



NATIONAL BANK OF SLOVAKIA

**MAIN TRENDS OF DEVELOPMENT IN THE MONEY
SUPPLY OF SLOVAKIA DURING 1998 AND THE FIRST
HALF OF 1999**

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Main Trends of Development in the Money Supply of Slovakia During 1998 and the First Half of 1999

Last year, we published the results of a large-scale analysis of the money supply in the Slovak Republic, which focused on the internal structure of the M2 monetary aggregate (defined as a measure of the money supply in the SR) during the period 1993-1997.¹ We paid increased attention to changes in the structure of this aggregate, caused by a marked rise in interest rates on short-term deposits in 1997, resulting from the attempts of commercial banks to obtain additional resources for filling the gap in short-term liquidity during the period of uncertain conditions on the interbank money market.

The goal of this paper is to update the previous analysis on the basis of statistical data for 1998 and the first half of 1999. This period was marked by various influences which brought about changes in the financial behaviour of economic entities with consequent impacts on the individual components of the money supply. These were first and foremost the increased expectation of currency devaluation among the public since the beginning of 1998 (and with the change in the exchange rate regime of the SKK from a fixed to a floating one at the beginning of October), which led to accelerated growth in foreign-currency deposits. During the first half of 1999, the fear of inflation increased owing to measures announced and gradually implemented by the Slovak Government in the area of price deregulation as well as to other measures adopted for stabilising the economy, which led to the arousal of interest in the quick utilisation of the persistent interest-rate differential on ultra-short-term deposits.

With regard to the definition of the M2 money supply in Slovakia, the effect of the two factors specified above (protection of deposits against the fall in the exchange-rate of the currency and the high interest yield on ultra-short-term deposits) leads to an increase in the weight of quasi-money (QM) in the M2 aggregate. However, the causes of this trend differ widely from the standard interpretation.

In creation of primary deposits, the saving-motive is being negatively affected by particular forms of speculative behaviour. This applies to behaviour stimulated by the high level of interest rates on ultra-short-term deposits, which act in the final analysis as a factor increasing the transaction component in the structure of the M2 money supply. The intensity of this behaviour is also supported by fears of inflation, and may be interpreted as an attempt to earn interest on monetary assets quickly, in order to avoid additional (inflationary) losses in real interest gains.

The conversion of crown deposits into foreign-currency deposits may also be regarded as speculative behaviour motivated by the effort of protecting monetary assets against depreciation resulting from a fall in the exchange-rate of the currency. The motives that stimulate Slovak public to deposit funds in foreign currency accounts, are in our opinion based on caution rather than speculation. Thus, the increase in the share of these deposits in QM - in contrast with the transaction effects of changes in the structure of crown time deposits by term - strengthens the position of the savings component within the M2 aggregate.

Under the influence of the financial behaviour of the public motivated by the opportunity to benefit from high interest and exchange-rate differentials, structural characteristics of the M2 aggregate in Slovakia developed in a different way as suggested by an obvious interpretation of the increase of quasi-money share in M2. The evaluation of developments in 1998 and

¹ See: KOMINKOVA, Z.: Forming of the Money Supply in Slovakia in 1993-1997 (Part I - III), Biatec, 6/1998, No. 8-10.

during the first half of 1999, with an emphasis on effects of the two above factors, is presented in the text below.

Monetary Aggregates and Basic Indicators

Basic information on year-on-year changes in the structure of the M2 money supply in a breakdown by M1 and quasi-money (QM), is given in Table 1 (*Tables and Figures see in BIATEC Journal*), compiled from the Monetary Survey data (tables and pictures see BIATEC Journal).

While the growth rate of M2 in 1998 was less than half the figure for 1997, the share of M1 in M2 decreased and that of quasi-money (QM) increased at an accelerated rate in 1998. This trend continued - though at a slower rate - during the first half of 1999. The result was a significant fall in the liquidity ratio M1/M2, to the level of 0.29 at the end of June 1999. The sharp fall in this ratio (its value for 1997 was 0.42) may appear as disproportionate in relation to the need for readily available liquidity to cover direct expenses; however, the liquidity ratio depends largely on the domestic (national) characteristics of money circulation and shows marked differences even in advanced economies (roughly 0.20 to 0.40). Let us also mention here results of the 1997' analysis, which showed that in Slovakia, the fall in the M1/M2 ratio was virtually compensated for by shifts in the term-structure of deposits within QM towards ultra-short-term deposits. This trend has remained for the years 1998-1999, as well.

