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MIROSLAV BEBLAVÝ:

# Exchange Rate and Exchange Rate Regime in Slovakia

## Recent developments

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# 1. INTRODUCTION

This paper is concerned with exchange rate regime and exchange rate developments in Slovakia. In all parts of it, progressively more attention is paid to more recent developments though the less recent experience can also provide very valuable lessons, particularly about the fixed exchange rate.

The paper begins with a review of institutional factors that impinge on exchange rate developments, namely the interaction between the exchange rate and the central bank independence. It then deals with monetary policy in Slovakia and its results over the 1993 - 2001 period.

However, the core of the paper is about the exchange rate itself. The section on exchange rate contains both some data on the exchange rate developments as well as their basic statistical analysis. It then follows with three analytical parts: on the 1993 devaluation, on the 1996 - 1998 period of increasing imbalances and ultimate breakdown of the peg and on the new 1998 - 2001 period of a floating exchange rate. Conclusions and some lessons are drawn in the end, together with preliminary thoughts on the path to EMU.

The paper has been developed as a country study independently of a more general paper on the overall foreign exchange rate policy and strategy in Central Europe, which is also a part of this project.

# 2. INSTITUTIONAL FACTORS - CENTRAL BANK INDEPENDENCE AND FOREIGN EXCHANGE RATE

The relationship between the state/government and the central bank is one of the most important factors influencing monetary policy. There is a basic consensus among monetary economists that central bank independence from the government has, *ceteris paribus*, positive effects - lower inflation can be achieved without negative consequences such as lower levels of economic growth. We refer the reader to the most highly respected analyses, which include Grilli, Masciandaro, and Tabellini (1991), Cukierman (1992), Alesina and Summers (1993) and Eijffinger and Schaling (1993). However, there is less interest and consensus on foreign exchange rate management and its relationship to central bank independence.

In analysis of the Slovak case, our estimates of values of central bank independence based on two most respected indices - by Grilli, Masciandaro, and Tabellini (1991) and Cukierman (1992) – are presented. We have determined these values in earlier research and, due to constraints of space, we do not provide detailed analysis of the research process. We refer readers to Beblavý (1999a).

It should be noted that both indices suffer from the problem of the so-called interpretation spread. This was pointed out by Mangano (1988, p. 477). His research showed that different scores could be assigned in various categories due to imprecisely defined criteria. Specifically, in the case of NBS independence, the interpretation spread for political

independence reaches 2.3, with the possible values ranging from 4 to 6.3 (maximum value is 8). The criteria for economic independence of NBS are straightforward and the index reaches the value 5 (maximum value is 7). Using Cukierman's criteria, the independence index of NBS reaches 0.71 - 0.83 (out of a maximum of 1).

Based on this, National Bank of Slovakia has a high degree of independence even compared to central banks in industrial countries.

For a small open economy, framework for exchange rate management is of great importance for actual central bank independence, but this is not reflected in the indices. One can find explanation in the Mas' statement that in no country has the "exchange rate policy been turned over entirely to the central bank." (Mas (1994), p. 16) Even though this statement is not true, it provides an explanation - if central bank independence in exchange rate policy is extremely rare, creators of central bank independence indices did not include it into indices, as it would have little explanatory power.

Complete central bank autonomy in determining the exchange rate policy exists in Slovakia and until the year 2000 recently existed in the Czech Republic. Central bank statutes in the Czech Republic and Slovakia state identically (based on the previous State Bank of Czechoslovakia Act) without any caveats that the central bank "shall... state the exchange rate of the Czech/Slovak crown in relation to foreign currencies"(see Article 28 of National Bank of Slovakia Act and Article 35 of the Czech National Bank Act).[2]

This difference in legal provisions would not be important if it remained on the paper. Due to political sensitiveness of foreign exchange decisions, there might be an unwritten convention that requires at least the approval of the government. Even if no such convention exists, it can be preferable for central banks to occasionally seek political cover for such decisions even if they have the authority to do so. The reason is that changes in the exchange rate regime can be associated with a foreign exchange crisis and wider economic and political turmoil (the causality can run both ways in this case). In that case, joint decision is a way of protecting the central bank from subsequent government criticism.

However, Czech and Slovak central banks repeatedly used their power to determine exchange rate to set exchange rate policy autonomously, occasionally despite government resistance. Occasions when this happened in Slovakia can be distinguished into several groups:

- decisions to preserve fixed exchange rate and use foreign exchange rate interventions to preserve it. Both countries inherited the fixed exchange rate from Czechoslovakia, but in neither case did the governments of the successor states ever made decisions concerning its preservation. On the other hand, NBS had to intervene to preserve fixed exchange rate in the spring of 1997 and summer of 1998. In 1993, the National Bank of Slovakia even resorted to administrative measures that partially restricted convertibility of the currency to defend the fixed exchange rate

[2] in the Czech case, this was complemented in 2000 by an amendment, which provides for Czech National Bank to determine the foreign exchange rate regime „after agreement with the government", thus indirectly confirming its autonomy before this amendment

- decisions to alter the fixed exchange rate and to float the currency. NBS took decisions that in crucial ways altered the fixed exchange rate regime and, in the end, took decision to abolish it. In neither case was formal government approval sought; on the contrary, there are instances where senior government figures publicly stated their opposition. In July 1993, NBS devalued crown by 10 % despite statements by then Finance Minister Julius Toth that "banking council cannot make a decision about the devaluation of the currency without consulting the Slovak government". (CTK, 15/02/93 - Opinions differ on potential devaluation of Slovak currency) There were other crucial decisions where there was no government opposition, but the government approval was not formally sought - e.g. widening of the band in the Slovak case in 1996 or the decision to float the currency in October 1998

- decisions to intervene in the foreign exchange market after the currency was floated. Since the currency float, NBS has infrequently, but repeatedly openly intervened in the foreign exchange market against the currency, but also in its support. In addition to that, they used 'covert' intervention in the form of direct purchase of foreign or domestic currencies from commercial banks. Again, in no case was formal approval or agreement of the government sought.

Previous paragraphs demonstrated that central bank autonomy in foreign exchange policy or its lack matters in the sense that Slovak central bank took decisions that were significant and in several cases openly opposed by the government. However, it also points to an unclear division of responsibilities for macroeconomic (and foreign exchange policy). Foreign exchange rate management is an inherent part of monetary policy. Therefore, central bank independence is limited when the government determines foreign exchange rate policy. If the central bank is independent and responsible for foreign exchange management, its responsibility is clear. However, monetary policy cannot sustain macroeconomic stability without support of the fiscal policy or against very strong countervailing pressure from the fiscal policy. Responsibility of the government for foreign exchange rate policy is a way of involving it in the responsibility for the developments of the exchange rate, which is a politically sensitive issue in most countries.

Exchange rate has also another sort of relationship with central bank independence. Cukierman, Webb and Neyapti (1992) indicated that the exchange rate regime can be important for inflation outcomes by saying that some countries had lower inflation in 1980s "than their central bank independence would indicate, because their monetary policy is dominated by a policy rule fixing their exchange rate to a relatively stable currency." (Cukierman, Webb and Neyapti (1992), p. 382) This was complemented by Anyadike-Danes (1995), who showed that for countries with pegged exchange rates, "the connection between central bank independence and the country's inflation performance was much weaker than in countries where no such rule was in place." (Anyadike-Danes (1995), p. 339) In other words, a peg can replace central bank independence as a form of commitment, which is consistent with research on monetary policy. However, Slovakia does not provide us with a good example of this as its central bank has been both very independent and also pursuing a fixed exchange rate for most of its tenure.

