Monetary Policy in the Transition Period

Conference

Borovetz, 25 – 27 April 1996

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1, Alexander Battenberg Square, 1000 Sofia
Public Relations. Telephone: 886 1351, 813 171
Telex: 24090, 24091
Fax: (3592) 980 2425, 980 6493

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Monetary Policy in 1995 and 1996

by Lubomir Filipov

Lubomir Filipov is Governor of the Bulgarian National Bank.

The year 1995 marked a considerable success in curbing inflation. Annual inflation at the end of the period was lowered from 122% to 33%, which is two points below the trough of the 35 – 40% target. Factors contributing to this positive result were the generally restrictive monetary policy in the second half of 1994 and through the better part of 1995, and the upward trend in real demand for money, primarily for national currency.

Another major factor underlying low inflation in 1995 was the exchange rate stability. The real appreciation of the lev against benchmark international currencies had a containing impact on domestic prices, without affecting the trade balance. At the same time, the interest differential created by the BNB between lev-denominated and forex-denominated deposits generated a substantial capital inflow which added to the international reserves of the country and ensured a smooth external debt servicing. Increased supply of foreign currency during most of the year was sterilized by the BNB to preclude excess of money supply over real demand.

In 1995, the BNB managed gradually and on a consistent basis to lower the basic interest rate in pursuit of its anti-inflationary target. For the first time after the start of reform the seasonal cycle of higher autumn-winter interest rates and lower in the summer was altered. In 1995, the BNB pursued a conservative interest rate policy – positive interest rates on deposits and loans were achieved and maintained throughout the period. This significantly contributed to strengthening real money demand and providing additional credit resources, though at a price of increasing the burden on a number of borrowers and financial deterioration of many banks.

The relative improvement in the macroeconomic environment was not, however, supported by accelerated structural changes in the real and banking sectors, which could have reversed inflationary expectations. Delays in privatization and in the enforcement of strict financial discipline on all economic agents did not allow for a fundamental solution to long-existing problems. A number of state-owned enterprises continued to incur losses and transfer them through the current

lending system to the banking sector. High real interest rates on loans, and BNB's efforts to sterilize the inflow of foreign currency into the country exerted additional pressure on banks and their customers.

Since the end of 1995 and early 1996, financial stability has been very fragile. The financial position of certain banks (private and state-owned) has rapidly deteriorated, thus endangering both their own solvency and the solvency of the banking system as a whole. These banks could not adapt quickly enough to the new situation of low inflation and stable exchange rate in 1995, and continued their credit expansion. Now they are facing more persistent and greater liquidity problems so that to maintain the payments system the BNB is compelled to provide them with uncollateralized deposit refinancing as lender of last resort. In the absence of effective mechanisms for forceful debt collection, including through initiation of bankruptcy proceedings, and in the absence of political will to apply such mechanisms, BNB's activities are just postponing the solution of liquidity problems, even aggravating them, which would in a number of cases lead to bank insolvency.

Liquidity problems faced by certain banks, and other factors, some political too, resulted in massive runs on several banks. The latter received additional refinancing by the BNB which became a major shareholder in two of them in order to save them and strengthen the credibility of the banking system. These measures were temporary, however, and will not solve the problem in the context of persisting structural reform delays.

The BNB's role as lender of last resort corresponds less and less to the general anti-inflationary focus of its monetary policy and has a loosening effect on the latter. The rapidly growing unsecured refinancing to banks with liquidity problems cannot be entirely sterilized through BNB's open market operations, and free resources are channeled to the foreign exchange market where the Bulgarian lev has started to depreciate in real terms since early 1996. This, along with disruptions in the banking system significantly contributed to undermine the credibility of the national currency. In this setting, real demand for money was decreasing, and the first signs of a tendency toward currency substitution emerged. This strongly limits the chances for implementing an anti-inflationary monetary policy.

With an emphasis on the necessity to preserve foreign exchange reserves for external debt servicing, liquidity should be withdrawn primarily in the domestic currency market. Since early 1996, market mechanisms have been expanded by the introduction of daily auctions of repo-operations. In its efforts to recover the attractiveness of the lev, the BNB is compelled to allow considerable increases in interest rate levels. Consequently, the BNB has effected a threefold increase of the interest rate from 34% to 67%. Above measures have only short-term effect, however, as they do not eliminate the causes of growing financial destabilization. In a situation of lacking structural reforms, they increase the interest burden on borrowers, thus intensifying the crisis in the banking system. This is proved by the continuing market-driven rise in interest rate levels of open market repo-opera-

tions, which again forces the BNB to increase the basic interest rate.

Problems of the banking system reflect the problems faced by the national economy and cannot be resolved within BNB's monetary policy. Deteriorating macroeconomic and financial conditions can be successfully mastered only by joint and resolute actions of both the government and central bank under a common program for rehabilitation of the real and banking sectors. Because of its paramount importance and the political commitment required for its implementation this program should be adopted by legislature. Within the overall process of its development, the BNB Plenary Council determined at two consecutive sessions (at the end of 1995 and the beginning of 1996) the major trends in the development of BNB's monetary policy. This body will continue to periodically discuss and determine it in relation to the pending banking sector restructuring and rehabilitation.

The BNB's monetary policy will maintain its focus on supporting the external and internal stability of the lev. The central bank's major objective will be to control inflation preventing significant deviations from parameters of the macroeconomic matrix of the state budget. The BNB will follow its basic anti-inflationary target by carefully dosing its monetary policy instruments without exerting unnecessary pressure on just beginning economic growth. Ensuring the country's financial stability at an acceptable social cost will require closer coordination throughout the year between the BNB's monetary policy, on the one hand, and the fiscal and income policies, on the other. At the same time, monetary policy alone cannot compensate for the delay in structural reform, as the latter is a factor to noninflationary economic growth.

The BNB's foreign exchange policy will act in support of the general anti-inflationary target of its monetary policy. Forex policy targets will again envisage both relative exchange rate stability, a result of fundamental factors and minimization of fluctuations along a chosen pattern of action, and maintenance of foreign exchange reserves at a reasonable level. A weak real appreciation of the lev to the benchmark international currencies is possible in 1996. We would not allow it, however, to erode the trade balance surplus, and to decrease foreign exchange reserves to a level which would endanger the implementation of a consistent foreign exchange policy and external debt servicing.

The BNB's interest rate policy will also be instrumental in maintaining control over inflation. In 1996, the interest burden on borrowers will have to be alleviated to the extent possible. In this context, positive real interest rates, on both deposits and loans, can be expected to decrease. Interest differential between lev-denominated and forex-denominated deposits will also have to be reduced, but still remain positive.

Given the situation at the beginning of 1996, the BNB will not be in a position to effect a one-way change of the basic interest rate, as in 1995. After two increases, the 49 percent interest level reached still remains far below the average interest rate underlying the government budget, but the BNB will continue pursu-

ing a conservative interest rate policy. The central bank will not give in to external pressure for a premature reduction of interest rates, that is, prior to the occurrence of necessary conditions, namely – sufficiently low inflation, as well launching of and commitment to structural reform – which will turn around expectations.

The BNB will work for reducing the spread between rates on deposits and loans. A major prerequisite for this is to improve the quality of commercial banks' loan portfolios by debt collection, including debt-for-equity swaps, and declaring insolvent debtors in bankruptcy. Tightening of financial discipline in the national economy will be pursued by the BNB in close cooperation with the government.

In its efforts to achieve its anti-inflationary target the BNB will continue to restrict money supply growth. As real demand for money was subdued in early 1996, the nominal increase of the monetary aggregate "broad money" (which includes money outside banks and all types of deposits) up to the level of projected inflation may turn out to be proinflationary. In this context, a new tightening of BNB monetary policy will be required in terms of money supply, and this restriction will be necessitated both by broad money lagging 4 – 5 points behind inflation, and by the expected real increase of GDP.

Controlling money supply growth will continue to be effected through reserve money control. In 1996, the BNB will use various monetary policy instruments for keeping reserve money movements within the preset line of development. Uncollateralized lending will be compensated by defensive open market operations so that overall liquidity in the economy remains under control. Preserving the country's foreign exchange reserves until their replenishment by external financing will require liquidity to be withdrawn completely on market-based principles, by setting interest rates at levels allowing for maintenance of balanced money market and government securities primary auctions. In these circumstances, exchange rate will be used as an additional aggregated indicator for monetary policy fine-tuning: under pressure in the forex market toward more rapid devaluation of the lev monetary policy will have to be tightened, and when this pressure is overcome – there will be possibilities for its relief.

Very important for reserve money management will be the practice introduced since February 1996 of reporting minimum required reserves on an average monthly basis. On normal days, commercial banks are allowed to use up to 50% of their required reserves, which will have to be reimbursed to the required level within the period of regulation by depositing with the BNB excess reserves on other days. This change is aimed at eliminating the use of the overdraft facility, which is practically beyond BNB control, and at allowing banks to manage their daily liquidity more flexibly. It is already clear, however, that certain banks facing permanent liquidity difficulties will not be able to satisfy the condition in relation to the minimum reserve requirements. It will be appropriate in such cases to gradually abolish their right to partially use their minimum required reserves, and resources needed to maintain their liquidity should be extended in the form of unsecured refinancing. Thus the number of monetary policy instruments applied

will be reduced, and BNB monetary policy will become more transparent.

The tendency manifested in most of 1995 toward increasing net foreign assets in the banking system is expected to persist in 1996. It arises from the necessity that Bulgaria continues its net payments on the external debt in the years to come. In 1996, banks have shrunk their net external liabilities by about USD 250 million. This assumption presumes that domestic debt growth will lag by about three points behind money supply growth.

A money supply growth which is consistent with a drop in inflation, and the need to allocate sufficient funds for maintaining the growth just started in the national economy restrict cash deficit financing and external debt principal payments maturing throughout this year by bank lending. In the calculations within the overall program of financial projections, bank lending cannot exceed 4% of GDP. For not allowing any loosening of monetary policy, the BNB and the government will have to identify additional resources by promoting nonbank financing, speeding up cash privatization, and attracting foreign investments.

In 1996, an important prerequisite for implementing the monetary policy will be to finance the government budget deficit entirely by issues of government securities, realized on market principles. Given the sizable domestic debt, the BNB will seek jointly with the government possibilities and mechanisms for restricting its growth and reducing the cost of its servicing. In the existing situation, this cannot be achieved by restricting interest rates administratively. Only decisive structural changes could bring about market-based conditions for reducing rates, and hence for alleviating the budget burden and the pressure it exerts on monetary policy.

Credit to the real sector is the balance between domestic credit and credit to the government. Provided that budget needs in 1996 are restricted to 4% of GDP, total credit to the government will drop in real terms by about 5%. If forex-denominated loans decrease by USD 100 million in USD equivalent (or 5%), lev-denominated credit will decrease in real terms by about 3%. This credit may be considered sufficient to support economic growth in the real sector, as long as the rehabilitation measures taken in the national economy will provide the necessary conditions for channeling credit resources to viable enterprises.

The BNB will strengthen supervision over commercial banks. Its activities will be focused not only on restricting uncollectable loans, but also on eliminating the causes for this. A program will be developed for weekly and monthly monitoring of cash flows in and out of banks. Analyses of data and projections of trends of development will be used as a basis for implementing bank supervision enforcement measures. A project for harmonizing reports on prudential regulations with commercial bank accounting registers will result in a unified report format covering all regulations. Work on an early warning system, which will include a system of indicators for monthly monitoring of commercial banks and a unified system for assessment of banks' position, will continue.

The BNB will enter upon its function of lender of last resort only after it has

assessed the viability of the commercial bank facing difficulties and has considered a specific program devised by the bank for its rehabilitation. This program will comprise both measures for improving collectibility of already extended loans, and for restricting new ones and cutting down on current and investment expenditures. Extension of unsecured loans will be of temporary character and will be allowed only under strict compliance with the rehabilitation program. Deviations from the latter will entail more stringent measures, including bank closure. In the present complicated circumstances, such measures may have a stronger impact on liquidity and banking system credibility than interest rate changes.

Further decapitalization of commercial banks not only will put further restrictions on the implementation of an anti-inflationary monetary policy, but may threaten the whole banking system. This issue is insoluble within the framework of off-site bank supervision done by the BNB. A rehabilitation program covering the whole banking system and implemented jointly with the government is obligatory. Delayed and indecisive steps to this effect may lead to financial destabilization with grave economic and social consequences. The rehabilitation of the banking system should not be at the expense of the BNB, because this will have a proinflationary impact. The necessary resources should be included in a supplementary structural budget, and should come from additional sources: nonbank financing, revenues from privatization, external financing.

The BNB will work for the establishment and operation of a Collection Agency, as an element of the overall program for rehabilitation of the banking sector. The Agency is intended to isolate loss-making state-owned enterprises from bank lending and stop transferring state-enterprise losses onto banks. Their uncollectable loans should also be transferred to the Agency for collection, while commercial banks will receive in exchange for them government securities of market-determined yield. This will mark a decisive step toward the solution of both long-existing and current problems in order to improve the quality of commercial banks' loan portfolios.

Improvement of the legal and regulative framework in this area is of key importance for the implementation of the banking sector rehabilitation program. The BNB will actively contribute to its expansion in order to create conditions for the real restructuring of the banking sector. We will prepare proposals for the simplification and better efficiency of bankruptcy procedures, acquisition and realization of collaterals and collateral securities, and other procedures for forceful collection of claims. The BNB will improve a number of existing banking regulations: Regulations No. 3 on Payments, Regulations No. 7 on Big and Internal Loans, Regulations No. 8 on the Capital Adequacy of Banks, Regulations No. 9 on the Classification and the Formation of Mandatory Special Reserves (Statutory Provisions) by Banks, Regulations No. 10 on Internal Controls in Banks, Regulations No. 11 on the Liquidity of Banks. The BNB will take part in the drafting of the Law on Deposit Insurance, which will replace a BNB regulation in this area currently in place.

The BNB will facilitate its monetary policy by cooperating with the competent departments and authorities for the legal regulation and practical creation of primary and secondary capital markets in the country based on the legislation on securities, stock exchanges and investment funds. This would not only have a benign and speeding up effect on privatization, but will also reinforce market-based principles in the banking sector.

In 1996, BNB policy will aim at providing and maintaining conditions necessary for concluding arrangements with the International Monetary Fund and the World Bank. The need for such arrangements arises particularly out of the difficulty for foreign debt servicing, in a situation of lacking external financing. Projections of major macroeconomic indicators do not provide sufficient grounds to expect that the inflow of short-term capital, seen in 1995, will continue in 1996. Balance of payments support coming from official sources may be crucial for maintaining international reserves at a level which will allow for smooth servicing of external payments.

At the same time, the conclusion of these arrangements will mobilize the country to rapidly and consistently enforce a comprehensive program, which would ensure favorable conditions for the functioning of the real and banking sectors, bringing inflation down to a single digit and a sustainable economic growth in the medium term. This setting will help Bulgaria improve its economic and financial image, regain its access to international capital markets, and attract more foreign investment. Having all this in place, it will be possible to finance the import of more high-technology investment goods and boost further a noninflationary economic development.

