

Miklós Losoncz*

Speculative Attack Against the Hungarian Forint

Preliminary Lessons and Conclusions

In mid-January 2003 a severe speculative attack was launched against the exchange rate of the Hungarian forint. The attack was very unusual in the history of foreign exchange speculations, since it was aimed at enforcing the appreciation – and not the depreciation – of the currency targeted. The specific nature of this kind of speculation is closely related to Hungary's accession to the European Union in general and to EMU in particular. Since the other Central and Eastern European acceding countries face similar problems and challenges, the Hungarian experience may involve some instructive lessons on monetary and economic policy for them too.

On 15 and 16 January foreign investors, presumably with hedge funds, converted huge amounts of foreign currencies into forints in order to force the National Bank of Hungary (NBH) to appreciate the national currency further, either by shifting the central parity or by broadening the intervention band formed around it or by eliminating the exchange rate regime and allowing the free float of the forint. In the present exchange rate system, the Hungarian currency is pegged to the euro at a rate of HUF 276.10 with a ± 15 per cent fluctuation band. This foreign exchange regime resembles the ERM-2, with the significant difference that the central rate is defined autonomously by the Hungarian monetary authority, excluding cooperation with the European Central Bank (ECB). Another difference is that the maintenance of the fluctuation band is the task of the National Bank of Hungary: it cannot rely on the help of the ECB in terms of open market intervention.

Prior to the attack, the market rate of the Hungarian currency was close to the strong boundary of the fluctuation band of HUF 234.69. Foreign investors hoped that with the further appreciation of the forint, they would be able to realise profits by converting their forint holdings at lower exchange rates than those at which they had previously obtained them.

As a response to the speculative attack, the central bank prevented the appreciation of the forint by taking various measures rather aggressively. First, the National Bank of Hungary bought an estimated €5 billion (corresponding to about 8 per cent of Hungary's GDP) in the foreign exchange market within two

days at exchange rates close to the intervention rate on the strong side of the central parity. In other words, the Bank defended the exchange rate regime. As a result of the foreign exchange market interventions, the international reserves of the NBH grew by 50 per cent. Second, the central bank lowered its benchmark rate on its two-week deposit facility by 2 percentage points from 8.5 per cent to 6.5 per cent in two subsequent steps. Third, the NBH put a quantitative limit of about HUF 100 billion on its two-week deposit facility. Fourth, it widened the overnight rate corridor from ± 1 percentage point to ± 3 percentage points around the central rate of 6.5 per cent. Thus, the fresh cash that appeared in the money market could have been invested at an o/n rate of 3.5 per cent in central bank deposits, whereas the NBH offered o/n loans at a rate of 9.5 per cent. With the quantitative limit imposed on the two-week deposit facility, the rate cut was practically 5 percentage points (from 8.5 per cent to 3.5 per cent) for the hedge funds which had attacked the forint.

The Hungarian currency weakened by more than 4 per cent after the introduction of these measures. The NBH assumed that with the obvious failure of the speculative attack the hedge funds would withdraw their forint holdings from Hungary within a short period of time at higher exchange rates even with significant losses. Some of them did so, but the major part of the hot money remained in Hungary. It enhanced liquidity substantially in the money market, leading to the reduction of the Budapest interbank interest rates and the yield of certain short-term government securities even falling to below the rate of inflation. At first the resident commercial banks considered this situation

* Research director, GKI Economic Research Co., Budapest, Hungary.

Figure 1
Exchange Rate Developments 1999-2003

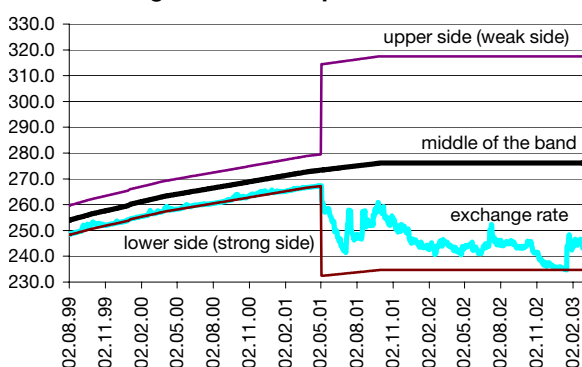
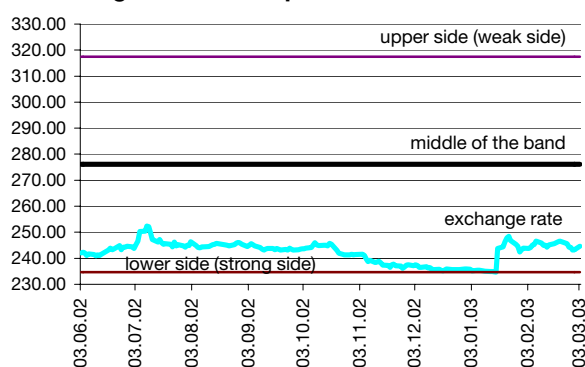