## 3. MACROECONOMIC DEVELOPMENTS AND MONETARY POLICY FRAMEWORK

On January 1, 1993, the independent Slovak Republic was formed. Five weeks later, on February 8, 1993, the Czecho-Slovak monetary union split and NBS began implementing a fully independent monetary policy. Within it, NBS had to struggle with the following problems: low foreign exchange reserves, continuing economic recession, relatively high inflation caused by the introduction of a new tax system (mainly a value-added tax), low credibility of the new state abroad and zero credibility of monetary policy stemming from the existence of a new central bank. Less than three years from its formation, the independent Slovak Republic had one of the lowest levels of inflation among transition economies, one of the highest levels of economic growth, satisfactory foreign exchange reserves and full current account convertibility. NBS achieved fairly high credibility (see OECD (1996) and OECD (1999)).

Over the 1994 - 1998 period, Slovakia achieved a very high GDP growth and single-digit inflation rate (see Table 1 for data). There were two principal groups of reasons for this achievement. The first group includes the existence of a fixed exchange rate and a long-standing culture of low inflation. In the second, less benign group, two complementary factors should be included. One is a near-freeze in regulated prices and the other an increasing internal and external imbalance evidenced by a very high current account deficit and very restrictive monetary policy.

After the parliamentary elections of 1998, a new policy of stabilization and rapid structural reforms began, which relieved these imbalances at the expense of increased inflation and slower GDP growth. However, by the end of 2000, both indicators began to improve again. This section is concerned with monetary policy and its relationship with macroeconomic developments over the 1993 - 2001 period. Emphasis is placed on the 1998 - 2001 period.

Table 1
**Basic macroeconomic data**

| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|---|
| **GDP growth, %** | -37 | 4.9 | 6.9 | 6.6 | 6.5 | 4.4 | 1.8 | 2.2 | 3.0 |
| **Unemployment, %** | 14.4 | 14.8 | 13.1 | 12.8 | 12.5 | 15.6 | 17.7 | 18.6 | - |
| **Inflation rate, %** | 23.2 | 13.4 | 9.9 | 5.8 | 6.1 | 6.7 | 9.4 | 12 | 7.5 |
| **Net exports** | -5.5 | 5.2 | 1.8 | -12 | -10.3 | -11.2 | -4.9 | -2.6 | - |

*Source:* Statistical Office of the Slovak Republic, National Bank of Slovakia
*Note:* GDP growth is in constant prices, inflation rate is the average annual inflation rate and net exports are ratio of net exports to GDP

## 1993 - 1998

When looking at monetary policy after split of Czechoslovakia, we have to keep in mind the dilemma faced by NBS in the first years of existence of the independent Slovak Republic. High inflation, low credibility of both fiscal and monetary policy of the new state, low foreign exchange reserves, relaxed fiscal policy, and the consequent deficit of the current account of the balance of payments triggered pressures for further internal (inflation) and external (devaluation) depreciation of the currency.

After initial steps including 10 % devaluation (see the section on foreign exchange developments), the end of 1993 marked a turning point in Slovakia's economic situation. In 1994 and 1995, the economy saw high levels of growth relative to the rest of the region. During this period, NBS did not focus on aggressive disinflation, but instead accommodatingly allowed the economy to grow, concentrated on eliminating some administrative barriers, and accumulated foreign exchange reserves. If we compare the inflation in 1992 with the inflation in the years 1994 and 1995, we can see that after the effect of the aforementioned changes in 1993 subsided, inflation gradually returned to 1992 levels (especially if the inflation is cleansed of volatile food prices, which are to a large extent determined by the supply-side factors).

In the external area, it is hard to object to NBS's actions, since they led to a gradual liberalisation of the foreign exchange regime along with a concurrent rise in foreign exchange reserves. This liberalisation led to the stabilisation and gradual decline of the level of dollarisation, which had not been very high anyway (see Beblavý (1999b).

It is more difficult to assess the internal impact of monetary policy, particularly in 1995. Understandably, after several years of a transitional recession, NBS saw as one of its targets "a growth-promoting monetary policy set within the frame of anti-inflationary intentions." (NBS (1996), p. 14) The target was successfully met in 1994 and 1995 when simultaneously with rapid GDP growth, the inflation declined. But monetary policy affects inflation with a one-year and in some countries even a two-year lag. This raises the question of whether NBS, through its pro-growth policy in 1995, did not sow the seeds of future internal and external imbalances, which had to be dealt with through heavily restrictive policies in the years 1996-1998? The question is also raised by an analysis of real interest rates in Slovakia in 1995 and overall monetary policy in Slovakia during this period. In 1995, inflation in Slovakia was already at fairly low levels, but throughout the year, real interest rates remained negative (the only such period between 1993-1999). This implies an even larger decline of nominal rates. This event was of great importance in this period due to the open character of the Slovak economy and a fixed exchange rate. We can thus speak of a significantly expansive monetary policy.

In 1996, particularly in the second half, the fiscal policy became sharply expansive (see for example Mikloš and Žitňanský (1997) and NBS (1997)). The years 1996 to 1998 in Slovakia then saw a textbook example of a conflict between monetary and fiscal policy. The state's budgetary policy was heavily expansionary and accompanied by a twin deficit (high fiscal deficit and high deficit in the current account of the balance of payments). Monetary policy, in contrast, turned from the second half of 1996 towards a policy of relative restriction. This

was seen as a way to prevent to prevent the imbalances from having negative consequences on the real economy. Although up until the year 1998 this policy successfully prevented the imbalances from turning into a full-fledged economic and financial crisis, it failed to resolve them - many of them actually deepened as a result. It could be argued that monetary policy has only limited instruments at its disposal unless it is co-ordinated with fiscal policy. In spite of this, it can be argued that NBS could have and should have taken the step that it took when forced by events in October 1998 - the abolition of the fixed exchange rate. However, this argument is explored in more detail in section on foreign exchange rate developments. For the purposes of this section, it is sufficient to say that even a restrictive monetary policy could not have preserved macroeconomic stability and a fixed exchange rate beyond parliamentary election in 1998. On October 1, 1998, the National Bank of Slovakia floated the currency.

## 1998 - 2001

After abandoning the peg, NBS gradually switched from an exchange-rate-targeting regime to a new one. Its shape has not been altogether clear though.

The 1999 Monetary Program stated: "NBS will target net inflation[3] at the level of 5 - 7 %, while anticipating a primary effect on the overall consumer price index of about 2 percentage points for every average 10 % increase in regulated prices. NBS will only influence secondary effects of price deregulation, in the sense of acting against "price contagion"." (NBS (1998), p. 2)

The monetary program thus contained an expression "target net inflation". In the 2000 Monetary program, NBS stated that "development of headline inflation will be a subject of predictions, while the core inflation will gradually become a target of NBS." (NBS (1999), p. 3) These statements led several authors (Beblavý (2000), Dufek and Ódor (2000), Tóth (2000)) to assume that the current monetary policy framework in Slovakia is inflation targeting, similar to regimes implemented in the Czech Republic and Poland.

