

## EVALUATION OF SELECTED PARTS OF THE DOMESTIC FINANCIAL MARKET FOR 2004\*

*One of the long-term characteristics of the Slovak financial market is the uneven development of its parts. While important segments, in particular that of money and foreign exchange markets, are able to provide the expected functionalities, the capital market, with the exception of the government bond market, is at best stagnant. The strengthening of the Slovak koruna's exchange rate and the increasing free liquidity clearly supported by the irreversible integration of the domestic market are partially changing and impeding the conditions for the conduct of monetary policy, for which the existence of a certain degree of stability and predictability in the financial market is essential.*

### The money market and liquidity

Over the course of 2004 the National Bank of Slovakia (NBS) contributed to the reduction of the volatility of interest rates on the money market via several changes on the interbank money market.

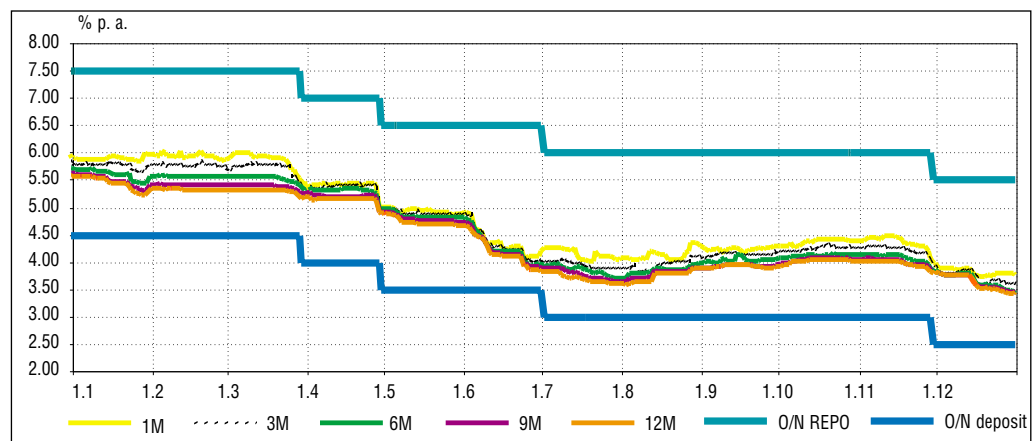
The first change was the introduction of the possibility to draw interest-free intraday loans at the NBS, secured by securities registered at the Central Registry of Short-Term Securities. Use of the intraday credit contributed to the more fluent course of the payments system and reduced unnecessary demand pressure for deposits in the situation of lower interbank liquidity within one day.

The second change consisted in the abolition of the interest calculation on compulsory minimum reserves (CMR) on the amount of balances on clearing accounts on a daily basis and the introduction of an average level of balances on these accounts for the period monitored. This change, similarly as the first one, reduced the concentration of demand for short-term deposits. The influence of the Agency for Debt and Liquidity Management (ARDAL) grew gradually, in particular in the shortest sector of the money market. The step by step transfer of financial accounts of the Government currently maintained at the NBS to the State Treasury increased, on an ongoing basis, the

influence of these newly-established institutions (the State Treasury and ARDAL) on the money market. This was reflected in the creation of banks' dependence on funds administered by ARDAL and led to a trend of higher prices for overnight deposits in the situation of banks' daily liquidity surpluses.

The correlation between the money and foreign exchange markets was most pronounced immediately at the beginning of the year with the opening of koruna positions by foreign banks and influenced particularly longer term interest rates. The developments in money market longer term interest rates was influenced to a great extent by the gradual reduction of NBS key interest rates. In March, June and November banks incorporated these reductions into prices for deposits in advance and only the April reduction was reflected in the deposit market in the form of a decline along the whole yield curve. A more significant factor influencing trading on the money market was the refusal to accommodate the demand in repo tenders and issues of NBS bills in full in June 2004. This approach, which was the result of an effort to eliminate the Sk exchange rate strengthening, limited substantially

Graph 1 Interest rates on the domestic money market (BRIBOR)



\*The authors of this article are staff of the Bank Trades Department of the National Bank of Slovakia.

traded volumes, and banks reacted to the uncertainty regarding the NBS's further acting by widening the spread between the buy and sell price to 50 basic points. The situation stabilised at the end of July and banks readjusted their offering of deposits to the standard spread of 30 basic points.

A typical feature of the second half of 2004 was the closing the koruna positions of foreign economic agents, in particular influenced by the publication of Slovak foreign trade data, the increase of interest rates by the central banks in Poland and the Czech Republic, and foreign exchange interventions by the NBS. The rate rise at the long end of the yield curve thus gradually softened implied expectations of a further reduction in the NBS key rates. An analogous situation was seen also in the expectations of medium maturities on the money market.