The development of main components of quasi-money, i.e. time deposits and foreign-currency deposits, underwent a significant change in 1998, characterised by a rapid increase in foreign-currency deposits (by 46 % at current exchange rate, or by 35.8 % at fixed rate as of the beginning of the year), which reflected the growing fear of currency devaluation culminating among the public in September, when these deposits showed a month-on-month increase of 11 % at fixed exchange rate. The marked expansion in foreign-currency deposits increased their share in QM to 21.1 % (compared with 16.4 % in 1997), while the increase in proportion to the total volume of the M2 caused a relatively marked increase in the degree of dollarisation of the money supply in Slovakia: it reached 0.14 in 1998, compared with its relatively stable value (around 0.10) in 1995-1997. The appreciation of foreign-currency deposits expressed in terms of the difference between their end-year volumes at current and fixed exchange rates in comparison with the beginning of the year, reached 10.8%, which was slightly above the average interest rate (10.39 %) on total crown deposits, but below the level of average interest rate on time deposits (13.16 %) from December 1998.

With regard to the more than 50 % share of time deposits in the total volume of the M2, the slowdown in the rate of M2 growth in 1998 was due partly to the absolute decline in demand deposits and partly to marked deceleration in the year-on-year dynamics of time deposits (from 19.5 % in 1997 to 6.8 % in 1998). The increase in time deposits remained behind the fall in demand deposits, which led to an absolute decline in crown deposits within the M2, in 1998. Thus, the whole growth in the M2 was due to a steep increase in foreign-currency deposits, which benefited from the fall in the exchange rate of the SKK.

During the first half of 1999, the growth in the QM aggregate at current exchange rate was due mainly to the fall in the exchange-rate of the SKK, which accelerated the dynamics of growth in foreign currency deposits. In terms of the exchange rate as of 1 January 1999, deposits in foreign currency increased during the first six months by only 1.5 % (corresponding to a 2 % growth in QM). This means that, during the first half of 1999, the highest increase (5.9 %) was recorded again in crown time deposits. Over this period, foreign-currency deposits appreciated by 10.10 %, which was less than the average interest rate on time deposits (13.40 %) or that on total crown deposits (10.90 %) in June 1999.

We may state that the behaviour of depositors during the first half of 1999 - seen in terms of choice between crown deposits and foreign-currency deposits - is confirming the predominantly cautious (not speculative) nature of motivation in the case of foreign-currency deposits. Taking into account their appreciation owing to the exchange rate development of the Slovak crown, the rate of growth in foreign-currency deposits slowed significantly in comparison with 1998, but recorded no outflow in absolute terms. Moreover, the rates of interest paid on foreign-currency deposits (approximately at 2.0 to 4.5 %) are significantly below the level of crown deposit rates, but taking their exchange-rate appreciation into consideration, the attractiveness of foreign-currency deposits is in fact counterbalanced by the average interest yield on crown deposits. It is obvious that explanation of the faster growth in crown time deposits than in foreign-currency deposits (at fixed exchange rate) in this quasi-balanced environment, requires an in-depth analysis of interest rates and the structure of time deposits.

Changes recorded in the structure of time deposits by term (short-term, medium-term, long-term) are shown in Table 2². During the period under review, preference was given again to short-term deposits (at up to 1-year notice), the share of which in total time deposits reached two thirds (65.8%) at the end of 1998 and almost three quarters (72.3 %) in the middle of 1999. The share of total short-term deposits (demand and short-term deposits) in total crown deposits increased over 1998 by 4.0 percentage points (to 76.4 %). During the first half of 1999 the share increased to 79.5 %.

The above category of short-term deposits represents the most liquid deposits, which, together with currency in circulation, may serve as a basis for defining a certain 'shadow' liquidity ratio of the money supply. The share of liquidity (defined as a sum of M1 aggregate and ultra-short-term deposits) in M2 increased from 52 % at the end of 1997 to 55 % in 1998, reaching 59 % in the middle of 1999.