Inflation targeting has distinct features aside from publishing an inflation target. The following can be identified as the most important ones (see Almeida and Goodhart (1998), Bernanke and Mishkin (1997), Bernanke et al. (1999), Leiderman and Svensson (1995)):

- absence of other targets or their clear subordination to the inflation target
- institutional commitment to price stability as the long-term objective of monetary policy
- higher level of communication between the central bank and the public and higher level of transparency of monetary policy
- increased accountability of central bankers

Monetary policy of NBS exhibits several features that point to inflation targeting. NBS does not have any other targets and began to communicate more with the public. On the other hand, there is no increased accountability and NBS has not stated what is the horizon for

[3] net inflation covers non-tradables without regulated prices and tradables without food – 55 % of CPI, while core inflation consists non-tradables without regulated prices and all tradables – 82 % of CPI

reaching price stability or at least low inflation. NBS has not begun to publish inflation report. NBS officials point to the 2000 Monetary program, which states that core inflation will become an explicit target only in few years. According to these positions, NBS cannot at the moment take responsibility for the inflation development due to turbulent and unpredictable environment.

In conclusion, NBS probably does not implement any of the four major monetary policy frameworks (exchange rate targeting, inflation targeting, monetary targeting and nominal GDP targeting). Its policy can be characterised as implicit inflation targeting with a significant amount of discretion as opposed to constrained discretion of inflation targeting.

What were the results of such monetary policy?

Chart 1 shows year-on-year CPI inflation and chart 2 shows month-on-month CPI inflation between 1998 and 2001

[Chart 1 - see appendix on page 25]

[Chart 2 - see appendix on page 26]

Together they show that after three years of CPI inflation between 5 and 7 %, inflation increased steeply during 1999 and 2000, particularly between July 1999 and July 2000 when it was above 14 %. This was caused primarily by high increases in regulated prices, increases in indirect taxes, reintroduction of import surcharge and depreciation of Slovak crown. However, once the one-time shocks related to these factors disappeared, inflation fell substantially and returned to previous levels. Distinction in the charts allows to see clearly that increase in inflation is related to temporary phenomena and in particular to four increases in regulated prices and indirect taxes – January 1999, July 1999, February 2000 and January and February 2001.

The key issue is why did such relatively drastic shocks left such a small impact beyond the first-round effects? Why was there no change in medium-term inflation expectations?

The answer lies in the following three factors. Between 1998 and early 2000, the Slovak economy witnessed a significant weakening of domestic demand pressures. Growth slowdown and delayed microeconomic restructuring manifested themselves in rapidly increasing unemployment, decrease in real wages and related increase in uncertainty. Decrease in household consumption and even more drastic decrease in investment limited the extent to which producers and sales institutions could pass on increase in their input prices. Decrease in real wages strengthened competitiveness of producers and allowed them to bear part of increased costs of other inputs. These factors were reinforced by an experience of relatively low and stable inflation in the 1996 - 1998 period. Last but not least, NBS had managed to build a reputation of an antiinflationary and credible institution.

These factors allowed the central bank to significantly loosen monetary policy. A dramatic decrease in government demand for domestic savings and decrease in bank interest for other than risk-free lending activities accompanied economic slowdown. This was caused by decrease in general government deficit as well as shifting some of its financing to foreign

markets and by bank restructuring. All of this resulted in steep fall in interest rates without a corresponding steep increase in lending (which was the case in 1995). This fall is shown in Chart 3, which contains developments in 1-year interbank money market rate in Slovakia, BRIBOR, since 1993.

[Chart 3 - see appendix on page 27]

These factors began to weaken during the second half of 2000 and the first half of 2001.Table 2 shows development of some macroeconomic indices during this period. GDP growth began to accelerate during 2000 and 2001 and household consumption and investment began to grow again by the final quarter of 2000 and the first quarter of 2001. At the same time, employment and real wages also began to grow. On the other hand, fiscal deficit stabilised and then increased, together with renewed sharp growth of current account deficit. The overall economic rebound limited potential for further loosening of monetary policy.

Table 2
**Macroeconomic developments, 2000 – 2001**

| | 1Q 2000 | 2Q 2000 | 3Q 2000 | 4Q 2000 | 1Q 2001 |
|---|---|---|---|---|---|
| **GDP growth** | 101.5 | 101.9 | 102.5 | 102.9 | 103.0 |
| **household consumption** | 93.6 | 92.3 | 98.1 | 102.4 | 104.0 |
| **Investment** | 100.5 | 92.0 | 107.1 | 99.5 | 116.2 |
| **Employment** | 97.1 | 97.9 | 99.1 | 100.2 | 101.3 |
| **Wages** | 93.9 | 91.6 | 96.2 | 98.2 | 100.6 |
| **current acc. deficit** | -2.8 | -4.0 | -0.7 | -25.3 | -14.9 |

*Source:* Statistical Office of the Slovak Republic, National Bank of Slovakia
*Note:* same period of previous year = 100, except for current account data, which are in SKK bln., gdp, consumption, investment and wage data are real

## 4. FOREIGN EXCHANGE RATE AND FOREIGN EXCHANGE RATE REGIME IN SLOVAKIA

The exchange rate in Slovakia (and Czechoslovakia) was occasionally subject to dramatic developments, but in comparison to other transition economies, it evolved in a relatively calm and stable manner.

The exchange rate of the crown was originally fixed against the following basket of five currencies: USD 49.06 %, DEM 36.16 %, ATS 8.07 %, CHF 3.79 %, and FRF 2.92 %. On July 10, 1993, the currency was devalued by 10 % against the basket. The basket was simplified on July 14, 1994, when it was narrowed to include only two currencies - 60 % the Deutschmark and 40 % the U.S. dollar. The exchange rate was set in this way until October 2, 1998, when the fixed exchange rate for the crown was abandoned. Since then, the Slovak crown floats freely based on trading on the foreign exchange market. Since January l, 1999, the National Bank of Slovakia has been using EUR as the reference currency.

The Czechoslovak crown was devalued several times in the second half of 1990 in order to reduce the differential between the official and the parallel black market exchange rate, and to create the requisite conditions for the introduction of internal convertibility of the crown on January l, 1991 (Svejnar, 1993, p. 33). The introduction of internal convertibility meant unrestricted access to foreign currency for all domestic legal entities for commercial purposes and, to a limited degree, also for individuals. The exchange rate regime has been gradually liberalised through the abandonment of administrative restrictions. This action preceded the introduction of full current account convertibility on October 1, 1995. The capital account also has undergone gradual liberalisation, though some minor restrictions still remain in place. These should be resolved by the date of EU entry.

This section, which forms a core of the paper, will deal with those developments over the 1993 - 2001 period, which can contribute to a discussion on alternatives for exchange rate in advanced transition countries. After basic quantitative analysis of developments in the foreign exchange rate, the following two parts deal with the period of a fixed exchange rate, with the focus on reasons and consequences for the 1993 devaluation of the Slovak crown and on issues related to persistence of the peg in the 1996 - 1998 period, when its costs arguably outweighed its benefits. Final part is concerned with the period of floating exchange rate and its interplay with the overall monetary policy.

Table 3 shows two basic statistical indicators of change and volatility in the foreign exchange rates. It includes the USD rate and the DEM rate.