Figure 2
Exchange Rate Developments 06/2002-03/2003



temporary. Several days later they lowered their deposit rates, followed by cutting their lending rates.

In order to help foreign investors wind up their forint positions in Hungary, the NBH called foreign exchange tenders. It did not give any guidance on exchange rates and quantities. Under the set conditions, which lacked transparency, the interest for converting the forint holdings of foreign investors to euro was rather modest.

It is assumed that the foreign investors may have hedged their positions in the derivative markets, thereby reducing their potential (and in the light of the *ex post* analysis, actual) losses. For American investors, the 3.5 per cent o/n interest rate was not extremely low compared to current US rates. They benefited from the weakening of the dollar against the euro as well, thereby further reducing their losses. Meanwhile, there were fears on the part of the NBH that the combination of low interest rates and the weak forint/euro exchange rate might undermine the inflationary targets of the Bank. The low interest rates certainly discouraged savings. Interest and exchange rate volatility increased, too.

From 25 February on, the central bank narrowed the overnight rate corridor from ± 3 percentage points to ± 1 percentage point around the central rate of 6.5 per cent. Its practical impact was an increase of 2 percentage points in the o/n interest rate. The Bank lifted the quantitative limit on its two-week deposit facility. In addition, it announced that the hot money had practically left Hungary through foreign exchange purchases by indigenous market participants using forints.

Foreign exchange experts think that the central bank may have discretely sold euro as well. If this were not the case, Hungarian business organisations must have purchased euro in a volume amounting to about 10 per cent of Hungary's annual exports. This is

impossible. Nevertheless, judging from the abundant liquidity in the money market, a certain part of the speculative capital is still in Hungary.

The bank also modified its inflationary target. In its latest report on inflation released in February, the Bank raised its projection of the inflation rate in 2003 from 4.6 per cent to 5.2 per cent, whereas it lowered its forecast for 2004 from 4.2 per cent to 4 per cent. These projections were based on an exchange rate of HUF 245 to the euro and an oil price (for the Brent type) of US \$31.5/bl. As a result of these measures, the forint strengthened against the euro in the days immediately following the announcement of the steps, and has remained in a range between HUF 243 and HUF 246 since then (see Figures 1 and 2).

The Main Underlying Factors

Many short-term and long-term factors enabled the speculative attack on the forint. Among them, the long-term appreciation of the equilibrium exchange rate of the Hungarian currency, the inconsistent policy mix and some exogenous factors deserve special attention and are discussed below.

The most important factor is related to the long-term appreciation of the equilibrium exchange rate of the forint. In the pre-announced crawling peg devaluation regime which was applied between March 1995 and May 2001 the Hungarian currency was steadily undervalued compared to both the currencies of the Central European countries and the equilibrium rate of the forint. The widening of the fluctuation band from ± 2.25 per cent to ± 15 per cent around the central parity, the removal of the existing barriers to foreign exchange transactions as well as the subsequent elimination of the crawling peg devaluation scheme necessarily resulted in the more or less steady appreciation of the nominal exchange rate after May 2001.

This has been the natural consequence of the correction of the former undervalued position.

The appreciation of the forint is fuelled by the positive gap in economic growth and productivity increase *vis-à-vis* the developed market economies. With the exception of Slovenia, the currencies of the other new EU members are appreciating as well. This is an important element of the catch-up process to the developed industrialised countries as well as the real convergence to the EU average.¹

In spite of the fact that the real trade weighted appreciation of the forint amounted to about 20 per cent in 2001 and 2002, the Hungarian currency is still undervalued. It is still only 50-55 per cent of its purchasing power parity value.² (It is rather difficult to identify the exact degree of the undervaluation. Different methods lead to different results. E.g. according to the Big Mac index of the Economist, the forint is undervalued in relation to the dollar by 19 per cent.³) This implies a further significant real appreciation of the forint.