The upward trend in short-term deposits reflected the situation on the money market, characterised during the period under review by marked instability, banks' uncertainty about the possibilities of access to refinancing resources, and by a high interest-rate volatility on the interbank money market. Expenses for ensuring an adequate level of liquidity in the banking sector, expressed in terms of the average interest rate on the joint group of demand and short-term deposits, were permanently on the increase. From 1996 to the end of 1998, the expenses more than doubled (from 5.40% to 11.02%)³. At the same time, the structure of primary deposits by term deteriorated, from the point of view of ensuring bank lending activities.

The conditions on the interbank and primary deposit markets are partially illustrated in Fig. 1, which shows the development of interest rates in the segments of interbank deposits with maturities of up to 1 month and up to 3 months, and primary time deposits with a maturity of up to 3 months.⁴ Particularly steep increase in the average rate of interest on the group of time deposits under review (ultra-short-term) was recorded during 1997, indicating the pulling function of BRIBOR rates. Since 1998, the average interest rate has shown certain signs of stabilisation, or even a moderate tendency to fall. During this period, however, the interest-rate level reacted very sensitively (with a rise) to the two sudden changes in BRIBOR rates.

² The data are based on banking statistics, i.e. total crown deposits including government sector deposits, which caused certain differences in their year-on-year dynamics compared with data from the Monetary Survey.

³ In the alternative method of calculation without deposits at up to 1-year notice, the difference between the average interest rate on the given type of deposits at the end of 1996 and 1999 was more than 300%.

⁴ Interbank deposit rates (BRIBOR) mean average monthly interest rates calculated for the days for which they were listed. The illustrated average interest rate on primary deposits is calculated as a weighted average of interest rates on the volume of deposits up to 7 days, up to 1 months, and up to 3 months.

The rapid increase in BRIBOR rates (in May-June 1997, September-October 1998, and in May 1999) clearly reflects the reactions of the interbank market to the measures taken by the NBS in favour of the exchange rate of the SKK (restriction, or suspension of refinancing on the part of the NBS). The marked fall in BRIBOR rates during the periods of liquidity surplus (e.g. during the 2nd quarter of 1998 in connection with the inflow of foreign funds for government sector financing) was accompanied by a slower fall in the average interest rate on primary deposits, so in certain periods it was above the level of BRIBOR rates.

Development of short-term deposits

Short-term deposits continued to be dominated by ultra-short-term deposits (Tab. 3), though since 1998 commercial banks have made increased efforts to change their structure in favour of longer-term deposits (3 to 9 months). This resulted in a marked increase in the share of these deposits in total short-term deposits, due mainly to a pronounced increase in deposits at up to 3-month notice (Tab. 4). However, interest yields on deposits at up to 7-day and 1-month notice remained also very attractive. The only component that recorded a marked absolute decline in 1998 were deposits at up to 1-year notice.

Deposits at up to 1-year notice may be regarded as a reference category for evaluating the stability of the monetary behaviour of the public, since they represent a certain interim between transaction money, or deposits that can be converted into cash relatively easily, and longer-term deposits intended mostly for saving purposes. However, the interest of banks in stabilising this category of deposits was suppressed by the acute (or even chronic) need to ensure new sources of short-term liquidity through gradual payment of high interest yields on ultra-short-term deposits. Compared with the roughly 16-20 % rates of interest offered for such ultra-short-term deposits, the year-on-year increase in average interest rate on deposits at up to 1-year notice was largely symbolic and did not prevent these deposits from being converted into shorter-term deposits.

To identify the monetary behaviour of the public (households and enterprises), we use a table from last year showing the structure of motivation for holding money (Tab. 5 and Fig. 2), in which we characterised the monetary behaviour of the public by applying three components of motivation (transaction motive, yield or 'speculative' motive, and savings motive, including a cautious factor).

During 1997-1998, the share of 'speculative' demand (which refers to a component of M2 in which the public deposits money with the aim of earning maximum interest, i.e. under Slovak conditions, in short-term deposits at up to 7-day or 9-month notice), increased by 15 points (from 9.4 % to 24.8 %). Over the first six months of 1999, the speculative component increased by a further 7 points, to 31.7 % of the M2 at the end of June 1999. The tendency to derive profit from the high interest-rate differential between ultra-short-term deposits and other types of deposits, was on the increase. The marked increase in these deposits (paying interest at an attractive rate) during the first half of 1999, may without doubt be attributed to the fear of inflation aroused by the measures announced by the Slovak Government in the area of price deregulation, which represented a stimulus for earning interest on monetary assets as quickly as possible, without suffering an additional loss on real interest yields.

