



NATIONAL BANK OF SLOVAKIA

FORMING OF THE MONEY SUPPLY IN SLOVAKIA IN 1993-1997
(Part III)

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Forming of the Money Supply in Slovakia in 1993-1997 (Part III)

Sectoral structure of deposits and its influence on the dynamics of M2

Specific characteristics may be identified within M2 in the holding of money in the main sectors contributing to the creation of money supply in the economy of the Slovak Republic -- i.e. the household and business sectors¹. There are sufficient amounts of data from bank statistics for an analysis of the sectoral structure of deposits, and for the share of both sectors in currency in circulation it is assumed that 70 per cent is held by households and 30 per cent by businesses. At the end of 1997, the share of households in the creation of total M2 money supply represented 66.7 per cent, and the share of the business sector (including insurance companies) was 33.3 per cent. If we exclude currency in circulation from further analysis², the share of households in the overall volume of deposits (the sum of demand and term deposits, and foreign currency deposits) at the end of 1997 represented 66.4 per cent and the share of the business sector 33.6 per cent (29.2 per cent of which were business deposits and 4.4 per cent were insurance company deposits).

It is evident that the two-third share of households³ in the M2 money supply is bound to give this sector an important function in the creation of M2 volumes. In addition it shows the characteristics of developmental dynamics of the aggregate. The cumulative data in Figure 1 (*tables and charts - see BIATEC Journal*) show that the development of deposits in both sectors differs significantly. Household deposits have a relatively steady growth tendency. Growth of deposits in the business sector was less even with marked periods of absolute decline.

Weights of sectoral characteristics of the development of deposits visibly influence the dynamics of M2. Household deposits have an important effect on M2 trends, while the business sector influences primarily short-term M2 fluctuations. The combined effect of changes in the growth rate of deposits of businesses and households, on the growth rate of M2 is shown in Figure 2. An extraordinary development, contradicting conclusions about the decisive influence of household deposits on the development of M2 occurred in the second half of 1997: as a result of a significant slowdown in growth of the volume of business sector deposits eventually leading to an absolute decrease, the dynamics of M2 deviated from the growth trend in household deposits and began to decline as well.

In the same way as development of total deposits, the character of the three main types of

¹ We are also monitoring the deposits of insurance companies within the business sector, because their separate analysis would not have a significant interpretative effect on account of the relatively low volumes.

² An evaluation of the development of currency in circulation in the Slovak Republic from the perspective of identification of consumer habits would at this point not yield worthwhile results, because the development of this narrowest monetary aggregate was hit by several shock effects of a nonfinancial (administrative) character: in 1993, there were the effects of the division of the former CSFR and the common currency, the division of the federal currency, stamping and gradual replacement by new Slovak banknotes, which caused sharp drops in the volume of currency in circulation in step with an independent Slovak currency. Another significant influence was the writing off of about SKK 6 billion at the end of 1994 (17.6 per cent of the volume of currency in circulation at that date), which may also be attributed to the settlement of errors that emerged during division of the federal currency according to the agreed 2:1 principle.

³ This share corresponds to the standard distribution of sectoral holding of financial assets within the definitions of broader monetary aggregates in developed economies. It was relatively stable in Slovakia over the monitored period, with the exception of 1993-1996, when it was somewhat lower, but the share of households remained above 60 per cent.

deposit -- demand deposits, term deposits, and foreign currency deposits -- depends primarily on the development of deposits of the sector which plays the most significant role in each group of deposits. It is clear from Table 1, that the household sector has a decisive influence on the development of term deposits and foreign currency deposits; businesses mostly influence the development of demand deposits.

The development of the share of deposits of households and businesses in the individual types of deposit depends above all on how the sectoral preferences of financial behaviour developed within the overall dynamics of deposits of each of the sectors. A more detailed analysis of the term structure of deposits in the household and business sectors is then, in fact the key to identification of the essential factors that contributed to the formation of the cumulative structure of deposits in Slovakia, and eventually to the main qualitative characteristics of M2 money supply.

The diversity of sectoral characteristics of the development of deposits stems from two factors, which, however, are to a great extent related. There are different attitudes on the part of households and businesses to the handling of money (different sectoral functions of demand for money), and the needs and access to loans as an additional or external source of financing differ as well.⁴

The motivations of households for holding money contain both a relatively strong transaction element to satisfy current expenses, together with a savings element with the function of conserving value (including conscious motive), which is intensified by the present conditions in our underdeveloped financial market (lack of opportunities for alternative placement of assets). The use of financial assets in the business sector tends to be motivated by transaction purposes and partial coverage of aims financed mostly by loans.⁵ Both sectors thereby use part of their deposits for "speculative" purposes corresponding to the situation on the money market; utilizing of the attractive interest rate differentials on various types of term deposit.

Household deposits

It may briefly be concluded from data in Table 2 that in the structure of household deposits the positive quantitative characteristics have strengthened -- crown time deposits maintained a relatively stable roughly two-thirds share, the share of foreign currency deposits strengthened significantly but not excessively, while on the other hand, demand deposits declined. However, here too on the basis of these figures we cannot speak about a significant reduction of the transaction component of money in favour of less liquid components.