The theoretical explanation of the appreciation of the currencies in Central and Eastern Europe is offered, *inter alia*, by the Balassa-Samuelson effect.⁴ As is well-known, the Balassa-Samuelson effect is based on productivity differences in the tradable and the non-tradable sectors. Productivity increases more quickly in the tradable sector (more or less identical to the production of material goods) which is exposed to international competition than in the non-tradable one (more or less equivalent to services) which is sheltered from external influences. The growth of wages in the non-tradable sector with lower productivity tends to keep pace with that prevailing in tradables with higher productivity. This is possible only if prices are raised in the non-tradable sector. In a floating exchange rate system, the differences in inflation and interest rates compared to the country of the anchor currency induce foreign capital inflow, leading to the appreciation of the national currency.

Over the past 10 years, all the factors of the Balassa-Samuelson effect driving the appreciation of the national currency were at work in Hungary. According to the results of various economic reports, including econometric models based on historical figures, the Balassa-Samuelson effect on the consumer price inflation *vis-à-vis* Germany is in the range of 1-2 per cent per annum.⁵ However, with the further unfolding of the catching-up process and the reduction of productivity differences, its possible magnitude is expected to diminish somewhat in the future.

As regards the exogenous factors, expectations

concerning the accession of Central and Eastern European countries to the European Union and later the Economic and Monetary Union and the resulting fall in country risk produced the so-called convergence game long ago. As regards Hungary, foreign investors, including institutional ones with long-term strategic investment policies, have been purchasing Hungarian government securities with a maturity of over 5 years in the hope that with the drop in risk premium and falling interest rates as Hungary gradually meets the convergence criteria of the Maastricht Treaty, they can realise profits at relatively low risk.

The successful Irish referendum on the ratification of the Treaty of Nice on 20 October 2002 removed the last legal and institutional barriers to the enlargement of the European Union. It paved the way to finishing the negotiations on EU accession with ten Central, Eastern and Southern European countries, including Hungary, at the European Council summit held in Copenhagen on 12-13 December 2002. The positive outcome of the Irish referendum gave a substantial impetus to the appreciation of the forint, which has accelerated since November 2002. It was driven by the inflow of foreign capital into government securities. The stock of government securities held by foreigners grew from HUF 1467 billion on October 22, 2002 by more than 30 per cent to HUF 1924 billion (representing €7.9 billion at the current exchange rate) on February 10, 2003 and HUF 1968 billion (€8 billion) on April 24, 2003. Foreign investors account for about 25-30 per cent of the total stock of Hungarian government securities. The successful Irish referendum lowered the country risk premium of foreign investments in Central and Eastern European government securities.

Policy Mix

As far as the policy mix is concerned, following the introduction of changes in the exchange rate regime in May 2001, the consistency of monetary policy and fiscal and income policies weakened. In order to coun-

¹ International Center for Economic Growth European Center: A forint árfolyamáról. (About the exchange rate of the forint), mimeo in Hungarian, Budapest, December 2002, p. 3.

² Leon Podkaminer et al.: Transition Countries Resist Global Slowdown: Productivity Gains Offset Effects of Appreciation, Research Reports No. 293, February 2003, The Vienna Institute for International Economic Studies, (WIIW), Vienna, p. 51.

³ McCurrencies, in: The Economist, April 26, 2003, p.66.

⁴ Bela Balassa: The Purchasing-Power-Parity Doctrine: A Reappraisal, in: Journal of Political Economy, Vol. 72, December, 1964; Paul Samuelson: Theoretical Notes on Trade Problems, in: Review of Economics and Statistics, Vol. 46, March 1964.⁵ Mihály András Kovács (ed.): On the Estimated Size of the Balassa-Samuelson Effect in five Central and Eastern European Countries, National Bank of Hungary Working Paper 2002/5, July 2002, p. 3.

terbalance the negative effects of global slowdown, fiscal policy became expansive. In addition, the loosening of fiscal policy was driven by the preparation for the parliamentary elections held in April 2002. Fiscal expansion continued after the elections too, for political reasons, since the new government wanted to fulfil the promises made during the election campaign, and intended to increase its legitimacy, which was based on a rather thin majority in Parliament, in this way. The relaxation of fiscal policy is reflected in the fact that according to the ESA-95 methodology used in the European Union, the share of general government deficit in GDP grew from 3 per cent in 2000 to 4.1 per cent in 2001 and 10 per cent in 2002.⁶ The figure for 2003 is expected to total 5.5 - 6 per cent.