The permanent increase in the share of the 'speculative' component of deposits in M2 led to a decrease in the share of transaction money (currency and demand deposits) and in that of the savings component of deposits. The increase in the share of the saving component during the second half of 1998, was due almost exclusively to a steep increase in foreign-currency deposits in September and October. Apart from the real growth in these deposits, their

increase within the structure of the money supply was due to a fall in the exchange rate of the SKK after the change in the exchange rate regime at the beginning of October, in consequence of which their crown equivalent increased as a whole.

The other components of deposits, which are referred to as saving components in our definition, showed less dramatic growth dynamics (Fig. 3). The only fact that is worth to mention here is that, compared with the relatively corresponding trend of development in deposits at up to 1-year notice and in medium-term deposits from 1997, the decline in medium-term deposits accelerated in 1998: their total volume fell during the second half of the year below the level of deposits at up to 1-year notice. These two groups of deposits pay interest at basically the same rate (10-12 %) and the acceleration in the rate of decline in medium-term deposits may be attributed to their lower liquidity (due to the term of notice) rather than to changes in interest rates.⁵

The development of long-term deposits had shown a stable, moderately upward trend until the end of 1998. During the first months of 1999, these deposits also recorded an absolute decline. Although the following months saw a moderate increase, the volume of these deposits remained below the 1998' level even in the middle of 1999.

Sectoral characteristics

The impact of the sectoral characteristics of financial behaviour on the dynamics of M2 is illustrated in Fig. 4. In Slovakia as in other countries the household sector has a dominant, roughly two-third share in the volume of deposits included in the money supply; the remaining one third is made up of enterprise sector deposits (including those held by insurance companies). Currency in circulation has had a stable ca. 10-11 % share in M2 since 1993, and its effect on the dynamics of M2 can be regarded as negligible. With regard to the said relation between household and corporate deposits, it is evident that the long-term trends in M2 are determined by the development of household deposits, while short-term fluctuations are attributable mainly to corporate deposits.

The causes of differences between the sectoral characteristics of deposit developments were already mentioned in the 1998' paper (different motivation for household and enterprise money holdings, or different sectoral money demand functions; different needs and possibilities of access to bank loans or external sources of financing). On the other hand, a common feature of their behaviour is that they use (according to the situation on the money market) a certain portion of their deposits for 'speculative' purposes, taking advantage of the attractive differences between the rates of interest on various types of time deposits. At the same time, they respond together to changes in the development of the monetary environment, caused by fears of inflation and devaluation in particular.

A primary factor determining the dynamics of deposits, or the rate of savings, is beyond doubt the economic situation in both sectors. In the household sector, it depends mainly upon the development of real wages, or total income and expenditure; whereas in the enterprise sector, it depends more upon the access of entities to credit resources than upon their financial results. The slowdown in the dynamics of year-on-year growth in deposits was partly taken into account in the Monetary Programme of the NBS for 1998, which projected a slower dynamics of growth in M2 (9.4 %) and a higher rate of inflation (5.6-5.9 %) for 1998 in

⁵ Until June 1998, the average interest rate on medium-term deposits slightly exceeded (by 0.5 to 1.0 point) the average rate of interest on deposits at up to 1-year notice. In July, the situation changed in favour of deposits at up to 1-year notice (in December 1998, the difference between the two rates was 0.6 points; in June 1999, it stood at 0.8 points).

comparison with 1997 (10.7 % for M2; 4.9-5.8 % for inflation). As supporting instruments, used to achieve these goals, were wage regulation and limited possibilities of bank lending to the private sector relative to the actual development in the government sector. The actual rate of growth in M2 (2.7 %) was much slower than the projected figure, due partly to the wage regulation having a downward effect on the dynamics of growth in household deposits, and to slower (4.3 %) than projected (7.9 %) growth in bank lending to households and enterprises. (Loans to enterprises increased by only 3.0 %; loans to households by 29.9 %, however, they account for only 5.0 % of the loans granted to the private sector.)