Preserving and promoting financial stability in the country will depend, however, not only on BNB's monetary policy, but rather on this policy's integration into the overall program of decisive structural reform both in the real and banking sectors. The necessary conditions for further sustainable reduction of inflation through moderately restrictive monetary and fiscal policies are contingent upon launching large-scale structural reforms related to privatization and enforcement of financial discipline on all economic and financial agents.

Recent Developments in the Monetary Policy of the National Bank of Hungary

by Gabriella Tesy

Gabriella Tesy is Senior Adviser and Assistant to the Governor of the National Bank of Hungary.

Since 1990, significant reforms have taken place in the Hungarian economy as in the other countries in transition. The market reforms implemented in the past five years led to:

• a large-scale transformation of the ownership;

• a complete reorientation in external economic relations, a result of the loss of our traditional markets;

• a liberal trade regime, combined with a gradually liberalized foreign exchange system (resulting in full convertibility of current account transactions and substantial, through not complete, liberalization of capital account transactions as of 1996);

• a removal of administrative control on price and wage formation;

• and reform in public finances and several elements of the welfare system.

As a result of these changes, significant progress was made in the establishment of a market economy. However, at some points (privatization, reform of the welfare systems, etc.), the transition proved to be more difficult and needed more time than it had been expected. Between 1990 and 1992, the economic performance was weaker. After several years of GDP decline, induced mainly by the transition itself, it returned to growth in 1994 but it was fueled by increasing domestic demand, including primarily the budget deficit.

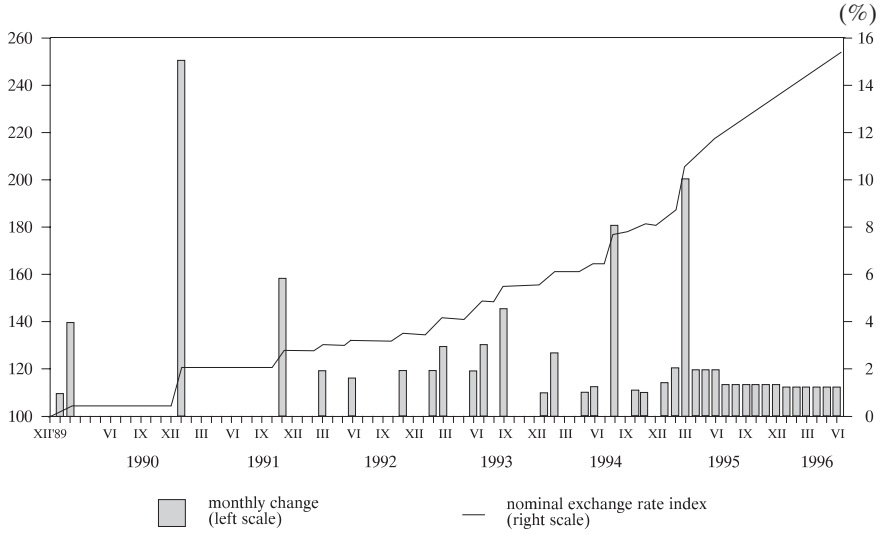
The economic growth was accompanied by increasing external and internal imbalances in 1993 and 1994. These imbalances were due to external factors (recession) to some extent, while the major reasons were the increasing budget deficit and limited control over public spending. In addition, since 1993 domestic demand of households and enterprises has also commenced to grow, thus the gap between domestic savings and financial requirements has widened. Consequently, foreign debt has grown more rapidly than expected.

Therefore, in March 1995 the government decided to introduce a comprehensive stabilization program. Its main objectives were:

• to enhance competitiveness in foreign and domestic markets, aimed at encouraging export and slowing down import growth; and

Chart 1

Exchange Rate Regimes: from Pegged but Adjustable to Preannounced Crawling Peg



• to reduce the general government deficit through further cuts in expenditures, intended to create a more favorable economic environment for the enterprises to raise credits and carry out capital investments, that is, to accelerate modernization and restructuring of the economy.

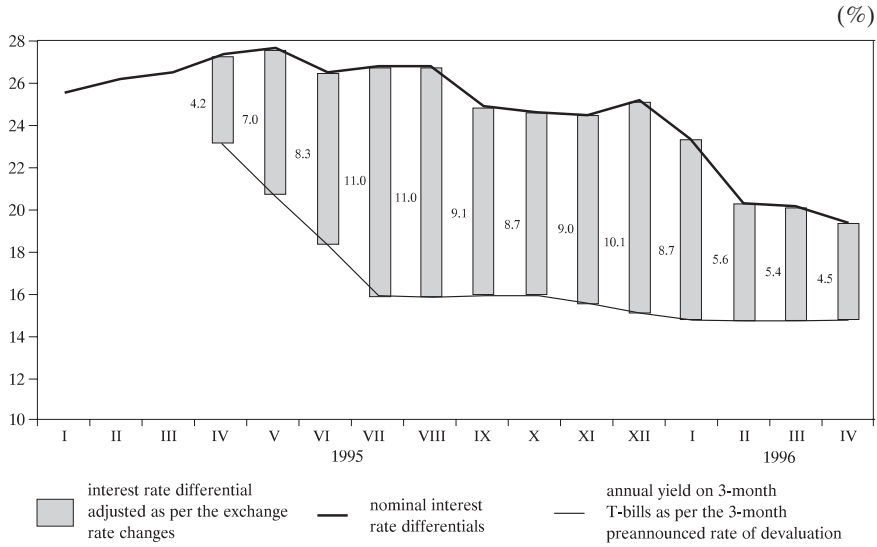
The HUF was devalued by 9% against a basket of 30% USD and 70% ECU, and a pre-announced crawling peg was introduced with a monthly rate of devaluation of 1.9% in the rest of the first half of 1995, 1.3% in the second half of 1995 and 1.2% in 1996.

Introduction of a floating exchange rate policy instead of the crawling peg system would have been more risky: the unbinded exchange rates – in such a small market as that of the HUF – would have involved, at least for a short time, a significantly undervalued currency, resulting in high inflation and a sustainable increase in the volatility of exchange rates. So, the external balance could have been restored by stronger shocks which would have led to a turmoil in the economy. In addition, there were no adequate institutional background and instruments for managing the exchange rate risks beforehand, as the futures foreign exchange market was opened just three years ago. The negative impact of the floating exchange rate policy still exists for small and open countries like Hungary.

Until the introduction of the stabilization program in March 1995, the National Bank of Hungary (NBH) pursued two final goals (balance of payments and inflation) with varying priorities. Since the crawling peg regime sets definite constraints on fiscal and incomes policies, the monetary policy becomes better

Chart 2

Nominal Interest Rate Differential



** 3-month HUF treasury bills yield − 3-month weighted average yield of USD and ECU market rate (weights: USD 30%, ECU 70% according to the currency basket).*

equipped to fight inflation. In addition, the external balance is substantially influenced by the budget deficit. Thus, maintenance of the crawling peg implies that the monetary policy can only pursue one final goal – a reduction of inflation. Interest rates are determined to a great extent by the preannounced rate of devaluation, while the central bank has to target an appropriate interest rate differential. Though current domestic interest rates are higher than justified by the crawl, the NBH is not willing to speed up the process of interest rate decline through offering cheap money.

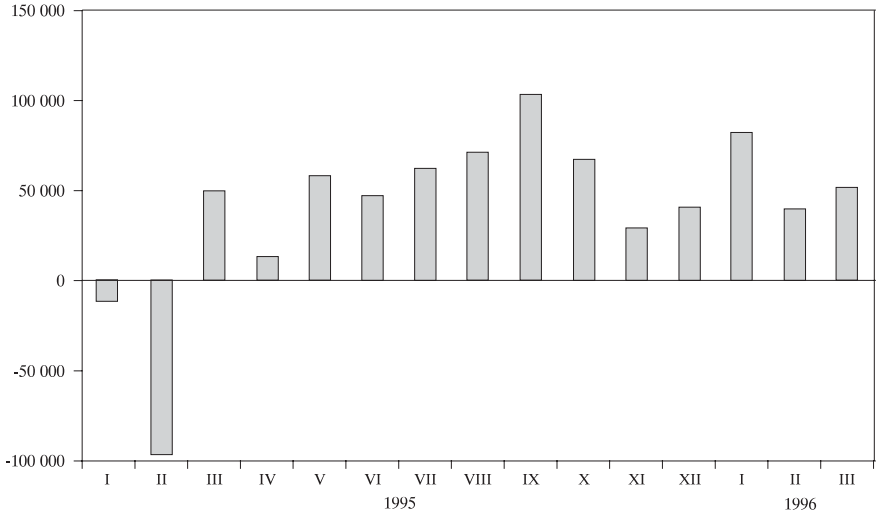
The preannounced crawling peg mechanism provided a new framework of targets and conditions for the 1995 and 1996 monetary policy. The only intermediate target is to keep the nominal exchange rate on a preannounced path. This conveys a message to the business sector that the central bank is confident of its ability to keep the rate of inflation in line with the preannounced rate of devaluation.

A negative implication of the new system is the problem of sterilization. In the crawling peg system the exchange rate risks can be predicted within the reference period. As on a short-term basis, both inflation and domestic interest rates remained high, while the rate of devaluation decreased dramatically, and the gap between international and domestic interest rates substantially widened. This prompted a conversion of existing foreign exchange funds into HUF funds – and also the acquisition of more foreign exchange funds – which resulted in an in-

Chart 3

NBH Interventions in the Interbank Money Market

(million HUF)



crease in money supply through central bank interventions. The exchange rate has been at the bottom of the band and the NBH had to sell forint continuously.

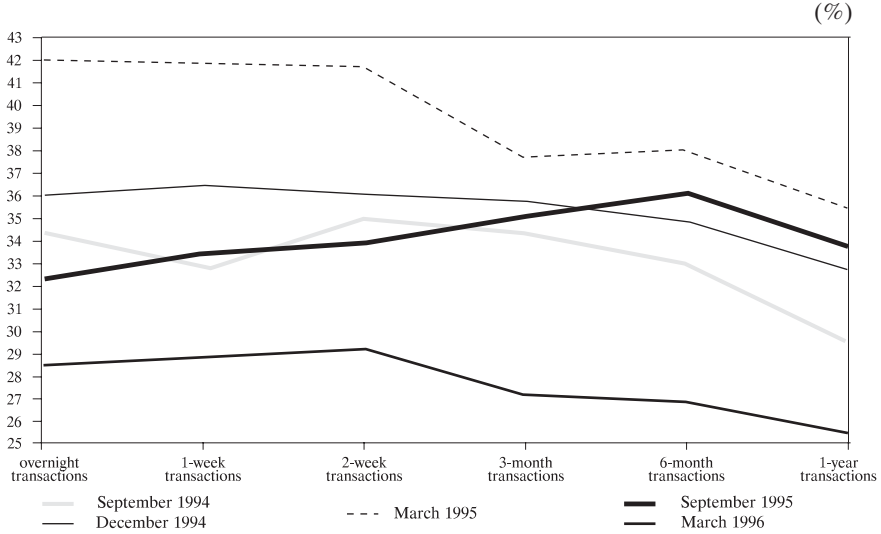
Recently the main instruments for sterilization are repo- and open market transactions. However, the NBH does not have an adequate portfolio of government securities (in terms of both quantity and quality, that is, those with appropriate interest rate conditions and maturity) to execute a large-scale outright sale of government securities. The improving coordination between the authorities responsible for the public debt management and the NBH will enable the central bank to establish an adequate portfolio and to operate only in those (shorter-term) segments of the money market for which no government financial requirements exist.

The HUF liquidity then led to a dramatic fall in refinancing demand and withdrawals from repo- and swap transactions. Along with these changes, the stock of other longer-term refinancing credits and foreign exchange deposits has continuously decreased, which complied with the central bank's intensions to restrict money supply.

The character of repo-transactions has gradually changed. As a general principle, the NBH tries to restrict its money market transactions to very short maturities. The objective is that the central bank interventions should disturb demand and supply in the capital market to the least possible extent only. This also means that the NBH intervenes only at a very few points of the yield curve, and leaves

Chart 4

Yield Curve Dynamics, 1994 – 1996 (compound rates)



the market to set adequate interest and yield levels.

One of the most important dilemmas of the monetary policy is to what extent the NBH should neutralize the excess liquidity, and to what extent it should allow a decline in interest rates without having an adverse impact on domestic savings. The current level of interest rate for one-year maturity seems to have reached the appropriate level.

Besides the introduction of a crawling peg, a temporary import surcharge of 8% was also introduced in March 1995. Expenditure cuts in public administration, education and health were implemented, and measures were taken to reduce public sector employment.

As a result of the March stabilization the macroeconomic equilibrium started gradually to restore, and the GDP growth continued to increase by 1.5%, following the 2.9% in 1994. From the beginning of the second quarter of 1995, the growth rate of exports exceeded that of imports to an ever increasing extent (as compared to the same period of the previous year). The current account deficit has decreased since April 1995, and in the second quarter it was lower than a year ago.

The general government deficit amounted to 8.5% of GDP in 1995. This means that net borrowing requirements of the public sector declined by 1.8% of GDP compared to the previous year. The central government deficit declined by about one percentage point: there was about three percentage point surplus in the primary balance but debt service payments from the budget were much greater than in 1994.

Chart 5

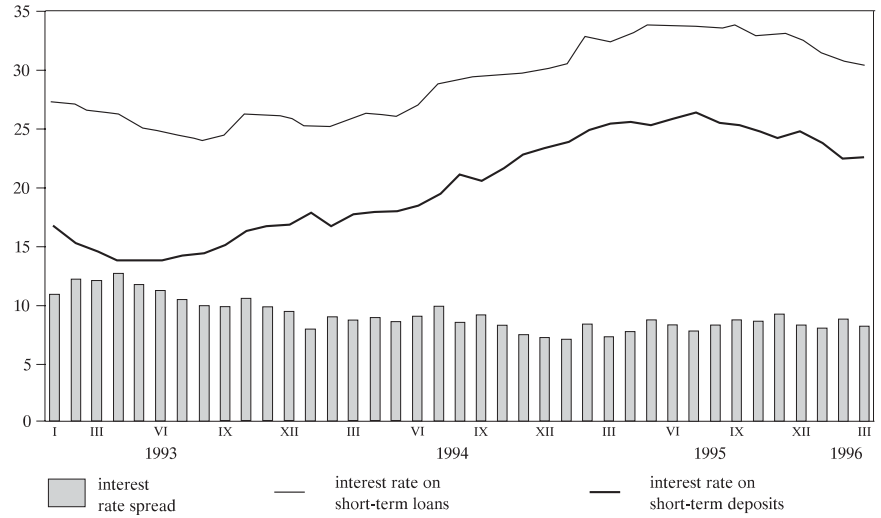
Consumer Price Index

(same month of previous year = 100, %)

Chart 6

Spread between Commercial Bank Short-term (up to 1 Year) Loans and Deposits

(%)



In 1995, gross average earnings increased by 18.8%, real earnings per capita declined by about 12%. The reasons behind this include sharp cuts in public expenditures, restrictions on wage increases in companies with majority state ownership, and changes in the tax rules.