Table 3
**Statistical indicators of volatility and change in the foreign exchange rates**

| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|
| **Standard deviation of daily change of SKK FX rate** | | | | | | | | |
| **DEM** | 0.736773 | 0.264527 | 0.297409 | 0.184162 | 0.324788 | 0.604673 | 0.369262 | 0.273552 |
| **USD** | 0.791621 | 0.336496 | 0.484661 | 0.267649 | 0.390816 | 0.692206 | 0.686441 | 0.810972 |
| **Mean of daily change in SKK FX rate** | | | | | | | | |
| **DEM** | 0.030574 | 0.016742 | 0.011515 | -0.00228 | -0.0209 | 0.051424 | -0.00585 | 0.01407 |
| **USD** | 0.056384 | 0.02241 | -0.02042 | 0.029263 | 0.033966 | 0.025152 | 0.054245 | 0.047288 |

Source: National Bank of Slovakia, calculations by author

Chart 4 shows the monthly exchange rate developments for ECU/EUR, USD and the composite currency[4]

[Chart 4 - see appendix on page 28]

The table shows that floating currency is not associated with any increase in very-short-term or short-term volatility of the Slovak currency vis-à-vis the Deutschmark or any change in the level of the foreign exchange rate vis-à-vis the Deutschmark except for the one-time

[4] with a currency basket of 40 % for USD and 60 % for DEM. The composite indicator reflects the currency basket used during the period of fixed exchange rate

change after floating the currency. On the other hand, volatility and level of the Slovak currency vis-à-vis the US dollar increased significantly. This indicates that while fixed currency cushioned changes in the US/DEM rate and split them nearly equally between the exchange rate of the Slovak currency vis-à-vis these two currencies, floating currency allowed realignment of the Slovak currency towards EUR.

## 1993 devaluation

It became obvious soon after the dissolution of Czechoslovakia on January 1, 1993 that due to high expectations of devaluation early in 1993 and low foreign exchange reserves, the exchange rate of the crown was unsustainable given the prevalent degree liberalisation of the foreign exchange market and transactions. NBS responded with a series of administrative measures, mainly involving limits to banks' access to foreign currency funds (NBS, 1994, p. 47) and delaying payments for imports. This approach alone could not achieve success, because it could not increase confidence in the Slovak crown. The low levels of credibility and foreign exchange reserves were not the only problems: the fiscal deficit and external deficits were also an issue. The aforementioned administrative measures amounted to de facto restrictions on internal convertibility, which could only temporarily moderate the effects of these problems, but not resolve them. A purely administrative solution would have led to a further deepening of the imbalance and a gradual backsliding on foreign exchange regime liberalisation.

On the other hand, a pure “market” solution - a drastic devaluation to the tune of 20 to 40 % - presented some major risks. Due to the one-time character of the price level increase in January 1993, inflation was expected to stabilise at the level reached in 1992 - around 10 % - relatively rapidly as long as the exchange rate remained unchanged. A major devaluation would have probably resulted in a sharp increase in inflation due to the openness of the Slovak economy. This would have piled a more significant inflation impulse on top of the one-time impulse from the beginning of the year. The result would have probably have been a sharp rise in medium-term inflationary expectations with subsequent problems for economic policy along with erosion of gains from the sharp devaluation. Besides, in a country with undeveloped financial markets and low foreign investment inflows, increased monetary risk posed a threat of sharp foreign exchange and financial market volatility.

Therefore, the combination of instruments chosen in 1993 by the National Bank of Slovakia - administrative tools combined with a 10 % devaluation - can be considered a suitable choice, as evidenced by the fact that the crown's exchange rate was sustained and most administrative measures were eliminated as early as in December 1993. This rate was then sustained until October 1998.

## 1996 - 1998: too much peg for too long

A fixed exchange rate can be very useful in the initial phases of transition when the need for a nominal anchor prevails over the drawbacks of a fixed exchange rate. In Slovakia's case, three basic arguments support this assertion:

- a fixed exchange rate is an unambiguous demonstration of the government's determination to keep inflation down;
- a fixed exchange rate helps economic entities by serving as a nominal anchor for setting prices and wages, especially in an economy with such high degree of openness as Slovakia's;
- fixed exchange rate as a monetary policy target is transparent, popular and easy to check for the public.

According to Sachs (1996), transition countries that have adopted a fixed exchange rate policy have experienced significantly lower inflation without noticeable output losses when compared with other post- communist states. However, he emphasises that in order to maintain a fixed exchange rate in the long term, the economy must have a high structural, price and wage flexibility and that transition economies generally do not have such flexibility. With few exceptions, long-term use of a fixed exchange rate is, in his view, not suitable for transition economies. (Sachs, 1996, pp. I50-1)

A fixed exchange rate, as mentioned above, is traditionally supposed to instill discipline into macroeconomic policy - both on the fiscal and monetary side. The rationale is that if the discipline is not there, the peg will not hold and all participants know it. However, while this is undoubtedly true in the medium-term, it is not necessarily true in the short term. According to Mishkin (1999), the drawback of a fixed exchange rate is that it "removes the signal that, with a floating exchange rate, the foreign exchange market gives every day on monetary policy." (p. 582) The government can conduct excessively expansive fiscal policy or the central bank can evoke excessively expansive monetary policy without any short-term effect on the exchange rate, until the situation becomes unsustainable and a currency crisis breaks out. This is particularly relevant for emerging market economies with a volatile level of integration in the world financial markets, where the penalty for overly expansive policies might not be immediate or does not necessarily come in the form of speculative attack. This is even more relevant if the central bank is independent.

In this context, we can contrast the situation in the foreign exchange market under Mečiar's (1994-1998) and under Dzurinda's (1998-) government. The fixed exchange rate made possible three years of significantly expansive fiscal policy that led to a crisis, a significant depreciation of the currency and a slowdown in economic growth. In contrast, the floating exchange rate gave a signal very fast that reforms were progressing too slowly through the crown's dip in May 1999 - after a series of austerity measures, it recovered very fast.

Coming back to the 1996 - 1998 period, fiscal policy was significantly expansive, to which monetary policy responded by strong tightening. However, the imbalance was so significant that the restriction was ultimately not enough. NBS could have theoretically used an even more restrictive monetary policy to resolve the imbalance, prevent an overheating of the economy and the deepening of internal and external imbalances. However, real interest rates were already extremely high - for instance, at the beginning of April 1997, ex post real interest rates in Slovakia reached 13.1 %, while in Czech Republic in the same period they

were 5.3 % and in Hungary 1.5 %.[5] A further rate increase would have particularly affected the credit position of the state, which during the 1996 to 1998 period had drained away most domestic savings. But the state displayed low levels of elasticity of demand to interest rate even in the following period and it was unlikely that an interest rate increase would have altered its behavior.

High interest rates were already causing distortions in the economy through the general phenomenon of adverse selection, when rising interest rates attract applicants with higher-risk or rent-seeking projects. In addition, unevenly distributed access of economic entities to foreign currency credit posed an even more significant distortion. These loans were available primarily to larger entities and to ones with a government guarantee. A stricter monetary policy would have exacerbated this imbalance.

In general, more recent works in the area of relationship between fiscal, monetary and foreign exchange policies emphasise the importance of a moderate fiscal policy for the monetary regime especially in the case of a fixed exchange rate. Canzoneri and Diba (I996) and Canzoneri, Cumby and Diba (1998) also explain theoretically why even an independent central bank cannot maintain low inflation and a fixed exchange rate if the government is not restricted in the size of the public finance deficit.