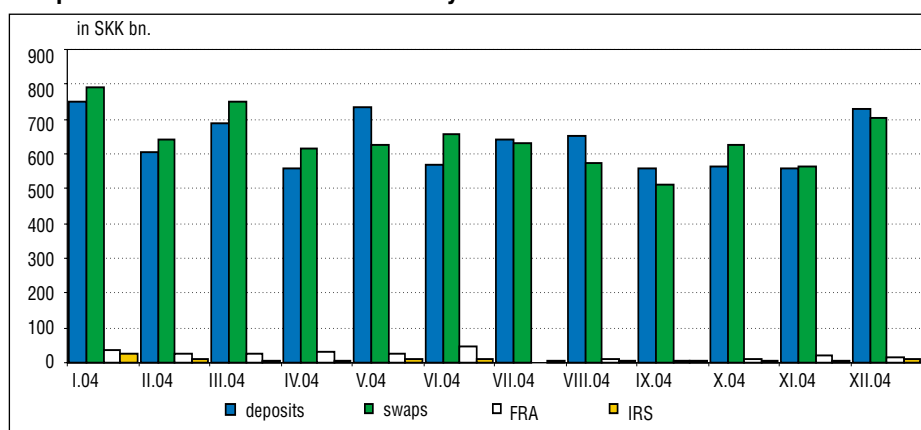
Decrease in price differences between individual maturities prior to the reduction of the NBS key rates in November and at the same time the reduction in prices of money reflected banks' expectations as regards the early adjustment of the key rates. Therefore the market reaction after the changes having been made was only limited.

As regards interbank transactions made, in comparison with the previous year, no substantial changes were seen in 2004. Transactions realised with foreign banks with a significant dominance of interest rate swaps and currency swaps continued to form a majority. From the beginning of the year the NBS began to monitor money market derivatives – forward rate agreements and interest rate swaps – thus gaining a better overview of expected events on the money market.

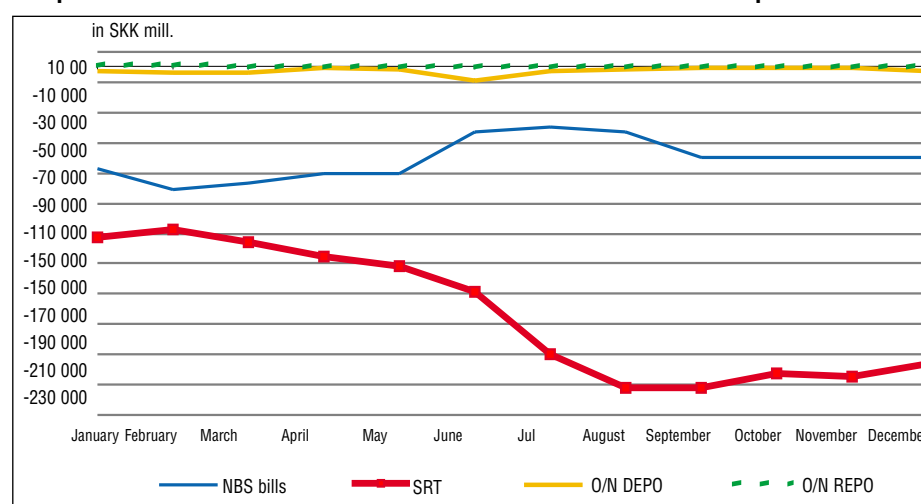
Trading in deposits occurred largely at the short end of the yield curve, where trades in deposits maturing within one week accounted for 89% of total trades and trades in deposits maturing within two weeks exceeded 95%.

There were no systemic changes in the monetary instruments used in open market trading in 2004. Chan-

**Graph 2 Trades in the interbank money market**



**Graph 3 Overview of the use of individual forms of trade in the open market**



ges occurred in the shares of the main instruments in the total sterilisation of surplus liquidity. At the beginning of the year, the Bank Board of the NBS decided to limit the share of NBS bills in the total sterilisation operations to a level of approximately 25%. The reason for this was the growth in demand for NBS bills, which the NBS does not consider to be its main monetary instrument. Another partial and temporary change was the expansion of the range of economic agents which are allowed to participate in NBS bills auctions to include the Ministry of Finance, represented by ARDAL.

In 2004 funds drawn from the market measured by a daily average grew to SKK 226.6 billion (SKK 162.7 billion in 2003). As regards the individual types of operations, repo tenders accounted for 72%, NBS bills for 27% and overnight operations for 1%. In 2004, liquidity increasing operations included in particular the repeated foreign exchange interventions by the NBS (SKK 68.6 billion), the transfer of resources of the State Fund for the Decommissioning of Nuclear Power Generating Facilities and Handling Burnt Fuel and Radioactive Wastes from accounts maintained at the NBS to the banking

sector (SKK 10.8 billion) and the reduction in the CMR at the beginning of the year (SKK 6.3 billion).

### Primary market in government bonds

As regards government bonds, ARDAL in compiling the issue programme for 2004 took account not only of the extent of debt servicing, but also of investors' expectations, something which was not sufficiently appreciated in previous years. The plan prepared was based on the principle of making the government bond market more attractive by increasing the scope of the issues, introducing new products and extending the yield curve to 15 years. The proposed issue programme was consulted with the most active investors before its publication and, as we believe, their comments and requests were taken into account in the final version.