Between 1991 and 1993, the number of registered unemployed increased significantly, and later fell from the high of 13.4% at the end of 1993 to 10.4% by the end of December 1995. In the long run, the number of unemployed will probably increase because the budget supported institutions will continue to reduce their staff and the labor productivity in industry and other productive sectors increases dynamically. There are no chances to lower significantly the unemployment ratio in the next few years.

Consumer prices increased by 28.2% in 1995, against 19% in 1994. The inflation began to pick up in the second half of 1994 and accelerated in the first half of 1995. In addition to demand-induced factors, this was a result of deferred increases in energy prices, more significant exchange rate devaluation and the introduction of the import surcharge. Policy-makers were aware of the temporary acceleration of inflation and deliberately accepted it in order to improve the external balance. The consumer price increase (compared to the same month of the previous year) reached 31% in June. Later the monthly inflation rate slowed down significantly – it was 28.3% in December.

Due to slow revival of confidence and the imperfection of the money and capital markets, domestic interest rates started to follow the preannounced rate of devaluation and decrease with a delay. However, the central bank should not undertake any step in advance in the process of interest rate decline by offering cheap money.

In 1996, the government will continue to implement its economic policy aimed at stabilizing and establishing the preconditions of a sustainable growth. According to the 1996 budget bill, the general government deficit/GDP ratio will fall to around 4%. The government endeavors to keep the current account deficit below USD 2 billion – which will be hopefully exceeded by the inflow of foreign direct investment (FDI) – and to slow down inflation to around 20%. In 1996, real incomes and household consumption are likely to continue to fall, but capital investment will continue to expand. The GDP is expected to grow by approximately 2%.

Polish Monetary Policy in the 1990s: A Bird's Eye View

by Zbigniew Polanski

Zbigniew Polanski is Senior Economist at the Economic Research Department, National Bank of Poland.

At the beginning of the 1990s the Polish government launched a stabilization program which marked the initiation of new economic policies. One of the most important components of this stabilization package concerned central bank monetary management. In 1990, the National Bank of Poland (NBP) began to conduct an anti-inflationary policy which enhanced the development of market mechanisms. Essentially, this policy is still being pursued by the NBP, although – as one could expect – it evolved over time, mainly as a result of the development of the financial system and the appearance of new economic problems.

Main Features of the 1990s Monetary Policy

At the cost of simplification one can argue that the new NBP policy can be summarized in four main points: inflation as the final goal of monetary policy; money supply as the intermediate target; positive real interest rates, and international liberalization of the exchange rate as an important policy instrument. In all four aspects, developments in the 1990s break substantially with previous experiences in Poland.

Inflation as the final goal. In January 1989, that is, at the end of communist rule in Poland, the Law on NBP was adopted. It states that "The activity of the NBP is aimed especially at strengthening the Polish currency." Since the fall of 1989, this vague definition of the main task of the central bank has been interpreted by its authorities as an obligation of the NBP to reduce the inflation rate.

Money supply as the intermediate target. The NBP has scored a success in bringing down inflation by controlling the money supply. As in the 1980s the Polish economy displayed very high levels of dollarization, the NBP initially targeted a money supply aggregate which excluded foreign currency denominated deposits (so-called "domestic money supply" aggregate). However, since 1991 "total money supply" (M2) has been NBP's explicit intermediate target.

Positive real interest rates. From the first half of the 1970s Poland experienced negative real interest rates which at the end of the 1980s reached their low-

est values (see Table 5 below). Loans granted by the central bank to finance the budget deficit had a zero nominal interest rate in the 1980s.

Under these circumstances, it is not surprising that the interest rate policy had to be redesigned. In the 1990s, this has led, however, to political turmoil.

International liberalization of the exchange rate. One of the key elements of the new policies adopted in Poland at the end of 1989 was the liberalization of foreign exchange restrictions. Consequently, the role of the exchange rate in economic policies in general, and monetary policy in particular, increased.

In January 1990, Poland adopted the so-called internal convertibility system, which was in effect until 1995. Since June 1995, Poland officially complies with the rules of Article VIII of the Articles of Agreement of the IMF. In 1996, exchange restrictions are being further liberalized according to the suggestions made by the OECD as Poland will join this organization in a few months. It is expected that around the year 2000 Poland will have complete convertibility of the zloty.

As regards the exchange rate policy, it must be said that it passed through three clearly defined phases: 1) from the beginning of 1990 until mid-October 1991 the exchange rate was to function as a nominal anchor for inflation by following a policy of a fixed exchange rate;[1] 2) as a result of the strong appreciation of the real exchange rate of the zloty, a preannounced crawling-peg exchange rate regime was introduced in the autumn of 1991 aimed at stabilizing the real exchange rate; 3) since mid-May 1995 "crawling-band" system was introduced: the zloty has been allowed to fluctuate in a band of +/-7% around a central rate which is being set by the NBP subject to the crawling-peg mechanism.

Macroeconomic Developments Since 1990

What were, however, the results of these new policies? Let us first have a look at real economic developments, and later, at monetary developments, keeping in mind that the tendencies visible in Tables 1 – 2 did not result from central bank policies alone.

The real economy. The first of our tables shows that after an initial economic contraction (1990 – 1991), mainly due to the stabilization program and the disintegration of the Council for Mutual Economic Assistance (COMECON), the Polish economy witnessed an economic revival. In 1994 and 1995 (and probably in 1996), Poland's economy was among the fastest growing in Europe.

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[1] *During this phase two subperiods can be identified: a) from January 1990 until mid-May 1991 which the zloty was administratively fixed only against the U.S. dollar; b) from May 1991 when the exchange rate regime became based on a basket of five currencies (US dollar – 45%, Deutschemark – 35%, British pound – 10%, French franc – 5%, Swiss franc – 5%). The structure of the basket reflected the structure of payments in Poland's foreign trade. This basket is still in effect.*

Table 1

Poland's Economic Performance, 1989 – 1995

(percent changes from previous year unless indicated otherwise)

Indicators	1989	1990	1991	1992	1993	1994	1995*
GDP	0.2	-11.6	-7.0	2.6	3.8	5.2	7.0
Private consumption	-0.3	-15.3	6.3	2.3	5.2	4.3	4.9
Fixed investments	-2.1	-10.6	-4.4	2.3	2.9	9.2	19.0
Exports	2.6	15.1	-1.7	10.8	3.2	13.1	10.0
Imports	4.3	-10.2	29.6	1.7	13.2	11.3	13.0
Unemployment rate	-	6.3	11.8	13.6	16.4	16.0	14.9

* *Preliminary data.*

Source: Polish Central Statistical Office.

If it not were for the unemployment rate (which – despite some decline since 1994 – is still quite high for European standards), developments in the real economy could be described as a success story. However, our evaluation cannot be so straightforward if we take into account the developments in the monetary area.

Monetary developments. As can be seen from Table 2, the inflation rate in Poland is still high and money supply growth is high, although – as we will stress – the latter also results from the increase in the real money demand.

Table 2

Inflation and Money Supply in Poland, 1989 – 1995

(percent changes from previous year)

Indicators	1989	1990	1991	1992	1993	1994	1995
Inflation							
CPI[1]	640.3	249.3	60.4	44.3	37.6	29.5	21.6
GDP deflator	298.5	480.1	55.3	38.5	30.5	28.4	25.0[3]
Money supply							
Total (M2)	527.3	157.9	47.4	57.5	36.0	38.2	34.9
Domestic[2]	190.5	396.3	64.8	57.2	28.8	38.7	50.2

[1] *Consumer Price Index. December of the referred year to December of the previous year.*

[2] *Total money supply (M2) foreign currency accounts excluded.*

[3] *National Bank of Poland estimate.*

Source: Polish Central Statistical Office and National Bank of Poland.

Poland entered the present decade with very strong inflationary pressures, bordering on hyperinflation. The 1990 program clearly reduced the inflation rate, but despite the continuation of stabilization policies there are serious problems with reducing inflation below 20%. Inflation has been strong for more than twenty years and is thus deeply ingrained in our society. Furthermore, many governmental actions, like administrative price rises or policies aimed at the protection of the

agricultural sector, are additionally fueling inflation.

Under these circumstances, it is not surprising that the money supply is quickly increasing. However, as demonstrated by Table 3, confidence in the Polish currency, despite the above mentioned problems with the reduction of the inflation rate, is growing.

Table 3

Structure of the Money Supply in Poland in 1989 and 1995

(%)

Indicators	1989	1995
Total money supply (M2)	100.0	100.0
Zloty money supply	27.5	79.6
Cash in circulation[1]	10.3	18.7
Zloty deposits of nonfinancial sector	17.2	60.8
Households	9.0	38.0
Business	8.2	22.8
Foreign currency deposits of nonfinancial sector	72.5[2]	20.4
Households	48.8	18.9
Business	23.7	1.5

***Note**: Figures may not add to 100.0 due to rounding error.*

[1] Excluding vault cash.

[2] Using the exchange rate of USD 1 = 9.500 zl.

Source: National Bank of Poland.

In the 1990s, we observed a clear shift in the composition of the money supply in Poland. At the end of 1989 foreign currency accounts equaled nearly three-fourths of the money supply, now they account for less than 20% (as in 1996 the role of foreign currencies further declined). These figures probably capture best the process of growing confidence in the Polish zloty which has resulted mainly from NBP's stabilization policies initiated at the beginning of 1990.

The Evolution of Monetary Policy

What were, nonetheless, larger problems faced by the central bank in the 1990s? A quick overview can be provided by analyzing the sources of money supply creation.

Money supply sources. As it is well known from economic theory, money supply in a small open economy with administrative (or quasi-administrative) exchange rate regime results from domestic and external sources.[2] The former, that is, domestic credit expansion (domestic assets), consists of: a) banks' domestic lending activity (loans granted to the nonfinancial sector (households and busi-

[2] See, for example, Theoretical Aspects of the Design of Fund-Supported Adjustment Programs. International Monetary Fund, Washington, D.C., 1987, chp. 3.

nesses), and b) banks' lending to the government (public) sector. The latter, that is, net foreign assets (foreign reserves), results from current and capital account imbalances in the balance of payments accounts.

Table 4

Sources of the Money Supply in Poland, 1990 – 1996

(%)

Indicators	1990	1991	1992	1993	1994	1995	1996[2]
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Net foreign assets[1]	46.0	-2.7	25.9	17.5	32.9	58.5	49.2
Net indebtedness of the public sector	-12.3	36.9	48.3	47.0	37.3	3.7	17.6
Credits granted to enterprises and households	66.2	65.8	25.8	35.4	29.9	37.8	33.2

***Notes**: "Net balance of other items" omitted.*
Figures may not add to 100.0 due to rounding error.
[1] Balance of Polish banking system's claims and dues.
[2] January – April.

Source: National Bank of Poland.

Table 4 uses this framework and shows that three basic periods can be differentiated in the evolution of the sources of the money stock in Poland in the period under consideration: a) years 1990 – 1991 when the dominating source of the money supply were banking credits granted to the nonfinancial sector; b) years 1992 – 1994 when the key role was played by the budget deficit; c) 1995 and the first months of 1996 when money supply resulted mostly from increases in foreign reserves. Undoubtedly, the distinction of these three periods is to some extent arbitrary – some of the factors creating money supply obviously overlap in some years as it is the case, for example, with bank lending to the nonfinancial sector and to the state budget in 1991 or increasing foreign reserves in 1994.

Credit expansion in 1990 – 1991. As pointed out, the beginning of the new decade coincided with the start of new monetary policy. However, Table 2 demonstrates, that in spite of the introduction of stabilization measures, throughout the 1990 – 1991 period, inflation and the money supply continued to grow at very high rates.

The main reason for this is twofold: money supply increases and strong inflation resulted both from credit expansion and the exchange rate policy which led to foreign reserves expansion in 1990. Let us note, however, that in 1990 the state budget enjoyed a surplus which means that it acted at that time as a factor reducing the expansion of money supply.

The 1990 stabilization program aimed at restricting credit supply growth. A new interest rate policy was started, reserve requirements were raised to very high levels, and in mid-1990, in the rudimentary money market, open market operations based on money bills issued by NBP (as T-bills were not available) were

introduced as an additional monetary policy tool. These instruments did not reduce considerably credit expansion so that in the autumn of 1990 credit ceilings (an administrative measure) were explicitly reimposed by the central bank.

Table 5

National Bank of Poland Basic Interest Rate, 1989 – 1995

Indicators	1989	1990	1991	1992	1993	1994	1995
Nominal NBP rate	61.3	103.8	53.9	39.0	35.4	33.7	31.5
Real NBP rate, deflated by:							
consumer prices[1]	-78.2	-41.6	-4.0	-3.7	-1.6	3.2	8.1
industrial output prices[1]	-78.6	-30.4	13.4	5.7	-1.2	4.5	10.6

***Note**: NBP basic interest rate is understood here as average annual interest rate on NBP's refinancing credits.*

[1] December of the referred year to December of the previous year.

Source: National Bank of Poland and Polish Central Statistical Office.

Looking at Table 5 one could argue that an important factor underlying the strong credit expansion in 1990 – 1991 were interest rates which were negative in real terms. However, the Table presents *ex post* data while the real interest rate is basically an *ex ante* concept, that is, it takes into account expected inflation. Although, it would be difficult now to prove it empirically, to an observer who witnessed directly the introduction of the stabilization program, it is quite obvious that expected real interest rates for most economic agents were positive in 1990[3]. What then were the reasons for this heavy credit expansion?

The main reason for the 1990 – 1991 credit expansion stemmed from the fact that despite the banking reform of 1989, most credits, as in socialist times, were supplied by large state-owned banks to large state-owned companies. At that time these agents did not change their behavior substantially. Despite high interest rates state firms were usually demanding new credits, while banks were usually providing them credit without analyzing, in detail, the creditworthiness of their clients. They did this in spite of the fact that the economy was heading into recession.

The second reason for the large increase in the money supply in 1990 is linked to the foreign sector. As we can see in Table 1, exports in 1990 sharply increased while imports abruptly declined. This led to a positive foreign trade balance and a surplus in the balance of payments current account. Consequently, foreign reserves unexpectedly increased, becoming an important money supply source.

These abrupt changes in the foreign sector were to a great extent the result of

[3] It should also be noted that the rates in Table 5 are annual averages. This is highly misleading because nominal rates were reduced every month in the first half of 1990. In the case of NBP refinancing credit, it reached 432% in January 1990! (This is an annualized simple interest rate.) In the second half of 1990 and in 1991, basic interest rates were also often changed, only since 1992 being occasionally modified.

