stand at SKK19 billion, after increasing sharply in 2003 and 2004 by 32% and 30%, respectively. Life insurance reserves reported a third successive annual increase of approximately 14% (standing at SKK 65 billion, they account for 78% of all reserves).

<sup>2</sup> Net operating expenses, i.e. after deducting commissions from reinsurers and interests in profits

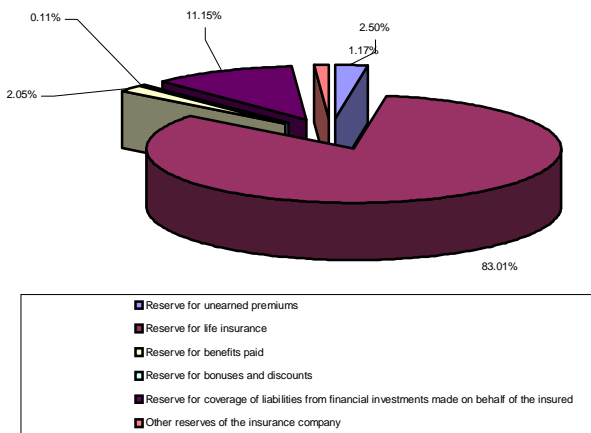
<sup>3</sup> A change in the technical reserves apart from a change in the technical reserve for unearned premiums (its change is included in the item "Earned premium") and changes in reserves for benefits paid (its change is included in the item "Insurance benefit expenses")

**Chart 84 Development of reserves since 1997**



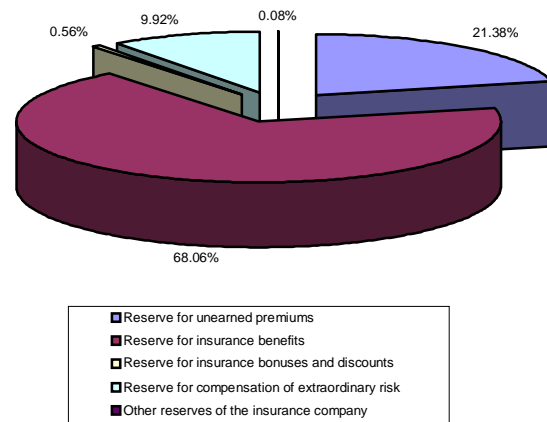
- Source: NBS  
- data are in SKK billion

**Chart 85 Structure of reserves in life insurance**



- Source: NBS

**Chart 86 Structure of reserves in non-life insurance**



- Source: NBS

**Financial investment of technical reserve funds**

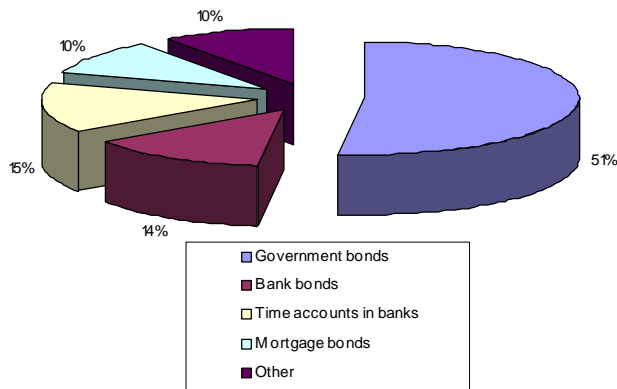
The total technical reserves, less the technical reserve for the coverage of liabilities from financial investments made on behalf of the insured<sup>1</sup>, amounted to SKK 77 billion as at 31 December 2005. These reserves were covered by assets in a total amount of SKK 84 billion, or 109% of the created technical reserves, excluding the reserve for coverage of liabilities from financial investments made on behalf of the insured. As regards the investment of technical reserves, there was no significant change in 2005. The largest part, up to 52%<sup>2</sup>, was invested in government bonds and EU central banks as at the year-end, representing little change in comparison with the previous year. A further 14% was invested in bank bonds, 14.5% in bank deposits and 10% in mortgage bonds. These four largest categories together accounted for as much as 90% of the total placement.

<sup>1</sup> A technical reserve created in insurance class A4 - assurance linked to investment funds. It is designated as a "unit-linked" reserve. The financial risk of the investment is borne by the policyholder, therefore the investment of technical reserve funds is tracked after the deduction of the unit-linked reserve.

<sup>2</sup> It is given as a share of total assets covering technical reserves, not of created technical reserves.

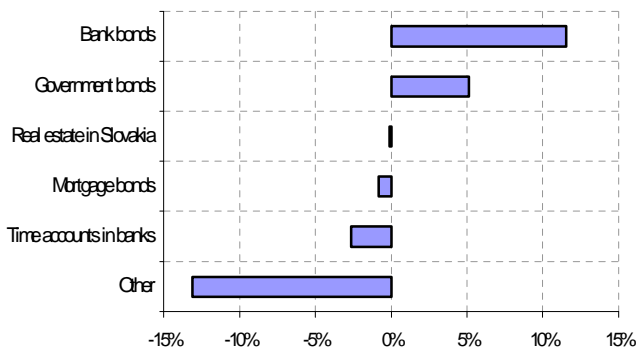
Only a small part of the reserves were placed in potentially riskier investment categories – 3.3% in real estate and 0.13% in shares.

**Chart 87 Investment of technical reserve funds**



- Source: NBS
- "Government bonds" is understood to include bonds issued by the Slovak Government, other EU countries, the NBS or other central banks, bonds guaranteed by the Slovak Government, and bonds issued by the EIB, the EBRD and the IBRD.

**Chart 88 Changes in the investment of technical reserves between 2004 a 2005**



- Source: NBS

## Solvency of insurance companies

In accordance with Section 31 of the Act on Insurance, the solvency of insurance companies is reported under Regulation no 441/2004 Coll., which took effect on 1 August 2004.

The basis for establishing and demonstrating solvency is the data from the insurer's balance sheet, the audited income statement, and selected data from analytical and operative records of the insurance company. Basic data for 2005 and their comparison to 2004 can be seen in table 12.

**Table 12 Solvency – basic facts**

	2005	2004
Real solvency rate (SMS)	19 731 035	16 863 622
Required solvency rate (PMS)( *)	8 187 029	7 804 876
SMS/PMS	241%	216.07%

- Source: NBS
- (\*) PMS for the entire insurance market is the sum of PMS or the guarantee fund (if the guarantee funds is greater than PMS) of individual insurance companies. Required rate of solvency (based on the volume of operations) and the guarantee fund (the volume of which is determined by law and a directive of the Ministry of Finance) is calculated for each individual insurance company. An insurance company is obliged to have at its disposal capital equal the higher of the two sums.



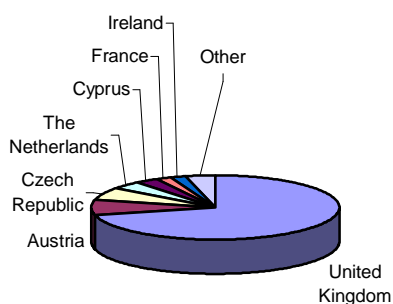
### 3 Securities dealers

The number of foreign entities conducting business in Slovakia under the single European licence system increased significantly in 2005, with the licensing process having been simplified following Slovakia's accession to the EU. However, transactions for clients continued to be performed almost exclusively by banks and registered a decline in volume over the course of the year. Most of the trading involved forward transactions and money market instruments. The volume of managed assets fell slightly. The capital adequacy of Slovak securities dealers met the prescribed minimum with a sufficient reserve.

As at 31 December 2005, the number of entities holding a securities dealer's licence in Slovakia stood at 36, of which 15 were banks, 10 securities dealers with a registered capital of more than SKK 35 million and 11 securities dealers with a registered capital of more than SKK 6 million. The number of entities was 5 fewer in comparison with the same period of the previous year.

As at the end of 2005, the number of foreign entities operating as a securities dealer in Slovakia under the single European licence system stood at 204, of which two operated through branches. By comparison, there were 85 as at 31 December 2004.

**Chart 89 Breakdown of foreign securities dealers by nationality**

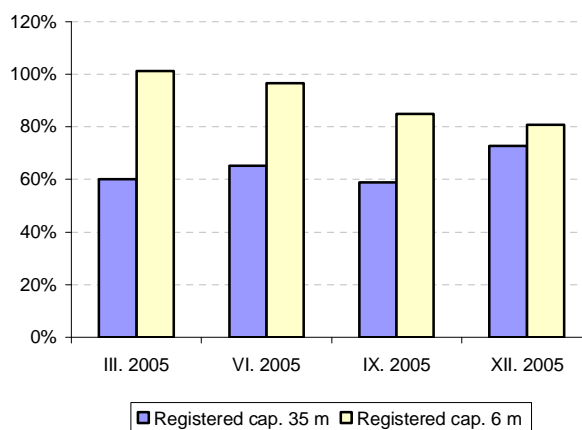


- Source: NBS
- other countries: Luxembourg, Finland, Greece, Malta, Germany, Norway, Slovenia

### Capital adequacy

Certain non-bank securities dealers recorded considerable fluctuations in their capital adequacy over the course of the year, caused by the major change to credit and market risks inherent in their assets. Yet all securities dealers sustained the ratio at a relatively high level above the legally prescribed threshold of 8% (among securities dealers with registered capital of at least SKK 35 million, the lowest capital adequacy ratio during the year was 26%, and among those with registered capital of at least SKK 6 million, it was 14%).

**Chart 90 Average capital adequacy of non-bank securities dealers**



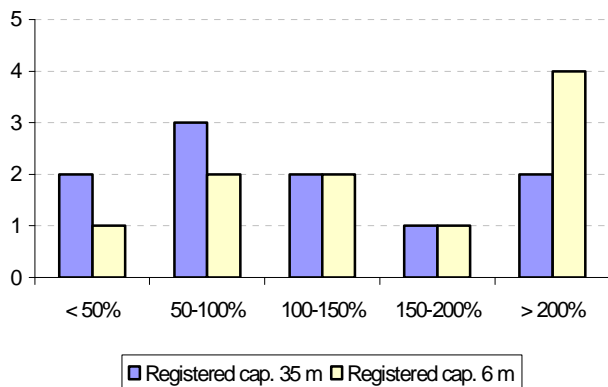
- Source: NBS

The total volume of risk weighted assets by these securities dealers represented only SKK 1.1 billion at the year-end, far less than the SKK



600 billion recorded by banks. Therefore the risk posed to the financial market from potential non-adherence to this requirement was negligible.

**Chart 91 Breakdown of capital adequacy of non-bank securities dealers**



- Source: NBS  
 - vertical axis: number of entities

## Investment services and asset management

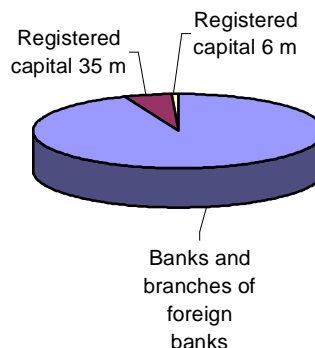
The total volume of client transactions performed under investment services IS-1 to IS-3<sup>35</sup> represented SKK 1,639 billion in 2005. Fully 94% of these transactions were performed through banks.

<sup>35</sup> IS-1= investment services in accordance with Section 6(2)(a) of the Securities Act, namely, the acceptance of client orders for the acquisition, sale or other handling of investment instruments and the subsequent assignment of such orders for the purpose of their execution.

IS-2 = investment services in accordance with Section 6(2)(b) of the Securities Act, namely, the acceptance of client orders for the acquisition or sale of investment instruments and their execution on another account or on the account of the service provider.

IS-3 = investment services in accordance with Section 6(2)(c) of the Securities Act, namely, the acceptance of client orders for the acquisition or sale of investment instruments and their execution on own account.

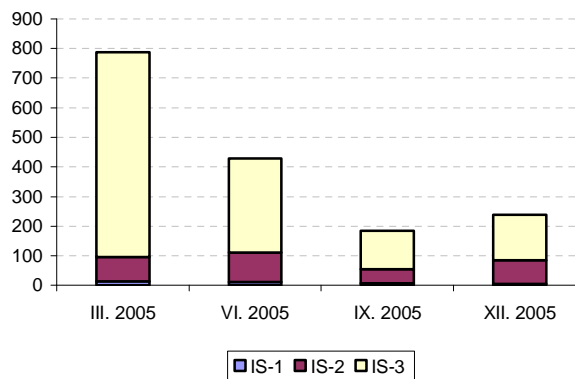
**Chart 92 Individual types of securities dealers by share of transactions for 2005**



- Source NBS

Most transactions were made in the first half of 2005 under trading on the own account of securities dealers (IS-3). Forward transactions and trading in money market instruments amounted to SKK 414 billion and SKK 426 billion, respectively, with banks accounting for most of the volume.

**Chart 93 Volume and structure of client transactions by type of investment service**

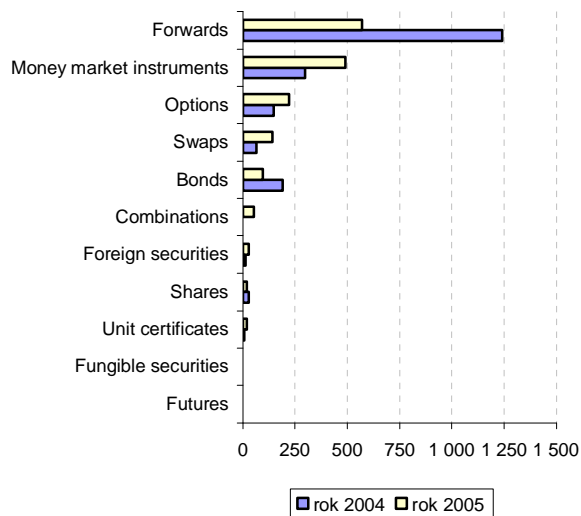


- Source: NBS  
 - vertical axis: data are in SKK billion

As mentioned above, most trading was performed in forward contracts (SKK 570 billion), followed by money market instruments (SKK 492 billion), options (SKK 222 billion) and swaps (SKK 142 billion). Futures were the least traded (SKK 110 m).

In comparison with 2004, the volume of forward and bond transactions declined significantly in 2005, while the volume of trading in money market instruments, options and swaps increased. The total volume of transactions fell from SKK 1.992 billion in 2004 to SKK 1.639 billion in 2005.

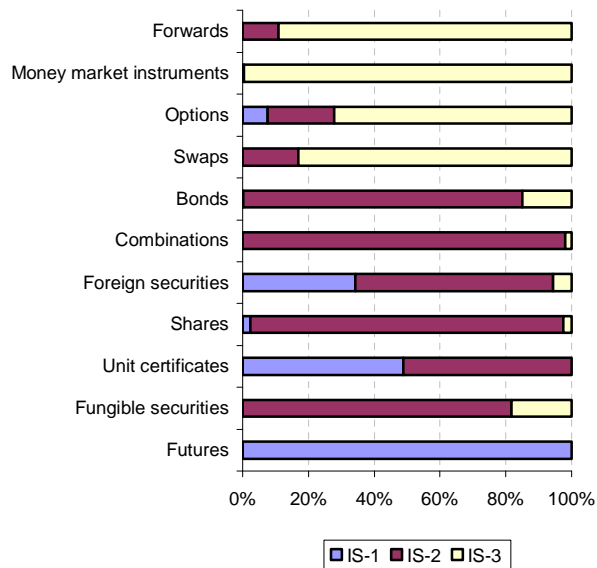
**Chart 94 Breakdown of transactions according to investment instruments**



- Source: NBS
- horizontal axis: data are in SKK billion

Trading under IS-3 (on the account of the investment service providers) was predominantly in forward contracts, money market instruments, options and swaps. Bonds, shares and combinations of securities were the most traded under IS-2 (acceptance of client orders for the acquisition or sale of investment instruments and their execution on another account or on the account of the service provider). Under IS-3, all client orders for dealing in futures contracts, and to a lesser extent in unit certificates and foreign securities, were assigned to other entities.

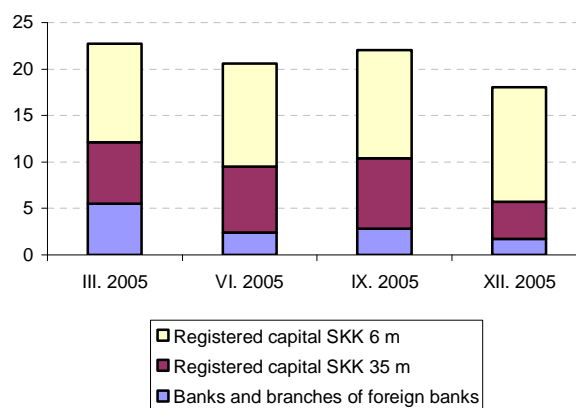
**Chart 95 Breakdown of trading in investment services during 2005 according to investment services**



- Source: NBS

The volume of client assets managed by securities dealers (including banks) decreased from SKK 24 billion to SKK 18 billion.

**Chart 96 Volume of client assets managed by securities dealers**



- Source: NBS
- vertical axis: data are in SKK billion

## 4 Collective investments

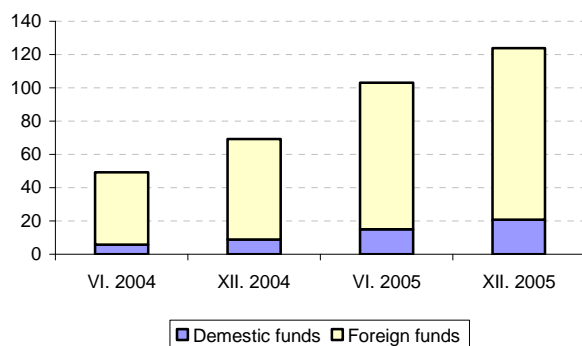
The net value of assets managed by open-end mutual funds in 2005 soared by 78%, as the structure changed as well. Investors gradually began placing their new money into riskier funds. While in 2004 money market funds had been the bestsellers, in 2005 it was bonds leading the way first, overtaken later on by equity funds and mutual fund funds. High yields in foreign equity markets supported sales in foreign mutual funds, lifting their market share from 13% to 17% in 2005.

### Asset management companies

As at 31 December 2005 there were 10 domestic asset management companies and 17 foreign collective investment undertakings operating in Slovakia, with 2 new asset managers compared to the same period last year.

The net asset value in open-end mutual funds selling in Slovakia carried on its uptrend in 2005, gaining 54 billion (78%) to 124 billion as at 31 December 2005. Falling interest rates on household bank deposits in particular saw many moving to mutual funds for a realistic investment alternative.