Table 3 on the other hand shows that short-term deposits (up to 1 year) remain the most popular form of time deposit. This share (apart from the starting position at the end of 1992), until 1996, only slightly exceeded that of medium-term deposits. In 1997, however, as a result of strong growth in the volume of short-term deposits and a marked decrease in the volume of medium-term deposits, the difference between both groups of deposits widened to 20 points in favour of short-term deposits, and during the first three months of 1998 this gap grew by a further 10 points. It is alarming to note that if the year-on-year decrease of medium-term

⁴ The share of loans to households in the total volume of loans is minimal: over the past three years it has been in the range of about 5 per cent (5.5 per cent in 1997). The majority, or roughly 95 per cent, are loans to businesses.

⁵ Motivation of businesses to hold money is best explained by the portfolio theory. Also under standard conditions however, it applies that financial behavior of small companies with limited access to loans and weak engagement on the capital market has features similar to behavior of households.

deposits in 1997/1996 was SKK 1.4 billion, in the first quarter of 1998 alone the volume of these deposits fell by SKK 7.5 billion. This may be considered a significant change in the financial behaviour of households as far as keeping a certain stable volume of a "conscious" reserve money is concerned.

Long-term deposits had a permanent growth tendency with a significant upswing in 1995. This has led to marked increase in the share of these deposits in the total volume of time deposits of households (17.4 per cent at the end of 1997). However, it should be pointed out that building savings deposits constitute by far the largest part of these deposits (about 90 per cent).⁶

If we look closer at the changes that took place in 1997, Table 3 demonstrates that the entire annual growth of term deposits of households was achieved to some extent in long-, but to a marked degree in short-term deposits, accompanied by an extensive withdrawals of medium-term deposits. Information about preferences of households within the group of short-term deposits itself is provided in Table 4. Until 1996, the lion's share (about 90 per cent) consisted of deposits up to 1 year, and deposits with shorter duration did not play a role. During 1997 (particularly in the second half of the year), the share of deposits up to 1 year fell abruptly to 62 per cent at the end of the year, which means that almost 40 per cent of short-term deposits of households were deposits with a ultra short term.

The shift in favour of the ultra short form of deposits yields more importance in consideration of the following: the greatest growth was registered in deposits with a duration of up to 7 days (with a year- on-year growth index of 1960) and deposits with a duration of up to 1 month (growth index 2209); way behind were up to 3 month deposits (index 86). No significant year-on-year changes occurred in other short-term household deposits.

One important fact can be noted in an evaluation of the phenomenon of the sharp growth in short- term deposits of households in 1997: despite significant changes in the relationship between individual deposit terms, in absolute figures the longer-term deposits -- i.e. deposits up to 1 year -- remained relatively stable. However, the situation fundamentally changed in the first quarter of 1998; continuing intensive growth of short-term deposits (the share of deposits of up to 7 days to up to 3 months, in March reached 47.1 per cent) took place at the expense of a reduction in volume of deposits up to 1 year, the share of which in short-term deposits of households dropped during the first three months alone by 13 points (to 48.5 per cent).

If we recalculate the motivation components of financial behaviour of households according to the method used for the whole private sector⁷, we would arrive at results summarized in Table 5. The dynamic shift of interest to quick returns on short-term deposits suppressed savings as well as transaction motives in the financial behaviour of households. The share of the "speculative" component significantly increased in 1997, and the growth rate accelerated strongly in the first quarter of 1998, when it increased by another 6.4 points, i.e. 2/3 of its growth over the whole of last year.

Enterprises deposits

The contribution of enterprises to the creation of M2 money supply is about 1/3 of the volume of deposits and 30 per cent of currency in circulation. The importance of businesses

⁶ Incentives to open building savings deposits are not based on advantageous interest rates, nor on the 30 per cent state annual premium (only SKK 6,000 at most), but primarily on the possibility to draw interim loans during the contracted savings period. From the statistical point of view, this situation makes a unified calculation of yield from building savings deposits impossible.

⁷ See Part II of the article in Biatic 9/98, Table 4.

(or the total volume of money held by businesses) for the formation of M2 trends is substantially lower than the financial resources held by households.

The only group of deposits the development of which was dominated by business, was demand deposits, with an approximate 60 per cent share of the business sector, measured at the end of individual years. Here however, a certain overvaluation of this share should be allowed for because of irregular development of business demand deposits, the volume of which grows at the end of the year and then decreases.⁸

Therefore, in an evaluation of the structure of business deposits, midyear data (or data up to the end of June) appear more relevant, because it does not contain the cyclic motion element of demand deposits. For this reason, we are presenting pertinent data in Table 6 in six-month intervals. It is clear also from this overview that both in absolute numbers and relative figures (apart from the second half of 1997), the main component of business deposits was demand deposits. However, the share of term deposits permanently increased. The role of foreign currency deposits, despite their rapid growth, is substantially smaller compared with the household sector.