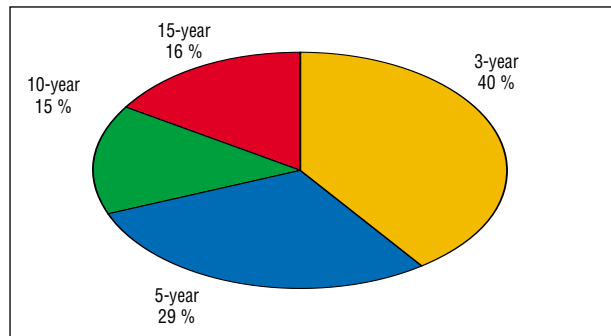
In the period monitored five new issues were introduced to the market via American auctions, these being issued progressively in the form of tranches. Besides the classic products with a fixed coupon, ARDAL issued the first 15-year bonds, 5-year government bonds with variable yield, and an issue of 3-year zero bonds. According to expectations based on the success of shorter zero bond issues in 2003, this last issue was the most successful and was the only one that was placed in the whole amount of SKK 40.0 billion. The primary market in government bonds was negatively influenced by serious problems at the Central Securities Depository (Centrálny depozitár cenných papierov SR, a. s.), due to which ARDAL cancelled two auctions of government bonds. These took place later, at an alternative date.

Besides domestic activities, ARDAL decided in 2004, despite high liquidity surplus, to place a 10-year euro bond issue in the sum of EUR 1 billion on the foreign market. The reason for this was the suitable conditions for extending the yield curve for Slovak euro bonds, but also in particular doubts as to sufficient absorption capacity of the domestic capital market at an acceptable yield.

The highest interest among investors in 3-year government zero bonds and 5-year fixed coupon government bonds was recorded mainly in the first half of the year. In the second half of the year interest lay mainly in

government bonds with a maturity of 10 years and in a 5-year bonds with a variable yield, where at this time banks already held government bonds with the preferred maturity and yield structure. Interest in the 15-year bond issue came mainly from insurance companies, and commercial banks purchased them primarily into their investment portfolios. In the case of the 15-year bond issue, in contrast to the others, the yield itself was not of completely cardinal importance for ARDAL, but rather

Graph 5 Share of individual maturities in the government bonds primary market in 2004



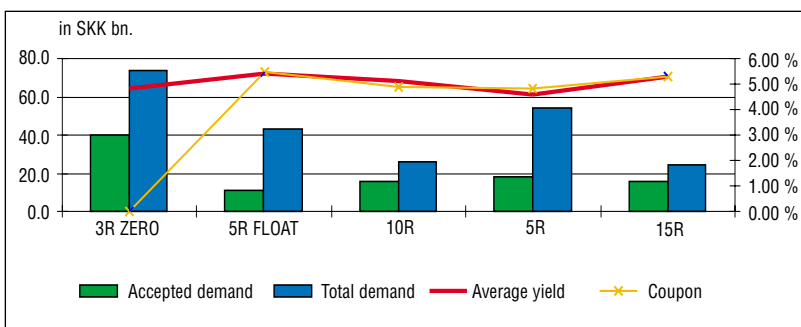
the desire to supplement the benchmarks with an as yet non-existent and the longest maturity. The accepted share in the total offer of this issue was 65%.

Yields on government bonds issued on the domestic market over the year in question declined. Their level was influenced, for example, also by the yield parameters in the euro region, primarily in Germany and the V4 countries. The decline in yields was supported to a large extent also by the issue of Slovak government bonds on foreign markets. The downward pressure on yields was caused also by increased demand for government bonds from foreign investors, on both the primary and secondary markets. This demand was brought about by Slovakia's accession to the European Union, the multiple increase in the country's rating, in particular in connection with the reform and investment potentials, and the appreciation of the Slovak koruna throughout the year, including the forecasted continuation of this trend, as well as by the domestic interest rate differential vis-à-vis

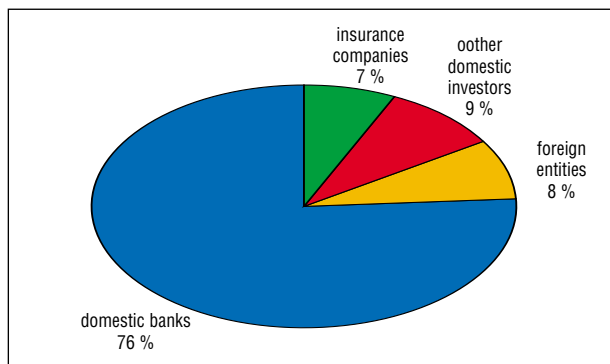
comparable investment opportunities aboard. The reduction in the NBS key rates did not have a significant effect on the bond market, a greater effect can be ascribed more to the expectation of their reduction, which had been incorporated into prices in advance.