Chart 1

Zloty's Real Effective Exchange Rate, 1989 – 1996

(December 1989 = 100)

Source: National Bank of Poland

exchange rate policies. As mentioned, in 1990 and in most of 1991 Poland followed a policy of a fixed exchange rate. However, before the zloty was fixed, it had been deeply devalued several times. These devaluations are now considered to have been excessive and are blamed for being an important factor contributing to the high 1990 inflation.

As the zloty was fixed for so long, despite an occasional May 1991 devaluation, it appreciated considerably in real terms (see Chart 1) leading in 1991 to a negative trade balance and a deficit in the current account, so that Polish foreign reserves declined that year (see Chart 2).

Budget deficit in 1992 – 1994. In the following three years the main source of money creation was the budget deficit, which had been basically financed by the banking sector – both from NBP and commercial banks. 1992 was particularly dramatic as the budget deficit reached 6% of GDP. In 1993 the budgetary situation considerably improved; in fact if costs of public debt are excluded (the so-called primary deficit is calculated) then our state budget would have had a positive balance since that time.

Despite the budgetary improvement, Table 4 shows that in 1993 and 1994 the state budget deficit continued to be the main source of money creation. The Polish foreign sector was still quite weak, although in 1994 it exhibited a considerable improvement, particularly as a result of unregistered foreign trade activities.

Table 6

State Budget Deficits and Public Debt in Poland, 1989 – 1995

(percent of GDP unless indicated otherwise)

Indicators	1989	1990	1991	1992	1993	1994	1995
Budget deficit (-) or surplus (+)	-3.0	0.4	-3.8	-6.0	-2.8	-2.7	-2.6
Domestic public debt	-	12.6	16.1	21.1	23.1	24.1	21.4
Sources of financing of domestic public debt (in percent)[1]							
National Bank of Poland	-	25.0	29.6	42.3	38.6	35.4	16.7
Commercial banks	-	66.7	59.6	54.2	56.3	56.5	66.3
Nonbanking sector	-	8.3	10.7	3.5	5.2	8.1	17.0
Total public debt	-	89.9	80.6	85.3	86.0	69.9	57.3

***Note**: GDP 1995 estimate by NBP.*

[1] Figures may not add to 100.0 due to rounding error.

Source: Ministry of Finance and Polish Central Statistical Office.

But what happened to credit market activities? As can be seen in Table 4, credit supply to the nonfinancial sector, relative to other money sources, has been very weak during all of the 1992 – 1994 period, sharply contrasting with the previous period.

The answer to the question concerning the change in the situation in the credit market should be viewed in the context of the incentives shaping commercial bank behavior. Once again, it seems, that this change in the credit market should not be attributed to changes in the real interest rates, which became undoubtedly positive since 1994 (see Table 5). The decline in the rate of bank credit supply, in 1992 and the following years, should be attributed rather to nonprice means by which banks have shrunk their credit activities. Why, however, did this dramatic change in banks' behavior take place?

Table 7

Bad Loans in Poland, 1991 – 1995

(%)

Indicators	1991[1]	1991	1992	1993	1994	1995
As share of banks' credits granted to enterprises	8.3	16.2	31.4	33.1	30.9	23.5
As share of banks' assets	-	6.7	10.8	10.2	8.9	6.9
As share of GDP	1.5	3.8	6.1	6.0	5.1	3.9[2]

[1] As of June.

[2] The ratio takes into account the NBP estimate of 1995 GDP.

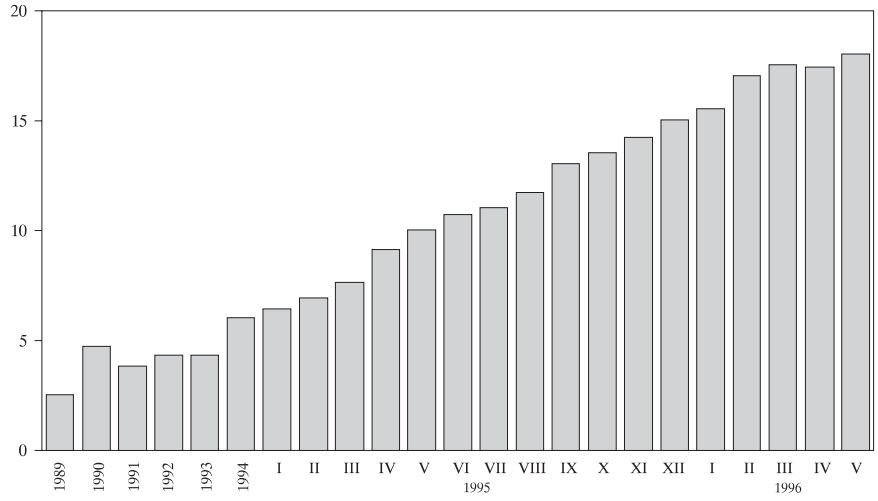
Source: National Bank of Poland and Polish Central Statistical Office.

As we have mentioned, in the beginning of the 1990s, despite new macroeconomic policies, Polish banks behaved very passively – to a great extent in a simi-

Chart 2

Polish Gross Official Reserves, 1989 – 1996

(billion USD)



Source: National Bank of Poland.

lar way as in the socialist economy period. As a result, they granted credits which in many cases proved to be bad loans. Additionally, at that time, the Council for Mutual Economic Assistance collapsed, leading many firms to bankruptcy and, consequently, to the deepening of bad loans crisis.

The bad loans crisis, which reached its peak in 1992 – 1993, was a decisive factor that changed commercial banks behavior from carelessness to caution. Banks began to ration credit by nonprice means in order to avoid the risks inherent in the process of granting credits, given the conditions of high uncertainty which characterized the transition economy. As a result of this slowdown in credit activities, NBP credit ceilings were abolished at the end of 1992.

The change in commercial banks' behavior was additionally stimulated by the fact that in 1992 the privatization of commercial banks had begun. On the other hand, budget deficits provided instruments which banks could use as earning assets in their portfolios, thus replacing credits to the business sector. In this context one should also add that the increasing role of T-bills in bank portfolios also enabled the NBP to conduct open market operations on a regular basis since the beginning of 1993.

In early 1993, a special law on enterprise and bank financial restructuring became effective, introducing some new legal solutions which enabled banks on their own to solve the bad loans problems with their corporate clients. This decentralized approach, coupled with a stricter banking supervision promoted by the

central bank, proved to be very successful: as can be seen from Table 7, from 1994 the volume of bad loans gradually declines. Against this background of declining economic uncertainty it is understandable why banks, despite pronounced positive real interest rates on credits, increased their credit activities in 1995 and further in 1996.

Foreign assets growth in 1995. In 1994, however, another important phenomenon became apparent. Foreign reserves began to increase quickly, so that in 1995 and in the first months of 1996 they became the key source in the money supply equation. In 1995, Polish foreign gross reserves (NBP reserves) had increased from USD 6 billion to nearly USD 15 billion, or 2.5 times. At the end of May 1996, foreign reserves reached USD 18 billion.

Three factors were responsible for this heavy foreign assets growth:

An unregistered foreign trade surplus. Despite the fact that the officially calculated foreign trade balance was negative, the entire trade balance (the one which includes unregistered trade payments), as well as the balance of payments current account show a surplus. Such developments resulted from efficiency increases coupled with a squeeze in real wages following the early 1990s liberalization, which increased Polish products competitiveness on international markets. At the same time, cross-country studies show that prices in Poland are on average lower than in most western countries.

Short-term (speculative) capital inflows. Due to the coexistence of high positive real interest rates, the crawling-peg exchange rate regime and the partial opening to international capital markets, coupled with high economic growth, the Polish economy in early 1995, after the Mexican financial crisis, came to be seen by foreign investors as a relatively safe place to make sound investments.

Long-term capital inflows. In 1995, Poland was also seen as a good place to make foreign direct investments. In the first months of 1996, this process was further stimulated by the privatization of factories with a heavy foreign involvement.

The quick 1995 rise of foreign reserves pushed the NBP to appreciate the zloty several times. The crawling-peg mechanism has been basically retained (although as we mentioned above the zloty was allowed to fluctuate from mid-May 1995), but its peg has been reduced. In mid-1996, it seems that the Polish balance of payments current account is close to an equilibrium level.

Concerning the other two sources of the money supply, positive trends are also visible. Bank financing of public sector deficit decreased considerably in 1995 and the trend is continuing this year. At the same time, bank credits for the nonfinancial sector are gradually picking up.

Let us return at this point to our remarks on Polish macroeconomic developments in the 1990s. Table 2 showed that the declining pattern of inflation was accompanied by still substantial money supply increases. We know now how they were generated. What we want to stress here is that despite problems in monetary control the inflation rate has steadily declined in Poland. Obviously, real money demand for Polish currency has increased. Our analysis suggests that this was ba-

sically due to two factors: a) economic revival which created additional demand for transaction balances, and, b) NBP interest rate policy which made zloty denominated deposits a valuable saving asset (see Table 3).

Conclusion

Despite our rosy picture of the 1990s developments one should also point out some of the many important problems which remain in monetary management. For example, despite the fact that open market operations are the key operational instrument in its activities, NBP is being forced to impose – as an additional sterilizing measure – high minimum reserve requirements on commercial bank deposits. This makes monetary policy less flexible than one would expect it to be.

Another serious problem is the issue of the NBP independence. NBP is one of the most autonomous central banks in central and eastern Europe. However, similar to many western central banks, problems of accountability and coordination with fiscal policy emerge.

As Poland is preparing itself to join the European Union, new institutional solutions in the area of monetary policy have to be compatible with western standards, particularly those outlined in the Statute of the European System of central banks and of the European Central Bank. In order to solve these problems of accountability and coordination, NBP will adopt a Monetary Policy Board, modeled on Banque de France.

Poland is also trying to meet the macroeconomic convergence criteria as laid out in the Maastricht Treaty. The information provided in this paper shows that Poland has been already fulfiling the fiscal criteria. In fact only inflation (and interest rates linked to it and changes in the exchange rate), despite its gradual decline, remains to be substantially lowered, so that Poland would meet the Maastricht quantitative criteria. Therefore, fighting inflation has to continue to be a priority for Polish monetary policy. It also implies that NBP has to remain an autonomous, but accountable, central bank.

The Czech National Bank and Recent Developments in the Czech Republic

by Roman Matousek

Roman Matousek works at the Institute of Economics, Czech National Bank.

The Czech Republic started the political and economic transition in 1990. As for the time structure, it is worth noting that the real transition was launched in 1991. However, this period of radical systemic changes can be perceived as relatively successful in comparison with other countries in transition. Nevertheless, this period of transition has been costly for the economic system as a whole and has taken more time than expected.

Place and Role of the Czech National Bank in the Transition Period

The Czech National Bank (CNB) plays one of pivotal roles in the transition period. The CNB[1] was established as an independent institution whose primary objective is to ensure the stability of the Czech currency. The major tasks of the CNB are similar to those of other central banks. The CNB is responsible for the pursuit of the monetary policy and is independent from the government. By law, its main goal is to control inflation. The CNB intermediate targets relate to the growth in money supply (M2) and exchange rate stability. The CNB also takes into account the development of monetary and real variables and their involvement in the pursuit of the monetary policy. Apart from the above mentioned targets, the activities of the CNB include: bank supervision, operation as a clearing center, maintenance of foreign exchange reserves, issue of banknotes, and money supply management.

Macroeconomic Development and Results

In macroeconomic terms, the development of the Czech Republic is very often labeled as a successful transition from centralized to a market economy, irrespective of the difficulties in the transition. However, if one compares these results

[1] *Known as the Czechoslovak State Bank prior to January 1993.*

with other emerging countries in central and eastern Europe they seem to be performing well.

Table 1

Macroeconomic Indicators (1990 – 1995)

Indicators	1990	1991	1992	1993	1994	1995
GDP (real)	-1.2	-14.2	-6.4	-0.9	2.6	4.8
Industrial output (real)	-3.6	-22.8	-11.7	-5.3	2.1	9.2
Unemployment (%)	0.8	4.1	2.6	3.5	3.2	2.9
CPI (%)	9.6	56.6	11.1	20.8	10.0	9.1
PPI (%)	4.3	70.4	9.9	13.1	5.3	7.6
Money supply M2 – growth (%)	n.a.	n.a.	n.a.	16.3	22.9	17.3
External debt (billion USD)	n.a.	n.a.	7.1	8.5	10.3	16.3

Source: Czech Statistical Office, Czech National Bank.

The crucial problem facing the Czech economy has been the restructuring and privatization of the economic system. This period had negative consequences such as GDP decline and a relatively high inflation rate. As for the decline of GDP, we can argue that it was mainly a result of restructuring of the economy. In support of this, we can see the same or similar development in Poland and Hungary.

As it has already been mentioned, the currency stability seems to be one of the essential and important targets. Since the initiation of transition, the CNB was very successful in this process. Apart from a huge liberalization in 1991, and the introduction of VAT in 1993, we can trace a disinflationary trend in the Czech Republic. This success can be attributed mainly to the central bank's restrictive monetary policy, which has been an integral part of the stabilization program pursued by the Czech government.

Significant progress in the monetary policy implementation has been made with the introduction of market instruments instead of administrative controls. Since 1992, the CNB has been able to operate with all main instrument employed in market economies, such as changes in discount and Lombard rates and minimum reserve requirements. The CNB also conducts open market operations and intervenes in the fixing of the exchange rate.

Monetary Targeting and Capital Inflows

Before tackling the problems of maintaining monetary targeting it is worth noting that in transition economies monetary targeting is more difficult than in developed economies for two major reasons: first, velocity of circulation is hardly stable or predictable; second, the estimate of potential output suffers many uncertainties. This is determined by the fact that systemic transformation implies significant institutional changes: privatization, financial and capital market, etc.

Table 2

Monetary Instruments of the CNB

(annual averages, billion CZK)

Year	Liquidity injection (+)	Liquidity drainage (–)			Balance
	Refinancing	Open market operations	Minimum reserve requirements	Deposits with CNB	
1990	17.4	0.0	0.0	0.0	17.4
1991	21.1	0.0	21.8	0.0	-0.8
1992	15.1	11.8	25.3	0.0	-22.0
1993	6.5	25.4	40.0	0.0	-58.8
1994	7.1	70.4	47.2	0.8	-111.3
1995	7.3	89.4	64.3	20.6	-166.9
Change in the period					
1990	17.4	0.0	0.0	0.0	17.4
IX.1991	3.7	0.0	21.8	0.0	-18.2
IX.1992	-6.0	11.8	3.5	0.0	-21.2
IX.1993	-8.6	13.6	14.7	0.0	-36.8
IX.1994	0.6	45.0	7.2	0.8	-52.5
IX.1995	0.2	19.0	17.1	19.8	-55.6

Source: Financial Statistical Information, Czech National Bank.

Since mid-1994, the ability to control money stock has significantly deteriorated in the Czech Republic. Money M2 increased by 21.5% in 1994, which was greater than in the previous year. This increase can be attributed to relatively large capital inflows, which began growing in the second half of 1993.