**Chart 97 Value of investments into open-end mutual funds offered in Slovakia**

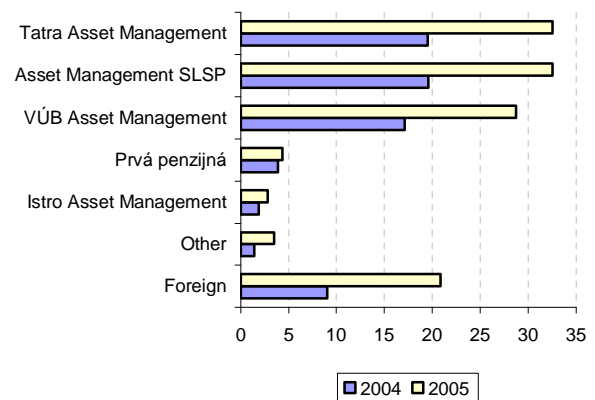


- Source: NBS
- vertical axis data in SKK billion

Tatra Asset Management, Asset Management Slovenskej sporiteľne and VÚB Asset Management were the major market players. Each of them recorded about 12 billion in new funds. Their market share, however, edged down from 81% to 76%, mainly due to foreign funds who

started the year with 13% and ended it with 17% of assets held by Slovak shareholders.

**Chart 98 Net value of assets in mutual funds run by asset management companies**

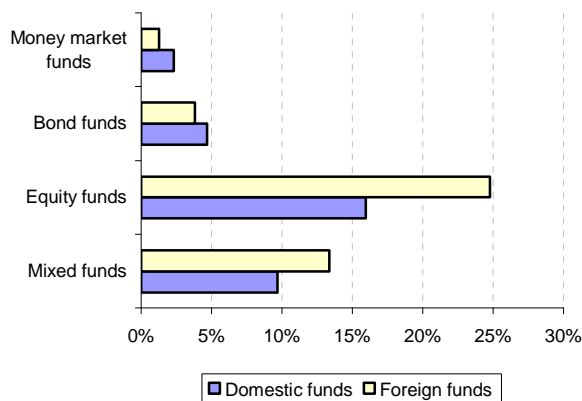


- Source: NBS
- horizontal axis data in SKK billion

The shift was likely the result of better track records shown by riskier categories of mutual funds run by foreign asset management companies coupled with easier sales owing to a simplified licensing procedure following Slovakia's EU accession.

Closed-end mutual funds held about 1% of the Slovak market and were operated by PRVÁ PENZIJNÁ správcovská spoločnosť, a.s. only. In 2005 their net asset value fell from 1.79 billion to 1.37 billion, as their number decreased from 52 to 49.

**Chart 99 Comparison of average performance of open-end mutual funds run by domestic/foreign asset management companies**



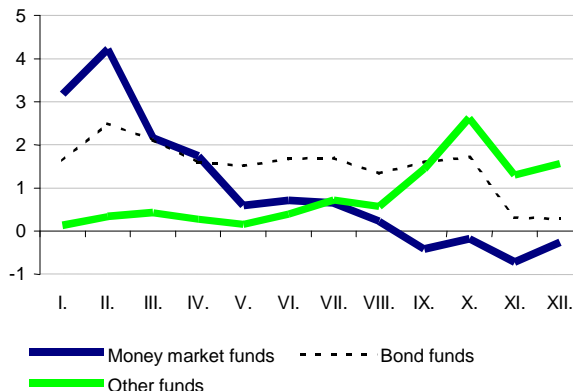
- Source: NBS
- horizontal axis data in % p.a.
- each fund assigned identical weight

## Open-end mutual funds

In 2004 investors were mostly attracted to money market funds, which recorded net sales of 23 billion. Other funds sold 6 billion only.

The situation in sales changed dramatically in 2005. Falling money market rates and significantly higher yields in other types of funds (see chart 5) have probably triggered an outflow of shareholders from this particular category. Beginning the year as the bestselling money market funds (with net sales over 4 billion in February 2004) they had redemptions to face as year-end drew near (investors pulled out almost 1 billion in November 2005).

**Chart 100 Monthly net sales of open-end mutual funds in Slovakia**

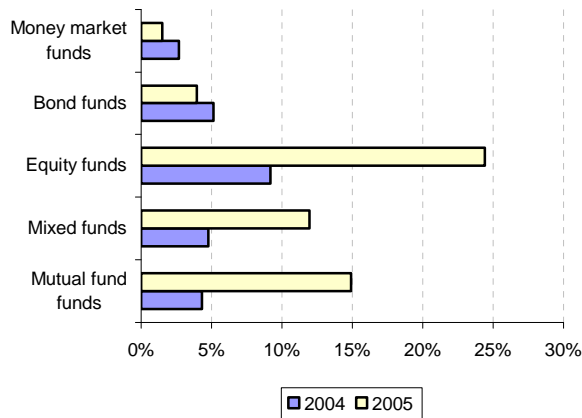


- Source: NBS
- vertical axis data in SKK billion

Bond funds chalked up the highest sales in 2005 (net sales of 20 billion), followed by money market funds (13 billion), attracting a conservative majority of investors. However, since a strong year in European and Japanese equity markets increased the popularity of riskier funds, they ended the year absorbing virtually all new capital (5.4 billion out of 6.3 billion worth of total sales in the last quarter of 2005).

Nevertheless, the growth of investments into mutual funds slowed down as the year passed. While the first quarter of 2005 saw monthly issues of mutual fund shares worth 19.9 billion, the figure dropped to 6.3 billion in the last quarter.

**Chart 101 Year-on-year comparison of average performance of individual types of open-end mutual funds offered in Slovakia**

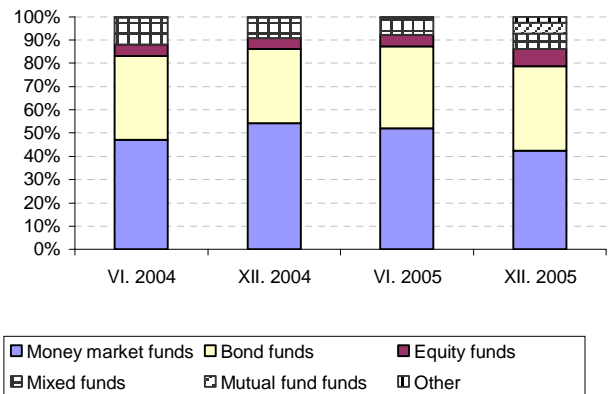


- Source: NBS
- horizontal axis data in % p.a.
- each fund assigned identical weight

The trends mentioned above resulted in an increase in the share of riskier funds in total

mutual fund assets, happening at the expense of money market funds which fell from 54% to 43% year-on-year.

**Chart 102 Developments in asset structure of open-end mutual funds, by type of fund**



- Source: NBS

## 5 Pension savings

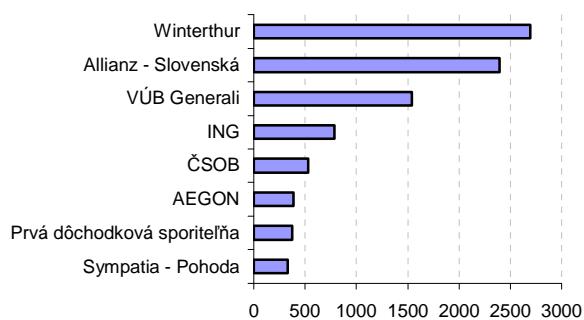
The first year with the pension system reform in place, 2005 watched asset management companies receive the initial contributions to pension accounts adding up to 9 billion worth of assets by the end of the year. All asset management companies reported a loss, stemming from high start-up costs and a low volume of assets managed in the first year of the new pension system. Most savers chose riskier funds with higher expected long-term returns.

### Pension asset management companies

The pension system reform (Act No. 43/2004 Coll. on retirement pension savings) paved the way to the establishment of pension asset management companies who could launch operation on 1 January 2005.

In 2005, the pension savings market was made up of 8 pension asset management companies running a line-up of 24 pension funds. The net value of assets in pension funds rose from zero to 9.04 billion during the year.

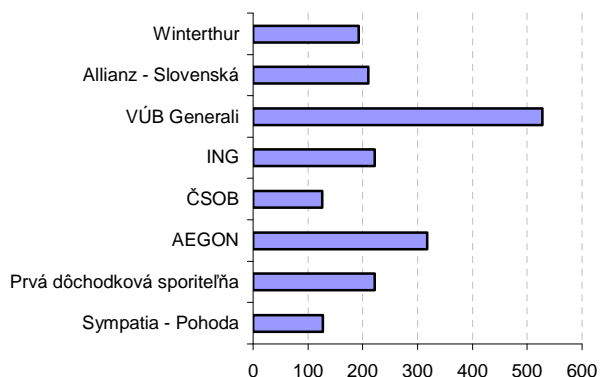
**Chart 103 Net value of pension fund assets run by individual asset management companies**



- Source: NBS
- horizontal axis data in SKK million

All pension asset management companies closed 2005 with losses caused by very costly advertising campaigns and development of a network of sales representatives and branches.

**Chart 104 Losses recorded by individual asset management companies**

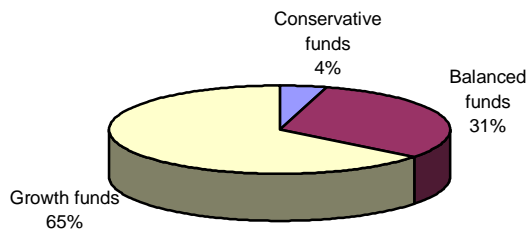


- Source: NBS
- horizontal axis data in SKK million

### Pension funds

The majority of pension savers (65%) favoured growth funds marked by riskier investment behaviour. Balanced funds were the choice of 31% of savers, while conservative funds attracted a mere 4%.

**Chart 105 Share of individual types of funds in total assets**

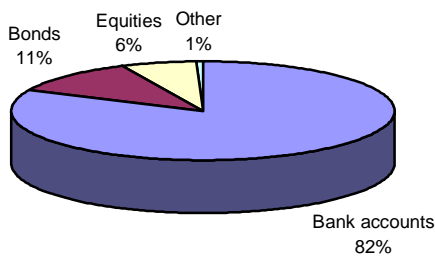


- Source: NBS

Despite growing steadily during the year, assets managed by pension funds were invested in a very conservative manner. As at 30 June 2005, 99% of all pension fund assets were deposited on bank accounts. By the end of the year, this share dropped to 82%. As at 31 December 2005, bonds accounted for 11%, denominated only in SKK. Unlike bonds, as much as 92% of equities (making up 6% of assets) were denominated in euro or other foreign currencies. Looking back at 2005, there is an apparent trend of a growing share of equities and bonds in total investments.

Given the large share of growth funds and swelling pension fund assets, expectations are of a lot more aggressive investment strategy coupled with a greater diversification of assets.

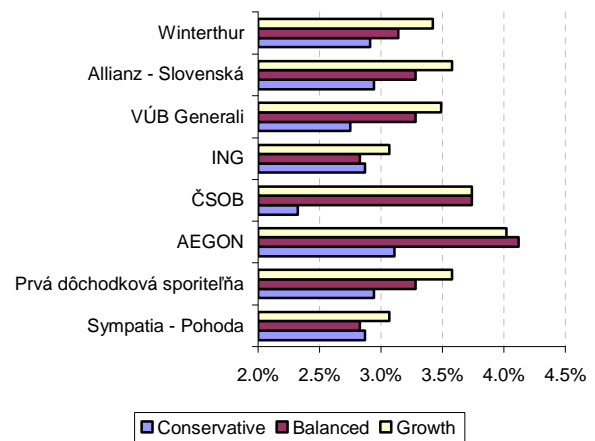
**Chart 106 Allocation of pension funds by type of assets**



- Source: NBS

For the year ending 31 December 2005, pension funds posted returns ranging from 2.32% to 3.11% in conservative funds, 2.83% to 4.12% in balanced funds and 3.07% to 4.02% in growth funds. However, since not all of the funds rolled out their investment strategies at the same time and on the same scale, the performance comparison in the following chart is for information only.

**Chart 107 Pension fund yields in individual asset management companies since launch, and types of funds**



- Source: NBS  
 - horizontal axis figures show the fund's return since launch based on the size of pension unit at end-2005

## 6 Stock Exchange

The volume of transactions at the Stock Exchange grew by 132 % in 2005 to hit the second all-time high. In the meantime, however, the number of transactions dropped 38.7% to the lowest level since 1993. The number of securities traded also fell, by 10.9%, to a long-time low since 1994. The total value of new issues amounted to 83 billion, but an entire 81% thereof was government bonds. Bond issues accounted for a mere 0.5 billion and shares in non-financial companies for 0.3 billion. In other words, the stock exchange still fails to play a significant role in private sector financing.

### Number of securities issues and market capitalisation<sup>1</sup>

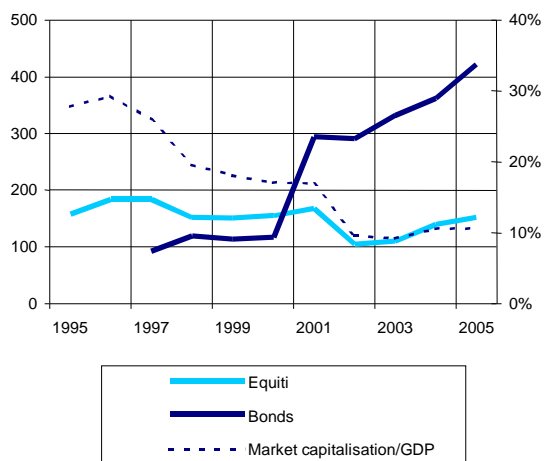
At the end of 2005, BCPB listed a total of 381 securities issues on its markets, thereof 35 issues on the main listed market, 46 on the parallel listed market, none on the new listed market, and 300 on the open market. One of the open-market issues was a eurobond.

The total market capitalisation of all securities issues registered on BCPB as at 31 December 2005 amounted to 573.6 billion, an increase of 14.1% from 2004. Some 83.5% thereof were issues listed on the main or parallel market.

The market capitalisation of equities rose 8.3% from year ago to reach 151.7 billion as at 31 December 2005. The market capitalisation of the listed equities market was SKK 78.9 billion (up 15% from year ago). The market capitalisation of debt securities was 421.9 billion (up 16.5% year-on-year), with listed issues representing 400.4 billion thereof (up 17.7% year-on-year).

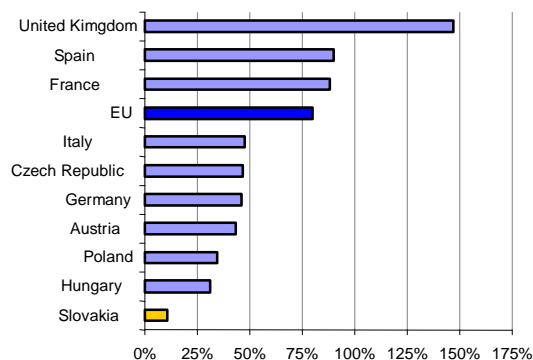
As a ratio to GDP, the market capitalisation of equities reached 11%, remaining far below the EU average of 80% of GDP, and well behind Slovakia's neighbours (except Ukraine), whose market capitalisation ranges from 31% (Hungary) to 47% (Czech Republic) of GDP.

**Chart 108: Market capitalisation of equities and bonds and the ratio of market capitalisation of equities to GDP**



- Source: BCPB
- left axis data in SKK billion
- right axis indicates the ratio of market capitalisation to GDP

**Chart 109: Ratio of market capitalisation of equities to GDP in EU**



- Source: Eurostat

<sup>1</sup> Market capitalisation indicates the market price of all equities listed on a stock exchange on a given date



## Primary market

In 2005 a total of 27 new issues of domestic securities worth 23.4 billion were admitted to BCPB markets. Apart from these new entries, there was an increase in four government bond issues with a total face value of 59.8 billion. As a result, the total value of new capital flowing into the capital market in 2005 amounted to 83.2 billion, with equities accounting for 278.1 million thereof. A total of 5 new equity issues were admitted for trading, issued by three companies from the regulated open market to raise shareholders' equity.

The aggregate value of capital issued in the form of debt securities amounts to 82.9 billion, with 59.8 billion thereof coming from the nominal value increase in four government bond issues mentioned above. Another 7.4 billion was related to a newly admitted government bond issue. The remaining 15.7 billion was made up of public sector issues, mostly by banks (15 mortgage bond issues with nominal value of 11.3 billion, 2 bank bonds with nominal value of 4.0 billion and 4 corporate bond issues worth 497.6 million).

**Table 13: New securities issues**

	<i>Value</i>
<b>New issues total</b>	83.2
<b>Equities</b>	0.3
<b>Debt securities</b>	82.9
<b>Government bonds</b>	67.2
<b>Private sector</b>	15.7
<b>Bank bonds</b>	4
<b>Mortgage bonds</b>	11.3
<b>Non-financial companies</b>	0.5

- Source: BCPB  
- values in SKK billion

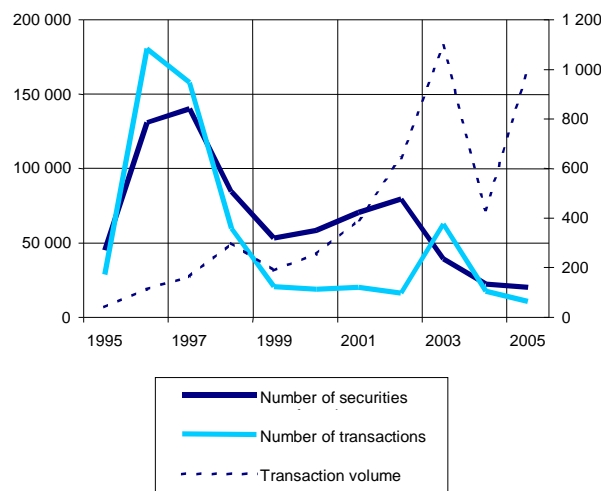
## Secondary market

The value of stock exchange transactions totalled 1,001.9 billion. Following a major setback in 2004 (when trading volume slumped 61% from 2003 to 432 billion), this amounted

to a rebound to near 2003 levels. On the other hand, trading continues its general decline. The total number of transactions settled was 10,814, with 19.95 million units of securities transferred. This meant a year-on-year decrease by 38.7% in the number of transactions to a long-time low since 1993. The number of securities traded fell 10.9% short of previous year's, its lowest since 1994. The increase in trading volume, coinciding with a falling number of transactions and securities traded is illustrated in chart 110.

The financial value of REPO operations conducted in 2005 totalled 346.1 billion, up 373.6% from year ago on the back of 58 transactions.

**Chart 110: BCPB trading (since 1995)**



- Source: BCPB  
- left axis shows the number of securities transferred in thousands and the number of transactions  
- right axis shows transaction volume in SKK billion

The share of transactions by non-residents in the total transaction volume reached 50.9% (510.0 billion), with 51.5% of purchases and 50.4% of sales. Out of the total equity trading volume non-residents held 46.4% (989.3 million), with 54.4% of purchases and 38.5% of

sales. Their share in the total bond trading volume came out at 50.9% (508.9 billion), with 51.5% of purchases and 50.4% of sales.