As much as 84% of foreign investors' demand was accepted at government bond auctions, which expressed investors' real interest in these assets, whereas the price requirements of

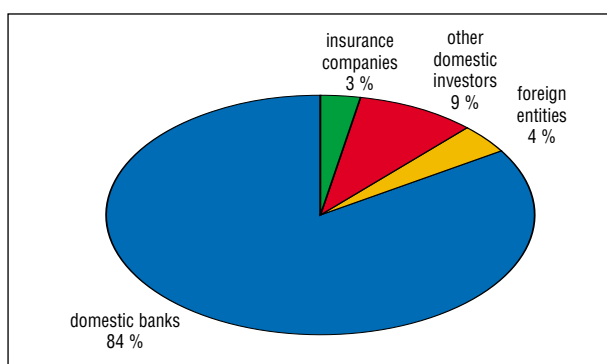
Graph 4 Developments in the government bonds primary market in 2004



**Graph 6 Share of investors in the primary purchase of government bonds in 2004**



**Graph 7 Investors' demand in the government bonds primary market in 2004**



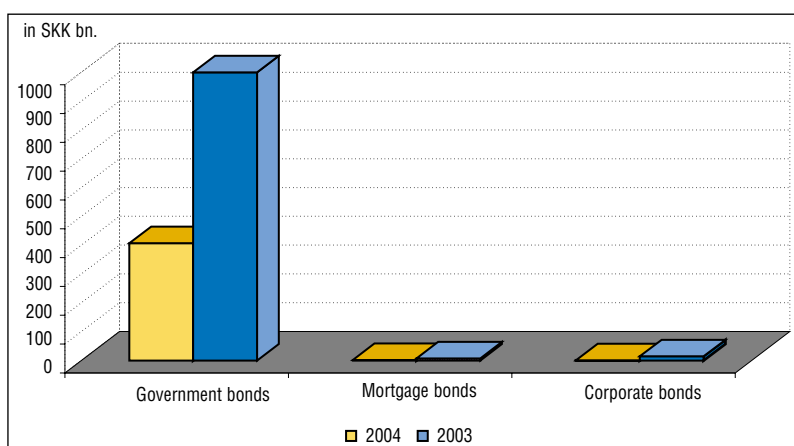
domestic investors may in several cases be doubted.

**Secondary market in securities**

The Bratislava Stock Exchange operated on 245 working days in 2004. Problems for market participants were caused primarily by the transfer of the securities clearing and settlement procedures from the Bratislava Stock Exchange to the Central Securities Depository. This was due to an unsatisfactory preparation of the securities clearing and settlement module for security trades at the time of transforming the Securities Centre to the Central Securities Depository and the resulting necessity to use the Bratislava Stock Exchange clearing and settlement system. This situation lasted half a year.

In 2004 the prevalence of direct trades over price-setting trades again continued, as did the prevalence of bond trades in comparison with share trades. In comparison with 2003, the total number of trades fell by 61.0% to SKK 432.4 million. The decline in the Bratislava Stock Exchange's activity against 2003 was caused by legislative changes, specifically those regarding income tax, which from January 2004 onwards put a break on the transfer of securities to foreign entities due to their tax advantage at the time prior to payment of coupons, something which had meant an artificial increase in the number and volume of trades. Economic agents registered outside Slovakia accounted for almost half the trades on the Bratislava Stock Exchange in 2004, where they fea-

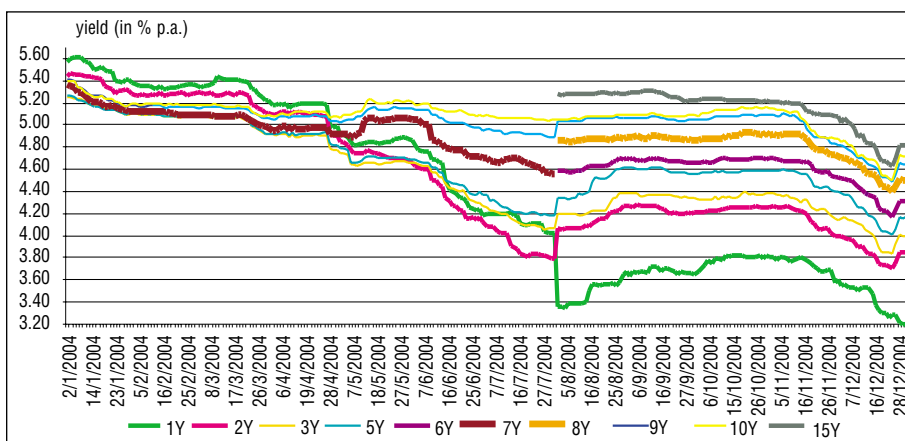
**Graph 8 Development of trades in the Bratislava Stock Exchange in 2003 and 2004**



red more frequently as buyers. The significant decline in trading was caused also by a decrease in takeover bids.

In the case of trading on the Bratislava Stock Exchange government bonds continued to dominate. Their share in total bond trades ranged from 95.1% to 99.9%. Over the course of the year 65 bond issues were traded on three markets. The total sum of accepted debt securities represented SKK 109.7 billion, where government bonds formed 92% of this sum.