Fiscal expansion was propelled by wage increases. Gross monthly average wages grew by 18 per cent in both 2001 and 2002, and are expected to be up by 12 per cent in 2003. Wages in the public sector, motivated to a large extent by the general parliamentary elections, were raised by 30 per cent in 2002. As a matter of fact, real wages jumped by 8 per cent in 2001 and 12 per cent in 2002, and they are expected to grow by another 6 per cent in 2003.

Global slowdown coincided with the deceleration of productivity growth. Productivity growth in terms of industrial value added per employee dropped from 10.1 per cent in 2000 to 1.2 per cent in 2001 and 2.2 per cent in 2002. The former positive gap between productivity increase and growth in real wages became negative, exerting an adverse impact on the competitiveness of the corporate sector.

Expansive fiscal policy together with sharp wage increases in the public sector did not support the anti-inflationary stance of the central bank. The NBH insisted on its objective of fighting inflation and kept its benchmark rate on the two-week deposit facility at high levels by international standards and compared to the rate of domestic inflation. Before the reduction of 2 percentage points in mid-January, the benchmark rate of the NBH totalled 8.5 per cent compared to the 1.25 per cent federal funds rate of the US Fed and the 2.75 per cent benchmark rate of the ECB. In the short run, this huge difference of 7.25 percentage points and 5.75 percentage points respectively induced a massive inflow of capital into Hungary. The process was reinforced by rate cuts in Poland and the Slovak Republic, possibly diverting capital flows to Hungary.

The 8.5 per cent benchmark interest rate seemed to be rather high in the light of the rather low rate of inflation of 5.2 per cent. Although high real interest rates undoubtedly boost savings, in Hungary this was more

than offset by other factors like the rapid increase of consumption, the purchase of homes and homebuilding under preferential conditions including preferential interest rates well below the market level etc. In addition, the high interest rate of the central bank raises the interest burden to be paid on the government debt.

The central bank insisted on maintaining its anti-inflationary priority rather one-sidedly, without considering other factors. The NBH was of the opinion that for various reasons Hungary should join EMU as soon as possible. (Some time ago the NBH wanted to join EMU in 2007, but in the light of the speculative attack it postponed this somewhat, saying that the earliest date for Hungary's joining EMU could be 2008.) The arguments were printed in several publications.⁷ The bank regularly communicated its standpoint. The bank should have introduced more aggressive rate cuts much earlier to avoid the speculative attack against the forint. Rate cuts should have been implemented well before the forint/euro market rate approached the stronger edge of the fluctuation band. To take a foreign example, the Slovak central bank cut its benchmark interest rate sharply not long ago and it managed to stop the further appreciation of the Slovak currency.

It seems to be justified to assume that foreign speculators took the inflationary target of the Bank as well as its commitment to Hungary's early EMU accession at face value. They must have assumed that the bank would not give up these priorities and would allow the further appreciation of the forint. Quite surprisingly, foreign trade and the current account deficit did not grow substantially in 2002. However, domestic exporters and firms engaged in tourism were more adversely hit by the appreciation of the forint than large multinational corporations, often located in customs-free areas and settling their financial transactions in foreign exchange.

On the other hand, the impact of the strong currency on inflation was rather controversial. According to empirical evidence, the drop in the prices of durable consumer goods and other industrial goods was rather small compared to the degree of appreciation of the nominal exchange rate.

⁶ The figure for 2002 includes those "hidden" or above the line temporary items which had not been registered in general government before, like the budget of Hungarian Development Bank with huge funds for the construction of motorways etc. These expenditures, which occurred in the past, were recorded for 2002.