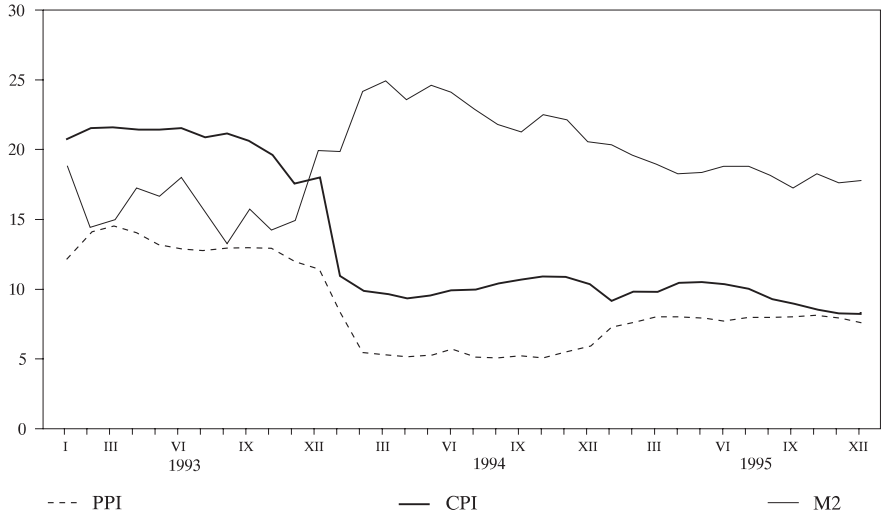
As far as the essential phenomenon of capital inflows is concerned, it must be stressed it has inhered in both macroeconomic and microeconomic aspects. At the same time, political stability has played a lion's share. There is no doubt that capital inflows have a positive effect on economic growth. However, the massive capital inflows are often accompanied by negative macroeconomic implications. One of them is an undesirable steep increase in foreign reserves resulting in fiscal costs in the form of reserve holding. Furthermore, the increase in foreign reserves can be preferable in the sense of ensuring such a volume of reserves that is needed for a given exchange rate regime. Finally, a surge in capital inflows induces inflationary pressures: in other words, it fuels inflation. With regard to the Czech Republic, the accumulation of net foreign assets accounted for 45%, 57% and 64% of M2 growth in 1993, in 1994 and in the twelve months ending June 1995 respectively.

Analyzing the impact of capital inflows under a fixed exchange rate regime in the Czech Republic, we can trace that it led to a steep increase in foreign reserves. Foreign reserves have doubled since the beginning of 1993.

The CNB has tried to adjust its intervention to the reaction of the markets un-

Chart 1

Money Supply and Inflation Rate (1993 – 1995)



der the impact of increasing capital inflows by using standard instruments, that is, open market operations, and a change of reserve requirements. The rate of compulsory reserves has been changed several times. Of course, the question which should be asked is to what extent the operations described above are efficient in reducing a surge in capital inflows.

Table 3

Reserve Requirements

(%)

Period	Demand deposits	Time deposits
January 1993 – July 1994	9	3
August 1994 – July 1995	12	3
August 1995	8.5	8.5

With regard to the structure of capital inflows, the composition has undergone some changes. We can see the increase in capital inflows in all their combinations, that is, portfolio investment, foreign direct investment, and also short-term investment labeled as speculative capital. The net capital in the Czech Republic is approximately 2. 5 times higher compared to the previous year. Unfortunately, short-term capital also increased dramatically compared to 1994.

There is no doubt that sterilization should be pursued indefinitely. This policy can have only limited success if other measures helping to absorb excess liquidity

Chart 2

Gross Reserves

(billion USD)

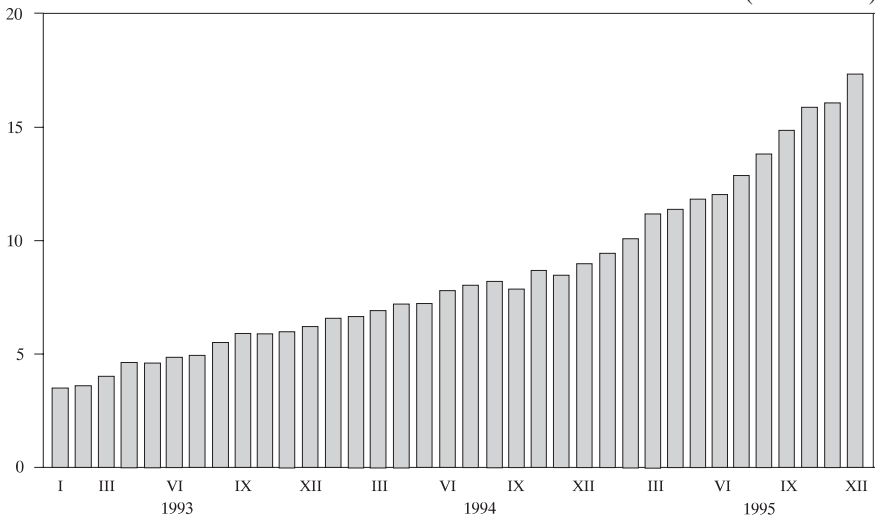
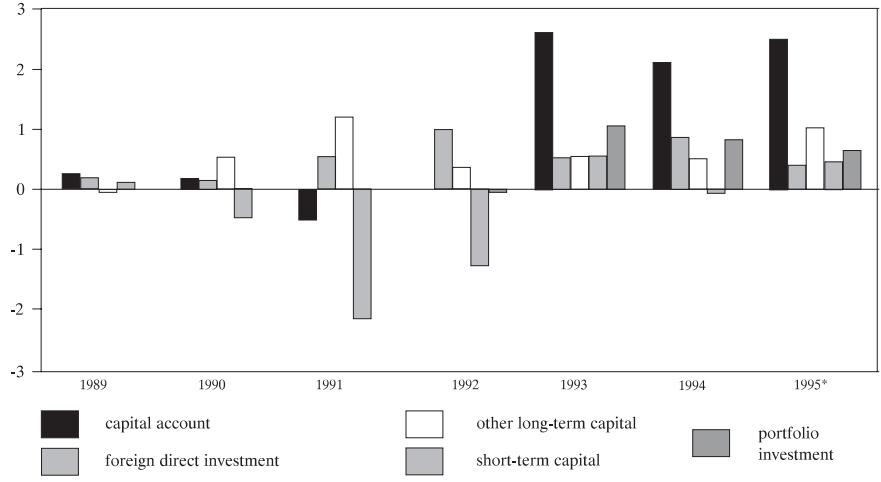


Chart 3

Capital Account

(billion USD)



* First half of 1995.

are not introduced, and particularly if fiscal policy is not correspondingly altered. Sterilization became increasingly costly for the central bank, due to the fairly stable interest rate differential between Czech and international reference rates. The CNB has almost twice as many bills as compared to 1994. Nevertheless, sterilization seems to be still effective – the CNB estimates indicate that the offset coefficient ranges between 0.4 and 0.65 according to different specification.

Exchange Rate Policy

The stable exchange rate of the Czech koruna and the fixed exchange rate have been an important part of the economic policy, with a substantial influence on monetary development. In the beginning of transition in 1991, the authorities of former Czechoslovakia adopted a fixed exchange rate regime, pegging the domestic currency to a basket. The fixed exchange rate regime and nominal exchange rate remained unchanged for 61 months in the Czech Republic. This was indeed remarkable stability in comparison with other emerging market economies.

Since the beginning of transition, the Czechoslovakia koruna (CSK), and later the Czech koruna (CZK), have been pegged to a currency basket. Both the composition of the currency basket of CSK (and CZK after the currency split in 1993) and the weights were occasionally amended in the first transition years to reflect the changing importance of individual major currencies in Czechoslovakia's trade and payments flows. In the case of the last amendment introduced in May 1993, the intention was to make the basket more simple and transparent (65% DEM; 35% USD).

Table 4

Currency Basket of the Czechoslovak and the Czech Koruna

(percentage weights)

	USD	DEM	ATS	GBP	FRF	CHF
1 June 1981	45.83	29.78	10.65	9.06	4.68	-
1 January 1989	32.88	40.93	12.32	-	4.82	9.05
28 December 1990	31.34	45.52	12.35	4.24	-	6.55
2 January 1992	49.07	36.15	8.07	-	2.92	3.79
3 May 1993	35	65	-	-	-	-

The nominal exchange rate of CSK was adjusted in four steps in the course of 1990 and the resulting cumulative devaluation amounted to 95.6%.

Chart 4 illustrates the developments in the official exchange rate, pursuing power parity rate and parallel market rate of CZK. We can see from the Chart that the initial gap between official and parallel rates was marginal from the beginning of 1991. The only disturbance, which occurred due to high uncertainty relating to the split of former Czechoslovakia, was the exponential increase of CZK rate in the parallel market. However, the parallel market rate decreased immediately after

the monetary union was discontinued and the separation of the Czech and Slovak currencies came into effect. As for the gap between purchasing power parity and the official exchange rate, it displays that it becomes narrower due to higher domestic inflation. It is worth noting that this gap has been largely caused by the difference between the prices of nontradable and tradable goods.

Table 5

Devaluation of the Czechoslovak Koruna in 1990

Date	CSK/USD*	Change (%)
2 January	14.62	2.1
8 January	17.00	16.3
15 October	24.00	55.2
28 December	28.00	15.9

** The first devaluation of 2 January 1990 was made with respect to the "commercial rate," i.e. to the applied exchange rate coefficient which amounted to CSK 14.31 per USD at the end of 1989.*

On the other hand, Chart 5 shows the developments in nominal and real effective exchange rates. We can notice that after the devaluation of the Czech currency it has gradually appreciated in terms of producer and consumer prices. Undoubtedly, this had a negative effect on exporters who faced stronger competitive pressures.

Since the beginning of 1991, the nominal exchange rate has been kept stable within a rather narrow band of 0.5%, and its developments reflected only the shifts in the cross rates of the currency basket. The regime of such a narrow band is managed via a "fixing" procedure on the interbank foreign exchange market where the central bank continues to play the dominant role of a market-maker. Only recently – as part of the policies to cope with the excessive capital inflows, and particularly to weaken the implied incentives especially for short-term inflows – a spread of 0.25% has been introduced for trading in the interbank foreign exchange market as of April 1995.

The currency convertibility of 1 October 1995 proved to be the most significant event as far as exchange rate policy is concerned. The shift took place from "internal" to "external" currency convertibility on current account flows (Article VIII of the MF), and the liberalization process is also extended on capital account flows. Unlike the previous stage, private capital flows surge and, accordingly, the capital account's fundamentals are of greater significance.

The recent change in the exchange rate regime, that is, the widening of the band to ±7.5%, which was introduced on 28 February 1996, opens up a new space for monetary policy. By widening the bands, the CNB has a potential powerful monetary instrument. It should be emphasized that the central parity of the exchange rate was not changed.

Chart 4

Official Exchange Rate

(CZK/USD)

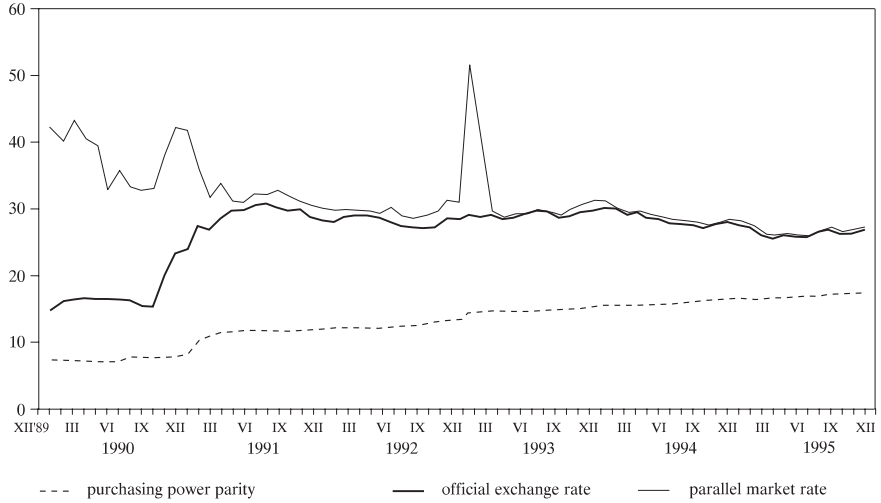
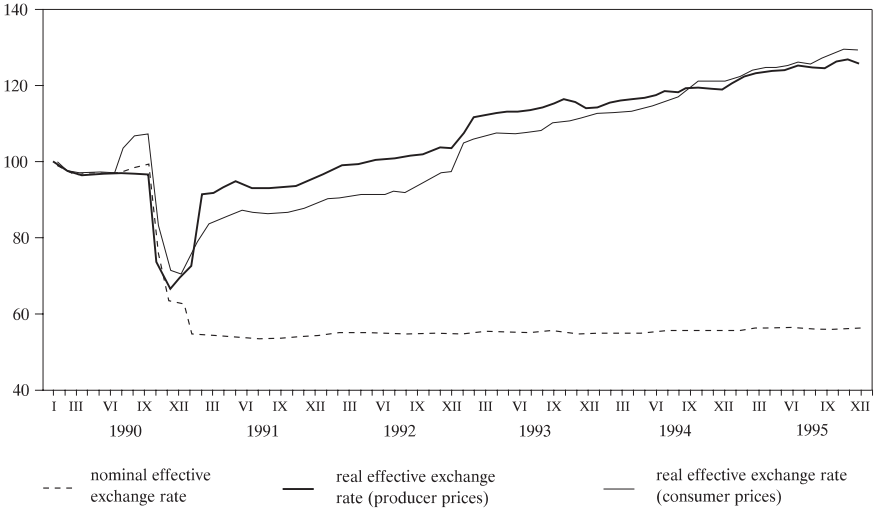


Chart 5

Effective Exchange Rate of CZK

(0.65DEM + 0.35USD per CZK 1, January 1990 = 100)



If one looks at the immediate impact of this measure, a few days after its announcement we can see that it was accompanied by certain degree of uncertainty within the financial market. In the morning of the announcement the Czech koruna was devalued by 2% against the USD/DEM basket, but in the afternoon it reached its original level. It is important to note that the CNB intervened in those days with sales of approximately USD 0.6 billion. Nevertheless, after this turbulence the exchange market stabilized and the Czech currency returned to its original level.

Let us analyze the potential impact of this measure on the Czech economy. Undoubtedly, the wider band of the exchange rate provides more flexibility for the CNB. The flexibility should be perceived as a possibility to conduct active monetary policy via the control over money supply growth by discouraging short-term capital inflows. In other words, a wider band allows for more flexibility in controlling monetary aggregates and increases the exchange rate for speculators. The present band takes into account that the exchange rate uncertainty should be adequate to the capital inflows with longer maturity. Even if the CNB faces inflation pressures by increasing the discount rate, which will prompt an increase in commercial bank interest rates – in actual fact this measure should not prompt a surge in short-term capital inflows. In other words, since a relatively large band induces uncertainty, which overwhelms potential profit, it seems that there is no incentive for further speculative capital inflows. Nonetheless, since the present expectations of speculators are based on the fact that the Czech currency remains stable – at least until the new elections – the CNB faces further short-term capital inflows.