Fixed exchange rate carries another disadvantage in terms of its complicated relationship to the equilibrium exchange rate for the currency. As Halpern and Wyplosz (1997), among others, show, the equilibrium exchange rate shifts significantly in the course of transition due to radical structural changes in the economy. A floating exchange rate allows the foreign exchange market to seek an equilibrium value, although it can hardly be argued that the market is at all times close to this exchange rate. But with the exchange rate fixed, real currency appreciation of the currency can easily occur (based on higher inflation that in the countries of the reference basket currencies). Significant deviations from the (unknown) equilibrium value and subsequent loss of foreign trade competitiveness resulting in a foreign trade deficit problem and macroeconomic imbalance can accompany this. During 1999, the exchange rate of the freely floating Slovak crown oscillated in the interval between 42.3 SKK/EUR to 47.3 SKK/EUR. This approximately corresponds to a 10 % - 23 % deviation from the former central parity[6]. We have pointed out that it is extremely difficult to determine the currency's equilibrium exchange rate under such rapidly changing and transitive conditions.

Tóth (1999) made an attempt to calculate it, working under the assumption that no significant changes in the structural relationships justifying a change in the equilibrium exchange rate occurred in the years 1995-1999. If we accept these assumptions, it appears that in 1997 and 1998 (before the fixed exchange rate was abandoned) a significant real overvaluation of the crown took place. Jointly, these indicators show that the equilibrium level for the Slovak crown was lower than the fixed exchange rate already in 1998. NBS interventions validated this. The bank intervened in December 1999 against the crown,

[5] ex post real interest rates were calculated by deflating nominal interbank interest rates in the period by year-on-year CPI inflation in the same period.

[6] we are providing only an approximation, since the original parity was against a basket composed of the DEM (EUR) and the USD

approximately at the 42.3 SKK/EUR level, or about 10 % above the former central parity, thus confirming, that even the bank considered ex post that the former central parity was unsustainable.

A very important issue is the procyclical tilt of the fixed exchange rate and moral hazard associated with the fixed rate. Fixed exchange rate is most likely to be devalued/abandoned in times of economic problems or downturn (the direction of causality is probably different in individual cases). As Mishkin ((1999), pp. 584-5) explains, currency uncertainty makes it much easier for many nonfinancial firms, banks and governments in emerging market countries to issue debt if the debt is denominated in foreign currencies. With a fixed exchange rate, depreciation of the currency is a highly nonlinear event because it involves devaluation. In emerging market countries with debt contracts denominated in foreign currency, devaluation of the domestic currency causes the debt burden of domestic firms to increase significantly. "On the other hand, since assets are typically denominated in domestic currency, there is no simultaneous increase in the value of firms' assets. The result is that a devaluation leads to a substantial deterioration in balance sheets and a decline in net worth, both for nonfinancial firms and financial firms," which in turn leads to reduced credit activity, investment and economic slowdown (Mishkin (1999), pp. 584-5).

Effects of this phenomenon are reinforced by the fact that it may encourage domestic firms and financial institutions to issue foreign denominated debt in large quantities. This scenario took place in Slovakia during the years 1996-1998, especially in connection with foreign currency loans to large firms such as Slovnaft and VSŽ, and as well as by direct and indirect foreign currency loans granted to the state (government eurobonds, government-guaranteed loans for state-controlled enterprises). It is not coincidental that the relative economic contraction in Slovakia in 1999 was led by the state, a state that was suffering from a growing debt burden.

Last but not least, even though contagion effects exist in emerging markets, importance of domestic forces should not be underestimated. Especially with smaller, less liquid markets, the speculation often manifests itself in absence of speculators or their presence can be neutralised more effectively by the central bank in such markets. Therefore, in case of Slovakia, domestic forces and their lack of trust in the currency ultimately led to collapse of the peg, not foreign speculation.

## 1998 - 2001

Floating currency raised several issues, which had not existed or had not been as prominent under the fixed exchange rate regime. The most important issue has been - to what extent should the float be managed and how to implement the managed float without damage to credibility of monetary policy, but also without inviting speculative pressures? Within this framework, two specific questions arose. A floating currency coincided with major changes in the crucial external exchange rate for Slovakia - the EUR/USD rate: how should monetary policy accommodate this development? Another interesting question was when and how should the central bank intervene on the currency markets? All of this is tied to the issues of external financing and external balance of the economy. Several points should be noted.

First of all, there is a learning curve for both policy-makers and the market participants. In its monetary program for 1999, NBS stated: "NBS expects to intervene on the currency market to decrease volatility of the foreign exchange rate. The overall trend in foreign exchange rate development though will depend on economic fundamentals and will, therefore, not be directly a concern of NBS intervention." (NBS (1998)) In its monetary program for 2000, NBS stated: "NBS expects appreciation pressures. It is ready intervene against excessive volatility [of the exchange rate] as in 1999. There is however, no precise level and band for intervention. It is expected that under favourable macroeconomic developments, the intent of NBS will be to stabilise the foreign exchange rate approximately at the current level." (NBS (1999)) In its monetary program for 2001, NBS stated: "[Exchange rate policy] will continue to be focused on eliminating excessive volatility of the exchange rate, while the trend of appreciation should be influenced by expected economic fundamentals." (NBS (2000))

This approach was motivated not only by a position that the market should be left to find an equilibrium exchange rate, but also by low foreign exchange rate reserves after the ultimately unsuccessful defence of the peg in 1998. However, it is very difficult to determine when the central bank is intervening against the excessive volatility and when it is intervening against the level of exchange rate and the statements on exchange rate policy have been progressively more and more vague as the central bank learned that it did not want to commit itself beforehand.

National Bank of Slovakia intervened on the market in May 1999, when it supported the currency, from December 1999 until May 2000 when it sought to weaken the currency and in May 2000 when it supported the currency again. The intervention in May 1999 and May 2000 can be considered interventions against volatility as there were substantial intra-day movements. However, in this case as well as during the December 1999 - May 2000 period, the movements in exchange rate that prompted the intervention were a consequence of a market sentiment, which was of a more permanent nature. There have also been strong indications of bands, which the central bank sought to defend in both directions (e.g. 42.3 SKK/EUR, 44 SKK/EUR), but which shifted over time.

A related issue is an issue of one reference currency. During the fixed exchange rate regime, the currency was pegged to a basket of 60 % DEM and 40 % USD. This reflected the fact that while most exports and significant part of imports were from current or future EU members, there was a significant USD element, particularly with regard to raw materials imported from former Soviet Union. Also, much of the foreign borrowing during the previous period had been denominated (often unwisely) in USD.

When the currency was floated, EUR was chosen as the only reference currency (a move similar to choices taken by the Czech and Hungarian central bank). This has caused several problems. Due to import prices and borrowing in USD, the USD exchange rates have continued to be important for much of the manufacturing sector. For psychological reasons related to dominance of USD in the world markets, this was also accompanied by continuing emphasis placed on the USD exchange rate by the media and the electorate. Consequently, the choice of EUR as the reference currency has been controversial and added to confusion about the monetary policy.

Also, there are some indications that the central bank is not neglecting the USD rate completely. The unofficial target zones for the EUR/SKK rate have been continuously shifting and some of the reasons are probably related to EUR/USD rate.

All of this points to a need for a communication strategy of a central bank, which is much more responsive to a volatile environment and clear on its basic goals and strategies.