**Graph 9 Development of price-setting (benchmark) government bonds**



The most attractive issue for the market was government bond issue no. 142 with a fixed coupon of 8.0% p.a. and half-year coupon payment. Trading in this bond reached 40.7% of the total number of bond trades. The second most traded issue was the 3-year government zero bond issue no. 200 issued in 2004. Non-residents accounted for 48.7%, or SKK 200.0 billion (purchases 52.4%, sales 44.9%) of total trading in 2004.

From the beginning of 2004 the listing of price-setting (benchmark) government bonds in the Reuters system has been functioning, where contributors, i.e. banks offer daily on a voluntary basis selected government bonds with a maturity of 1 to 15 years. These prices are used for valuing a bank portfolio of government bonds for capital adequacy measurement purposes.

In a separate market makers module it was possible to trade in 19 government bond issues, 3 issues of corporate bonds and 5 issues of mortgage bonds. Trading in this module totalled SKK 1.04 billion in 69 transactions, which represents a 7.4% share in all price-making transactions with bonds.

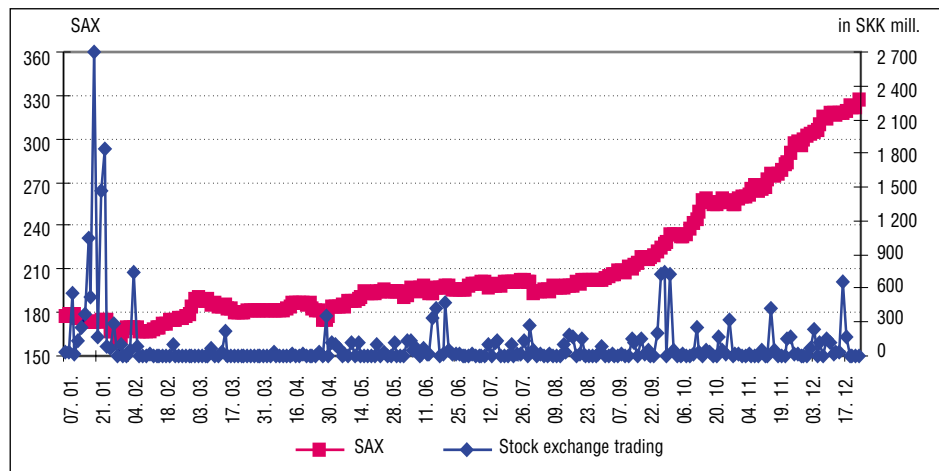
Market capitalisation of debt issues at the end of the year stood at SKK 362.3 billion, which in comparison with 2003 represents a growth of 9.2%. Of this sum, SKK 340.1 billion pertained to listed issues, whose share in comparison with 2003 increased by 18.9%.

The SDX component for bonds of banks and corporations closed the last trading day in 2004 with an annual gain of 8.6%. Since September 2004 the Bratislava Stock Exchange has published the new price

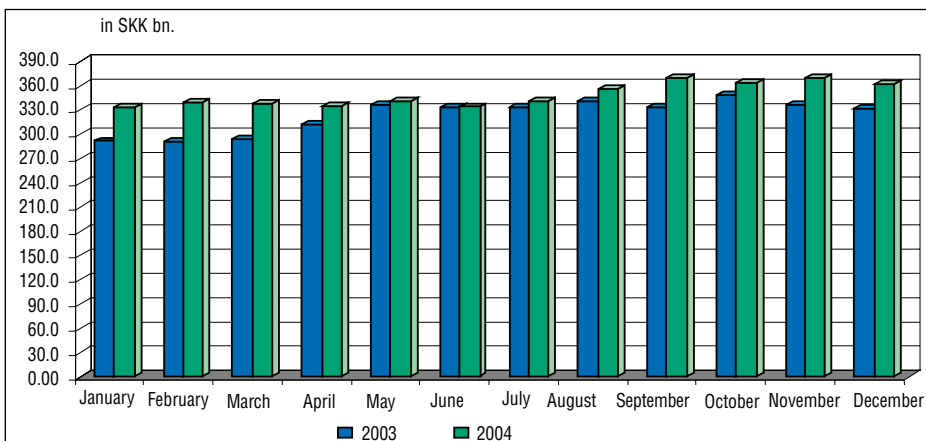
indicator SDX Group. This is a proportional index formed on the basis of the comparison of the current capitalisation of a bond and its initial value. The initial value of the index, equalling 100 points, is tied to 7 January 2004. The index has two components, price and development. The price index compares the market prices of a selected set of debt issues (basic titles) with the market prices of the same set at the initial date. The development index, besides market price changes, also monitors the capital yields of the set of the index's basic titles and compares them to the value at the initial date of introducing the index.