⁷ Attila Csajbók and Ágnes Csermely (eds.): *Az euró bevezetésének várható hasznai, költségei és időzítése*. (Expected benefits, costs and timing of the introduction of the euro), Working paper of the National Bank of Hungary, Budapest 2002, pp. 2003 (in Hungarian).

Conclusions and Lessons for the Future

One of the most remarkable features of the speculative attack launched against the Hungarian forint is that, in contrast to similar past attempts, it was directed against an undervalued currency with the aim of enforcing its further appreciation. This specific type of speculative attack and its consequences may not necessarily culminate in high tensions. From the point of view of the speculators, the risks of such an attack seem to be lower if they are hedged and/or diversified in the derivative markets. According to anecdotal evidence, the inflow of hot capital began long before the attack, as early as November 2002. If this assumption holds true, the weighted average exchange rate at which foreign speculators converted their foreign exchange into forint must have been significantly higher than the strong edge of the fluctuation band, leaving them much room for manoeuvre.

In the case of an attack, the intervention on the strong side of the fluctuation band aimed at maintaining the exchange rate regime under unchanged monetary conditions implies that the central bank increases money supply by converting foreign exchange to local currency. Before the speculative attack, the NBH did not need additional international reserves; it did not want to increase the level of its foreign currency reserves, on the contrary. One of the major negative impacts of the speculative attack was that due to the difference between euro/dollar and forint interest rates in favour of the latter, the central bank could invest the foreign exchange purchased only at much lower interest rates. At the same time, the central bank had to absorb or "sterilise" the excess liquidity of the local currency by offering higher interest rates. The difference in these interest rates is part of the direct losses Hungary has to suffer.

If the forint interest rates remain low (the reduction was formerly necessary to stop speculation), the excess liquidity in the system tends slowly to undermine the economic fundamentals. Low interest rates even below the rate of consumer price inflation tend to discourage savings, boost consumption and thereby fuel inflation. This state of affairs cannot be maintained longer than perhaps three months. The dilemma is that in order to offer foreign speculators an attractive leeway, the NBH has to raise its benchmark rate which, on the other hand, may stimulate additional capital inflows. As was stated above, the National Bank of Hungary managed to get rid of a substantial part of the speculative capital by deploying a combination of various measures, presumably including specific bargains.

In the light of the *ex post* analysis, the question arises whether or not the National Bank of Hungary could have avoided or fended off the speculative attack. One may arrive at the conclusion that the NBH should have cut its benchmark rate earlier to prevent the strengthening of the forint/euro exchange rate to the stronger end of the fluctuation band and the open market interventions. International analogies show that the Slovak and the Polish central banks managed to avoid the excessive strengthening of their currencies by earlier rate cuts. In the Hungarian case, the central bank insisted on adhering to its steadily communicated anti-inflationary priority. Foreign speculators might have logically assumed that the central bank would sacrifice the exchange rate regime to meet the inflationary objectives. However, this assumption of the speculators proved to be wrong.

The speculative attack against the forint drew public attention to the vulnerability of the present exchange rate regime. It can be assumed that under the conditions of free global capital movements, no optimal exchange rate system which can be applied in practice exists for a small, open economy even if its economic policy is optimal.⁸ Even the best exchange rate systems cannot guarantee protection from speculative attacks and volatility.

A theoretically perfect solution could be the immediate autonomous introduction of the euro, before Hungary's accession to the EU and EMU respectively, but this is impossible for obvious reasons. If Hungary autonomously adopted the euro, it would not be allowed to join the European Union. As an EU member country, Hungary will be obliged to meet the convergence criteria of the Maastricht Treaty before entering the EMU.

There are two basic opinions among experts concerning the reduction of the vulnerability of the present exchange regime. The first is the flight forward approach, according to which Hungary has to join EMU as soon as possible, the sooner the better (in 2008 at the earliest). This view is represented most plausibly by the former member of the central bank's governing board, the Monetary Council, Gábor Oblath.⁹ He seems to be fully aware of the difficulties associated with Hungary's early accession to EMU. Nevertheless, he thinks that with the establishment of EMU, a small, open economy does not need to maintain a national currency and monetary policy. It is not only unnecessary, but costly and risky as well. Instead of analysing

⁸ Cf. Gábor Oblath : Az euró hazai bevezetése (The introduction of the euro in Hungary), in: Figyelő, 1-7 May 2003, pp. 24-28.