However, this adaptability is related not only to communication outside, but also to internal policy. Floating currency brought volatility as evidenced in the data presented previously. An active exchange rate management policy to smooth volatility brings new challenges, such as the situation in May 2000. Until May, NBS repeatedly intervened to stop appreciation beyond certain levels. Last such intervention took place on May 3, 2000. However, the very next day, due to a different sentiment concerning the Central European markets (particularly concerning Czech and Polish currency), Slovak currency began to depreciate rapidly and during the following days, the central bank had to step in repeatedly to prop up the currency. Such active participation requires that a central bank have a very clear policy on its intervention strategy in order not fall into trap of micromanagement. That is probably also one of the reasons why NBS generally refrained from intervention since then.

Other important factor to remember is a different level of foreign exchange market liquidity even among advanced transition countries and Slovakia has had one of the smaller and less liquid markets, largely dominated by domestic participants. This tendency was exacerbated during certain periods by a nearly complete absence of foreign participants related to perceived high political and economic risk of Slovakia. As a consequence, uncertainty related to the foreign exchange rate sometimes manifested itself not in speculative pressures, but in absence of involvement in the Slovak currency market.

In addition to more technical issues of foreign exchange rate management under floating currency, policy-makers have had to face a more general issue of managing external (im)balance. A very high current account deficit was a persistent feature of the Slovak economy between 1996 and 1998, accompanied by low FDI and high level of borrowing. After the currency was floated in October 1998, new borrowing decreased radically, but the current account deficit and low level of FDI remained, thus creating a substantial external financing gap.

Two solutions were possible. The first one was to decrease the current account deficit by austerity measures. The second one was to increase external financing by speeding up privatisation of remaining state enterprises, particularly utilities and banks. The new Dzurinda government was officially committed to both of these, but was very slow in implementing them until May 1999. This resulted in the already mentioned absence of foreign involvement in the Slovak currency market and skepticism by domestic participants resulted in gradual depreciation of the currency, which accelerated in May 1999. The government then adopted an austerity package, which involved credible commitments to speed up structural reforms, but also to take radical steps to decrease the current account deficit and accelerate privatisation. As a result of this commitment and its (even though less than complete) implementation, the currency stopped its slide and appreciated steadily through the rest of 1999 and the early months of 2000. The current account deficit decreased

substantially over the second half of 1999 and the first half of 2000 despite oil and gas price increases on the world market as well as the USD appreciation vis-a-vis EUR and SKK.

This points to one conclusion - in-depth structural reforms concerning primarily the private sector and environment in which it operates are crucial for the medium-term development of the economy including the aggregate supply, external balance and the exchange rate. However, in the short-term, the government actions related to government-controlled areas can be much more important and powerful for the exchange rate development in an advanced transition economy. The external imbalance has been a crucial issue not only for Slovakia, but also for Hungary and Poland.

The government has two levers, which can rather quickly influence this imbalance. The first lever is the inflow of privatisation revenues and the second lever is the government control over taxes, import surcharge and regulated prices for utilities and other monopoly/public services. Privatisation revenues and regulated prices are a temporary tool and their use becomes more and more difficult as there is less and less property to privatise and as more and more price regulation is handed over to independent regulators and as prices gradually reach the cost-recovery level. The Slovak experience shows though that they can be quite effective in the interim period.

However, at the same time, it points to the fact that nothing but in-depth structural reforms concerning primarily the private sector and environment in which it operates can ensure that the external balance is preserved in the medium-term. After the austerity package and its two followers wore off, the current account deficit began to increase rapidly in late 2000 and early 2001 as consumption began to grow again (see above). Without improvements on the aggregate supply side, Slovakia would repeat the Hungarian experience (until 1994-95), where brief periods of growth led to external imbalances, followed by austerity measures, followed by brief periods of growth etc.

## 5. SOME LESSONS AND THOUGHTS ON THE ROAD TO EMU

The Slovak experience can teach several lessons, which may be applicable to other countries as well.

First of all, there is often an unclear division of responsibilities for macroeconomic (and foreign exchange policy). Foreign exchange rate management is an inherent part of monetary policy. Therefore, central bank independence is limited when the government determines foreign exchange rate policy. If the central bank is independent and responsible for foreign exchange management, its responsibility is clear. However, monetary policy cannot sustain macroeconomic stability without support of the fiscal policy or against very strong countervailing pressure from the fiscal policy. Responsibility of the government for foreign exchange rate policy is a way of involving it in the responsibility for the developments of the exchange rate, which is a politically sensitive issue in most countries.

A related issue is moral hazard, the balance sheet effect and the distorting effect of the fixed exchange rate. There is a moral hazard for the government, particularly with an

independent central bank, which allows the government to pursue, in the short-term, an expansionary unbalanced fiscal policy without the short-term costs in terms of the political "penalty" of exchange rate depreciation, slowing growth or increasing inflation. There is also a moral hazard for major corporations, which tend to borrow in foreign currency, as there is often an implicit guarantee of the government bailout. The consequent devaluation is procyclical because it influences balance sheets of both government and corporations, contributing to economic slowdown. There is also distorting effect, as the access to foreign borrowing is limited to large corporations and the government. This is particularly important in transition economies, where artificially large corporations dominate as a heritage of communism and are particularly politically entrenched.

The third issue is the changing equilibrium exchange rate. Due to substantial cumulative inflation differential even in transition countries with low inflation, peg presents issues of eroding external competitiveness unless the structural adjustment is very quick. This is more pronounced in economies with price-sensitive products, such as Slovakia.

Fourthly, contagion effects exist in emerging markets, but importance of domestic forces should not be underestimated. Especially with smaller, less liquid markets, the speculation often manifests itself in absence of speculators or their presence can be neutralised more effectively by the central bank in such markets. Therefore, in case of Slovakia, domestic forces and their lack of trust in the currency ultimately led to collapse of the peg, not foreign speculation.

The fifth group of issues is concerned with management of floating currency. It needs very little explaining that there is a learning curve for both policy-makers and economic agents, particularly with regard to signaling, intervention and relationship between interest rates and the exchange rate. Equally importantly, choice of EUR as the reference currency has significant consequences as the importance of USD manifests itself particularly in import prices of raw materials and in price of borrowing. Significant changes in EUR/USD rate raise questions of the equilibrium rate between the EUR and the domestic currency. There is also political and signaling issue as the USD/SKK rate is often the more potent one from the popular and political point of view than from the economic point of view. Last but not least, managed float raises issue of how managed should the float be.

The last issue is interplay between policy decisions on external imbalances, their financing and the exchange rate. Transition governments have potent weapons in the form of privatisation and changes in regulated prices that can bring more external financing and close the gap between domestic demand and domestic supply. However, both of these are politically very sensitive and they are also not very helpful in the medium term if other structural reforms do not follow. This can also help explain why the floating foreign exchange is so sensitive towards political developments that can influence privatisation and changes in regulated prices.

This leads us to thoughts on how to best approach the EMU accession and prior process of convergence. In the short- to medium-term, two principal factors will be important for the disinflation and exchange rate decisions and outcome.

The first one are the capital inflows related to the final stage of privatisation. Utilities and banks have been bringing significant capital inflows since 2000 as they are privatised. They can be expected to do so at least in the following two years, possibly more. This inflow is unrelated to speculative capital inflows, which can be dealt with by decreasing interest rates and is also unrelated to "regular" FDI, which it is dwarfing at the moment.