A factor that contributed to the slowdown in the rate of M2 growth projected in the monetary programme for 1998, i.e. the deceleration in the dynamics of corporate and household deposits representing its main component, were devaluation expectation of the public since the beginning of the year accompanied by a fall in interest in holding financial assets in SKK. Their alternative utilisation was partially reflected in increased additional consumption and stockpiling by importers, and in a marked increase in the volume - as well as in the share - of foreign-currency deposits in the total M2 money supply.

The changes in the term-structure of deposits in 1998 (Tab. 1 and Tab. 2) resulted from changes in the volume and structure of deposits in both sectors (Tab. 6). The fall in demand deposits in 1997 was due to a decline in corporate deposits, while household deposits remained stagnant. In 1998, this category of deposits recorded a decline even in the household sector.

In the household sector, customers continued to show interest in high interest-earning short-term deposits, which represented a key factor in the expansion of total time deposits in the two sectors under review. Medium-term deposits recorded a fall in volume in both sectors as early as 1997, which continued in 1998 at an accelerated rate. The increase in long-term deposits, which are made up almost exclusively of building-savings deposits, took place solely in household deposits. Over the first half of 1999, the individual types of deposits basically followed the trend from the previous period: the share of short-term and foreign-currency deposits continued to increase in the structure of deposits in both sectors. The trend and structural characteristics of household and corporate deposits are shown in Fig. 5 and 6.

Table 7 contains a comparison of the structure of short-term household and corporate deposits at the end of 1996 (i.e. before the change in the interest-rate-policy of commercial banks) with the structure of these deposits in the middle of 1999.

At the end of 1996, all types of short-term deposits (except deposits at up to 1-year notice) were dominated by corporate sector. The rise in interest rates in 1997 led to an extremely huge increase in the share of household deposits in ultra-short-term deposits and to a dramatic decline in deposits at up to 1-year notice, paying interest at an average rate. As a result, the share of the latter in short-term household deposits decreased from 88% in December 1996 to 29% in June 1999. At this time, the greatest demand was recorded for deposits at up to 1-month notice in both sectors; they were followed by deposits at up to 3-month and/or 7-day notice.

This comparison shows the substantial change that occurred in the structure of these deposits in the household sector, which plays a dominant role in the creation of deposits and therefore determines the structure of the money supply in the economy. The changes in the structure of short-term deposits (including the fall in medium-term and stagnation in long-term deposits) are indicating a weakening in the saving motive within the financial behaviour of the population. Naturally, high interest rates on ultra-short-term deposits are stimulating decisions to deposit funds in this form. On the other hand, this is disturbing longer-term motives behind the behaviour of economic entities, and, eventually, has unfavourable impacts on the wider macro-economic environment of the monetary stability and real economic development.

Summary

The instability of the monetary environment in Slovakia in 1998, which was due partly to the fear of currency devaluation among the population and partly to the way the monetary policy of the NBS was applied to mitigate the devaluation pressures (discrete restricting the access of commercial banks to the sources of refinancing), was reflected in the structure of the money supply in the form of a continued trend towards the preference for short-term deposits bringing high interest yields. As devaluation expectations grew, the interest of the population in securing the value of their money in foreign-currency accounts increased. During the first half of 1999, after the devaluation expectations eased, the interest of the public focused again on earning high interest yields on ultra-short-term deposits.

Despite a sharp fall in the value of the standard liquidity ratio (M1/M2), the liquidity characteristics of the M2 money supply increased, because of a corresponding increase in the share of short-term deposits in total time deposits. The adequate level of liquidity in the banking sector was ensured at the expense of increasing interest costs, which have more than doubled over the past two years.

Development of the internal structure of the money supply in Slovakia since 1997 indicates that microeconomic aspects (changes in the monetary behaviour of entities in the real economy, as well as the policy of commercial banks in asset and liability management determining the level of market-based interest rates) may bring various risks into the aggregate money supply, which pass unnoticed at a basic analytical level. For that reason, in addition to the analysis of main monetary aggregates and their standard components, a significant information value for the needs of monetary policy of the central bank is represented by the continuous monitoring and assessment of the time and sectoral structure of the money supply.