Conclusion

Recent trends in our economy require particular attention. As was already tackled, adequate control of monetary aggregates has become more difficult for the CNB due to a surge in capital inflows, and particularly to short-term capital inflows. The CNB tried to curb inflation pressures by using monetary targeting and a fixed exchange rate regime as an important anchor. But as has been already mentioned, the control of money supply in the period of transition is extremely difficult. Nevertheless, the CNB succeeded in decreasing the inflation rate from 10% in 1994 to 9.1% in 1995.

The Czech Republic has been an unique country in central and eastern Europe, being capable to maintain the fixed exchange rate regime and nominal exchange rate unchanged for 61 months. Recently the CNB has taken an important step by widening the fluctuation band of the Czech currency. This measure undoubtedly enables to mitigate undesirable short-term capital inflows as well as to ease control of monetary aggregates. In other words, the exchange rate has become another possible powerful instrument which could be used by the CNB in conducting monetary policy.

Summing up, we can see that the Czech economy has undergone relatively rapid and fundamental changes since the start of the transition. Nonetheless, the

key macroeconomic indicators such as GDP growth, inflation rate, unemployment etc., enable us to assess the Czech transition as successful. Thus, recent trends in our economy indicate that the trajectory of the transition has been appropriate. Nevertheless, we are aware of the fact that the situation is still far from perfect.

Development of Indirect Monetary Policy Instruments in Croatia

by Katja Pecarevic

Katja Pecarevic[1] works at Economic Research Department, National Bank of Croatia.

The choice of monetary policy instruments depends upon the stage of the transition process. Croatia, as a constituent republic of former SFRJ, abandoned central planning in the early 1950s introducing a decentralized socialist economic system and a two-tier banking system. In late 1950s, Croatia entered the transition process being already in an advanced stage in comparison to some other transition economies.

In the last couple of years Croatia has moved toward increased reliance on indirect monetary policy instruments. However, slow pace of real and financial sector restructuring explains why it has not been able to make greater progress in diversification of indirect instruments. The financial structures are underdeveloped and financial markets are still shallow and narrow. The National Bank of Croatia (NBC) is building up its competence in the area of bank supervision. Bank Rehabilitation Agency was founded in 1995 and the process of rehabilitation has started in three of the "old" banks. The government launched a comprehensive stabilization package in October 1993. The stabilization program had great success in checking inflation and keeping it under control. Although this first phase of the program was very successful, the process of privatization and restructuring of enterprises (envisaged as the second, overlapping, phase of stabilization) is lagging behind. The soft-budget constraint mechanism is still functioning as the new bankruptcy law is to be implemented in 1997. As a consequence greater reliance on indirect monetary instruments has also been slowed down.

Persistence in reform and cooperation between the central bank and the government is indispensable in order to help develop a market-based financial sector. One of the major goals of monetary authorities should be promoting development of domestic capital markets, so that domestic savings (of households) are attracted into the financial system. The bottleneck is often an inadequate flow of monetary savings to finance investment projects. It is extremely important that interest rates

[1] *Views expressed here are not necessarily those of the National Bank of Croatia.*

remain positive in real terms and become market determined as soon as competition is achieved. Significant changes to the monetary policy framework generally require parallel measures aimed at the structure and degree of development of financial markets. Only when these markets develop and the banking and enterprise sector rehabilitates, will Croatia be able to pass the last phase of transition and become a full-fledged market economy.

Successful restructuring of former centrally planned economies, that is, their transition to market economies presupposes many important changes that have to be brought about, especially in the monetary and financial sphere. As financial sector is considered to be the weakest in transition economies that have faced problems with inflation, fall in production and living standards, loss of traditional foreign markets and macroeconomic instability detrimental to growth, the task is even more complicated when it comes to financial sector restructuring.

Transition economies are becoming increasingly open, introducing current account convertibility, liberalizing their economies. Because of the growing role of price signals in the real and monetary sphere, central banks in these countries are shifting from use of direct instruments of monetary policy to indirect ones. They are following the path developed countries were compelled to pursue in the 1980s as a consequence of financial market developments and across the broad deregulation of their economies. The use of indirect monetary instruments can only be effective if it allows markets to allocate financial resources more efficiently and therefore depends on the development of these markets. The main aim of indirect instruments of monetary policy is to influence interest rates and price signals are therefore of utmost importance. The choice of monetary policy instruments also depends upon the choice of monetary policy targets. To what extent and how fast direct instruments of monetary policy will be substituted for indirect ones depends on the speed of restructuring of financial and enterprise sector and financial market's development. Like other transition economies Croatia is trying to build up its financial markets. Money and capital markets are still weak but their development in the future would render the system based on the use of administered interest rates, quantitative credit allocation, and credit restrictions highly inefficient. Opening of the economy will lead to fast development of alternative sources of domestic finance, enable domestic nonfinancial sectors to raise funds internationally and therefore reduce credit provided by domestic financial intermediaries.

Background

Croatia's economy has faced similar problems as other transition economies have, but in addition to those the new state has been confronted with open military aggression and occupation of almost a third of its territory (from 1991 until 1995). The costs resulting from systemic reform have been augmented by huge direct and indirect costs of war.

Contrary to other transition economies, inflation and inflationary expectations in Croatia have deep and strong roots. The 1980s in former Yugoslavia were years

of high inflation and sluggish economic growth, that is, stagnation. As a result of a prolonged period of high inflation, currency substitution (in Deutschemarks) became deeply rooted. From 1971 until 1991, inflation was 69% annually, which in 1989 escalated into hyperinflation of 50% monthly. Croatia inherited inflation in the range of 15 – 20% per month, but fiscal position deteriorated and inflation accelerated to 25 – 30% monthly range by mid-1992. In 1991, the GDP declined to 80% of the 1990 level. As a result of further decline in 1992 and 1993 (despite some growth in 1994 and 1995), the 1995 level was around 68.3% of that in 1990[2]. The main source of inflation in the Croatian economy has been loss-making enterprises' heavy demand for bank credit and the general government budget deficit. The general government deficit has generally been financed by government arrears and by printing money[3]. Although, under the Law on the NBC, domestic credit by the NBC to the government is legally restricted the NBC's legal independence has been violated, as the government did not respect the above mentioned limit, which may endanger the central bank independence and postpone successful reform of monetary policy instruments.

Croatia gained monetary independence in December 1991. The National Bank of Croatia, former member of the Yugoslav central bank system, became the central bank of Croatia, independent by law[4], started to bring its independence into reality in the second half of 1992, though major changes started with the beginning of the stabilization program. The government launched a comprehensive heterodox stabilization package in October 1993. In an extremely unfavorable environment Croatia has succeeded in checking inflation and creating preconditions for economic growth. One of the stabilization program great successes has been achievement of fiscal austerity. In 1993 and 1994, the budget deficit was 0.7% of GDP. The fiscal stance was actually tightened (first extrabudgetary funds were consolidated with the central government) in late 1992, which resulted in budget surplus in 1993.

Main Characteristics of the Croatian Banking Industry

Today, due to the oligopolistic structure of the Croatian banking sector the great number of new banks (there are now 58 universal banks in Croatia, of which four are foreign[5]) have not been able to induce more competitiveness in the mar-

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[2] It must be pointed out that statistical coverage is still deficient due to an increasing number of private enterprises which the existing statistics still does not cover.

[3] Jankov, Lj. (1994 b). Monetary Policy and Inflation in Croatia, Reform Round Table. Working Paper No. 10. Institute for Development and International Relations, Zagreb, April 1994, p. 3.

[4] The National Bank of Croatia was established as a central bank in December 1991.

[5] The first foreign bank entered the Croatian financial market in late 1994 and next three followed in 1996.

ket. According to Skreb[6], by 30 June 1994 the commercial banks' share in total assets of financial institutions was 99%. The four biggest "old" banks account for almost 84% of total credit disbursed, and two largest banks account for more than 50% of total assets and total capital. The value of the Hirschmann-Herfindhal index was 0.18[7] according to end-1993 data, which is very high. It indicates that the Croatian banking industry is highly concentrated, having an oligopolistic structure. In such a market structure replacing direct by indirect instruments will not by itself introduce more competition into these markets[7]. On the other hand, it is also known that "the monetary policy transmission mechanism depends on the soundness and competitiveness of the banking system."[8] Although the former Yugoslavia's banking law from 1989 made entry easier, "old" banks still dominate the market.

The new banking law of 1993 was later complemented with bylaws introducing BIS principles and lessened the possibility of banks extending credits to their shareholders.

The liquidity and solvency of banks was extremely adversely affected by war. In order to improve commercial banks' solvency, the Croatian government between 1991 and 1992 effected two large rescheduling operations. In 1991, so-called "big bonds" were issued to enterprises which had defaulted on their bank debts. The bonds were used to repay that debt and are currently held by banks. The second operation was a "Frozen Foreign Savings Deposits" scheme initiated in March 1992.

The banks in former Yugoslavia had to surrender all foreign exchange to the National Bank of Yugoslavia (NBY) and when Yugoslavia broke up all these deposits remained with the NBY and were irretrievably lost. Croatia was therefore left without any foreign exchange reserves. The government transformed the households' foreign currency deposits into public debt, issuing DEM-denominated bonds. Through these operations the government became the largest banks' debtor: about 50% of total banks' assets are claims on the government. These government bonds and obligations are not tradable, and no treasury bonds have so far been issued. The rescheduling operations did not solve the banks' solvency as the government has not been meeting its obligations (interest payment) on time. The obvious danger here is the possible future lack of confidence by the public in any type of government securities. Problems are further aggravated by the existence of large government arrears to enterprises. All this hinders the development of a sec-

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[6] *Skreb, M. (1994). Banking in Transition − the Case of Croatia, NBC Working Papers, NBC, Zagreb, September 1994, p. 5.*

[7] *Skreb, M. (1995). Recent Macroeconomic Developments and Financial Sector Changes in Croatia, Working Paper, Universita di Trento, p. 8.*

[7] *Hilbers, P. (1993). Monetary Instruments and Their Use During the Transition from Centrally Planned to a Market Economy, IMF Working Paper, IMF, November 1993, p. 7, 9.*

[8] *Guitian, M. (1994).The Adoption of Indirect Instruments of Monetary Policy, IMF, 26 October 1994, p. 44.*

ondary market and introduction and development of a very powerful indirect instrument, that is, open market operations.

The first attempt at rehabilitation did not solve the problems of four "old" banks that became insolvent and seriously illiquid because of their concentrated sectoral and regional exposure. If distressed banks do not get rehabilitated (or liquidated if necessary) properly, moral hazard increases. Ordinary central bank instruments and signals then encounter a perverse reaction by the banks' managers and shareholders. In a soft-budget constraint environment without effective bankruptcy procedures this results in perverse relationship indeed, leading to a vicious circle. Structural measures are therefore not only a matter of necessity, but of high priority and have to be implemented urgently. Otherwise distressed banks would complicate monetary management and impair the central bank's capacity to implement and control monetary policy.

Monetary Policy Targets

The choice of appropriate mix of monetary policy instruments depends on the chosen monetary target. If a monetary targeting regime is chosen, like base money targeting, the primary objective of central bank interventions in the exchange market is to achieve a desired amount of domestic liquidity and the exchange rate is a residual. To address the exchange rate, other instruments have to be used, not central bank's foreign exchange interventions. If the exchange rate is chosen as an anchor, then the primary role of forex interventions is affecting the exchange rate. Other instruments (development of primary and secondary markets for NBC bills) have to be developed and used in order to sterilize the excess liquidity created. It is advisable to announce publicly the target exchange rate (whether as a band or as a specific exchange rate level). The problem with exchange rate targeting is the possibility of speculative attacks on the rate, that is, on the central bank and its international reserves. The fiscal discipline is a necessary precondition for that to work and fiscal policy becomes critical to the success of such a regime. Monetary policy has to have flexible instruments at hand in order to react swiftly. The exchange rate target seems therefore less appropriate for a transition economy such as Croatia's.

The NBC's main objective during 1991, 1992, and the first part of 1993 was broader than the maintenance of the stability of the value of the national currency. The NBC was still concerned with structural and socioeconomic development via its refinance facilities. The NBC did not publicly announce its policy targets which does not meet the "requirements" of a modern (independent) central bank: according to S. Fisher[9], among "the lessons that should be drawn from the theoretical and empirical evidence presented" one is: "the central bank should publicly

[9] *Modern Central Banking, April 1994, paper prepared for presentation at the Bank of England's Tercenary Celebration, London, 9 June 1994, p. 52.*

announce its medium-term policy goals"; and another is that "the central bank should be accountable, in two senses: it should be held responsible for meeting its announced goals, and it should be required to explain and justify its policies to the legislature and the public."

In pursuing its monetary policy as of October 1993 (at the beginning of the stabilization program) the NBC has started to publicly announce its quantitative targets, that is, a tight base money target. It is generally believed that announcement of target values for monetary expansion can help particularly in influencing expectations, and in a more general sense, create climate of stability or certainty for the economy. The intermediate target was base money and M1. However, the NBC was more concerned with the exchange rate stability. Foreign exchange market intervention was the principal operating technique of monetary policy and sterilization was done through auctions of central bank securities (NBC bills). The NBC chose a halfway solution, sacrificing transparency of its monetary policy.

The target under the IMF standby arrangement (of October 1994) has been net domestic assets of the banking system but because of experienced difficulties with estimating demand for money and money velocity respectively this target was replaced in 1996 by the net domestic assets of the banking system.

One of the consequences of the stabilization was a reverse currency substitution or reliquification of the economy. The NBC had two very important targets: building up foreign exchange reserves and keeping inflation under control. Although exchange rate was never explicitly named as a target the NBC has always been concerned with the stability of the rate as it has had a very strong signaling effect (due to a long history of currency substitution). Rapid expansion of monetary aggregates due to reliquification continued through 1994 and 1995 and therefore sterilization was a key problem.

Although formally declaring the base money target at the beginning of the stabilization program as a basic policy target the NBC put a higher priority of defending the exchange rate from further appreciation. It tried to manipulate foreign exchange auction and force banks to sell foreign exchange at a more depreciated (that is, higher) exchange rate than necessary. In 1994, the NBC used moral suasion to prevent exchange rate from appreciating, as the banks were net sellers of dinars. Finally, in deciding between a fixed and floating exchange rate policy the NBC decided to use the dirty-float policy of Kuna. As checking inflation and breaking down inflationary expectations was the first phase of the stabilization program and these results had to be stable it was decided to stick to the monetary target (despite further appreciation of domestic currency). Under the IMF standby arrangement a lower limit was set for the increase of international reserves and a ceiling for increase of net domestic assets. As banks were at that time permitted to borrow against reserves this led to sharp fluctuations in the monetary base and tight control over credit to the banking system had to be imposed.