## Development in market indices

### SAX equity index

SAX (Slovak equity index) is the official BCPB equity index. It is a total return index<sup>1</sup>.

A general overview of the composition of the SAX index and its performance in 2005 is shown in the tables below.

**Table 14: SAX index composition as at 31 December 2005**

<b>Biotika</b>	2.1%
<b>OTP</b>	31.0%
<b>SES Tlmače</b>	7.3%
<b>Slovnaft</b>	27.6%
<b>VÚB</b>	32.0%

- Source: BCPB

**Table 15: SAX Index – performance in 2005**

	Date	SAX
<b>Opening value</b>	10/01/2005	325.87
<b>Closing value</b>	23/12/2005	413.31
<b>Year maximum</b>	14/03/2005	507.98
<b>Year minimum</b>	25/01/2005	324.19

- Source: BCPB

- volumes in SKK billion

### Bond indices

On 2 September 2004 BCPB released a new set of bond indices – SDXGroup – which went on to become the main indicator of the Slovak bond market. SDXGroup indices break down according to sector classification into SDXGroup government bonds (public sector) and SDXGroup private sector, which is further

<sup>1</sup> A total return index reflects the total change in assets related to investments into items included in the index. As a result, in addition to price changes it includes dividend income for equities and coupon income for bonds. A price index only reflects the change of price of assets in the index.

divided into subsectors of corporate, bank and mortgage bonds.

A year-on-year decline in interest rates across the yield curve range saw all bond indices gaining between 4.1% and 8.7%, with a particularly marked growth in indices containing issues maturing in over 5 years.

**Table 16: Performance of selected SDXGroup total return indices**

Title	Type of debt securities	31/12/2004	31/12/2005	Change
<b>SDXG overall</b>	Government bonds	110.16%	117.06%	6.3%
<b>SDXG (&lt;=5)</b>	Government bonds, maturity up to 5 years	108.33%	112.73%	4.1%
<b>SDXG (&gt; 5)</b>	Government bonds, maturity over 5 years	111.83%	121.53%	8.7%
<b>SDXG overall</b>	Corporate bonds	108.69%	116.22%	6.9%
<b>SDXG overall</b>	Mortgage bonds	109.57%	115.39%	5.3%

- Source: BCPB

## Mandatory takeover bids

Since early 2005, the institute of mandatory takeover bids was affected in particular by an amendment to the Securities Act, in force since 1 January 2005, which requires mandatory takeover bids to involve an expert assessment to determine the minimum price of shares in a compulsory bid. In the period reviewed, this amendment resulted in an overall decline in the number of mandatory takeover bids, as the required expert assessment had a considerable effect on the minimum bid price for shares, making the calculation of the bid price more realistic.

In the course of 2005, the Financial Market Authority (FMA) examined 29 mandatory takeover bids, with one decision to decline a takeover bid pending effect. The bidders put their bids – pursuant to the Securities Act – either due to exceeding the threshold for voting rights attached to shares of a single issuer as defined in Article 118 of the Securities Act or following a decision of the issuer's general meeting to retire the issuer's shares from stock exchange listing or trading in accordance with Article 119, or Article 170(3) in conjunction with Article 119 of the Securities Act.

As regards mandatory takeover bids under Article 119 of the Securities Act, i.e. following a decision of the issuer's general meeting to retire the issuer's equity from stock exchange listing or trading, 14 mandatory takeover bids were approved in 2005. One mandatory takeover bid under Article 119 of the Securities Act was rejected, but the FMA rejection is still pending effect. With respect to mandatory takeover bids placed due to exceeding the threshold in voting rights attached to shares of a single issuer as set out in Article 118 of the Securities Act, there were 7

bids approved in the period concerned. Two mandatory takeover bids brought under Article 118 of the Securities Act were rejected.

In 2005 twenty companies notified FMA that their general meeting had decided to discontinue stock exchange trading of their equity and that there was no obligation on their part to place a mandatory takeover bid, since the general meeting had been attended by all shareholders of the respective issuer and the decision in question had been approved by 100% of attending shareholders holding voting rights attached to shares.

## 7 Special topic

### Bank credit growth to households

*Most of the new EU member states recorded a growing trend in bank lending to households in the last few years. The 'household credit growth' phenomenon has become the centre of attention not only for financial regulators, but also among the general public or international institutions, such as the International Monetary Fund.*

*In 2005, bank credit growth to households also reached a significant level in Slovakia, in both relative (42.4% year-on-year) and absolute terms (SKK 49.5 billion year-on-year). Loans to households as a share of GDP increased from 8.8% in 2004 to 11.6% in 2005. The share of household loans in the total assets of the banking sector also increased, from 9.5% in 2004 to 11.3% in 2005. On the other hand, the comparison of these figures with the other new member states of the European Union indicates that Slovakia is lagging behind the comparable economies in relative terms. This, however, may represent an advantage in maintaining the country's financial stability.*

*Despite the growth in household debt in recent years, the financial position of households, assessed on the basis of macroeconomic figures, is sufficient for loan repayment (see 'Household Credit Risk').*

*In general, it can be said that household credit growth in Slovakia is in line with the structural changes, mainly on the supply side, as well as with the positive trend in macroeconomic development. On the supply side, the growth in loans was mainly supported by bank privatisation and overall financial liberalisation. The rate of growth is influenced by the low level of indebtedness. Currently, the dominant factors are the country's positive economic development, which is reflected in the financial position of households, and the long period of falling interest rates.*

#### Behaviour of households

The level of household debt in individual countries, as well as the reasons for credit indebtedness, can be to some extent explained by the characteristics of household behaviour. The economic behaviour of households is described in the life cycle model<sup>36</sup>. Its principle is based on the fact that every household attempts to maximise its utility, and adjusts its consumption accordingly. At the same time, households are exposed to certain restrictions. In the most simple form of this model, the restrictions consist in the fact that no household can consume more than the present value of its lifetime income and the present net value of its assets.

According to this model, a household maximises its utility by levelling out its consumption throughout its life cycle. In periods when the level of income is low in comparison with the average lifetime income, the household borrows money for financing its current consumption. If income exceeds the level of average lifetime income, the household uses the surplus for loan repayment.

Thus, if we assume that the income curve is rising over the productive life cycle of a household, the household tends to finance its consumption from loans at the beginning of the productive cycle. As household income grows, the level of indebtedness falls and the value of assets culminates when the debt has been repaid. In later stages of life, the household only reduces its accumulated assets. The level of household debt over the life cycle depends on the

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<sup>36</sup> „Life cycle, individual thrift, and the wealth of nations, Modigliani (1986); A theory of the consumption function, Friedman (1957).

household's future income and the level of interest rates (in relation to the basic interest rate).

From this basic model of household behaviour, it is possible to derive the values of indicators that determine and/or explain the loan indebtedness of households.

The different levels of household debt in various countries can be explained by the demographic structure, expected future income, and real interest rates. A society that is dominated by younger generations or households with a low volume of assets and prospects for growth in income, is often connected with increased household debt. A significant factor is the expectations of households concerning their future incomes. Where incomes are expected to grow, households show a stronger tendency towards indebtedness. Another factor increasing the level of indebtedness is the fall in interest rates, which reduces the costs of debt servicing and increases the present value of future household income. On the other hand, the fall in interest rates negatively influences the level of return on assets, so the final impact of interest rate reduction primarily depends on the life cycle stage in which most households are.

While the life cycle and household income models are mainly based on the effects of demand components on household debt, a significant role is played by the supply side, i.e. the availability of loans to households. Some of the studies indicate that the differences in indebtedness between the individual countries are by and large explained by the differences between countries in terms of access to loans (the availability of loans to households, *the loan-to-value ratio, loan-to-income ratio, etc.*).

The easier access to loans in West European countries and the USA is mainly a result of deregulation and financial liberalisation from the 80ies and 90ies. In Great Britain, almost 60% of the households had had limited access to loans before the financial deregulation of the 80ies,

compared with 30%<sup>37</sup> in 1987. Thus, the strong growth in borrowing in certain countries can be explained as a tendency of households to move from a low level of indebtedness before deregulation to a higher level, owing to the elimination of some of the obstacles after financial liberalisation. In many cases, credit growth to households does not necessarily mean a negative trend, but can be understood as a rational answer of households to the elimination of regulation, motivated by efforts to maximise their utility.

The level of household debt is also influenced by the rate of real estate ownership. Real estate purchases require a higher level of indebtedness than real estate renting. Countries with increased real estate ownership rate show a high level of household debt (Great Britain, USA, Australia).

A relatively common but significant factor affecting the indebtedness of households is government support through tax benefits or other housing support programmes. Especially countries with higher inflation rates (affecting loans with fixed interest rates in particular), where households were allowed to deduct interest payments from their tax bases, recorded high loan indebtedness among households. A higher inflation rate has a positive effect on the level of indebtedness. Assuming that loans are repaid by constant monthly instalments, inflation reduces the real value of the instalments as well as the ratio of instalments to household income.

Real estate prices affect the growth in loans through the so-called financial accelerator. This means that higher real estate prices increase the value of real estate pledged as security for a loan and thus households may borrow more money for consumption. The impact of this factor, however, depends on the share of real estate ownership. An increase in real estate prices is a positive factor for real estate owners, but has negative consequences for households possessing no real estate.

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<sup>37</sup> Financial deregulation and consumption in the United Kingdom, Bayoumi (1983).

## Comparison of household credit growth within the European Union

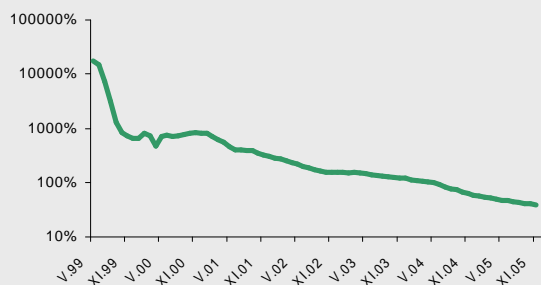
The volume of loans granted to households is steadily increasing in all member states of the EU. Some of the characteristics and the measure

of this phenomenon differ in the individual states, depending on the local conditions. A common feature is the high rate of growth in the volume of loans provided, especially in the household sector (chart 113).

### Box 7: Measuring of credit growth

The issue of credit growth can be analysed from various aspects. The analysis is usually based on two views: a dynamic view – a growing trend in the total volume of loans provided (expressed as a year-on-year percentage change) and a static view – the total volume of loans provided in comparison with another variable, e.g. GDP or the banking sector's total assets.

#### Chart 111 Year-on-year percentage growth in mortgage loans



- Source: NBS.
- Vertical axis: logarithmic scale.

#### Chart 112 Month-on-month increases in mortgage loans



- Source: NBS.
- Vertical axis: increase in loans in SKK billions.

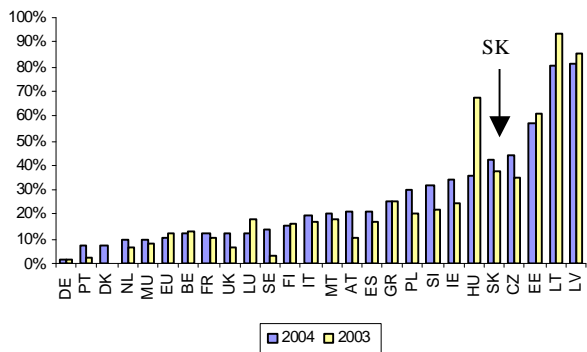
However, such indicators of growth often cover only part of the issue, or may lead to the misinterpretation of economic reality. A problem in connection with the methodology applied may be, for example, the stage of development or maturity of the given economy.

As an example, we can mention here the most frequently used indicator, i.e. the rate of growth. In the case of mortgage loans, a logarithmic scale had to be used on the vertical axis, for the volume of loans began to grow from virtually zero (chart 111).

If measured in terms of absolute month-on-month changes, the volume of loans to households would seem to grow much more dynamically in the Slovak Republic. In other words, the growth in loans measured in terms of percentage year-on-year changes slowed, while the values of month-on-month increases grew (chart 112).

The interpretation and evaluation of credit growth require a prudential approach, because the individual indicators interpreted separately do not always capture the actual situation.

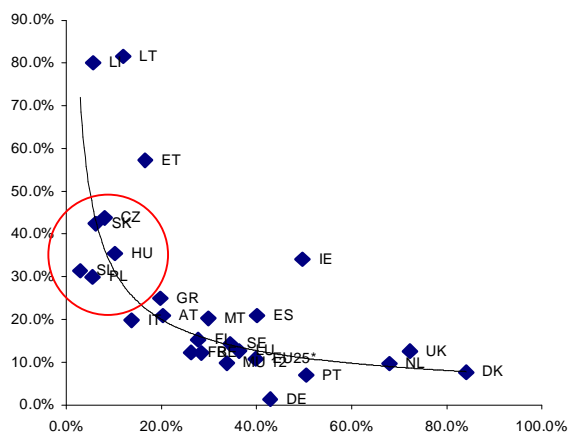
**Chart 113 Month-on-month percentage growth in house purchase loans in EU countries**



Source: ECB - WGBD, NBS calculations.

Within the European Union, the biggest year-on-year percentage changes are recorded in the new member states (especially in the Baltic states, V4 countries, and Slovenia). The big changes in percentage terms can be explained by the low initial indebtedness of households, the positive macroeconomic development, and the low initial share of loans in the banking sector's assets.

**Chart 114 House purchase loans – percentage growth and share of GDP (2004)**



Source: ECB - WGBD, NBS calculations.

- Vertical scale: year-on-year percentage growth in loans for house purchase.
- Horizontal scale: volume of loans as a share of GDP.

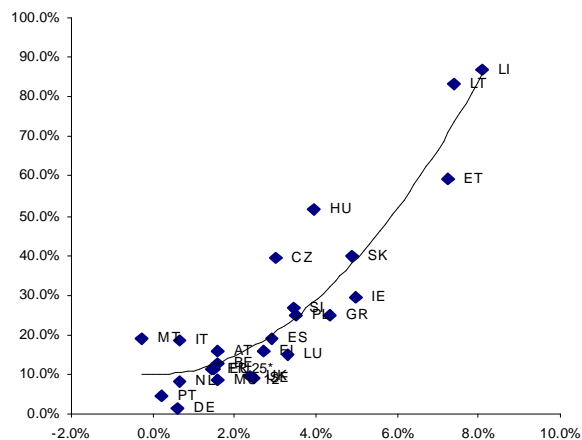
The relationship between the volume of loans (measured as a share of GDP) and their year-on-year percentage growth can be seen in Chart 114.

Although it can be said in general that countries with a relatively smaller volume of loans achieved stronger year-on-year growth in house purchase loans in percentage terms, this development is not a satisfactory answer to the situation in Ireland and Estonia, or in Germany.

The year-on-year growth in house purchase loans in percentage terms is also connected with the rate of GDP growth. This relationship gives a better explanation for the situation in Estonia, Ireland, or Germany. On the basis of this analysis, it is not possible to state unambiguously that the growth in house purchase loans was caused by economic growth and that economic growth was determined by credit growth. What we can say at this moment is that there is some relationship between the two variables.

A comparison of the rate of year-on-year growth in house purchase loans and the relation of this growth to the share of loans in GDP and the rate of GDP growth indicates numerous similarities between the new member states.

**Chart 115 Percentage growth in house purchase loans and GDP growth**



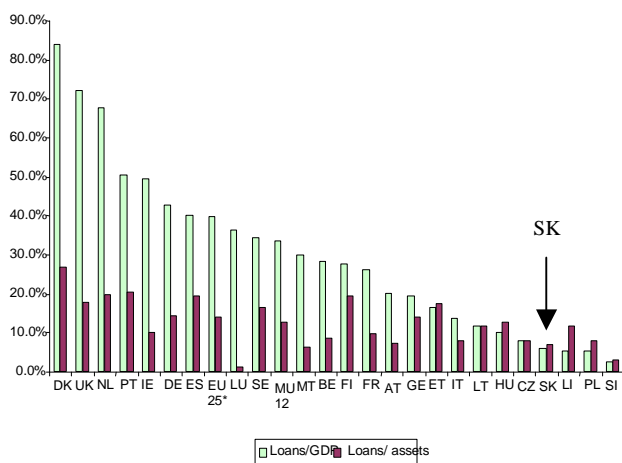
Source: ECB – WGBD, Eurostat, NBS calculations.

- Vertical scale: average growth in house purchase loans in 2003 – 2004.
- Horizontal scale: average growth in real GDP in 2002 – 2004.

On the other hand, a comparison of loans for house purchase as a share of total assets in the banking sector delimits different groups among the old and new member states of the Union.

In the new member states, the size of the banking sector is often comparable with the value of GDP, while the size of the banking sector in the EU 15 exceeds the value of GDP several times.<sup>38</sup> When comparing the volume of loans and the value of GDP, we found relatively marked differences between most new and old EU member states, whereas we see no significant differences in comparing the share of loans in the assets of the relevant banking sector. This share (house purchase loans as a share of total assets) is distributed over the EU countries more evenly. In such a comparison, Estonia, Lithuania, and Latvia reached higher values than France, Belgium, Ireland, Italy, Austria, and Luxembourg (chart 116).

**Chart 116 House purchase loans as a share of GDP and total assets in the banking sector (2004)**



Source: ECB – WGBD, NBS calculations.

38 In the EU15, the assets of the banking sector as a share of GDP fluctuate from 138% (Greece) to 468% (Ireland), except in Luxembourg with a share of 2,706%. In the new member states (except for Cyprus and Malta), this share ranges from 47% (Latvia) to 101% (Lithuania).

In general, we can say that even if the volume of house purchase loans in the new member states is relatively small with regard to the size of the economy, the sensitivity of banking sectors to the household sector may also be higher in some of the new member states.

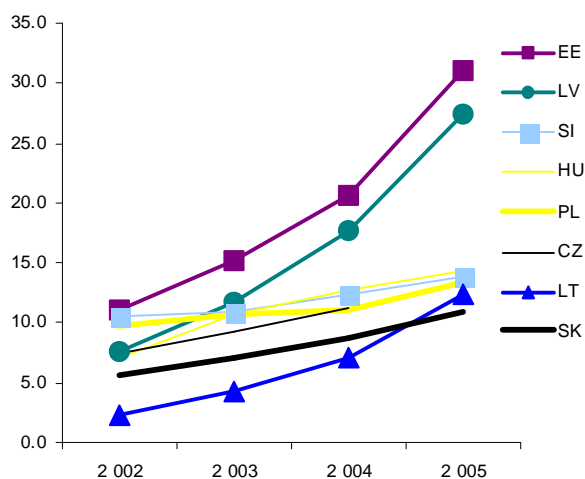
### Comparison of Slovakia with the new member states

Most of the new member states (except for Malta and Cyprus) show certain common characteristics, which accompany the faster rates of growth: a lower share of household loans in GDP compared with the EU15, stronger economic growth than in the EU15, real estate price increases in recent years, banking sector restructuring, financial liberalisation, and faster growth in the banking sector’s assets in comparison with the GDP. For that reason, credit growth in the new member states is a special problem and deserves a separate analysis.