The Slovak Equity Index (SAX) strengthened over the year by 83.9% to 326.6 points, appreciating by 149.01 points. The volume of trading on the equity market represented SKK 21.4 billion, including takeover bids, where on a year-on-year basis market trading declined by 12.2%. Equity trading may be considered very weak. The sum of price-setting trades was SKK 8.4 billion, representing 37.8% of total price-setting trades made in 2004 on the Bratislava Stock Exchange. Essentially, trading was limited to a group of shares in the companies Nafta, Slovnaft, Zentiva and VÚB.

Graph 11 Overview of stock exchange trading and development of SAX index in 2004

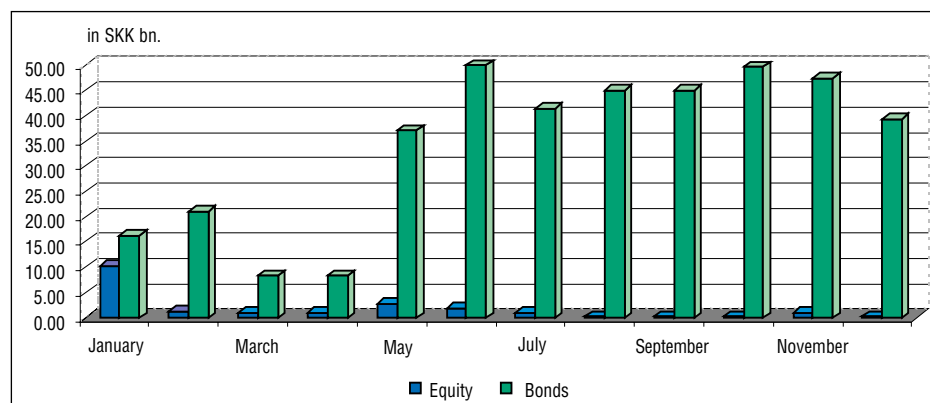


Graph 10 Comparison of the development in the market capitalisation of listed bonds in 2003 and 2004



The market (real) capitalisation, measured by shares in which at least one price-setting trade was made, excluding investment funds and mutual fund certificates, grew by 40.0% and on the last day of trading reached SKK 125.6 billion. Even despite the fact that two large listed companies, VSZ and Zentiva, left the Bratislava Stock Exchange, the increase in market




**Graph 12 Development in equity and bond trading in 2004**


capitalisation of the listed market indicates an appreciation of existing stock exchange titles. The domestic capital market is nevertheless undoubtedly dominated by government bonds.

### Collective investment

Collective investment, represented mainly by open mutual funds, was again in 2004 the fastest developing segment of the domestic financial market. Its development influenced the inflow of financial resources into collective investment funds, whose volume of managed assets grew in 2004 by 80% and in absolute terms by SKK 32.1 billion.

Open mutual funds accounted for 97.37% of the total volume of assets administered. Money funds were the most active, where these became an alternative to the low-interest yielding bank deposit products. This fact was influenced mainly by the continuing decline in interest rates on term deposits. At the end of 2004 koruna money funds reported yields at levels between 4% to

#### Overview of collective assets in domestic and foreign collective investment funds

Type of fund	31.12.2002	30.12.2003	30.12.2004
Open mutual funds	14.3	33.8	61.7
Closed mutual funds	1.9	1.9	1.9
Foreign open mutual funds	1.5	4.6	8.8
Funds total	17.7	40.3	72.4

Source: Association of Fund Management Companies

5%, while the average interest rates on koruna deposits moved in the range from 2.01% to 3.36 %, and term deposits yielded interest in the range from 2.88% to 4.53%. Interest in the usually attractive bond funds was lesser due to their initial weaker performance. The number of open funds grew significantly in 2004.

This growth was influenced by foreign fund management companies, whose entry to the domestic market had been simplified by the Slovak Republic's accession

to the European Union. Despite the fact that they outnumber domestic fund management companies by 6:1, their share in managed assets is only 13%, thereby confirming the expectations that Slovakia's entry to the European Union will not bring about any fundamental change in this part of the market. The reason here is the conservatism of

Slovak savers and their preference for traditional financial institutions connected with a large distribution network of banks operating in the country.

### The exchange rate and the foreign exchange market

The positive economic results and pro-reform environment, which made the domestic currency significantly more attractive, were the determining factors for the exchange rate in 2004. Growth in the economy alongside a concurrent decline in inflation, unemployment, and acceptable balance of trade deficit and continuing inflow of foreign direct investment (FDI) formed an environment with strong expectations in favour of strengthening in the Slovak koruna exchange rate.

The causes and forms of investment in assets denominated in Slovak koruna were complex, nevertheless it is appropriate to emphasise certain aspects. These are, for example, Slovakia's membership in the European Union, which for acceding countries means the acceptance of the obligation to introduce within a set time horizon the single currency, the euro. The Government of the SR together with the NBS officially announced the forecast dates for entry into ERM II and subsequently into the euro area. The specification of this period provided investors with a relatively good systemic idea of future interest rates and the exchange rate. The certainty regarding future development reduced risk for longer-term investments in the Slovak koruna, which enables the application of a classic convergence strategy, where it is assumed that the yield curve of government (koruna) bonds will gradually approximate to the yield curves of euro area members, alongside a concurrent strengthening of the exchange rate. This will enable investors to gain not merely capital appreciation of their investment, but concurrently also an exchange rate gain.