Monetary Policy and Its Implementation before October 1993

Monetary policy and its implementation can be divided into two periods: first is the period until October 1993 when stabilization and disinflation of the economy started, and the second, which can be divided into two subperiods, is after October 1993.

After gaining independence, direct controls remained to be the main monetary instruments in Croatia. The huge public sector deficit seriously reduced the scope for potential reforms. However, the NBC actually began to reform the type and role of its monetary policy instruments in 1992, a year before stabilization began. This was also the year of fiscal stance tightening. The beginning of reform of monetary policy instruments had sent important signals about NBC's commitment to independence and has had the role of a prestabilization phase. According to the Law on the National Bank of Croatia of 1992[10], the NBC's fundamental task is stability of domestic currency."[11] Similar to the Bundesbank mandate the NBC "shall by its activity support the economic policy measures of the Republic of Croatia whereby its support shall not endanger the currency stability and the general settlement of payments in the country and abroad," has an obligation to support government economic policy but this does not override the price stability mandate. The Law on the NBC also stipulates that the NBC can grant short-term bridging loans to the government, which cannot surpass 5% of the budget of the Republic of Croatia for that year and which has to be repaid by the end of the current year. In this way independence of the central bank is legally determined[12].

In the period prior to 1992 the NBC tried to pursue a "leaning against the wind" policy, but without success. The main source of inflation was still in place: enterprises and banks were facing soft budget constraints. Due to the way privatization of banks was done (according to the "Markovich" law of 1989[13]), former borrowers of the banks' became shareholders and many of these were loss-making enterprises. The banks were transformed: founders became shareholders, and these were borrowers, as the banks' role was to be of "service" to the enterprise sector.

One of the serious problems the new state and the new central bank were faced with was nonexistence of foreign exchange reserves. A very important task of the

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[10] *With two amendments in 1993.*

[11] *"The National Bank of Croatia shall be liable for the stability of the domestic currency and for the general liquidity of payments in the country and abroad," Article 2.*

[12] *However, in 1993 the Croatian government borrowed from the NBC under a special decree, overriding the Law on the National Bank of Croatia, and therefore violating central bank independence and threatening its credibility.*

[13] *In 1989, there was an unsuccessful attempt at a comprehensive reform which was known under the name of the former Yugoslavia's prime minister Ante Markovich. At that time many laws and changes were introduced by which transition to a market economy, actually beginning in the 1950s, but stagnated for decades, had to be accelerated.*

NBC was to start building up foreign exchange reserves. This goal had a major influence on the monetary policy: after the introduction of Croatian dinar in December 1991 monetary policy had conflicting goals. The central bank intended to control money supply and target interest rates and exchange rates simultaneously, as well as to build up international reserves. Foreign exchange operations were not sterilized in the setting of an inadequate payment system[14] which hampered monetary control. The central bank discount rate was negative in real terms. In former Yugoslavia direct (refinance) credits were extensively used, reflecting the structural characteristic of central bank lending. In Croatia, after its independence[15], two types of central bank credits were granted to commercial banks: documentary credit (refinancing credit) and liquidity credit. In early 1991, Croatian commercial banks were free to refinance their credits to agriculture at the central bank, without any limits. The NBC "rediscount rates" reflected different lobbying pressures. NBC's credits continued to be subsidies, creating a quasi-fiscal deficit. Refinance credits were the principal monetary instrument until July 1993. The NBC finally had to put pressure on the government, which brought about some positive results: in January 1993 all refinancing credits (so-called selective credit quota (direct refinance credits)) were merged into one quota: the uniform general quota. Interest rate charged on these credits was generally well below market interest rates and the banks were constantly using their shares of the quota at the maximum permitted level. Despite the improvement the general quota credits' main feature continued to be structural, not a monetary one. To offset the expansionary effects of quotas, the NBC raised the rates of reserve requirements[16] which played a strong redistributive role. The parafiscal character of monetary policy was still at work: liquidity of the banking system was increased selectively while sterilization was done linearly[17]. As at that time foreign exchange operations were not sterilized the NBC gradually reduced the real and the nominal value of the uniform general quota and therefore simultaneously "sterilized" some of the money creation and

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[14] Although the speed of money circulation in the payment system in Croatia is among the fastest in Europe.

[15] Some facts about the historical heritage (detailed in Jankov (1944b): "In former SFRJ the central bank (National Bank of Yugoslavia) did not control the stock of base money, neither its foreign exchange operations nor its credit activities. Interest rates were low and negative in real terms. The main monetary instrument was commercial banks credit ceilings. At the beginning of 1989, commercial banks ceilings were replaced by ceilings on the NBY documentary credits. The banks had to prove, by delivery of certain documents, that they had already granted credits to final users for earmarked purposes. Thanks to this refinancing arrangement, banks were always highly liquid, and documentary credits were crowding out other credits of their portfolio. Banks were considered as a "service" to the enterprise sector. They relied on central bank credits, subject to soft budget constraints, knowing the government (through the NBY) would always come to the rescue."

[16] Among socialist countries only former SFRJ used reserve requirements long before the reform process started in 1989. However, their function was structural.

[17] Anusic Z., Z. Rohatinski, V. Sonje (1995). A Road to Low Inflation Croatia, 1993 − 1994, The Government of the Republic of Croatia, Zagreb, May 1995.

phased out structural (direct) credits. In this way the NBC largely reduced the government control of the banks' credit policies. As part of the stabilization program, the general quota was formally abolished by the end of July 1994.

Purchases of Foreign Exchange

During 1992 and 1993, the main channel of monetary base creation became NBC's foreign exchange purchases from commercial banks. Foreign exchange assets have dramatically increased their ratio in the NBC total assets. This channel was used in the past but was not controlled until the shock stabilization, that is, the NBC prior to the beginning of the anti-inflationary program was buying as much foreign exchange as the banks were willing to sell.

Reserve Requirements

Croatia simply inherited this monetary instrument and continued to adopt the system of lagged reserves. The penalty rate was introduced in 1993 (19% per annum). Prior to May 1993, the banks were subject to three types of reserve requirements: required reserves, obligatory NBC bills (involuntary holdings), and required minimum liquidity. As of May 1993, all three requirements were merged into the statutory reserves requirement. The instrument became more transparent.

Prior to October 1993 (start of the stabilization program), different reserve rates applied to demand deposits (including time deposits with maturity of within three months) and time deposits with maturity above three months. The rates were unified in October 1993, but in March 1994 different rates were again introduced. Uniform reserve requirement should improve the relationship between base money and broad money by reducing the effect of shift in deposit composition on obligatory reserves. As of October 1993, the banks' obligation to meet their required reserves at the end of the day was replaced by the obligation to meet them at any time.

Savings banks and cooperatives were not subject to reserve requirement. Although reserve requirements are not applicable to deposits denominated in foreign exchange, a proportion of new foreign exchange deposits of households has to be held in correspondent banks. Until the end of 1994, the banks were obliged to keep 60% of these deposits with correspondent banks abroad. In 1995, differentiation by maturity was introduced. The average ratio was later reduced.

Liquidity Facilities

Liquidity facilities were only partially under NBC control. The use of NBC liquidity facilities always resulted in substantial base money creation. Due to the system of domestic payments inherited from former Yugoslavia, liquidity facilities were never under effective NBC control[18].

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[18] *Jankov, Lj. (1994a). Controlling Domestic Liquidity. Privredna kretanja ekonomska politika, Narodna banka Banka & Hrvatske Ekonomski institut Zagreb, Zagreb, p. 138.*

First, negative giros could be created by the Institute for Domestic Payments without the approval of the NBC. Such quasi-automatic credit facilities made it virtually impossible for the NBC to accurately control on a continuous basis the level of base money. *Second*, household deposit guarantee represents special liquidity credits granted by the NBC to banks experiencing household deposit withdrawal under a law inherited from the former Yugoslavia which guarantees household deposits. This credit facility was virtually automatic. *Third*, liquid asset ratio: the banks were required to hold liquid assets equivalent to 3% of short-term (up to one year) HRD deposits. This was later abolished. *Fourth*, NBC liquidity credits were credits granted to banks for up to 10 days within a month. Credit was granted above the general quota level for a given bank against the banks' holdings of certain securities.

Before the end of 1993 control of monetary variables was impossible. Several, already mentioned automatic liquidity facilities were in place, including the ability of banks to borrow against their required reserves and run arrears to the NBC. The phasing out of refinance credits had not achieved the desired effect on the banks' liquidity and on broad money, as the banks could very easily and without any significant penalties use automatic liquidity facilities.

Interest Rates

The NBC discount rate has been negative in real terms until October 1993[19]. In Croatia interenterprise rates (enterprises always found recourse in the interenterprise market when bank credit was rationed) had independent trends and the NBC discount rate did nor send signals to the economy at all.

The NBC discount rate was the reference and floor rate for the NBC interest rate structure. Before the stablization program the discount rate was set taking into account both actual and targeted levels of inflation. Although the intent was to keep it positive in real terms, it turned to be negative ex-post.

The Stabilization Program of October 1993

This period can be divided into two subperiods.

• **The first subperiod** lasted from October 1993 until the end of 1994.

Although the NBC began to reform the type and role of its monetary policy instruments in 1992, major changes started with the beginning of the (heterodox) stabilization program[20]. The first phase of the stabilization program, launched in October 1993, has been successful in rapidly bringing down inflation from

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[19] *Administered interest rates existed already in former SFRJ and were set according to the central bank discount rate, which was usually negative in real terms.*

[20] *Villanueva and Mirakhor point out that macroeconomic stability and adequate supervision are essential preconditions for successful financial liberalization. Guitian (p. 36) points out that the introduction of monetary policy instruments is most effective and goes most smoothly under conditions of a stable macroeconomic environment and sound fiscal policies and that it is crucial to develop a sound and competitive financial system and an adequate supervisory framework.*

1,149.3% (end of year level) in 1993 to -3% in 1994 (end of year level). Inflation has since then remained low: at the end of 1995 it was 3.7%. The first stage of stabilization, rapid disinflation, was extremely successful. In May 1994, the Croatian dinar was replaced by Croatia's permanent currency, the kuna. Before the program was launched the new banking law and a new law on foreign exchange operations which introduced current account convertibility had been adopted by the Parliament. The NBC has eliminated direct credits (formally abolished them by the end of July 1994). There was an initial devaluation of 21%. The upper intervention point for the exchange rate was set at 4,444 HRD/DEM. The rate sharply appreciated and then stabilized. Incomes policy limited the growth of wage bills in the public sector and state-owned enterprises. Disinflation was unexpectedly sharp as an unexpected appreciation of the Croatian dinar occurred. This initial appreciation resulted from capital inflows and destocking of foreign assets by enterprises and households[21]. Some of the appreciation can be attributed to the process known as reliquification. Monetary policy switched to a publicly announced, tight base money target. The NBC introduced NBC bills (central bank securities) and reserve averaging. Reserve averaging brought more flexibility in calculating and satisfying minimum reserve requirements. Repurchase agreements using NBC bills and foreign exchange swaps were introduced in order to regulate intramonth bank liquidity. The Zagreb Money Market was established in February 1993 by 26 banks and the Croatian Insurance Company. It serves as a broker for the sale of short-term central bank money between banks. Other banks can use its services, too. The Zagreb Money Market functions as two separate markets, one is the day market and the other one is the guaranteed overnight market. The interbank money market remains very limited, as the overnight market is more an allocative mechanism rather than a market.

Principal tool of monetary policy became interventions in the newly established foreign exchange market. Due to rapid increase of net foreign assets of the NBC, the share of general quota in total NBC assets shrunk from 848.9% at the end of 1992 to 6.2% at the end of 1993. Foreign assets make more than 90% of monetary authorities assets (85% in December 1993, 94% in December 1994 and 1995, 93% in March 1996). In the first half of 1994, the NBC continued to set targets for base money growth, maintain an exchange rate target range and at the same time control the level of interest rates. In the first half of 1994, sterilization was effected by sales of NBC bills, a reduction in credit to banks and an increase in statutory reserves. The budget was in surplus in 1994. The government repaid its borrowing from the NBC. The stabilization program has been successful so far as the central government avoided any borrowing from the banking system. Therefore, one of the components of reserve money has not been growing. In this way, the government has shown its commitment to the stabilization program.

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[21] *Jankov, Lj. (1994a). Controlling Domestic Liquidity. Privredna kretanja ekonomska politika, Narodna banka Banka Hrvatske & Ekonomski institut Zagreb, Zagreb, p. 135.*

During the 1993 tourist season (May to September), the NBC opened a refinancing facility for prepayment to banks for purchases of foreign currency bank notes and travellers' checks. Sterilization became a key problem.

The NBC has succeeded in foreign exchange market development as no parallel market emerged and no multiple currency practices have arisen. The credibility of the exchange system has not been undermined, but strengthened gradually.

The most important instruments of monetary policy have become foreign exchange interventions, NBC bills auctions (open market type operations), and reserve requirements.

So-called NBC bills (these central bank securities were introduced in 1989 in former SFRJ) were mainly sold to the banks on obligatory basis and therefore were acting as a supplement to required reserves. NBC bills became an instrument of excess liquidity absorption. The main aim of NBC bills after October 1993 has been sterilization of monetary effects of NBC interventions in the foreign exchange market. Until November 1993, they were sold on tap, and the interest rate was very low. Auction procedures were instituted in November 1993. As NBC bills were exempted from tax on excess interest, this induced NBC bills sales in the first quarter of 1994. However, only a few banks participated in the auctions. After a few months the selling technique improved and the major change in the issue of NBC bills came in March 1994. The NBC decided to offer interest rates that were in line with interest rates in the interenterprise money market, as initially interest rates were low and failed to stimulate the desired levels of demand for NBC bills. The NBC decided to invite banks to tender interest rates and volumes hoping that this would induce banks to start buying NBC bills. It was a right decision as the banks have shown very modest interest in this opportunity for profitable earnings. Had the NBC set the interest rate the banks would have shown even smaller interest, because even with this risk-free and profitable investment in purchasing NBC bills the NBC had to reintroduce NBC bills on obligatory basis as it could not achieve its sterilization targets.

This made NBC bills easily marketable (and therefore made sterilization easier), but created an important cost for the NBC. The NBC bills rate became the highest among the NBC rates. In February and March 1994, bills sales increased dramatically as yields became attractive due to the reimposition of a tax on "excess" interest charged on loans. In the beginning bills were not attractive, and there was no interest in them on the part of banks and other potential purchasers. In order to encourage secondary market trading of NBC bills, the NBC started to offer NBC bills at a discount in July 1994 to facilitate secondary market development. However, up to now there has only been a primary market for NBC bills. There was a broad range of maturities which have been reduced to 7, 35 and 91 day of maturity. The NBC has also reduced the frequency of auctions to three times a week instead of more frequent auctions. During 1994, the NBC bills sold at auctions became the main and practically the only instrument of sterilization.