### Comparison of loans in terms of volume

Within the group of new member states (except Malta and Cyprus), it is also interesting to compare the development and volume of loans to households as a share of GDP and as a share of total bank assets.

**Chart 117 Loans to households as a share of total assets in the banking sector**

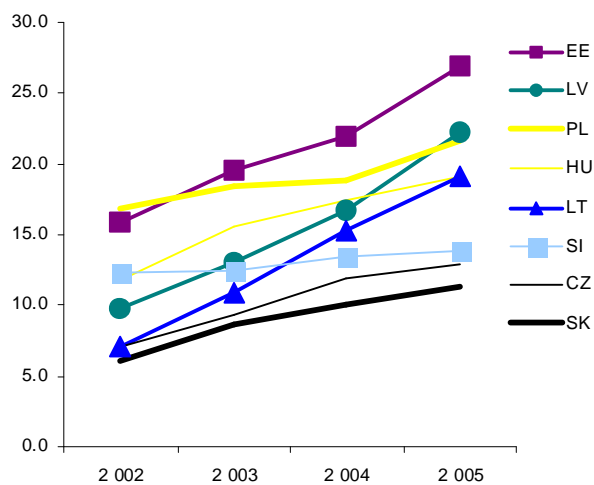


Source: Central banks of the relevant states.



Charts 117 and 118 show that Estonia and Lithuania have a dominant position, while Slovakia is the least significant according to these indicators. In addition, the rate of growth in the Baltic states is even faster, so the differences in relation to Slovakia have increased still further in the recent period. In comparison with the other new member states, the Slovak banking sector is the least sensitive to the household sector.

**Chart 118 Loans to households as a share of GDP**



- Source: Central banks of the relevant states.

On the other hand, the low share of household loans in the total assets of the banking sector is also connected, in the case of Slovakia, with the fact that the country has the smallest share of total loans (to households and enterprises) in these assets. The lower sensitivity of the Slovak banking sector to households is connected with the relatively weaker orientation of Slovak banks to lending to customers. This does not necessarily mean that Slovak banks grant 'less' loans to customers; it only means that their assets are dominated by securities and interbank assets.

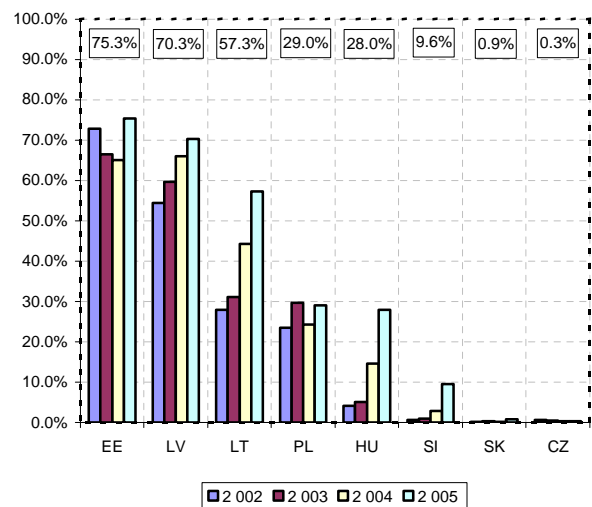
**Comparison of loans to households in foreign currency**

In comparing loans to households in the new member states, loans denominated in foreign currency (mostly EUR and CHF) represent a

separate category. The significance of these loans in a given banking sector depends on numerous factors.

The main reason behind the growth in foreign-currency loans to households is the existence of an interest rate differential between the domestic and foreign currencies, which led to significant differences in the prices of loans in some countries. The second crucial factor is the foreign exchange regime. Depending on the foreign exchange regime (fixed or floating), there are differences in the degree of the foreign exchange risk taken by households, since the incomes of most households are in domestic currency. The third factor is the lack of domestic resources and the resulting attempt of foreign capital to utilise the given country's potential growth. This is primarily denominated in foreign currency and it is probably more effective for banks to provide loans in the same currency. An additional factor may be the tendency of households to take a certain foreign exchange risk, and to profit from the appreciation of the domestic currency against the currency in which the loan is denominated.

**Chart 119 Loans to households in foreign currency as a share of total credit to households**

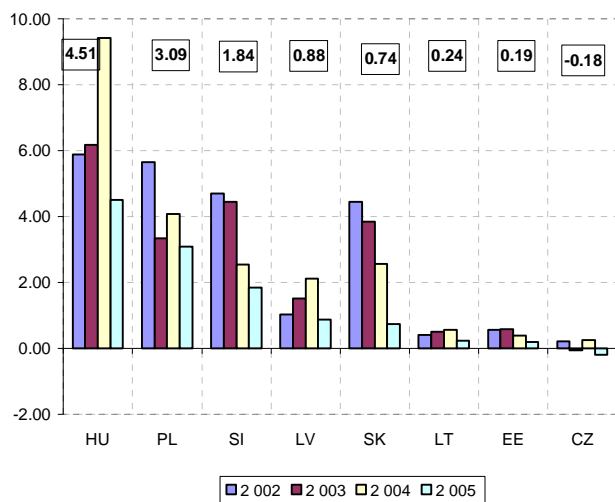


- Source: Central banks of the relevant states.  
 - Figure above the columns: proportion in 2005.

The Czech Republic is an example of a country with a negative interest rates differential and a managed floating foreign exchange regime. Both factors were responsible for the fact that the Czech banking sector had the smallest share of loans to households in foreign currency among the new member states.

The example of Hungary and Poland again demonstrates the impact of the interest rate differential, which is also supported by a more rigorous foreign exchange regime (in Hungary). Slovenia mainly recorded an increase in foreign-currency loans in 2005, which was due probably to the persistent interest rates differential and the country's entry into the ERM II.

**Chart 120 Interest rate differentials on the three-month money market**



- Source: Central banks of the relevant states.
- Vertical scale: values of interest rate differentials in percentage points.
- The interest rate differential for a certain country is the difference between the three-month interest rates in domestic currency and the EUR.
- Figure above the columns: differential in 2005.

Extra high values are recorded in the Baltic republics, mainly in Estonia and Lithuania. However, these countries have reported small interest rate differentials since 2002 (chart 120), which means that the main factor in the growth of foreign-currency loans was probably a shortage of domestic resources in the economy (which is

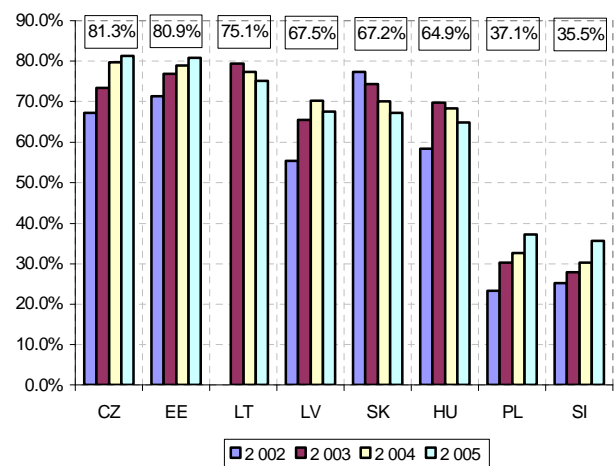
also indicated by the relatively high *deposits-to-loans ratios* – Box 2), supported by a fixed foreign exchange regime.

**Comparison of loans to households by structure**

The differences in the proportions of house purchase loans in total credit to households are probably connected with the situation on the relevant real estate market and the participation of the state in housing development (chart 121).

The reporting value of the comparison of loans to household by structure has been limited, mainly in recent years. The share of unspecified loans is steadily increasing; these loans are used mostly for housing purposes.

**Chart 121 House purchase loans as a share of total credit to households**



- Source: Central banks of the relevant states.
- Figure above the columns: proportion in 2005.

**Structure of credit growth in Slovakia**

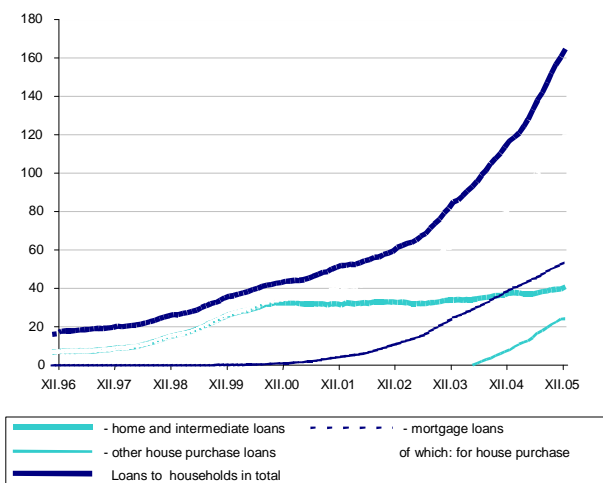
The monitoring of credit growth in terms of structure is complicated by the accessibility of data, the methodology applied, and the launch of new products (mostly in the last year). A substantial restriction is the fact that the structure of loan portfolios of banks was monitored in the past exclusively from the viewpoint of standard loans. Since the share of standard loans to household in total credit to households increased from 89% to 95% (from 1996 to December 2005),

the ‘standard loans’ category can be considered a sufficiently representative specimen.

We can say with a certain simplification that in the last ten years we have seen several general trends in bank lending.

From the middle of the 90ies to the end of 2000, consumer loans decreased in volume, mainly in connection with the growth in loans from building societies. Building societies loans showed strong dynamics in that period, particularly intermediate loans. Although the first mortgage loans were granted as early as 1997, mortgage banking was actually launched in 2000, when mortgage banking licences were granted to six banks (charts 111 and 112). The growth in loans from building societies slowed down in that period and housing construction was increasingly financed through mortgage loans (due partly to government support in the form of interest rate bonuses). In November 2004, the volume of mortgage loans provided was already larger than the volume of loans from building societies.

**Chart 122 Koruna loans to households**



- Source: NBS
- The data are in billions of SKK.

The end of 2004 saw a change in house purchase loans. In the banking sector, a competitive product appeared parallel with the

mortgage loan, i.e. ‘other housing loans’. In addition to these loans, unspecific loans started to be granted against real estate as security; they are illustrated in chart 122123, together with consumer loans, as the difference between total loans and house purchase loans.

In 2005, the month-on-month changes in mortgage loans, other loans for house purchase, and consumer (or unspecific) loans were at similar levels. This development can be explained by the provision of unspecific loans secured by real estate, which are used mostly for housing purposes.<sup>39</sup>

With regard to the wide range of loan products, it is not possible to specify exactly how many of the loans provided to households are actually for housing purposes.

### Evaluation of credit growth to households in Slovakia

The strong growth in bank lending raises the question whether the rate of growth is adequate or not. According to economic theory, credit growth is disproportionate where:

- it leads to increased lending to risky customers, where the likelihood of non-repayment is high, or
- it leads to macroeconomic disequilibrium, mainly in the external indicators.

It is, however, a very demanding task to measure the relationship between credit growth and the relevant indicators.

In some analyses, credit growth is defined as excessive if the rate of growth is faster than the trend under analysis<sup>40</sup>. For example, a ‘credit boom’ is defined by the International Monetary Fund as credit growth more than 1.75 times greater than the standard deviation of credit growth fluctuation from the trend in a given country. The application of this methodology under Slovak conditions is very difficult, owing to the short time series at disposal and structural changes.

<sup>39</sup> Results of marketing research.

<sup>40</sup> Mostly the Hodrick-Prescott filter is applied.

In general, there are very few papers on the quantification of rapid credit growth adequacy in the new member states of the EU<sup>41</sup>. Most authors focus on the theoretical description of credit growth and the causes of this growth.

In our analysis, we also focus on the theoretical description of the causes of credit growth, due to the shortage of relevant data. It can be said in general that the growth of loans to households is in line with the structural changes and the positive macroeconomic developments. On the supply side, credit growth was mainly supported by bank privatisation and overall financial liberalisation. The rate of growth is influenced by the initially low level of indebtedness. At present, one of the dominant factors is positive economic development, which is reflected in the financial position of households.

Growth in bank lending to households is a trend which can be seen in numerous countries. The trend is caused by a number of factors, which vary from country to country. There are few countries where the growth in loans is caused by one factor only. In most cases, there is a combination of various factors, and it is very difficult to precisely quantify the weights of individual factors. However, it can be said unambiguously that every country has certain specific features in connection with lending to households; these features are given by economic development, the position of the banking sector, the legal system, etc.

Slovakia, together with the other new EU member states and accession countries, belongs to the group of countries that have witnessed dynamic growth in loans to households in the last few years.

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<sup>41</sup> Early Birds, Late Risers, and Sleeping Beauties: Bank Credit Growth to the Private Sector in Central and Eastern Europe and the Balkans (IMF 2003), Explaining Credit Growth Dynamics in Central and Eastern Europe (ECB, 2005).

In the 90ies, the overall growth in bank lending was reflected in loans to households only in small measure. Household mostly borrowed from building societies within the scope of a state-subsidized programme. In that period, the banking sector had little experience in financing the needs of households. A marked impetus to growth in household loans other than loans from building societies, was privatisation and the subsequent consolidation of the banking sector. The entry of foreign owners led to the re-capitalisation of banks, the launch of new products, improvement in risk management, and an overall change in the commercial policies of banks. Economic and legal reforms also contributed to the credit boom, especially the more effective law enforcement.

Credit growth in Slovakia and other new EU member states, as well as its dynamics, can be explained by the loosening of restrictions on the supply side and the current efforts of households to adjust consumption to their economic life cycles.

While the consolidation of the banking sector has caused a credit boom, demand for loans among Slovak households is determined by the current level of their indebtedness, the expected macroeconomic development, and the financial situation of individual households.

The issue of household debt in Slovakia is discussed in more detail in another chapter of this analysis, but we can say in general that Slovakia is among the countries with the lowest household debt. Thus, demand for loans can be explained by the low level of indebtedness and the so-called *catch-up* effect, which appears in most countries with a low initial level of household debt.

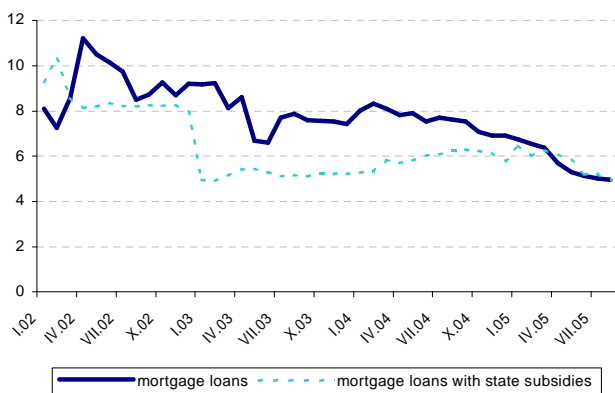
In recent years, unemployment has dropped and the disposable income of households has increased, as a primary source of loan repayment. The expectations of households concerning the future trends in economic development and disposable income, have improved. Loans to households grew most dynamically in regions with the lowest unemployment rates and the

highest level of income (by the end of 2004, 65% of the total loans to households had been granted in the Bratislava region). This indicates that households finance their increasing consumption from loans.

Within the scope of macroeconomic stabilisation, interest rates dropped and thus the expenses of households on loan repayment decreased. The decrease in loan repayment costs has made bank credit a common tool for the financing of short- and long-term consumption.

Until 2004, the growth in bank lending had also been promoted by government support through interest bonuses. When market interest rates have dropped, the government withdrew from support in this form. At present, Slovakia is among the countries where no direct government support is provided to households through bank loans (except for government bonuses to deposits in building societies and the financing of real estate purchases via the State Housing Development Fund).

**Chart 123 Fall in interest rates on mortgage loans**



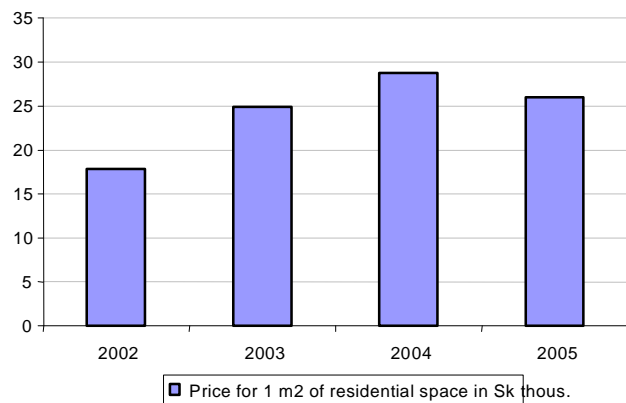
Source: NBS.

Through their interest and non-interest incomes, households significantly contribute to the profitability of banks. The attempt of banks to succeed in this market is reflected in the growing competition among banks. Due to small and medium-sized banks in particular, credit

standards and some of the terms and conditions of bank lending have moderated and the process of lending has accelerated. Despite this, we can hardly talk about effective competition on the market for household loans, owing to their high concentration.

The impact of real estate prices increase on the volume of loans provided in Slovakia is rather ambiguous. Although the rate of real estate ownership is relatively high, it is questionable whether the financial accelerator acting through the rising value of collateral is a factor that significantly contributes to the growth in bank lending. The financial accelerator would play a significant role if the loans were granted mostly to real estate owners. In such a case, we could talk about consumption financing through the rising value of real estate. We, however, assume that a large portion of the loans, mainly loans for house purchase, is provided to households, which possess no real estate. They are largely young people, borrowing money for real estate purchases. In this case, the price of real estate is determined by demand for real estate among households. The rise in real estate prices in Slovakia is also supported by the relatively low elasticity of demand on the real estate market (the construction of new flats is not adequate to meet the demand for real estate).

**Chart 124 Real estate prices in SKK per m<sup>2</sup>**



Source: National Association of Real Estate Agencies, SR.

The prices are in thousands of SKK.

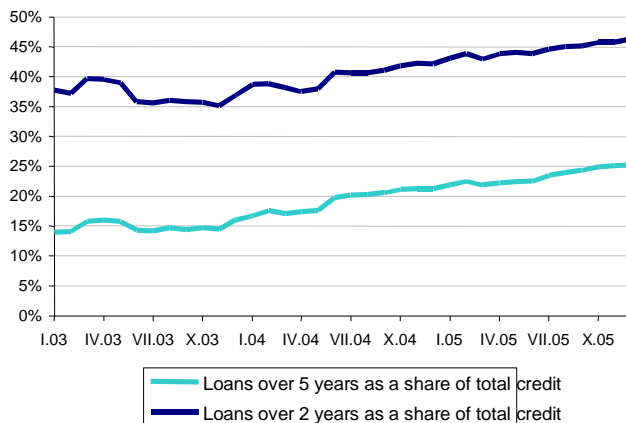
## Impact of credit growth on the banking sector

In the course of lending to households, the banking sector has changed in various respects. In this chapter, only four fundamental changes are described. The first one is a change in the structure of assets and liabilities, the second is an increase in the sensitivity of banks to the household sector, the third is an increase in the dominant position of the leading banks, and the fourth is a decrease in capital adequacy.