Over the course of the year, the Slovak koruna/euro exchange rate appreciated by 5.76% (from 41.161 EUR/SKK to 38.796 EUR/SKK). The average level of the exchange rate was 40.043 EUR/SKK, representing



## Basic characteristics of the SR foreign exchange market in 2004

Business subjects	SPOT			FORWARD			SW			Total	
	Volume		No. of trades	Volume		No. of trades	Volume		No. of trades	Volume (USD mil.)	No. of trades
	(USD mil.)	(%)		(USD mil.)	(%)		(USD mil.)	(%)			
Domestic bank trades without foreign bank participation	8 936.9	11.6	5 913	1.7	0.0	4	67 845.5	88.4	4 014	7 6784.1	9 931
Domestic bank trades with foreign banks	29 254.1	8.0	14 160	547.4	0.2	167	334 712.2	91.8	20 873	364 513.7	35 200
<b>SR foreign exchange market excl. NBS</b>	<b>38 191.0</b>	<b>8.7</b>	<b>20 073.0</b>	<b>549.1</b>	<b>0.1</b>	<b>171</b>	<b>402 557.7</b>	<b>91.2</b>	<b>24 887.0</b>	<b>441 297.8</b>	<b>45 131</b>

a change upon 2003 of 3.5%. The Slovak koruna exchange rate rose 13.44% against the US dollar (from 32.920 USD/SKK to 28.496 USD/SKK). The average level of the exchange rate was 32.247 USD/SKK (a strengthening on 2003 of 12.3%). Against the Czech koruna the Slovak koruna weakened by 0.47%.

The overall volume of trades including foreign exchange conversions, foreign exchange swaps and forwards on the interbank foreign exchange market excluding foreign exchange interventions by the NBS totalled USD 441,297.8 million, and in comparison with 2003 increased by 10.3%. Trades in US dollars accounted for 83.3%, in euro 13.1% and in other currencies 3.6%. As regards the individual types of trades, currency swaps formed 91.2% (91.0% in 2003), followed by spots 8.7% (8.9%) and forwards 0.1% (0.1%) in the total number of trades.

The average daily turnover on the spot market stood at USD 151.0 million. Trading in euro had a dominant position, which, given that the euro is the reference currency, accounted for 96.8%. Trading among domestic banks and between domestic banks and foreign banks on the spot market confirmed the trend of foreign banks' increased activity (domestic banks formed 17.4% of the total turnover and foreign banks 82.6%). The Slovak koruna market is globalising and many domestic economic agents therefore are using the services of foreign banks, mainly in the case of large foreign exchange conversions.

As for the types of trades made among domestic banks, 88.4% were in the form of swap operations (85.9% in 2003) and spot foreign exchange conversions formed 8.0% (14.1% in 2003).

Trading with foreign banks recorded a year-on-year growth to USD 364,706.6 million (12.3%). Trading in USD prevailed with an 84.3% share (78.8% in 2003), followed by trading in euro with an

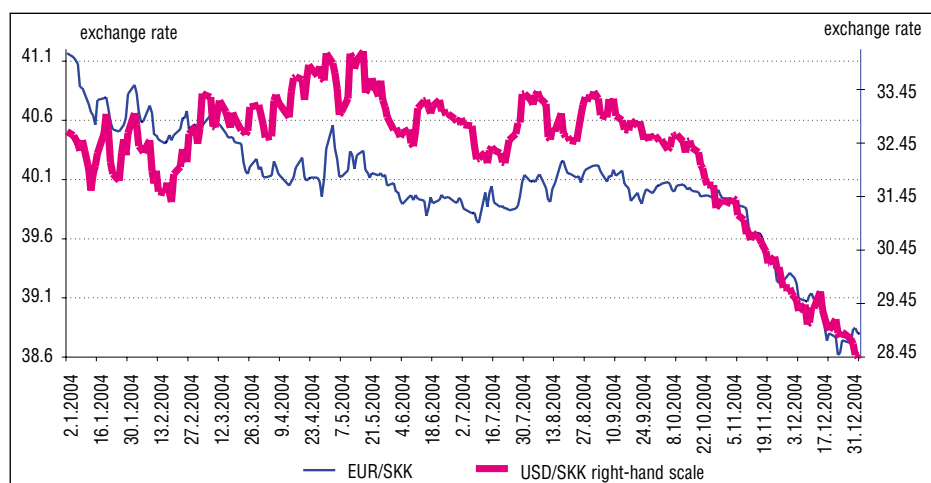
11.6% share (12.1%), and other currencies forming 4.1%.