The second factor is the continuing adjustment of regulated and relative prices. Slovakia is a relative latecomer to deregulation of utility prices due to political reason and as a consequence, has been forced to drastic increases since 1999. However, the process is still not over and as the political will to push through further significant increases has diminished, this process can be expected to continue on a smaller scale for a longer period.

On a more general art, adjustment of relative prices is a long-term ongoing process that will continue throughout the catch-up period. Theory shows that relative price adjustment usually increases inflation even though this does not have to be necessarily so. However, in the transition environment, the nominal rigidity downwards can reasonably be expected. In the framework of the Balassa-Samuelson effect, Slovakia, together with other transition countries, can expect higher inflation than the EMU average even after the membership in EMU.

Therefore, it is questionable to what extent does it make sense to rapidly disinflate to the 0-2% area of the ECB target, as this would probably take place at significant cost and the inflation would reappear after the EMU entry.

There is also significant uncertainty about the EU and EMU entry dates, which suggest that countries aspiring to be members should be ready fulfil the membership criteria quickly once the window of firm opportunity opens, but should not subordinate every other policy objective to prior achievement of the ECB target range.

A more reasonable strategy is probably to gradually disinflate to the 3 - 4 % zone so that the final stage of disinflation before the EMU entry can take place quickly and with less pain. A related issue is the issue of what exchange rate regime should acceding countries choose between now and the ERM 2 membership.

Adjustable peg to EUR is an option, as it would allow a smooth entry into ERM 2 and later into EMU. However, it is quite risky, as its credibility can easily be threatened. It also has all the risks mentioned above.

The floating exchange rate would allow more flexibility, which is important when one considers that these arrangements might have to last anywhere between 4 and 10 years. It would also allow distributing the burden of real exchange rate appreciation between inflation and nominal appreciation, which might make disinflation easier. However, floating rate would have to be abandoned on the ERM 2 entry at the latest. It is also subject to severe misalignments if capital flows are substantial.

Currency board also allows smooth passage into ERM 2 and EMU and is also more credible and less susceptible to speculative attack than an adjustable peg. Due to high and rising share of EUR in trade of acceding countries, it should not cause any Argentina-style

economic problems associated with currency board pegged to a country with a low share of country's trade. However, there are some risks. Since the PPP condition does not hold between acceding countries and the eurozone, currency board would not mean importing low inflation of eurozone and could even mean strong inflationary pressures in case of substantial capital inflows. On the other hand, it would also make adjustment to external shocks painful, especially as the economies are probably not going to be as flexible as they should be.

Therefore, experience points to intermediate regimes and their more flexible forms at the best tool to use in preparation for the EMU entry.

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Chart 1
**Year-on-year inflation in Slovakia, 1998-2001**