### Time structure of assets and liabilities

For banks, the growth in loans to households meant the provision of long-term loans, for they were mostly intended for housing purposes. From the beginning of 2003 to December 2005, the share of loans with a residual maturity of over 5 years in total loans to customers increased from 14% to 25%, and that of loans with a residual maturity of over 2 years grew from 38% to 46% (chart 126).

**Chart 125 Long-term loans as a share of total credit**



Source: NBS.

Despite rapid growth in the volume of short-term interbank assets, the share of assets with a residual maturity of over 5 years in total assets increased, due to growth in long-term loans, from 5% in January to 16% in December 2005. Thus, the proportion of investment in less liquid assets increased in the banking sector.

In combination with the decline in time and savings deposits and growth in demand deposits<sup>42</sup>, the time discrepancy between assets and liabilities has widened (see *Liquidity Risk*). The wider discrepancy can also be explained by the fact that, in granting unspecific loans secured by real estate, the bank is not obligated to issue mortgage bonds (see *Liabilities*).

### Exposure of banks to the household sector

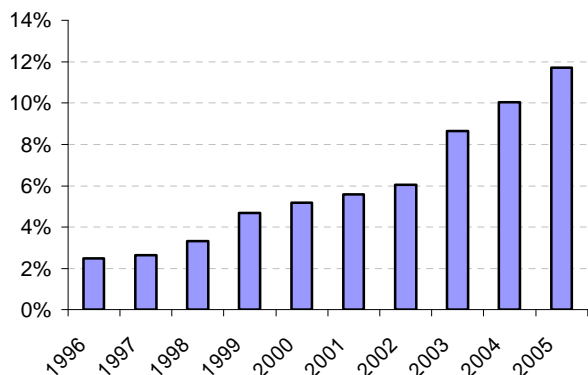
A substantial change in connection with the growth in loans to households is their share in the total assets of the banking sector. Loans to households have become one of the most rapidly growing components of bank assets. From 1996 to 2005, they increased as a share of total assets in the banking sector from 2.5% to 11.7% (chart 126).

In recent years, loans to households have grown at a faster pace than loans to enterprises. From the beginning of 2004 to the end of 2005, the share of securities in the banking sector's total assets decreased from 28% to 23%, while the share of household loans in total assets increased from 8% to 11%.

Thus, the banking sector's exposure to households has increased substantially, as well as its sensitivity to possible credit events in this sector. On the other hand, the value of this share is, despite its rapid growth, the lowest among the new EU member states (chart 117) and one of the lowest in the EU (chart 116).

<sup>42</sup> The changes in liabilities were not a consequence of credit growth; they were mainly due to drops in interest rates.

**Chart 126 Loans to households as a share of total assets in the banking sector**



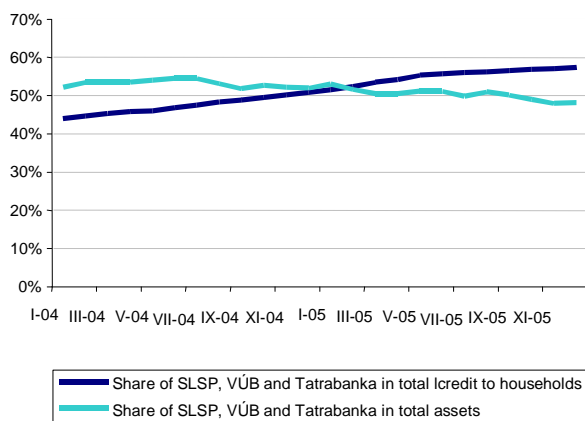
Source: NBS.

**Concentration**

The provision of loans to households affected the concentration of the volume of loans provided and the generation of profits.

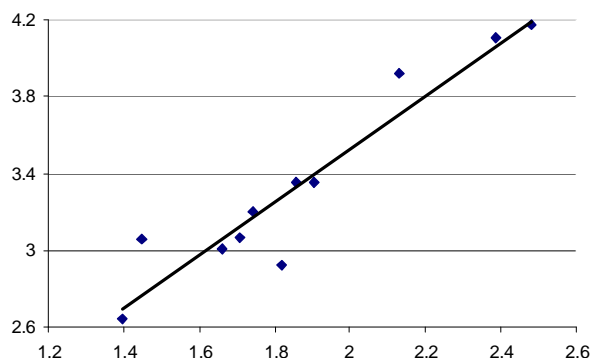
The share of large banks in the sector’s total profit is relatively higher than the share of their assets (chart 127). The high profitability of these banks is partly the result of their dominant position in retail banking, which shows a growing tendency. This dominant position is connected with the size of the branch network, which positively correlates with the year-on-year change in the volume of loans provided to households (chart 128).

**Chart 127 Share of the three largest banks in lending to households**



Source: NBS.

**Chart 128 Growth in the volume of loans to households in relation to the size of the branch network**



- Source: NBS.
- Horizontal scale: number of branches in logarithmic values; Vertical scale: year-on-year changes in loans to households (in millions of SKK) in logarithmic values; The logarithmic scale is used for the sake of transparency.
- The chart does not cover banks with a low share of retail loans in the total volume of retail loans in the banking sector.

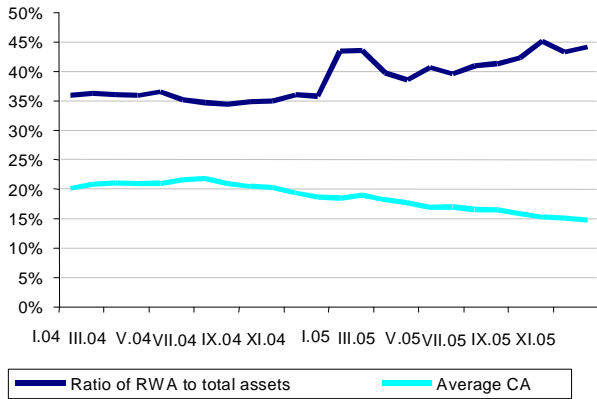
**Capital adequacy**

As a result of growth in loans to households, the volume of risk-weighted assets has increased (as well as their share of total assets). This is connected with a decrease in the share of government securities with a zero risk-weight.

Obviously, the growth in the volume and share of risk-weighted assets is not only connected with the growth in loans to households. However, as Slovakia is converging towards the EU average in terms of the ratio of household loans to assets and GDP, the difference in capital adequacy is also diminishing.



**Chart 129 Ratio of risk-weighted assets to average capital adequacy**



- Source: NBS.



# 8 Annexes

## A Information on financial market structure

### A.1 Data on the number of institutions

#### A.1.1 Number of financial institutions in 2005

	Number of institutions at 31.12.05	Number of institutions at 31.12.04	Change
Number of banks in the SR	18	18	0
building societies	3	3	0
banks with a mortgage banking licence	9	9	0
other banks	6	6	0
Number of branches of foreign banks in the SR	5	3	+2
of which: operating on the basis of an NBS licence	1	1	0
operating on the basis of a single banking licence	4	2	+2
of which: branches of foreign banks with a mortgage banking licence	1	1	0
Number of branches of foreign banks contributing to the Deposit Protection Fund	2	1	+1
Number of representative offices of foreign banks in the SR	9	7	+2
Number of branches (organisational units) of banks in the SR	685	587	+97
Number of sub-branches in the SR	457	526	-69
Number of branches of Slovak banks in other countries	1	1	0
Number of representative offices of Slovak banks in other countries	1	1	0
Number of foreign entities freely providing cross-border banking services	104	48	+56
of which: electronic money institutions	2	0	+2
of which: foreign financial institutions	3	0	+3
Slovak banks freely providing cross-border banking services abroad	1	1	0
of which: electronic money institutions	0	0	0
Number of employees in banks and branches of foreign banks	19,850	19,720	+130
Number of insurance companies in the SR	25	25	0
of which: insurance companies rendering only life insurance services	5	5	0
insurance companies rendering only non-life insurance services	4	4	0
insurance companies rendering both life and non-life insurance services	16	16	0
Number of insurance comp. in the SR rendering compulsory contract, third-party motor insur. services	8	8	0
Number of employees in insurance companies		6,493	
Number of pension management companies	8	0	+8
Number of domestic asset management companies in the SR	10	8	+2
of which: mgmt. comp. with an extended licence as per § 3 para. 3 of the Collective Investment Act	7	5	+2
Number of foreign mgmt. comp. operating in the SR and foreign collective investment companies	17	5	+12
of which: operating on the basis of a licence as per § 75 of the Collective Investment Act	3	4	-1
of which: through a branch office in the SR	2	3	-1
without opening a branch office	1	1	0
operating on the basis of a single European licence	14	1	+13
of which: through a branch office in the SR	0	0	0
without opening a branch office	14	1	+13
of which: number of foreign mutual funds	50	0	+50
number of sub-funds of foreign investment companies and foreign mutual funds	246	20	+226
of which: sale of securities issued by foreign mgmt. companies via securities dealers on the basis of a licence pursuant to Act No. 385/1999	0	222	-222
Number of dealers in securities	36	36	0
of which: banks and branches of foreign banks	15	15	0
Number of foreign entities operating in the SR as dealers in securities	204	87	+117
of which: through a branch office in the SR	2	2	0
without opening a branch office	202	85	+117
Number of Slovak dealers in securities rendering services abroad	9	6	+3

### **Banking sector**

On 24 January 2005, the National Bank of Slovakia registered a representative office of a foreign bank, namely Banque Privee Edmond De Rothschild Europe, a. s., Luxemburg.

On 14 April 2005, the National Bank of Slovakia confirmed receipt of notification from Niederösterreichische Landesbank- Hypothekenbank Aktiengesellschaft, Austria, of the establishment of a representative office in the SR. Thus, the number of representative offices of foreign banks increased to 9.

On 1 June 2005, a branch office of HSBC Bank plc commenced operations in Slovakia, on the basis of a single banking licence. The deposits of the branch are insured by the Deposit Protection Fund of Slovakia.

On 19 September 2005, a branch office of Banco Mais, S. A. commenced operations in Slovakia, on the basis of a single banking licence. The deposits of the branch are insured by the Deposit Guarantee Fund of Portugal.

On 4 November 2005, the National Bank of Slovakia informed J&T, Banka, a.s. in writing of the terms and conditions of operation in Slovakia as a branch of a foreign bank, on the basis of a single banking licence. The branch office of the above bank will be a contributor to the Deposit Insurance Fund of the Czech Republic.<sup>43</sup>

### **Collective investment**

The number of domestic asset management companies increased during 2005 by two, owing to the establishment of two new asset management companies – OTP Asset Management, a.s., and KD Investments, a.s., which were granted a licence to operate as asset management companies at the end of 2004. At the end of 2005, these companies obtained 5 permits to establish open-end funds.

The year 2005 saw a marked increase in the number of institutions operating in Slovakia on the basis of a single European licence. Under the temporary provisions of Art. 118 para. 4 of the Act on Collective Investment<sup>44</sup> (hereinafter referred to as ‘ACI’), if a permit was granted pursuant to Art. 15 of Act No. 385/1999 Coll. on collective investment and on amendments to certain laws (hereinafter referred to as ‘previous law’) to a domestic or foreign dealer in securities for the sale of securities issued by a foreign asset management company, the foreign asset management company in question was obliged to submit, within 12 months of the coming into effect of the ACI, an application for the issue of a permit according to Art. 75 or to end this activity in the territory of the Slovak Republic. This did not apply where a European fund or foreign asset management company based in a member state followed the procedure set out in Articles 28, 29, or 61, i.e. commenced operations on the basis of a single European licence. In the course of 2005, notification was sent to each foreign asset management company that had operated up to that time on the basis of permits issued to securities dealers pursuant to the previous law (except for Activest Luxembourg s.a. and Activest Investmentgesellschaft mbH, Munich).

During 2005, there were further minor changes in the number of entities operating on the basis of a permit according to Art. 75 of the ACI. Erste-Sparinvest, Vienna, Austria, which had operated in Slovakia in the previous year on the basis of a permit under Art. 75 of the ACI, decided, as the above-mentioned institutions, to operate within the single European licence system. A new licence under Art.

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<sup>43</sup> J&T, Bank, a.s., commenced banking operations in 2006.

<sup>44</sup> Act No. 594/2003 Coll. on collective investment and amendments and supplements to certain laws as amended by subsequent regulations.

75 was also granted to ING International II SICAV of Luxembourg. A foreign investment company, Pioneer Global Investments Limited, Dublin, Ireland, decided to end its operations on the Slovak market and returned its licence issued under Art. 75 of the ACI, on the basis of prior consent. This step was connected with the overall restructuring of the Pioneer Investments group, which also affected the Luxembourg section, operating in Slovakia under the single European licence system.

### A.1.2 Open-end funds established in 2005

Asset management company	Type of fond					fond of funds
	money	bond	share	mixed		
Tatra Asset Management, správ. spol., a.s.						6
Asset Management SLSP, správ. spol., a.s.						1
AIG Funds Central Europe, správ. spol., a.s.	1					
ČSOB Asset Management, správ. spol., a.s.		1	1			
OTP Asset Management, správ. spol., a.s.	1	1	1			
KD Investments, správ. spol., a.s.			1		1	

## A.2 Data on the ownership structure of entities under supervision

### A.2.1 Share of individual countries in the registered capital of individual financial institutions by type as at 31 December 2005

	Banks	Insurance companies (*)	Pension management companies	Asset management companies	Dealers in securities
Slovakia	10.35	9.16	57.19	80.55	11.43
EU states (excluding SR)	85.91	86.8	14.19	19.45	84.25
Czech Republic	7.86	0.5	7.74	10.61	1.34
France	1.13	1.04			1.31
Netherlands	1.39	13.23	6.45		0.09
Luxembourg	28.24				32.8
Hungary	4.52	1.32			5.26
Germany	1.94	42.04			
Austria	35.34	17.51			37.24
Italy	4.26				4.95
Portugal	0.09				
United Kingdom	1.14	8.46			1.25
Other		2.7		8.84	
Non-EU countries	3.74	4.04	28.62		4.32

The data in the table express the share of individual countries in the registered capital of financial institutions according to the first owner. The data are in percentages.

(\*) Data for the end of 2004. Data on the ownership structure of insurance companies are available only once a year. Data for the end of 2005 will be published in the Structural Report for the first quarter of 2006.

### Banking sector

Over the first quarter of 2005, Banka Slovakia, a.s., and Ľudová banka, a.s. recorded some changes in the stakes of foreign investors, which, however, did not affect the total share of foreign investors in the registered capital of these banks.

The share of the registered capital of Calyon Global Banking (originally called Credit Lyonnais Global Banking S.A.) increased from 90% to 100%, due to the acquisition of a 10% stake from VUB, a.s.

The main shareholder of Dexia banka Slovensko, a.s. has become Dexia Kommunalkredit Bank AG, Austria (originally called Dexia Kommunalkredit Holding, GesmbH, Austria).

### **Collective investment**

On 13 December 2005, the general meeting of KD Investments a.s., asset management company, approved an increase of SKK 15.0 million in the registered capital, which was paid on 16 December 2006 and entered in the commercial register on 31 January 2006.

### **Old-age pension scheme**

During 2005, pension management companies increased their registered capital as follows:

- ČSOB d.s.s., a.s.: from SKK 350,000,000 to SKK 360,000,000;
- VÚB Generali d.s.s, a.s.: from SKK 300,000,000 to SKK 304,000,000;
- ING d.s.s, a.s.: from SKK 300,000,000 to SKK 654,000,000;
- Credit Suisse Life & Pensions d.s.s., a.s.: from SKK 300,000,000 to SKK 1,330,800,000;
- Allianz – Slovenská d.s.s, a.s.: from SKK 300,000,000 to SKK 1,100,000,000.

## B Analytical Data

### B.1 Banks and Branches of Foreign Banks

#### B.1.1 Structure of Assets and Liabilities of Banks and Branches of Foreign Banks (volume data in SKK thousands)

	Volume Total (as at 31.12.2005)	Foreign Currency Share	Year-on- year Change	Share of Balance Sheet Total	CR3	CR5	HHI
<b>ASSETS TOTAL (gross)</b>	1 463 908 674	14%	19%	100%	48%	68%	1 084
<b>LOANS TO CLIENTS TOTAL</b>	556 537 313	25%	26%	38%	47%	60%	970
Retail Loans	181 867 817	1%	41%	12%	64%	81%	1 610
thereof: Loans to households	166 603 539	1%	43%	11%	65%	82%	1 660
Loans to corporates	272 997 956	37%	21%	19%	40%	58%	907
Loans to non-bank financial companies	55 389 457	22%	49%	4%	48%	68%	1 119
Loans to the general government	27 897 393	32%	-24%	2%	76%	90%	2 471
Loans to nonresidents	18 384 690	88%	42%	1%	51%	69%	1 256
<b>INTERBANK MARKET OPERATIONS TOTAL</b>	513 204 905	7%	31%	35%	59%	74%	1 456
thereof: Operations with the NBS and foreign central banks (including bills of the NBS)	412 999 384	0%	40%	28%	62%	76%	1 534
<b>SECURITIES TOTAL</b>	323 923 136	10%	1%	22%	76%	82%	2 039
Securities issued by residents	274 549 311	4%	1%	19%	78%	83%	2 180
Treasury bills and bills of exchange held until maturity	2 173 497	28%	-75%	0%	88%	99%	2 798
Government bonds	202 586 731	4%	-12%	14%	78%	84%	2 460
Corporate bonds	7 758 749	25%	-37%	1%	68%	90%	1 929
Bank bonds	22 702 658	0%	33%	2%	69%	81%	1 831
Other debt securities	33 291 515	0%	9029%	2%	100%	100%	9 890
Equity securities	6 036 161	0%	30%	0%	74%	90%	2 224
Securities issued by nonresidents	35 879 965	60%	-2%	2%	74%	85%	2 025
Debt securities	32 816 584	60%	-6%	2%	76%	88%	2 077
thereof: issued by banks	14 858 592	32%	N.A.	1%	78%	96%	2 339
thereof: issued by general government	3 699 150	100%	N.A.	0%	62%	86%	1 745
thereof: other issuers	14 258 842	78%	N.A.	1%	83%	97%	3 073
Equity securities	3 063 381	64%	93%	0%	98%	100%	4 688
thereof: issued by banks	1 439	100%	N.A.	0%	100%	100%	10 000
thereof: other issuers	3 061 942	64%	N.A.	0%	98%	100%	4 693
Derivatives – positive real value	13 493 860	7%	5%	1%	61%	85%	1 717
<b>LIABILITIES TOTAL</b>	1 404 762 510	26%	21%	100%	47%	68%	1 076
<b>DEPOSITS AND LOANS FROM CLIENTS TOTAL</b>	829 082 916	28%	8%	59%	56%	68%	1 246
thereof: deposits subject to deposit insurance	419 717 236	11%	-1%	30%	60%	74%	1 532
Retail deposits and loans	396 014 506	11%	0%	28%	61%	75%	1 612
Deposits and loans from households	360 016 101	11%	0%	26%	61%	75%	1 636
Deposits and loans from corporates	250 920 299	21%	11%	18%	52%	68%	1 314
Deposits and loans from non-bank fin. companies	66 823 558	4%	8%	5%	51%	74%	1 241
Deposits and loans from the general government	93 147 313	7%	18%	7%	72%	95%	2 559
Deposits and loans from nonresidents	22 177 240	70%	174%	2%	58%	70%	1 774
<b>FUNDS FROM BANKS TOTAL</b>	364 932 192	64%	75%	26%	60%	75%	1 571
Funds from the NBS and foreign central banks	6 114 948	1%	18%	0%	98%	99%	4 299
Funds from nonresident banks	301 514 531	73%	91%	21%	66%	77%	1 829
<b>ISSUED SECURITIES TOTAL</b>	77 073 690	5%	34%	5%	57%	79%	1 447
Mortgage bonds	43 646 338	0%	46%	3%	67%	84%	1 774
Bills of Exchange	12 864 631	17%	28%	1%	75%	90%	2 451
Other issued securities	6 027 504	0%		0%	83%	100%	2 774
Derivatives – negative real value	14 535 217	13%	-17%	1%	62%	89%	1 727
Risk weighted assets of the banking book	583 254 232		30%	42%	50%	64%	1 059
Risk weighted assets of the trading book	24 918 337		43%	2%	58%	76%	1 640
Other risk weighted assets	27 371 061		466%	2%	88%	95%	3 979
Capital	78 270 859		1%	6%	50%	66%	1 086

CR3 is the share of three institutions with the highest volume of the given item of the total volume of the given item in the sector.