With growing volumes of time deposits, we again need to know how their term structure develops in the business sector: which is the relative significance of the savings factor and the creation of certain longer reserve funds, and how business reacted to the dynamic growth in interest rates in 1997. Table 7 shows that since 1993, short-term time deposits dominate business term deposits⁹, and that in a more distinct way that is the case with household deposits: while, in the case of households the difference between the share of short- and medium-term deposits in cumulative time deposits was only several (approx. 5) percentage points, in the business sector the share of short-term deposits was roughly double the volume of medium-term deposits (illustrative in 1994-1996). Another obvious difference compared with the household sector, is the negligible level of long-term deposits of the business sector.

The effect of rapidly growing interest rates on short-term time deposits in 1997, was less dramatic in the business sphere than in the household sector, because business in previous years more frequently used (very) short deposits (Table 8). Deposits with a duration of 7 days to 3 months have prevailed since 1996, with an absolute dominance of deposits up to 1 month. The share of deposits up to 1 year decreased to 11.02 per cent in March 1998.

Summary

Measuring the volume of money in an economy using cumulative aggregates of money supply (M2, M3, etc.) presupposes identical properties of all structural components of the chosen aggregate. This approach does not allow the interpretation of significant reactions of financial behaviour of economic entities to changes in interest rates on individual components of financial assets accumulated in the given aggregate. In cases of dramatic changes in financial behaviour induced in this way, significant changes may occur within the cumulative aggregate of money supply in the proportions of its individual components, which will greatly alter its properties.

⁸ This is due to administrative procedures in the business sector and financial flows: increased accumulation of business revenues at the end of the year causes a significant growth in demand deposits, while payment of taxes at the end of March results in diminishing volume of these deposits at the end of the first quarter of the subsequent year.

⁹ The unique situation at the end of 1992 is primarily associated with various financial operations in the business sphere shortly before the dissolution of the former CSFR, along with unclear outlook and expectations surrounding the economic development of the independent Slovak Republic from 1993.

As development in Slovakia since 1997, has shown, behind the seemingly positive trends in the formation of the internal structure of the M2 aggregate, founded on the formal premise that with a growing portion of its less liquid component (quasi-money) the stability attributes improve in the entire money supply in the economy, there is a quite distinct opposite trend towards destabilization and deterioration in its term structure.

The analysis of term and sectoral structure of money supply in the Slovak Republic with emphasis on development in 1997, has shown that, as a result of the sharp growth of interest rates on ultra short- term deposits within the structure of term deposits (as the main component of quasi-money), the portion of ultra short-term deposits, and within them deposits with a duration of less than 1 year, has significantly increased.

Households have had a decisive influence on this development, considering its two-third share of total money supply resources, as well as the truly fundamental shift in its financial behaviour towards massive transfers of deposits with less yield (demand deposits, but also to a growing extent medium- term deposits and deposits with a one-year period of notice) to short-term deposits, since the second half of 1997.

The deterioration in the term structure of deposits entails a deterioration in the quality of resources to finance lending activities of commercial banks. A by-product of this development is the high volume of regularly paid interest, which is an additional source of money supply growth in the economy, and also a factor potentially threatening monetary policy goals of the NBS in the area of regulating money supply.

Hence, the microeconomic implications (changes in the financial behaviour of entities in the real economy, as well as the policy of commercial banks in the management of assets and liabilities that determines the level of interest rates in the market-place) may significantly change the internal characteristics of the cumulative money supply aggregate and introduce a significant degree of instability and risk elements into its structure. Cumulative money supply aggregates (created by the "sum-up" method) are an important standard component of the methodological set of instruments used by every central bank. However, since they are unable to interpret microeconomic associations influencing their formation, it is desirable, along with the above standard measurement of money supply, to also use alternative approaches based on differently constructed monetary aggregates and with a greater emphasis on sectoral characteristics of financial behaviour.

The results of this analysis provide a stimulus to attempt to find alternative measures of money supply for Slovak conditions, which could be the subject of future research in this area.¹⁰ Monetary aggregates constructed with the emphasis on the motivation for holding financial assets could contribute to identifying some of the relevant factors and facts that cannot be interpreted by M2 money supply reported in a standard way.

¹⁰ As a lesson in sectoral analysis of a broad money aggregate may serve case studies of Great Britain by R. Thomas. See: THOMAS, R.: Understanding Broad Money. Bank of England. Working Papers 36/1992, No 2. ; THOMAS, R.: The Demand for M4: A Sectoral Analysis. Part 1 - Personal Sector. Bank of England. Working Paper Series No 61, June 1997.; THOMAS, R.: The Demand for M4: A Sectoral Analysis. Part 2 - The Corporate Sector. Bank of England. Working Paper Series No 62, June 1997. Another approach worth to follow represent the index method, as e.g. the Divisia indexes described in: FISHER, P. - HUDSON, S. - PRADHAN, M.: Divisia Measures of Money. Bank of England. Quarterly Bulletin, May 1995, pp.240-255.