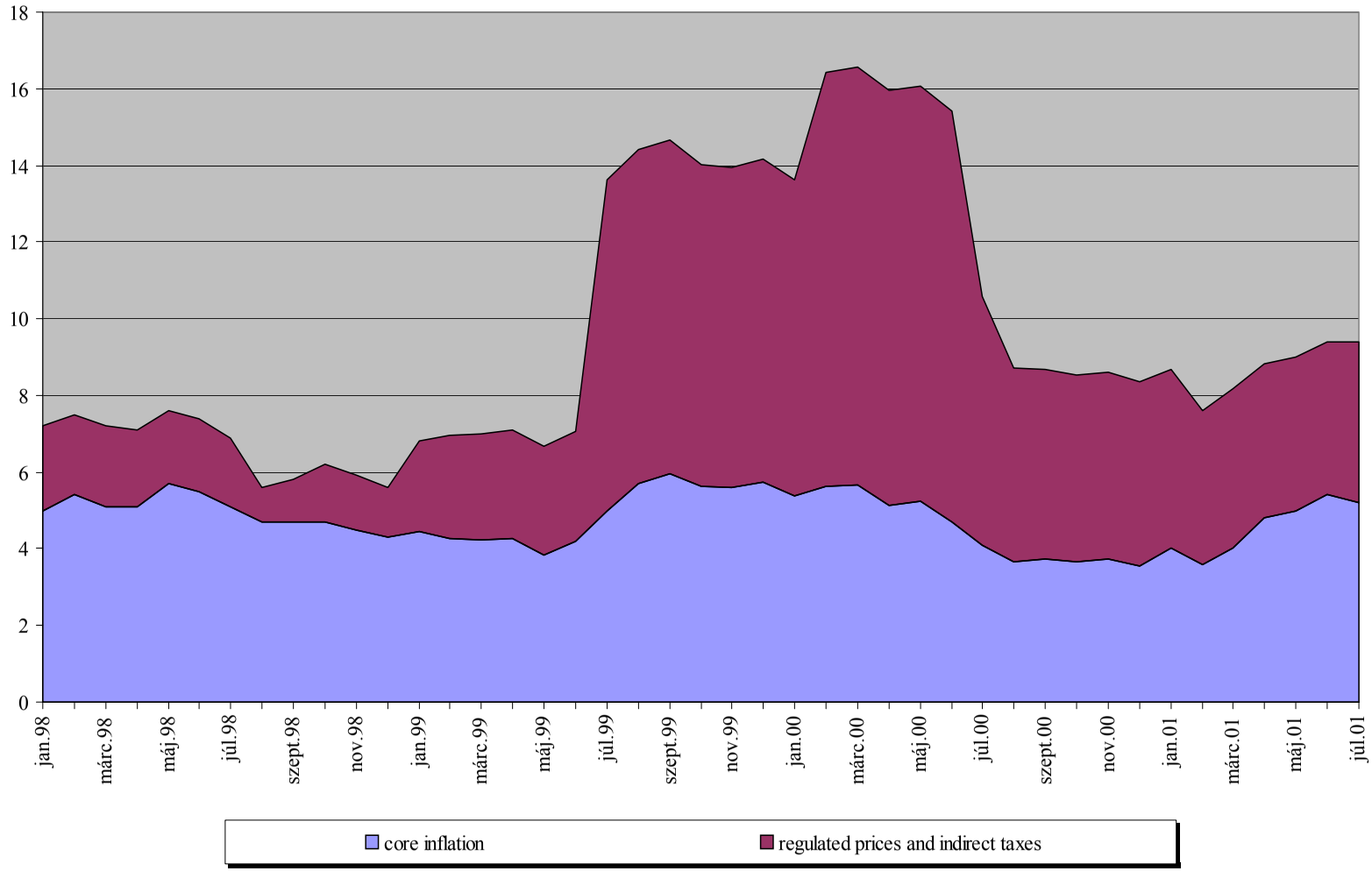

Chart 2
**Month-on-month inflation in Slovakia, 1998 - 2001**

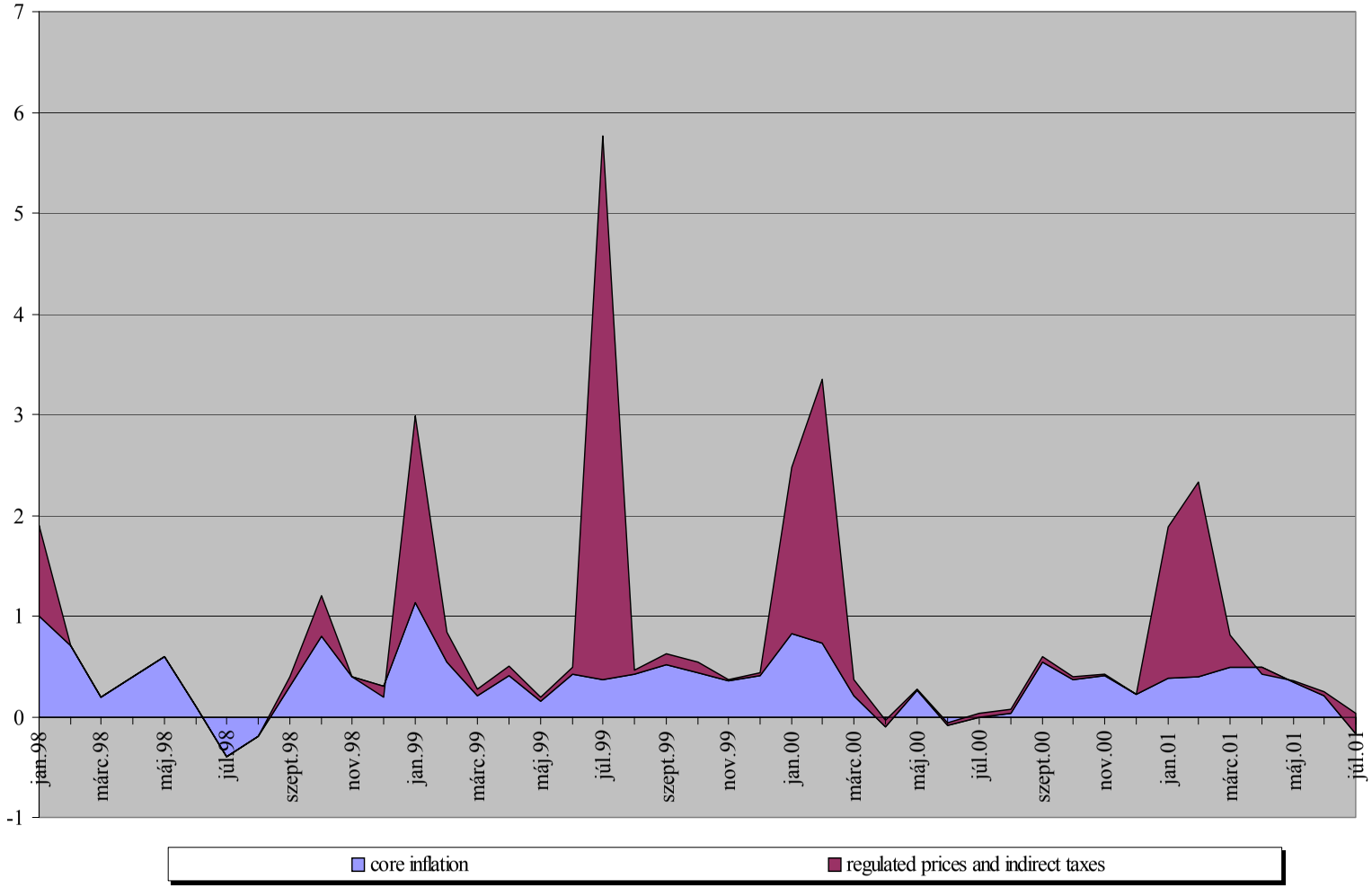

Chart 3
**1-year interbank rate, BRIBOR**

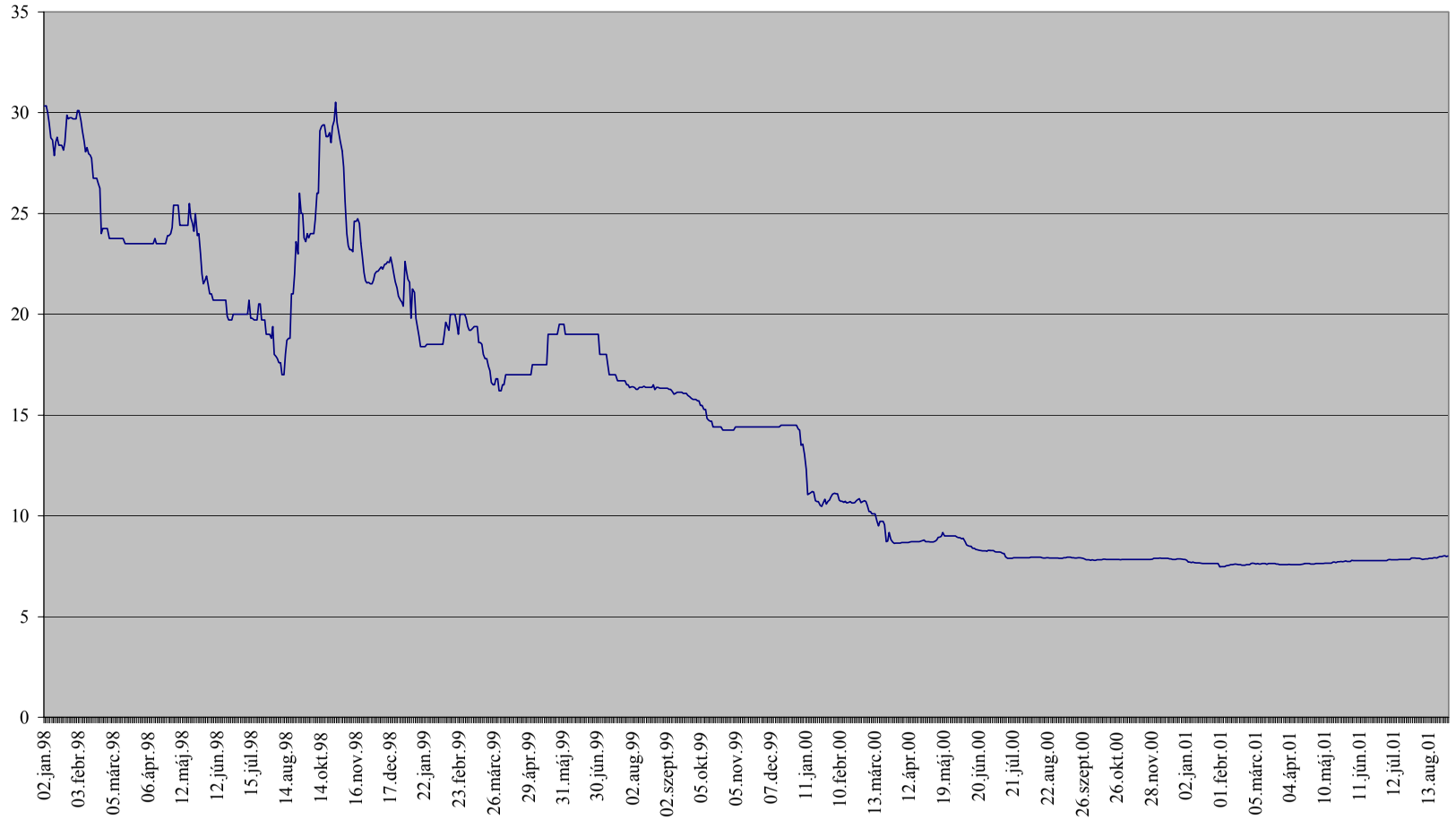

Chart 4
**FX rate of SKK vis-a-vis selected currencies**