⁹ Ibid.

the actual or perceived advantages and disadvantages of the introduction of the euro in Hungary, this defensive approach focuses on the threats and risks from which the early accession to EMU may save the Hungarian economy.

The central point of the second approach is that the declaration of the date of Hungary's accession to EMU together with a rather aggressive anti-inflationary policy logically inspires foreign investors to take part in the convergence game, thereby exposing the country to excessive capital inflows, a strong currency and foreign exchange speculation.¹⁰ According to this approach, the exact date of Hungary's joining EMU should be kept open in order to keep speculation against the exchange rate more risky. The counter-argument to this conclusion is that the convergence programme necessary for joining EMU sets the approximate date of EMU accession. Other experts maintain the view that the setting of the approximate exchange rate at which Hungary could join EMU could also diminish speculation. This set of measures, however, could lead to a quasi EMU membership. The most significant difference could perhaps be a more autonomous fiscal policy.

The room for manoeuvre of the central bank with regard to diminishing inflation is rather small. The bank has to consider not only domestic factors, like the rate of inflation etc., in determining its benchmark interest rate. Changes in the benchmark interest rates of the ECB, the Fed or the Central and Eastern European countries may widen the gap between Hungary and its major partners, thereby triggering the acceleration of the inflow of foreign capital. Following Hungary's accession to the European Union, further regulatory limits on investments by foreigners in Hungarian government securities are expected to disappear. When Hungary is an EU member country, institutional investors will not have to consider benchmarking in terms of weighting the share of Hungarian government securities in their portfolios. They will have the chance to buy unlimited quantities of them, contributing thereby to the appreciation of the forint.

The term financial stability, the preservation of which is the task of the central bank as provided by law, must not be restricted to combating inflation. Financial stability has to comprise a predictable and authentic interest rate and exchange rate policy to be ensured in cooperation with the government.¹¹ Fiscal

¹⁰ György Surányi: Az egyensúlyromlásnak infláció a beceneve (The nickname of the deterioration of equilibrium is inflation), in: Népszabadság, December 24, 2002, p. 13.

¹¹ Judit Neményi: Győzelem vagy bukás? (Victory or fall?), in: Népszabadság, January 22, 2003, p. 14.

and monetary policy should be harmonised with each other, and economic fundamentals have to be considered as well.

The present exchange rate system, which has a strong resemblance to EMS-2, is undoubtedly not perfect; it cannot defend the Hungarian currency against speculative attack. However, the causes of the attack are manifold, and they cannot be linked exclusively to the exchange rate system. The discussion of the causes of the attack has revealed that apart from long-term internal and external factors (the undervaluation of the forint and the Balassa-Samuelson effect on the one hand, the convergence game on the other) inadequate economic policy in terms of an increasing rift between monetary policy and fiscal policy can be blamed.

My conclusion is that the Hungarian response to the speculative attack should not be the over-ambitious acceleration of the accession process to EMU. It is far from certain that a quick accession to EMU would guarantee sustainable budget positions and low inflation. The European Commission also represents the view that Hungary should create sound economic fundamentals before joining EMU, which is otherwise the precondition for sustainable development. First, the necessary structural reforms have to be implemented in the budget, in the tax system, in the social security system, in the labour market, etc. in order to lay the foundations for Hungary's accession to EMU.

The experience of Ireland, Spain, Portugal and Greece shows that in less developed countries the rate of inflation is higher than in the highly developed economies. This belongs to the preconditions of the catching-up process. The aggressive reduction of the inflation rate may result in losses in economic growth.

There is a trade-off between economic growth or the catching-up process on the one hand, and internal equilibria in terms of inflation and budgetary deficit on the other. This actual or virtual contradiction can be reduced only gradually. It is important to stress the fact that in the long run the general requirements of sustained economic development in terms of sustainable fiscal policies with balanced general government budgets, low inflation rates etc. are the same as those defined for the accession to EMU. Hungary's membership in EMU should be the result of successful structural reforms underpinned by persuasive figures on the development of the real economy. The consensus between the government and the central bank to accomplish this objective seems to have been established in terms of a coherent policy mix. Further efforts are needed to establish the corresponding political and social consensus.