Swap operations have for some time now had a large share in the interbank foreign exchange market. This is connected with the fact that they are used mainly by commercial banks as a replacement for a deposit market, where swap operations are from the credit aspect less risky and thereby more acceptable and give practically the same yield as depositing a term deposit. Moreover, primarily the shortest maturities are used (O/N to 1-week), which are constantly renewed, which significantly increases the total turnover on the interbank foreign exchange market. From the aspect of influence on the exchange rate level, the most influential are foreign exchange conversions.

The Slovak koruna's strengthening against the main currencies was brought about by several factors, in particular the SR's positive macroeconomic development, by similar perception of the whole Central European region and its currencies – the Czech koruna, the Polish zloty and the Hungarian forint, by the euro's strengthening against the main world currencies, as well as by weak growth in the euro area countries.

The upgrading of the SR's rating to investment grade by the three main rating agencies (Moody's, S&P and Fitch) was important also for longer-term portfolio investors. By gaining a sovereign investment rating SR

Graph 13 Development of the EUR/SKK and USD/SKK exchange rates in 2004





government bonds denominated in a foreign currency entered several reference bond indices created for emerging markets. Investors whose ordinary business strategy is neutral thus began to automatically buy Slovak euro bonds. Furthermore, many consider the SR in this market segment as currently the most progressive economy, therefore it is natural for them to increase the weighting of Slovak euro bonds in their portfolios against the reference indices.

With regard to the greatly prevailing expectations of a strengthening in the Slovak koruna in 2004, currency options began to be used to a greater extent, securing investors a profit from option premiums in the case of a stable strengthening of the exchange rate.

In 2004 the NBS intervened on the interbank foreign exchange market exclusively with the aim of weakening of the exchange rate, or slowing its excessively fast strengthening. In total it purchased via direct foreign exchange interventions and individual trades EUR 1,730 million, of which EUR 564 million was in the form of individual trades. The NBS made the first individual foreign-exchange purchase on 9 January. Gradually up until mid July it purchased EUR 564 million. Over the following period it made only direct foreign exchange interventions. In the period from 8 to 13 July the NBS purchased via direct foreign exchange interventions EUR 566 million. It made a further direct foreign exchange intervention at the close of the year, on 22 and 23 December, in the total volume of EUR 600 million.

In 2003 and to an even greater degree in previous years, when the difference between koruna interest rates and interest rates for the euro and US dollar was greater than now, the interest rate differential was the main motivation for short-term investors. Despite its significant reduction, interest in investing in Slovak koruna did not wane, but on the contrary rose. This results from the fact that short-term investors are no longer betting to such a degree on the interest-rate differential, but rather on the profit resulting from the Slovak koruna's strengthening.

A further fact that perhaps influenced the koruna's appreciation were non-delivery forwards. These are trades where a bank's client deposits the required collateral and instructs the bank to purchase or sale of the selected currency on the interbank foreign exchange market. In the case that the client is successful, the bank regularly pays the client the gain. Since the long-term trend of the koruna's strengthening is generally conceded clear, clients used the strategy of selling euro and buying Slovak koruna. Since these investment operations are done also by extraordinarily solvent clients, we presume that the influence of this type of trades is not insignificant.

Perhaps the most cardinal qualitative change on the interbank foreign exchange market was the natural

growth in the number of market participants buying Slovak koruna. We want to emphasise in particular two categories of entities. The first are exporters who after collecting a foreign currency (foreign exchange) for exported goods do not want to hold this currency in this situation, since it is an asset losing value, and therefore they sell it immediately or even via a forward trade for domestic currency. The second group comprises foreign investors who in the framework of the investment process need to hold domestic currency and obtain it by selling foreign exchange.

### **Significant features of the domestic market in 2004**

Over the course of 2004 the NBS decided to use its set of monetary policy instruments to act against the koruna's appreciation. Within the framework of the system of open market operations the NBS did not accommodate demand from banks in repo tenders in full, or in the case of NBS bills, completely refused the banks' demand.

The use of derivatives on the money market began to provide important information on the interest rate expectations of its participants. Besides this, the existence of more sophisticated trades is an important factor in the progress of a country's domestic market and a significant factor in its integration.

The capital market, with the exception of funds, was marked by persistent stagnation. The growth in the SAX equities index was of little importance, since it still represents only a minimal number of titles. The domestic capital market, with the exception of government bonds, is negligible, and is not a place for business financing or for meaningful trading and asset appreciation. Somewhat surprisingly trading infrastructure became a problem, which considerably unsettled activities in the domestic environment.

The development potential of the capital market, it seems, is connected exclusively with pension reform. In 2004 the creation of fund management companies (and their mutual funds) was, despite their limited number, significant in Slovakia's conditions. These companies are arriving in the form of subsidiaries of banks with foreign capital. With this, we presume, is connected the expansion of the range of services and investment opportunities offered in the form of a combination of various investment products.

Trades in options undoubtedly represent a qualitative change in the interbank foreign exchange market. The foreign exchange market in 2004 did not record significant growth and it may be assumed that this market is now saturated to a certain extent. Average daily turnover in 2004 was USD 151.0 million and we predict that the foreign exchange market will moderately but steadily grow in the coming years.