CR5 is the share of five institutions with the highest volume of the given item of the total volume of the given item in the sector.

HHI is defined as the sum of shares of individual institutions squared of the total volume of the given item.

Only institutions where the given item is positive enter the calculation of all these three indicators.

At equal value of the share of all institutions with 23 institutions the value of HHI would be 435.

Assets are expressed at gross value; equality with liabilities is achieved by deduction of accumulated depreciation, provisions, and reserves.

## B.1.2 Revenues and Expenses of Banks and Branches of Foreign Banks (value of expenses and revenues in SKK thousands)

	Value (as at 31.12.2005)	Year-on-year change	CR3	CR5	HHI
(a) OPERATING COSTS TOTAL (b + e + f)	28 010 473	6%	57%	69%	1 266
(b) Administrative expenses (c + d)	23 489 515	8%	57%	69%	1 252
(c) Purchased performance	11 360 542	3%	53%	66%	1 153
(d) Staffing costs	12 128 973	13%	60%	71%	1 358
(e) Depreciation of tangible and intangible assets	4 393 253	1%	58%	70%	1 401
(f) Taxes and fees	127 705	-9%	42%	60%	1 003
(g) GROSS INCOME (h + l)	42 673 741	-1%	60%	71%	1 365
(h) Net interest income (j - i)	29 693 682	-6%	63%	72%	1 458
(i) Paid interest	24 823 777	-7%	47%	67%	1 095
(j) Received interest	54 517 459	-6%	54%	67%	1 218
(k) thereof: interest received from securities	16 255 412	-21%	70%	81%	1 841
(l) Net non interest income (m + n + o + p)	12 980 059	13%	54%	70%	1 360
(m) Income from equities and business shares	98 091	-65%	81%	95%	3 171
(n) Net income from fees	11 242 961	20%	65%	79%	1 670
(o) Net income from trading	8 060 150	35%	43%	61%	994
(p) Other net operating income	- 6 421 143	56%			
(q) NET INCOME (g - a)	14 663 268	-12%			
(r) Net provis. and net income from written-off claims	- 1 037 336	-139%			
(s) Net creation of reserves	- 541 976	146%			
(t) NET INCOME BEFORE TAXES (q - r - s)	16 242 580	14%	69%	79%	1 722
(u) Extraordinary profit	0	-100%			
(v) Income tax	2 321 382	30%	68%	79%	1 752
(w) NET INCOME AFTER TAXATION (t + u - v)	13 921 198	13%	69%	79%	1 734

CR3 is the share of three institutions with the highest volume of the given item on the total volume of the given item in the sector.

CR5 is the share of five institutions with the highest volume of the given item on the total volume of the given item in the sector.

HHI is defined as the sum of shares of individual institutions squared on the total volume of the given item expressed in %.

Only institutions where the given item is positive enter the calculation of all these three indicators.

At equal value of the share of all institutions with 23 institutions the value of HHI would be 435.

## B.1.3 Profitability Indicators of Banks and Branches of Foreign Banks and Their Distribution in the Banking Sector

	Average weighted by denominator (31.12.2005)	Average weighted by denominator (31.12.2004)	Average weighted by volume of assets	Minimum	Lower quartile	Median	Upper quartile	Maximum
ROA	1.05%	1.16%	1.02%	-22.34%	0.17% (3%)	0.66% (33%)	1.07% (10%)	2.14% (53%)
ROE (without branches)	16.76%	15.74%	18.32%	0.28%	6.40% (6%)	9.39% (9%)	12.31% (15%)	26.00% (69%)
Cost-to-income ratio	65.64%	61.23%	68.43%	-15751%	56.37% (33%)	77.68% (51%)	85.47% (8%)	186.48% (8%)
Relative importance of net interest income	69.58%	73.29%	66.86%	-662.96%	54.02% (27%)	64.26% (22%)	77.85% (25%)	140.02% (26%)
Net interest spread	2.11%	2.79%	2.06%	0.05%	1.14% (23%)	1.75% (15%)	2.65% (21%)	3.81% (42%)
Retail	6.44%	5.86%	6.37%	-1.45%	3.44% (18%)	5.62% (11%)	7.98% (36%)	15.69% (33%)
Corporates	2.42%	2.78%	2.31%	-5.34%	1.29% (19%)	2.77% (33%)	3.14% (41%)	18.42% (6%)
Non-bank financial companies	1.03%	2.04%	0.85%	-1.11%	0.29% (26%)	1.40% (35%)	2.07% (25%)	4.76% (9%)
Banks incl. the NBS and treasury bills	-0.36%	0.68%	-0.34%	-1.09%	-0.51% (52%)	-0.07% (16%)	0.18% (13%)	2.78% (18%)
Net interest margin	2.15%	2.87%	2.08%	0.06%	1.13% (23%)	1.79% (15%)	2.73% (38%)	3.44% (25%)

Numbers in brackets below the values of quartiles represent the share of banks (measured by net assets volume), for which the value of the given indicator is between the value of the given quartile and the preceding quartile.

## B.1.4 Risks and Capital Adequacy Indicators of Banks and Branches of Foreign Banks and Their Distribution in the Banking Sector

	Average weighted by denominator (31.12.2005)	Average weighted by denominator (31.12.2004)	Average weighted by volume of assets	Minimum	Lower quartile	Median	Upper quartile	Maximum	Number exceeded
<b>CREDIT RISK</b>									
Share of non-performing loans of the total volume of loans to clients	3.74%	7.15%	4.46%	0.00%	0.38% (12%)	2.41% (28%)	4.17% (36%)	16.31% (24%)	
Retail (share of retail loans)	2.50%	5.45%	2.73%	0.00%	0.82% (12%)	2.38% (41%)	4.27% (35%)	11.23% (12%)	
Corporates (share of loans to corporates)	5.93%	11.93%	6.81%	0.00%	0.06% (10%)	3.65% (31%)	6.21% (20%)	24.88% (38%)	
Financial companies (share of loans to financial companies)	0.13%	0.20%	0.09%	0.00%	0.00% (63%)	0.00% (0%)	0.00% (16%)	2.48% (16%)	
Share of provisions of the volume of non-performing loans to clients	84.03%	71.94%	71.87%	56.47%	66.99% (25%)	81.28% (21%)	86.80% (8%)	100.00% (37%)	
Large property exposure (weighted) / shareholders' equity (without branches)	160.34%	128.71%	164.17%	0.00%	14.02% (28%)	202.64% (24%)	319.92% (32%)	457.75% (16%)	0
Large property exposure within groups (number exceeded)									8
Share of claimable value of guarantees of total volume of classified loans to clients	14.79%	18.56%	10.81%	0.00%	7.26% (35%)	16.62% (6%)	40.44% (11%)	95.63% (8%)	
<b>FOREIGN EXCHANGE RISK</b>									
Open foreign exchange balance sheet position / shareholders' equity (without branches)	-19.51% -32.86%	-25.49% -2.51%	-24.07% -27.21%	-280.20% -680.00%	-44.51% (36%) -113.02% (19%)	-11.32% (44%) 0.00% (10%)	0.00% (8%) 35.53% (11%)	227.42% (12%) 230.98% (60%)	
Open foreign exchange off-balance sheet position / shareholders' equity (without branches)	-52.38%	-28.00%	-51.29%	-693.21%	-100.04% (19%)	-0.09% (31%)	29.66% (6%)	184.67% (43%)	
Total open foreign exchange position / shareholders' equity (without branches)	-68.98%	-40.95%							
Total open foreign exchange position / shareholders' equity (including branches)	-1.46%		-1.38%	-7.05%	-2.08% (18%)	-0.94% (11%)	-0.42% (32%)	-0.07% (39%)	
VaR / shareholders' equity (without branches)									
<b>INTEREST RATE RISK</b>									
Total open interest rate position up to 1 month / shareholders' equity (without branches)	-88.69%		-75.48%	-800.3%	-232% (33%)	13.63% (13%)	93.99% (25%)	254.47% (29%)	
Total open interest rate position up to 1 year / shareholders' equity (without branches)	-19.58%		-22.94%	-262.1%	-139% (28%)	8.36% (27%)	96.41% (29%)	379.63% (15%)	
Total open interest rate position up to 5 years / shareholders' equity (without branches)	34.43%		21.27%	-947.1%	-14.1% (32%)	23.33% (30%)	112.52% (25%)	438.69% (14%)	
<b>LIQUIDITY RISK</b>									
Share of immediately liquid assets on highly volatile funds	9.26%	23.80%	511.21%	0.52%	4.10% (10%)	9.12% (56%)	26.26% (9%)	75942.41% (25%)	
Share of liquid assets (including collateral from reverse REPO trades) on volatile funds	65.98%	364.68%	103.23%	18.09%	40.25% (28%)	54.03% (26%)	81.07% (23%)	3256.80% (22%)	
Indicator of fixed and illiquid assets (without branches)	46.31%	43.29%	49.71%	2.02%	15.40% (13%)	38.16% (21%)	55.39% (12%)	86.52% (54%)	
Share of loans on deposits and issued securities	61.42%	53.46%	87.76%	29.63%	50.35% (44%)	73.58% (33%)	103.71% (14%)	3506.68% (9%)	
Share of loans on deposits and issued securities	-32.66%	-31.23%	-31.83%	-63.02%	-42.76% (39%)	-13.53% (39%)	4.45% (5%)	51.40% (17%)	
Total liquidity position current up to 7 days /assets	-2.04%	-1.34%	-0.92%	-29.66%	-10.70% (43%)	0.00% (9%)	9.27% (27%)	51.40% (22%)	
Total liquidity position estimated up to 7 days /assets	-36.12%	-36.97%	-36.20%	-68.68%	-49.70% (40%)	-22.64% (27%)	2.52% (23%)	52.61% (10%)	
Total liquidity position current up to 3 months /assets	-4.23%	-7.22%	-3.42%	-43.98%	-15.58% (29%)	-2.09% (34%)	13.15% (16%)	52.61% (22%)	
Total liquidity position estimated up to 3 months /assets	3.74%	7.15%	4.46%	0.00%	0.38% (12%)	2.41% (28%)	4.17% (36%)	16.31% (24%)	

CAPITAL ADEQUACY									
Capital adequacy (without branches)	14.79%	18.69%	14.66%	9.47%	12.36% (50%)	19.57% (31%)	23.04% (14%)	31.65% (6%)	0
Share of Tier I capital on shareholders' equity (without branches)	90.16%	93.89%	90.26%	56.96%	84.79% (11%)	92.39% (49%)	97.75% (29%)	99.73% (11%)	
Share of shareholders' equity on the balance sheet total (without branches)	8.18%	8.18%	7.12%	0.00%	4.26% (2%)	6.48% (73%)	11.02% (16%)	19.94% (10%)	
Share of potential loss on shareholders' equity when 8% CA is achieved (without branches)	45.92%	54.39%	41.85%	15.51%	35.25% (50%)	59.09% (31%)	65.22% (14%)	74.73% (6%)	

Numbers in brackets below the values of quartiles represent the share of banks (measured by net assets volume), for which the value of the given indicator is between the value of the given quartile and the preceding quartile.

## B.2 Insurance Companies

### B.2.1 Net Profit And Profitability Indicators Of Insurance Companies (profit data in SKK thousands)

	Value as at 31.12.2005	Value as at 31.12.2004	Year-on-year change	Share of total written premiums	CR3	HHI 31.12.2005	HHI 31.12.2004
Net profit total	2 732 884	2 201 741	24.12%	5.29%	90%	2985	4854
Gross profit from non-life insurance	3 542 814	1 319 225	168.55%	6.85%	98%	7220	9941
Gross profit from life insurance	1 587 730	1 347 839	17.80%	3.07%	86%	3018	3892
Gross operating expenses to written premiums	22.14%	27.11%					
ROA	2.22%	2.09%					
ROE	12.33%	12.28%					

CR3 is the share of three institutions with the highest volume of the given item on the total volume of the given item in the sector.

HHI is defined as the sum of shares of individual institutions squared on the total volume of the given item expressed in %.

Only institutions where the given item is positive enter the calculation of all these three indicators..

At equal value of the share of all institutions with 25 institutions the value of HHI would be 400.

### B.2.2 Written Premiums (volume data in SKK thousands)

	Value as at 31.12.2005	Value as at 31.12.2004	Year-on-year change	Share of total written premiums	CR3	HHI 31.12.2005	HHI 31.12.2004
TOTAL	51 698 642	48 087 313	7.51%	100.00%	64%	1920	2180
Life insurance	21 924 092	19 311 862	13.53%	42.41%	53%	1390	1485
Insurance for the case of death or endowment assurance (A1)	13 360 518	11 903 802	12.24%	25.84%	58%	1383	1510
Insurance connected with an investment fund (A4)	3 800 689	2 909 043	30.65%	7.35%	79%	2736	3311
Accident or illness insurance (A6)	2 475 587	2 183 846	13.36%	4.79%	69%	1761	1748
Other	2 287 299	2 315 172	-1.20%	4.42%	83%	3652	3850
Non-life insurance	29 774 549	28 775 451	3.47%	57.59%	77%	2677	3067
Insurance against civil liability in respect of the use of motor vehicles (B10a)	11 576 274	11 698 049	-1.04%	22.39%	81%	3260	4036
Insurance against damages on vehicles (B3)	8 716 195	7 426 741	17.36%	16.86%	81%	2681	2959
Insurance against damages to property (B8+B9)	6 053 800	6 373 694	-5.02%	11.71%	67%	2648	2750
Other	3 428 280	3 276 968	4.62%	6.63%	58%	1734	1644
Share of written premiums to GDP	3.59%	3.63%					

CR3 is the share of three institutions with the highest volume of the given item on the total volume of the given item in the sector.

HHI is defined as the sum of shares of individual institutions squared on the total volume of the given item expressed in %.

Only institutions where the given item is positive enter the calculation of all these three indicators.

At equal value of the share of all institutions with 25 institutions the value of HHI would be 400.



## B.2.3 Written Premiums Ceded To Reinsurers (volume data in SKK thousands)

	Value as at 31.12.2005	Value as at 31.12.2004	Year-on-year change	Share of total written premiums	CR3	HHI 31.12.2005	HHI 31.12.2004
TOTAL	10 281 625	10 571 757	-2.74%	19.89%	65%	1981	2020
Share of written premiums	19.89%	21.98%					
Life insurance	1 343 212	1 088 235	23.43%	2.60%	84%	2596	2513
Share of written premiums	6.13%	5.64%					
Non-life insurance	8 938 413	9 483 522	-5.75%	17.29%	69%	2130	2136
Share of written premiums	30.02%	32.96%					

CR3 is the share of three institutions with the highest volume of the given item on the total volume of the given item in the sector.

HHI is defined as the sum of shares of individual institutions squared on the total volume of the given item expressed in %.

Only institutions where the given item is positive enter the calculation of all these three indicators.

At equal value of the share of all institutions with 25 institutions the value of HHI would be 400.

## B.2.4 Expenses On Indemnities (volume data in SKK thousands)

	Value as at 31.12.2005	Value as at 31.12.2004	Year-on-year change	Share of total written premiums	CR3	HHI 31.12.2005	HHI 31.12.2004
TOTAL	17 018 344	16 790 134	1.36%	32.92%	71%	2599	3009
Life insurance	7 267 373	6 572 882	10.57%	14.06%	72%	3252	3742
Insurance for the case of death or endowment assurance (A1)	4 547 079	4 136 090	9.94%	8.80%	76%	3241	3562
Insurance connected with an investment fund (A4)	749 201	420 930	77.99%	1.45%	92%	5953	6444
Accident or illness insurance (A6)	433 504	421 070	2.95%	0.84%	65%	1763	1946
Other	1 537 587	1 594 792	-3.59%	2.97%	94%	7475	7286
Non-life insurance	9 750 972	10 217 253	-4.56%	18.86%	76%	2499	2871
Insurance against civil liability in respect of the use of motor vehicles (B10a)	3 140 434	2 942 186	6.74%	6.07%	84%	3089	3947
Insurance against damages on vehicles (B3)	4 201 731	4 514 346	-6.92%	8.13%	76%	2335	2721
Insurance against damages to property (B8+B9)	1 509 676	1 854 389	-18.59%	2.92%	78%	2829	2775
Other	899 130	906 332	-0.79%	1.74%	63%	1951	2049

CR3 is the share of three institutions with the highest volume of the given item on the total volume of the given item in the sector.

HHI is defined as the sum of shares of individual institutions squared on the total volume of the given item expressed in %.

Only institutions where the given item is positive enter the calculation of all these three indicators.

At equal value of the share of all institutions with 25 institutions the value of HHI would be 400.

## B.2.5 Damage Rate in Non-Life Insurance

	Value as at 31.12.2005	Value as at 31.12.2004
TOTAL	38.35%	51.96%
Insurance against civil liability in respect of the use of motor vehicles (B10a)	39.31%	63.34%
Insurance against damages on vehicles (B3)	42.91%	63.17%
Insurance against damages to property (B8+B9)	29.53%	28.05%
Other	33.28%	33.39%

## B.2.6 Structure Of Technical Reserves Of Insurance Companies (volume data in SKK thousands)

	Value as at 31.12.2005	Value as at 31.12.2004	Year-on-year change	Share of total reserves	CR3	HHI 31.12.2005	HHI 31.12.2004
TOTAL	84 230 650	73 087 142	15.25%	100.00%	69%	2444	2872
Life insurance	57 964 949	50 845 184	14.00%	68.82%	71%	2303	2677
Reserve to cover commitments from financial placement on behalf of the insured	7 273 916	5 068 254	43.52%	8.64%	83%	3780	4348
Non-life insurance	18 991 786	17 173 704	10.59%	22.55%	86%	4562	5231
Share of technical reserves to GDP	5.85%	5.51%					

CR3 is the share of three institutions with the highest volume of the given item on the total volume of the given item in the sector.  
HHI is defined as the sum of shares of individual institutions squared on the total volume of the given item expressed in %.  
Only institutions where the given item is positive enter the calculation of all these three indicators.  
At equal value of the share of all institutions with 25 institutions the value of HHI would be 400.

## B.2.7 Placement Of Technical Reserves Of Insurers Apart From A Reserve To Cover Commitments From Financial Placement On Behalf Of The Insured (volume data in SKK thousands)

	Value as at 31.12.2005	Value as at 31.12.2004	Year-on-year change	Share of total reserves	CR3	HHI 31.12.2005	HHI 31.12.2004
Government bonds (*)	43 445 846	35 049 222	23.96%	56.45%	77%	3413	2998
Term deposits in banks	11 448 181	1 616 189	608.34%	14.88%	65%	1881	3262
Bonds admitted on the listed securities market	12 140 888	10 943 861	10.94%	15.78%	80%	3770	5091
Mortgage bonds	8 389 370	7 717 641	8.70%	10.90%	83%	3650	4109
Foreign government bonds	8 270 577	14 960 279	-44.72%	10.75%	76%	3184	4127
Real estate on the territory of the SR	43 445 846	35 049 222	23.96%	56.45%	77%	3413	2998
Other	11 448 181	1 616 189	608.34%	14.88%	65%	1881	3262

(\*) "Government bonds" is understood to include bonds issued by the Slovak Government, other EU countries, the NBS or other central banks, bonds guaranteed by the Slovak Government, and bonds issued by the EIB, the EBRD and the IBRD.

CR3 is the share of three institutions with the highest volume of the given item on the total volume of the given item in the sector.

HHI is defined as the sum of shares of individual institutions squared on the total volume of the given item expressed in %.

Only institutions where the given item is positive enter the calculation of all these three indicators.

At equal value of the share of all institutions with 25 institutions the value of HHI would be 400.

## B.2.8 Solvency (\*)

	2005	2004
Real solvency rate (SMS)	19 731 035	16 863 622
Required solvency rate (PMS)**	8 187 029	7 804 876
SMS/PMS	241%	216,07%

(\*) Solvency data is available only once annually. Data for the end of 2005 will be reported to the NBS on 31 March 2006 and will therefore be stated only in the Structural Report for the first quarter of 2006.

(\*\*) PMS for the entire insurance market is the sum of PMS or the guarantee fund (if the guarantee funds is greater than PMS) of individual insurance companies. Required rate of solvency (based on the volume of operations) and the guarantee fund (the volume of which is determined by law and a directive of the Ministry of Finance) is calculated for each individual insurance company. An insurance company is obliged to have at its disposal capital equal the higher of the two sums.

## B.3 Retirement Pension Saving

### 3.3.1 Pension Fund Management Companies as at 31.12.2005

	Market share	NAV of funds (SKK thous.)	Number of clients
Credit Suisse Life & Pension DSS	30%	2 696 583	326 196
Allianz - Slovenská DSS	27%	2 398 887	288 175
VÚB Generali DSS	17%	1 538 576	180 382
ING DSS	9%	781 971	83 662
ČSOB DSS	6%	529 986	69 716
AEGON DSS	4%	385 975	57 204
Sympatia - Pohoda DSS	4%	330 107	40 611
Prvá dôchodková sporiteľňa	4%	375 980	65 206

NAV – Net Asset Value

### B.3.2 Financial Result of DSS as of 31.12.2005 (data in SKK thousands)

	Revenues	Expenses	Financial Result	ROA	ROE
Credit Suisse Life & Pension DSS	127 832	321 177	-193 345	-0,14	-0,14
Allianz - Slovenská DSS	37 944	247 793	-209 849	-0,25	-0,26
VÚB Generali DSS	32 891	561 747	-528 856	-1,19	-1,47
ING DSS	68 596	290 858	-222 262	-0,41	-0,60
ČSOB DSS	8 971	134 766	-125 795	-0,19	-0,20
AEGON DSS	11 509	329 458	-317 949	-1,09	-1,29
Sympatia - Pohoda DSS	22 891	150 132	-127 241	-0,41	-0,44
Prvá dôchodková sporiteľňa	14 036	236 094	-222 058	-0,72	-0,83

### B.3.3 Pension Funds (data in SKK thousands)

	NAV as at 31.12.2005	NAV as at 31.12.2004
TOTAL	9 038 065	N.A.
Conservative	402 200	N.A.
Balanced	2 809 294	N.A.
Growth	5 826 571	N.A.

NAV – Net Asset Value

### B.3.4 Structure of Investments of Pension Funds (data in SKK thousands)

	Value as at 31.12.2005	EUR share	Share of other foreign currencies	Value as at 31.12.2004
TOTAL	9 038 065	2,72%	1,54%	N.A.
Accounts in banks	7 436 966	0%	0,28%	N.A.
Bonds	1 020 311	0%	0%	N.A.
Equities	568 822	24,18%	15,24%	N.A.
Other	58 407	82,47%	12,69%	N.A.
Commitments	-46 441	0,01%	0,9%	N.A.

## B.4. Collective Investments

### B.4.1 Asset Management Companies as of 31.12.2005

Asset Management Company	NAV of mutual funds (SKK thous.)	Market Share
Total	104 467 364	100,00%
Tatra Asset Management	32 533 401	31,14%
Asset Management SLS	32 519 137	31,13%
VÚB Asset Management	28 770 273	27,54%
Prvá Penzijná	4 363 665	4,18%
Istro Asset Management	2 824 051	2,70%
AIG Funds Central Europe	2 145 335	2,05%
ČSOB Asset Management	535 604	0,51%
OTP Asset Management	476 853	0,46%
Investičná a dôchodková	259 467	0,25%
KD Investments	39 578	0,04%

NAV – Net Asset Value

### B.4.2 Expenses, Revenues and Profitability Indicators of Local Asset Management Companies as at 31.12.2005 (data in SKK thousands)

Asset Management Company	Revenues	Expenses	Financial Result	ROA	ROE
Total	1 702 876	1 382 233	320 643	23.62%	33.41%
AIG Funds Central Europe	51 192	39 870	11 322	16.03%	18.15%
Asset Management SLS	481 159	376 286	104 873	43.45%	58.15%
ČSOB Asset Management	101 321	65 708	35 613	30.97%	36.60%
Investičná a dôchodková	13 798	13 334	464	0.66%	0.68%
Istro Asset Management	47 846	36 785	11 061	14.29%	16.01%
KD Investments	1 328	18 746	-17 418	-34.91%	-36.76%
OTP Asset Management	3 805	11 725	-7 920	-17.64%	-18.39%
Prvá Penzijná	82 699	70 250	12 449	4.62%	16.06%
Tatra Asset Management	429 622	307 549	122 073	45.60%	57.61%
VÚB Asset Management	490 106	441 980	48 126	31.82%	47.15%

### B.4.3 Structure of Mutual Funds as at 31.12.2005 (data in SKK thousands)

Type of fund	Market Share	Net Asset Value	Number of funds	CR3	CR5	HHI	HHI at even distribution
Mutual Funds Total	100.00%	125 549 461	394	77%	86%	2 045	25
Local	83.21%	104 467 364	100	42%	58%	942	100
Money market funds	38.07%	47 797 500	9	90%	97%	3 292	1111
Bond funds	30.80%	38 671 065	16	64%	86%	1 721	625
Equity funds	2.84%	3 570 299	7	86%	95%	3 392	1429
Mixed funds	6.22%	7 806 057	12	58%	81%	1 517	833
Master funds	4.18%	5 248 367	7	66%	90%	1 841	1429
Closed-end mutual funds	1.09%	1 374 076	49	34%	45%	594	204
Foreign (*)	16.79%	21 082 097	294	70%	89%	2 302	34
Money market funds	3.93%	4 934 630	23	99%	100%	6 243	435
Bond funds	5.10%	6 398 569	74	75%	92%	2 096	135
Equity funds	4.42%	5 548 976	150	69%	94%	2 106	67
Mixed funds	0.45%	561 994	12	100%	100%	9 675	833
Master funds	0.34%	426 453	15	100%	100%	9 487	667
Other funds	2.56%	3 211 475	20	100%	100%	6 996	500

(\*) For foreign mutual funds Net Asset Value is stated of units sold in the Slovak Republic

CR3 (CR5) is the share of three (five) institutions with the highest volume of the given item on the total volume of the given item in the sector. HHI is defined as the sum of shares of individual institutions squared on the total volume of the given item expressed in %. Only institutions where the given item is positive enter the calculation of all these three indicators. The column „HHI at even distribution“ states the value of HHI that expresses concentration at even distribution of net asset value within the given group of funds.

#### B.4.4 Net Sales of Open-end Mutual Funds as at 31.12.2005 (data in SKK thousands)

	3 months	1 year	Cumulative	Number of funds	CR3	CR5	HHI	HHI at even distribution
Open-end mutual funds total	8 792 808	38 727 680	109 269 005	345	66%	88%	1 851	29
Local	5 631 264	32 138 381	92 604 135	51	95%	100%	3 302	196
Money market funds	-1 161 975	11 894 568	45 915 072	9	99%	100%	7 144	1111
Bond funds	2 515 198	16 797 971	36 583 166	16	88%	97%	5 019	625
Equity funds	556 222	1 245 572	3 390 288	7	98%	100%	5 146	1429
Mixed funds	915 404	2 200 270	1 548 886	12	80%	100%	3 154	833
Master funds	2 806 415	0	5 166 723	7	65%	90%	1 845	1429
Foreign	3 161 544	6 589 299	16 664 870	294	83%	92%	3 878	34
Money market funds	-584 125	1 154 453	4 521 012	23	100%	100%	4 339	435
Bond funds	553 472	2 784 495	4 297 492	74	92%	100%	5 422	135
Equity funds	1 764 549	2 387 468	4 471 653	150	85%	95%	2 948	67
Mixed funds	65 981	180 040	507 462	12	100%	100%	9 572	833
Master funds	38 593	118 262	373 825	15	100%	100%	10 000	667
Other funds	1 323 075	-35 419	2 493 426	20	100%	100%	5 057	500

CR3 (CR5) is the share of three (five) institutions with the highest volume of the given item on the total volume of the given item in the sector. HHI is defined as the sum of shares of individual institutions squared on the total volume of the given item expressed in %. Only institutions where the given item is positive enter the calculation of all these three indicators. The column „HHI at even distribution“ states the value of HHI that expresses concentration at even distribution of net asset value within the given group of funds.

#### B.4.5 Average Performance of Open-end Mutual Funds as at 31.12.2005 (data in % p.a.)

	3 months			1 year			3 years		
	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max
Local	-3,33%	0,16%	4,61%	0,35%	7,51%	38,43%	-5,99%	4,81%	19,17%
Money market funds	-0,57%	0,12%	0,63%	1,87%	2,34%	3,56%	2,22%	3,51%	3,98%
Bond funds	-3,33%	-0,98%	1,04%	0,35%	4,69%	15,19%	-5,99%	2,76%	9,63%
Equity funds	0,31%	1,95%	2,93%	8,45%	15,96%	20,01%	2,06%	7,74%	10,48%
Mixed funds	-1,99%	-0,09%	2,26%	1,09%	9,70%	38,43%	2,47%	6,67%	19,17%
Master funds	0,00%	1,46%	4,61%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Foreign	-4,66%	2,11%	15,52%	-11,24%	15,66%	82,41%	-0,81%	11,69%	55,47%
Money market funds	-2,52%	0,10%	0,94%	-8,97%	1,29%	3,34%	0,82%	1,27%	2,09%
Bond funds	-2,09%	-0,13%	2,50%	-8,40%	3,82%	16,47%	-0,81%	4,71%	15,16%
Equity funds	-4,66%	3,76%	15,52%	-11,24%	24,83%	82,41%	4,02%	16,62%	55,47%
Mixed funds	-2,27%	2,01%	5,75%	-6,72%	13,37%	29,60%	4,15%	6,05%	8,06%
Master funds	-0,54%	2,66%	4,92%	3,68%	14,96%	23,96%	3,59%	8,79%	15,21%
Other funds	-4,08%	-0,11%	3,35%	3,15%	8,67%	18,17%			

#### B.4.6 Structure of Assets of Local Mutual Funds as at 31.12.2005 (data in SKK thousands)

	Money Market Funds	Other Funds
Total	48 066 914	57 267 976
Deposits in banks	14 953 416	7 342 985
Securities other than equity shares and units of mutual funds	31 434 085	37 022 075
Equity shares and units of mutual funds	304 235	5 624 279
Equity shares and other equity interest	961 244	6 744 694
Financial derivatives		465 816
Other assets	413 933	68 127

## B.4.7. Structure of Services Provided Pursuant to Article 3 Paragraph 3 of ZKI

Asset Management Company	Portfolio Management				Safekeeping and management of units of mutual funds (in SKK thous.)	
	Number of Contracts		Volume of managed assets (in SKK thous.)		31.12.2005	31.12.2004
	31.12.2005	31.12.2004	31.12.2005	31.12.2004		
Total asset management companies	8	1	7 266 902	3 128 744	33 092 012	19 616 344
Tatra Asset Management	1	1	4 204 410	3 128 744	0	0
VÚB Asset Management	6	0	338 074	0	0	0
Investičná a dôchodková	0	0	0	0	0	0
ČSOB Asset Management	1	0	2 724 418	0	535 602	0
OTP Asset Management	0	0	0	0	41 319	0
Asset Management SLSP	0	0	0	0	32 515 091	19 616 344

## B.5. Stock Brokerage Firms

### 3.5.1 Basic Characteristics of Stock Brokerage Firms as at 31.12.2005 (data in SKK thousands)

	Volume of Trades	Market Share	Volume of Managed Assets	Market Share
Banks and branches of foreign banks	1 538 403 635	94%	1 679 055	9%
Share capital 35 mil.	88 376 435	5%	4 046 613	22%
Share capital 6 mil.	11 762 475	1%	12 328 360	68%

Stock brokerage firms in the table are divided by the size of their share capital.

### B.5.2 Trade Volume Market Concentration of Stock Brokerage Firms (\*)

	Number of stock brokers	CR3	CR5	HHI
Total	36	54%	70%	1406
Banks and branches of foreign banks	15	63%	82%	1805
Share capital 35M (**)	10	94%	99%	3987
Share capital 6M (**)	11	86%	100%	2951

(\*) Market concentration is calculated from data for the last quarter of 2005

(\*\*) Stock brokerage firms (OCP) that are not banks and have share capital of 35 million or 6 million. The difference between these two categories of OCP is that OCP with minimum share capital of 6 million do not have a license to perform investment service IS-3 (accepting an instruction from a client to buy or sell an investment instrument and carrying it out on an own account)

CR3 is the share of three institutions with the highest volume of the given item on the total volume of the given item in the sector.

CR5 is the share of five institutions with the highest volume of the given item on the total volume of the given item in the sector.

HHI is defined as the sum of shares of individual institutions squared on the total volume of the given item expressed in %.

Only institutions where the given item is positive enter the calculation of all these three indicators.

At equal value of the share of all institutions with 36 institutions the value of HHI would be 278, with 15 institutions it would be 667, with 10 institutions it would be 1000, and with 11 institutions it would be 909.

### B.5.3 Volume of Trades by Individual Investment Services as at 31.12.2005 (data in SKK thousands)

	IS - 1	IS - 2	IS - 3
Trades Total	35 747 160	308 949 602	1 293 845 783
Equity shares	416 336	17 318 089	463 169
Bonds	161 656	81 231 947	14 254 725
Units of mutual funds	8 625 762	9 054 727	0
Substitutable securities	0	499 239	111 670
Foreign securities	9 612 924	16 980 479	1 556 488
Financial market instruments	429	2 052 105	489 966 136
Futures	110 363	0	0
Forwards	208 582	61 881 855	507 936 166
Swaps	0	23 892 559	117 961 280
Options	16 611 108	45 191 607	160 651 422
Combinations	0	50 846 995	944 727

IS-1 – accepting a client instruction to buy, sell, or otherwise handle investment instruments and subsequently passing on the client instruction to be executed.

IS-2 – accepting a client instruction to buy or sell an investment instrument and its subsequent execution in an account other than an account of the service provider.

IS-3 – accepting a client instruction to buy or sell an investment instrument and its execution in an own account.

### B.5.4 Capital Adequacy

	Min	Median	Max
Total	9%	35%	30389%
Banks	9%	18%	32%
Share capital 35 mil.	33%	96%	5800%
Share capital 6 mil.	14%	113%	30389%

## B.6. Guarantee Fund of Investments

### 3.6.1 Basic Characteristics of the Guarantee Fund of Investments (hereinafter GFI, data in SKK thousands)

Date	Revenues of the fund *	Expenses of the fund	Cumulative value of the fund	Volume of client assets	Maximum amount of compensation
31.12.2005	11 456	2 148	26 694	9 257 913	1 598 459

\* comprising received contributions paid into the GFI and interest earned on a current and a term deposit account of the GFI

The Guarantee Fund of Investments accumulates financial contributions from stock brokerage firms, foreign stock brokerage firms, and asset management companies that provide selected investment services with the purpose of providing compensation for inaccessible client assets accepted by a stock brokerage firm, a foreign stock brokerage firm, or an asset management company to provide an investment service and it handles the received funds in accordance with the Act on Securities.

The Guarantee Fund of Investments was established pursuant to the Act on Securities. Activities of the Guarantee Fund of Investments are governed by Articles 80 to 98 of the Act on Securities.

## B.7. Stock Exchange

### B.7.1 Market Capitalization as at 31.12.2005 (data in SKK thousands)

	Listed	Free Market	Total
Securities Total	479 218 099	94 413 249	573 631 348
Equity	78 851 135	72 851 857	151 702 992
Bonds	400 366 964	21 561 392	421 928 356

### B.7.2 Volume of Trades in 2005 (data in SKK thousands)

	Listed	Non-listed	Total
Securities Total	1 000 672 823	1 203 605	1 001 876 428
Equity shares and units of mutual funds	1 417 998	712 761	2 130 759
Electronic order book trades	178 633	251 576	430 208
Negotiated trades	1 239 366	461 185	1 700 551
Bonds	999 254 825	490 843	999 745 669
Electronic order book trades	7 789 566	438	7 790 003
Negotiated trades	991 465 260	490 406	991 955 665

### B.7.3 Development of Market Indices

Date	SDXGroup – public sector	SDXGroup – private sector	SAX
23.12.2004	110,16	109,48	326,63
31.3.2005	115,22	111,3	448,69
30.6.2005	117,81	113,21	436,11
30.9.2005	118,95	114,73	459,74
23.12.2005	117,06	115,6	413,31

## B.8 Central Securities Depository

### 3.8.1 Number of Registered Issues and Issuers by Individual Types of Securities

Type of Securities	Number of Issues	Number of Issuers	Volume*
Total	3251	2466	986 492 770
Equity securities	2221	1672	541 929 816
Bonds	361	218	431 237 732
Units of mutual funds	70	1	1 105 740
Stakeholder certificates	598	508	11 919 392
Other	1	1	300 090

\* Volume of securities in SKK thousands, calculated using the NBS exchange rate



# Data Collection Methodology

## A. Banks and branches of foreign banks

### A.1 Structure of assets and liabilities of banks and branches of foreign banks

All assets are reported in gross terms, i.e. not net of provisions.

Category "Interbank market operations" covers, in addition to loans and deposits to central banks and other banks, NBS bills purchased, Treasury bills and bills of exchange other than those held by the bank in the portfolio of "securities held to maturity".

Data sources:

Title	source STATUS
Loans to clients	V (NBS) 33 - 12
Interbank market operations	Bil (NBS) 1 - 12
Securities	V (NBS) 8 - 12, (NBS) Bil 1 - 12
Deposits and loans received	V (NBS) 5 - 12
Funds received from banks	Bil (NBS) 1 - 12
Securities issued	Bil (NBS) 1 - 12
Risk-weighted assets	BD (HKP) 1 - 12 (section 7)
Equity	BD (HKR) 1 - 04

#### Notes on the calculation of concentration indices:

*CR3 index* – the share of three banks with the largest holdings in an item in the total volume of that item in the banking sector; only institutions with a positive item value enter the calculation

*CR5 index* – the share of five banks with the largest holdings in an item in the total volume of that item in the banking sector; only institutions with a positive item value enter the calculation

*Herfindahl index (HHI)* – defined as the sum of squares of individual banks' shares in the total volume of an item as a percentage; only institutions with a positive item value enter the calculation

One way to interpret the *HHI* value is that the concentration in an item is identical, as if the sector comprised 10 000/*HHI* institutions with identical shares in the item. According to the US Department of Justice definition, a market is deemed highly concentrated if *HHI* exceeds 1 800, and unconcentrated if *HHI* is below 1 000.

### A.2 Income and expenses of banks and branches of foreign banks

#### Notes on certain items:

*Net trading income* includes net income from operations in securities (other than interest income), net income from foreign currency operations and net income from derivative operations.

*Other net operation income* includes net income from claims assigned, from tangible and intangible asset transfers, shares in profit resulting from equities and equivalent deposits, from transfers of equities and deposits, from other operations, and other net operating income.

The annualised value is a year-end estimate assuming the income statement item concerned develops steadily in time.

The data comes from the Bil (NBS) 2 – 12 statement.

### **A.3 Profitability indicators for banks and branches of foreign banks and their breakdown in the banking sector**

#### Calculation of individual indicators:

- *ROA* = the ratio of cumulative net profit to average net asset value (source: Bil (NBS) 2 – 12, Bil (NBS) 1 – 12)
- *ROE* = the ratio of cumulative net profit to average equity value; branches excluded from calculation (source: Bil (NBS) 2 – 12, BD (HKR) 1 – 04)
- *Operating efficiency* = the ratio of cumulative value of operating expenses to cumulative value of the sum of net interest and non-interest income (source: Bil (NBS) 2 – 12)
- *Relative significance of interest income* = the ratio of cumulative value of operating expenses to 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 cumulative value of (interest and non-interest) income, other than interest income on non-performing assets, in outstanding loans to the counterparty concerned and the share of cumulative value of expenses in outstanding deposits with the counterparty concerned (source: V (NBS) 13 – 04)
- *Net interest margin* = the ratio of net interest income less interest income on non-performing assets to average net assets (source: Bil (NBS) 2 – 12, Bil (NBS) 1 – 12)

The minimum, lower quartile, median, upper quartile and maximum indicate the distribution of values of the indicator concerned in the banking sector. Lower quartile is such a value of the relevant indicator, whereby 25% of all banks (as a number) have an indicator value lower or equal to the lower quartile. Similarly, median is an indicator value, whereby 50% of all banks have an indicator value lower or equal to the median. And finally, upper quartile is an indicator value, whereby 75% of all banks have an indicator value lower or equal to the upper quartile. Since this distribution takes no account of the size of individual banks, their size is reflected in the percentages stated in brackets. For example, the number below the first quartile value indicates the share of banks (in terms of assets), whose indicator value lies within a closed range between the minimum and the lower quartile. Similarly, the number shown below the median indicates the share of banks whose indicator value lies within a (closed on the right side) interval between the lower quartile and the median.

### **A.4 Risk and capital adequacy indicators for banks and branches of foreign banks and their breakdown in the banking sector**

#### Calculation of individual indicators:

- *Share of non-performing loans in total loans to clients* = the share of gross value of non-standard, dubious and non-performing loans to clients in total gross outstanding loans (source: V (NBS) 33 – 12)
- *Ratio of provisions to classified loans* = the ratio of provisions to gross value of sub-standard, doubtful and loss loans (source: BD (ZPZ) 1 – 04)
- *Large (weighted) asset exposure / equity* = the ratio of large weighted assets exposure to equity; pursuant to the Banking Act the ratio must not exceed 800% (Act No 483/2001 Coll., Article 39(2); does not apply to branches of foreign banks (source: BD (HMA) 8 – 12, section C)

- *Large asset exposure within groups* – monitoring the number of month-end overruns of limits set by the Banking Act (Article 39(1)), does not apply to branches of foreign banks (source: BD (HMA) 8 – 12, sections A and B)
- *Ratio of claimable collateral value to total non-performing loans* – the indicator excludes banks which, in accordance with Article 8 of NBS Decree No. 13/2004, have not classified loans due to provisioning on portfolio basis according to international accounting standards (source: BD (ZPZ) 1 – 04)
- *Open foreign currency balance sheet position / equity* = the ratio of the difference between foreign currency assets and liabilities to equity (source: Bil (NBS) 1 – 12)
- *Open foreign currency off-balance sheet position / equity* = the ratio of the difference between foreign currency off-balance sheet assets and liabilities (excluding redistribution and memorandum accounts and assets/liabilities related to items in custody) to equity (source: Bil (NBS) 1 – 12)
- *Total open foreign currency position / equity* = the ratio of the sum of foreign currency balance sheet and off-balance sheet position to equity; if positive, the foreign currency position implies a risk of losses due to appreciation of national currency (source: Bil (NBS) 1 – 12)
- *VaR / equity* = the ratio of an exchange rate loss which, based on a historical simulation (over a period of 1 year), should not be exceeded on any given day with 99% probability, to equity (source: M (NBS) 4 – 12)
- *Total open interest rate position / equity* = the ratio of the difference between assets and liabilities with a fixed interest rate or residual maturity shorter than the relevant period (1 month, 1 year, or 5 years) to equity (source: BD (HUC) 53 – 04, BD (HKR) 1 – 04)
- *Ratio of instantly liquid assets to highly volatile funds*: instantly liquid assets comprise cash and purchased NBS bills and Treasury bills, other than bills held to maturity, and balances in current accounts with central banks and other banks. Highly volatile funds comprise current accounts of central banks and other banks, current accounts and other sight deposits of clients, and all general government deposits (source: Bil (NBS) 1 – 12)
- *Ratio of liquid assets (including collateral in reverse repo contracts) to volatile funds*: on top of instantly liquid assets, liquid assets include securities received in reverse repo contracts, bills held to maturity and all government bonds purchased; however, their value is net of securities pledged and collateral provided in repo contracts. Volatile funds also include time deposits by clients (source: Bil (NBS) 1 – 12, V (NBS) 8 – 12)
- *Indicator of fixed and illiquid assets* = the ratio of fixed and illiquid assets to selected liability items; according to NBS Decree No. 3/2004 the indicator must not exceed 1 (does not apply to branches of foreign banks) (source: BD (LIK) 3 – 12)
- *Ratio of loans to deposits and securities issued* (source: Bil (NBS) 1 – 12)
- *Total liquidity position / assets* = the ratio of the difference between assets and liabilities maturing within a relevant period (within 7 days, or 3 months) to total assets. For balance sheet items, securities subject to lien are excluded from the calculation. For off-balance sheet items, the calculation only includes loan commitments given/received and the value of underlying instruments in spot and forward operations (but only if the underlying instrument is a financial asset with actual delivery) (source: BD (LIK) 3 – 12)
- *Capital adequacy* = the ratio of equity to risk-weighted assets (must not fall below 8%) (source: BD (HKP) 1 – 12, BD (HKR) 1 – 04)
- *Ratio of Tier I capital to equity* = the ratio of core capital, net of the appropriate portion of items reducing the value of core and supplementary capital, to equity (source: BD (HKR) 1 – 04)
- *Ratio of equity to total assets* (source: BD (HKR) 1 – 04)
- *Ratio of potential loss to equity at 8% capital adequacy* = the ratio of a loss resulting in a decrease of capital adequacy to 8% to equity (source: BD (HKP) 1 – 12, BD (HKR) 1 – 04)

## **B. Insurance companies**

### Notes on the calculation of concentration indices:

*CR3 index* – the share of three banks with the largest holdings in an item in the total volume of that item in the banking sector; only institutions with a positive item value enter the calculation

*CR5 index* – the share of five banks with the largest holdings in an item in the total volume of that item in the banking sector; only institutions with a positive item value enter the calculation

*Herfindahl index (HHI)* – defined as the sum of squares of individual banks' shares in the total volume of an item as a percentage; only institutions with a positive item value enter the calculation

One way to interpret the *HHI* value is that the concentration in an item is identical, as if the sector comprised  $10\,000/HHI$  institutions with identical shares in the item. According to the US Department of Justice definition, a market is deemed highly concentrated if *HHI* exceeds 1 800, and unconcentrated if *HHI* is below 1 000.

### **B.1 Net profit and profitability indicators for insurance companies**

*Gross operating expenses in relation to written premiums* – acquisition cost of insurance policies + administrative overhead + change in the balance of transferred cost of insurance policies

#### Calculation of individual indicators:

*ROA* = ratio of cumulative value of net profit to current net assets value

*ROE* = ratio of cumulative value of net profit to current equity value; branches excluded from calculation

### **B.5 Indemnification rate in non-life insurance**

*The indemnification rate* is defined as a ratio of insurance claims, reported and unreported, to due premiums:

*Indemnification rate* = (sum of the cost of insurance claims and a change in insurance reserves) / (written premiums – change in reserves for accrued premiums)

### **B.8 Solvency**

*Required solvency rate (RSR)* for the whole market is the sum of RSRs or guarantee funds (where larger than RSR) of individual insurance companies. The required solvency rate (based on size of operations) and the guarantee fund (its level is set by law and a Slovak Ministry of Finance decree) are determined for each individual insurance company. Each insurance company must hold minimum capital equal to the larger of the two parameters.

## **Complete list of methods of allocation of technical reserve funds as defined in Article 1(1) of Ministry of Finance of the Slovak Republic Decree No. 197/2002**

For better readability of tables, the titles of some methods of allocation of technical reserve funds were abbreviated. Furthermore, categories are listed only if accounting for over 1% of total reserves. Shown below is the full list of methods of allocation of technical reserve funds as defined in Article 1(1) of Ministry of Finance of the Slovak Republic Decree No. 197/2002:

- a) Government bonds issued by the Slovak Republic or the National Bank of Slovakia
- b) Bonds issued by banks
- c) Bills
- d) Bonds listed on a stock market

- e) Equity listed on a stock market
- f) Shares in closed-end mutual funds
- g) Shares in open-end mutual funds
- h) Time deposits in banks
- i) Mortgage bonds
- j) Certificate of deposit
- k) Real estate in the Slovak Republic
- l) Loans to policyholders
- m) Loans or credits secured by bank guarantee
- n) Bills of exchange secured by bank guarantee
- o) Government bonds issued by member states or their central banks and bonds issued by EIB, EBRD or IBRD

## **F. Securities dealers**

### Acronyms:

IS-1 – instruction received from client to acquire, sell or otherwise dispose of investment instruments and forwarded for execution

IS-2 – instruction received from client to acquire or sell investment instruments and executed for the account of a party other than the service provider

IS-3 – instruction received from client to acquire or sell investment instruments and executed for own account

## **H. Stock exchange**

The data comes from the monthly statistics of the Stock Exchange.

# 9 Terminology and abbreviations

## Bank names and grouping

### Large banks

*VÚB* – Všeobecná úverová banka, a.s.

*SLSP* – Slovenská sporiteľňa, a.s.

*Tatrabanka* – Tatra banka, a.s.

### Medium-sized banks

*OTP* – OTP Banka Slovensko, a.s.

*Dexia* – Dexia Banka Slovensko, a.s.

*Unibanka* – UniBanka, a.s.

*Ludová banka* – Ľudová banka, a.s.

*Istrobanka* – Istrobanka, a.s.

## Banks and branches linked to own financial groups

*HVB* – HVB Bank Slovakia, a.s.

*Citibank* – Citibank (Slovakia), a.s.

*Komerční banka* – Komerční banka Bratislava, a.s.

*Calyon* – Calyon Bank Slovakia, a.s.

*ČSOB* – Československá obchodní banka, a.s.,  
pobočka zahr. banky v SR

*ING* – ING Bank N.V., pobočka zahr. banky

*Commerzbank* – Commerzbank Aktiengesellschaft,  
pobočka zahr. banky, Bratislava

*HSCB* – HSBC Bank plc, pobočka zahr. banky

*MAIS* – Banco Mais, S.A., pobočka zahr. banky

## Building societies

*PSS* – Prvá stavebná sporiteľňa, a.s.

*Wustenrot* – Wüstenrot stavebná sporiteľňa, a.s.

*ČSOB stavebná sporiteľňa* - ČSOB stavebná  
sporiteľňa, a.s.

## Other

*Poštová banka* – Poštová banka, a.s.

*Privatbanka* – Privatbanka, a.s.

*SLZB* – Slovenská záručná a rozvojová banka, a.s.

## Terminology

*Households* – population, i.e. accounts held by households

*Retail* – households, self-employed and non-profit generating organizations serving primarily households

*Corporates* – non-financial enterprises

*Non-bank financial companies* – other financial corporations, financial intermediaries, pension and mutual funds, insurance companies

*General government* – central and local government authorities

*Acid ratio* – instantly liquid assets / highly volatile funds

*Total net position* – the sum of net balance sheet and net off-balance sheet position

*CR n index* – concentration of n largest banks, i.e. the sum of their shares in total assets

*Net balance sheet position* – the difference between balance sheet foreign currency assets and liabilities

*Net off-balance sheet position* - the difference between off-balance sheet foreign currency assets and liabilities

*Cost-to-income ratio* – the ratio of total operating expenses and net income from banking operations (performance purchased + staffing costs + social expenses + depreciation of tangible and intangible fixed assets + taxes and fees/income on equity and business shares + net income from fees and commissions + net income from securities operations + net income from derivative operations + net income from foreign currency operations + net income from other operations)

*Deposits-to-loans* – the ratio of the sum of deposits (retail, corporates, non-bank financial companies and general government other than ARDAL) and bonds issued to loans (retail, corporates, non-bank financial companies and general government)

*Long position* – position where assets exceed liabilities

*Herfindahl index* – the sum of squares of individual banks' shares in total assets

*Non-performing loans* – loans to clients and banks past due for 90 days or longer

*Short position* – position where liabilities exceed assets

*Cumulative gap* – the sum of open positions (short or long) in certain time buckets

*Loan-to-value ratio* – the ratio of loan value to collateral value

*Default rate* – the percentage of loans defaulted during a relevant period

## List of insurance categories

### A – Life insurance

1. Death insurance, endowment insurance, or death or endowment insurance (A1)
2. Dowry or child subsistence insurance (A2)
3. Insurance related to capitalization contracts (A3)
4. Insurance under sections 1 and 3 combined with an investment fund (A4)
5. Pension insurance (A5)
6. Accident or illness insurance, if in addition to this type of insurance specified in sections 1 to 4 (A6)

**B – Non-life insurance**

1. Accident insurance (B1)
2. Illness insurance (B2)
3. Insurance against damages to non-rail ground conveyances (B3)
4. Insurance against damages to rail conveyances (B4)
5. Insurance against damages to aircraft (B5)
6. Insurance against damages to vessels (B6)
7. Cargo transport insurance including luggage and other property irrespective of means of transportation (B7)
8. Insurance against damages to property other than in sections 3 to 7, caused by fire, explosion, wind, element other than wind, nuclear energy, landslide or land slump (B8)
9. Insurance against damages to property other than in sections 3 to 7, caused by hail or frost, or other reasons (e.g. theft), other than those covered by section 8 (B9)
- 10.a) Third party liability motor insurance (B10a)
- 10.b) Carrier liability insurance (B10b)
11. Insurance against liability for damages resulting from ownership or use of aircraft, including carrier's liability (B11)
12. Insurance against liability for damages resulting from ownership or use of river, lake or marine vessels, including carrier's liability (B12)
13. General liability insurance, other than as specified in sections 10 to 12 (B13)
14. Loan insurance (B14)
15. Bail insurance (B15)
16. Insurance against various financial losses resulting from the performance of occupation, insufficient income, adverse weather conditions, profit loss, permanent general expenses, unexpected business expenditures, loss of market value, loss of regular source of income or other indirect business losses of financial nature and other financial losses (B16)
17. Legal insurance (B17)

18. Insurance in respect of assistance to persons in distress during travel or stay away from permanent residence (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	Netherlands
PL	Poland
PT	Portugal
SE	Sweden
SI	Slovenia
SK	Slovakia
UK	United Kingdom
EU	European Union
MU	Monetary Union
OCP	securities dealer
RWA	risk-weighted assets
HZL	mortgage bonds
NBS	National Bank of Slovakia
ECB	European Central Bank
ČNB	Czech National Bank
ŠFRB	State Housing Development Fund
ARDAL	Debt and Liquidity Management Agency
BCPB	Bratislava Stock Exchange
EIB	European Investment Bank
EBRD	European Bank for Reconstruction and Development
IBRD	International Bank for Reconstruction and Development