Segmentation of the market due to very close customer-bank relationships and

the deficiencies of the domestic payments system made liquidity management difficult for the banks to perform. The banks had to learn how to manage their liquidity properly in a new environment, although their liquidity management was to some extent hampered by the domestic payments system. The government and the NBC have envisaged a rehabilitation program for the several "old" banks (experiencing problems due to their regional and sectoral exposure), because they complicate monetary management and threaten the stabilization results. The rehabilitation of distressed banks started with one of the regional banks at the end of 1995, other two followed in 1996.

In October 1994, a standby arrangement was concluded between the International Monetary Fund and the Republic of Croatia. Quarterly ceilings on the growth of net domestic assets of the banking system for 1994 and the first quarter of 1995 were established as performance criteria for the Fund supported program. As the banks were permitted to borrow against required reserves held with the NBC this led to sharp fluctuations in the monetary base and therefore tight control over credit to the banking system had to be imposed. Credit limits were set on the growth of net credit from the banking system to a group of large, financially troubled enterprises. In this way, control of tight base money had to be achieved and stabilization results protected. Control of net domestic assets had to ensure stability of the balance of payments and the protection of international reserves. Sterilization with NBC bills then neutralizes the monetary impact of balance of payments.

Liquidity Facilities

The necessary condition for liquidity management to function efficiently is a competitive financial sector. Financial institutions should respond to market incentives and the banks should exhibit profit maximizing behavior which in Croatia is not still the case, mostly due to the behavior of "old" banks, burdened with frozen assets and bad loans, as their major debtors are their shareholders. Rehabilitation of some of these banks was again envisaged by the government and the NBC, but it only started in late 1995 and 1996 in three old regional banks. One has to take into account that a learning process on the side of the banks takes time: and indeed the banks have slowly started learning how to exploit profitable opportunities[22] and how to manage their liquidity.

The ceilings on liquidity credits were gradually replaced by blocking of banks' giro accounts with the NBC. This was not effective[23]. During the first months of the program's implementation, the "autonomous", that is, automatic use of required reserve balances as well as of other secondary, in fact irregular, sources of liquidity was large.

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[22] *Primarily investments in NBC bills.*

[23] *Some banks easily went around the blockade by establishing their daughter companies which were not subject to the NBC control.*

In October 1994, the Law on Payment Transactions was amended in order to introduce stricter rules in the payment system. The implementation of new rules made it impossible for banks to use the automatic liquidity facility any more. Central bank discretionary credits have replaced these liquidity facilities. In order to improve solvency of commercial banks, the obligation of the same day clearing (except for government, interbank and a limited group of high priority transactions) has been eliminated. The concept of final settlement had been introduced. After its introduction, the one-day settlement became a serious obstacle to liquidity management, as the banks could never know their liquidity situation in time. It was therefore replaced by the two-day settlement in order to help the banks manage their liquidity. Double coverage was introduced: blockage of the banks' giro accounts was meant to discipline the banks running continuous overdrafts.

In order to help the banking system cope with sudden shocks, liquidity credits were introduced in October 1994. The banks can be granted credits for daily liquidity which are collateralized with NBC bills. Instead of the automatic credit facilities, the NBC introduced discretionary lender of last resort facilities: the banks will have access to these credits provided they satisfy certain provisions. These are: credits for very temporary liquidity needs; daily credit for savings and currents accounts of households which is to be phased out in the near future, as soon as the system of deposit insurance starts operating; initial credit for bridging illiquidity to help those banks that will be rehabilitated and which could not operate under conditions created by the reform of the payment system.

Until the savings deposit insurance becomes operative (under the Law on the Agency for Insurance of Households Savings Deposits and Bank Rehabilitation[24]), the NBC extends so-called daily credits to banks that have insufficient giro balances to cover withdrawals from households accounts. If a bank anticipates withdrawals from these accounts, it may apply for daily credit, that has to be repaid at the end of the day.

The new liquidity credits are the only channel of base money creation where the initiative comes from commercial banks. Although these credits reduce NBC control of base money, they have been necessary because of the very tight liquidity situation produced by the stabilization program. The loss-making enterprises are now surviving with less bank credit by running down their foreign exchange assets and incurring domestic arrears. This creates pressure on the exchange rate and on the NBC monetary policy.

In December 1994, so-called initial credits were introduced. They were granted to the banks experiencing problems in anticipation of bank rehabilitation. Initial credits were actually initial bridging loans granted to banks which had made frequent use of secondary liquidity sources during the third quarter of 1994. The biggest amount was borrowed by some seriously illiquid banks. Banks which borrowed these credits were not permitted to increase their credits or other assets, but

[24] *The same Agency is responsible for bank rehabilitation and for deposit insurance.*

could repay the credit and then draw again.

A new instrument, under the name of intervention credit, was introduced in order to bring more discipline into the banks' (especially the distressed ones) monetary management. This is a special emergency window which replaced the former rolling-over of overdrafts by problem banks. If a bank at the end of the day, after utilizing money market borrowing and any available Lombard credit has a negative giro balance, the NBC grants a short-term intervention credit. This credit can be used up to two days and up to three times a month. If a bank cannot repay the intervention credit, it must submit a request for extension of the credit to the NBC, information about the bank's position, a plan for resolving the problem and a cash-flow plan for the next 30 days. Banks that have used these credits have not been allowed to increase their credits or other assets.

Penalization is done through blockage[25] of the bank. Lagging behind of bank rehabilitation has led to frequent use of the intervention credit as the troubled banks' illiquidity could not let them solve their problems without recourse to this highly penalizing source of liquidity. There was a danger of a confidence crisis due to repeated interruptions of banks' payments.

The initial idea of the initial and intervention credits was to encourage the troubled banks to apply for "voluntary rehabilitation."

Management of Government Deposits

On 1 October 1994, a shift of government deposits from the banks to the NBC was effected, which created a decrease in the banks' liquidity.

The Ministry of Finance has started to develop its own Treasury and opened a single governmental account held with the NBC. Most government deposits were deposited in about 20 commercial banks based on share of government revenue coming from the region served by each bank. However, due to lack of coordination between the NBC and the Ministry of Finance, one especially useful instrument of monetary policy – when other monetary instruments and financial markets are not sufficiently developed – cannot be used. The central bank can intervene by making short-term transfers of government deposits to and from commercial banks. When deposits are moved from commercial banks to the central bank then banks' liquidity is reduced. This measure requires close coordination with government cash management.

• **The second subperiod** began in late 1994 when more market-based instruments were introduced: Lombard credit and repurchase agreements in NBC bills and partial adjustment in the mechanism for the calculation of required reserves.

In November 1994, the Lombard facility was introduced with NBC bills as collateral. Lombard facility had existed before but because of inadequate collaterals it could not be used as an efficient monetary policy instrument (former

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[25] *This works in the following way: payments on depositors accounts are stopped in order to sanction the bank for nonrepayment of the credit.*

Lombard facility existed within the general quota). Until August 1994, there were no Lombard or refinance facility lending offered to banks. Lombard facility can be used at the banks' discretion. NBC bills must be presented as collateral. At first bills were valued at 100% of face value. The interest rate is set 1.5% above the NBC bills rate (collateral). In the beginning, the NBC blocked the incoming payments of a bank running arrears on repayment of Lombard credit. Then the incoming payments were diverted to pay off the credit. This practice was later modified: overdue Lombard was treated as intervention credit to enhance market discipline.

The limit for the Lombard facility was first set at 15 working days per calendar month and later shortened to 12 working days.

Required Reserves

In early 1994, remuneration was introduced, 5.15%, but then abandoned and reintroduced on 9 January 1995 in order to allow banks more flexibility in managing their liquidity. In January 1995, required reserves rates were merged across maturities, to 28.3% on all deposits. Savings banks have been gradually made subject to the same reserve requirement as the banks. Due to problems with sterilization, the NBC decided in June 1994 to temporarily increase the reserve requirement. It did that by reintroducing "NBC bills on obligatory basis." The required reserve ratio increased to 41%. The NBC has changed the reserve requirements very actively, as no other instruments have been available or were very costly (NBC bills) to use. The government has not yet prepared short-term securities issue and no secondary market exists. Therefore, the reserve ratios increased, as it became more and more difficult to withdraw liquidity. In June 1996, after the beginning of rehabilitation of three troubled banks, the reserve requirement was slightly lowered.

Repurchase Agreements

Repos in NBC bills began in November 1994, but only two were used to inject seasonal liquidity at the end of December 1994. The NBC has placed little reliance on this instrument preferring the use of auctions of NBC bills. Repurchase and reverse repurchase agreements are a flexible instrument that allows very precise management of money market liquidity, but sufficiently developed financial market is a necessary precondition for its proper functioning. In case of an urgent need for liquidity, the NBC stands ready to use repos. Repos are being used for 3 – 5 days. The NBC gave the banks the opportunity to use repos among themselves, but there has not been enough interest in this.

Interest Rates

The whole period after October 1993 has been marked by tight monetary targets and relative interest inelasticity of demand.

The primary transmission mechanism of indirect monetary control is through changes in short-term interest rates in the money and central bank bills markets. The NBC discount rate was adjusted monthly until March 1994 when it was set at

11% per annum, but in September 1994 lowered to 8.5%. Since September 1994, it has remained at that level, but lost all its information value. As a result of the anti-inflationary measures interest rates first fell drastically in the first half of 1994, and became positive in real terms. Real credit rates became extremely high as well as the spread, at about 10 – 12 percentage points.

At the beginning of the stabilization program interest rates charged by the NBC were generally below market rates. Then the NBC finally decided to change the structure of its interest rates. The discount rate became positive in real terms. Interest rates on liquidity facilities were set very high, especially at the beginning of the stabilization program. It was obvious that banks were beginning to react to the interest rate instrument, as only few banks drew on the NBC liquidity facilities and most banks became compliant with the NBC regulations. Croatian government introduced in October 1993 a tax on "excess interest" but this forced banks to compete on the basis of fees and services. As a result, fees increased. Lifting of tax in December 1993 did not result in an increase in interest rates. The government reimposed the tax in February 1994 imposing it on fees too, although this dampens price competition and distorts intermediation, therefore hampering development of indirect monetary policy instruments. Taxing excess interest precludes interest rates from playing a significant role in the transmission of monetary policy. The banks were also subject to some moral suasion to keep interest rates low, but quantity and price of money cannot be determined simultaneously by the central bank. Demand for NBC bills increased, as these interests rates were exempt from the "excess interest" tax.

It is known[26] that "there will be little room for indirect instruments to operate unless all short-term interest rates have been freed and banks have some scope to determine deposit and lending rates."

Interest rates remain high (weighted average deposit interest rates on kuna deposits of the banks was 4.8% in March 1996, and credit rates 29.4%). The spread is extremely high and indicates monopolistic and/or inefficient practices.[27] However, soon after the beginning of rehabilitation of the three troubled banks interest rates on the Zagreb Money Market showed a slight decrease.

Reserve Requirements

Remuneration of required reserves was introduced in 1994, 5.15% annually (the weighted average of the banks' deposit interest rates for 1994 was around

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[26] *Guitian, M. (1994). The Adoption of Indirect Instruments of Monetary Policy, IMF, October 26, 1994, p. 80.*

[27] *Weighted average of lending rates on total kuna credits of commercial banks was 29.7% in January 1996, on short-term credits 28.5%, on long-term credits 16.2%; lending rates on total kuna deposits was 17.7% while the annual inflation rate in 1995 was 2% reflecting several factors: oligopolistic structure of the banking industry, still operating soft-budget constraints, illiquid assets of old banks, due to former attempts of the government to improve commercial banks' solvency.*

4.14%)[28]. In the former SPRJ, occasional shortfalls were not penalized, and the penalty rate was below the interbank rate. However, it is generally considered that the penalty rate should be explicit: the penalty rate needs to be at least twice the opportunity cost to be effective[29]. The penalty rate in Croatia was high throughout 1993 and 1994 so that, for example, in December 1994 it was 19% per annum. (NBC discount rate was 8.5% per annum.)

In March 1994, the ratio was raised to 27.3% but the ratio on time deposits of maturity longer than three months was reduced to 15.8%. The reserves maintenance period was 10 days and the banks had to meet the requirement continuously. When having temporary shortage of liquidity banks were allowed to "borrow" these reserves at penalty rates. Borrowing against required reserves has become a significant source of liquidity (despite the penalty rate of 19%) and reached 12% of total required reserves. Most of the borrowing was done by the four illiquid banks.

Reserve averaging (since mid-1994) has introduced a big opportunity for banks to learn how to manage their liquidity monitoring their giro balances and taking advantage of profit opportunities in lending to shortfall banks.

Reserve requirements have been introduced in savings banks. By law only small businesses and natural persons can have an account and maintain deposits at the savings banks, but there has been evidence that some legal entities maintain their deposits at the savings banks. There have, therefore, been two reasons for imposing reserve requirements on savings banks: if, what the NBC concluded, commercial and savings banks conduct similar businesses with a similar customer base, then this can result in shifts in the monetary base. On the other hand, taking into account the underdevelopment (1993 founded) of supervision in the area of savings banks higher reserve requirements to some extent would safeguard bank liquidity.

The NBC has changed the reserve requirements very actively, relying heavily on this instrument to mop up surplus liquidity. During 1994, NBC alone reserve rates were increased several times.

As of mid-January 1994, the NBC limited the use of required reserves (for above mentioned liquidity purposes) to 50%, and introduced a higher penalty rate. Finally, as of March 1994 the NBC started to pay interest on required reserves. Today interest rate on required reserves is 5.5% which makes an average of 7% if one adds the rate on involuntary holdings of NBC bills (in April 1996 this interest rate was 16.5% annually). The banks definitely cannot complain about their high costs as in April 1996 the weighted average deposit interest rate of the banks was 4.8%. This high reserve ratio is perceived as a high tax on intermediation and

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[28] *"The remuneration of required reserves allows for the separation of their monetary from their fiscal aspects." Hardy, D.C. (1993). Reserve Requirements and Monetary Management − An Introduction, IMF Working Paper, IMF, April 1993, p. 19.*

[29] *Ibid., p. 23.*

was raised to such a high level primarily for monetary policy purposes, as no better indirect monetary instrument was available.

On 9 January 1995, reserve averaging was introduced[30] in order to allow banks increased flexibility to manage their liquidity. Hardy[31] says:" ... averaging will be especially important in less sophisticated financial systems, where thinness in the interbank market and long and variable lags in the clearing and system lead to involuntary variations in bank liquidity." In order to manage commercial banks' liquidity, central banks replace lagged reserve requirements with contemporaneous reserve requirements. The latter permits banks to have occasional end of day reserve deficiencies. Banks have to meet their requirements in the prescribed time interval. The required reserve ratio is calculated on the basis of all domestic currency deposits (with minor exceptions). The rate is now unified in order to eliminate evasion and to achieve a more stable base, that is, to make monitoring of monetary aggregates and monetary control easier. The range of financial institutions that have to comply to the reserve requirements is widened by the inclusion of savings banks, although the required reserve rate for them is 7.5%. (For deposits of daughter banks the reserve requirement is 100%.) Penalties are set very high. Vault cash is included, but so-called minimum liquidity asset requirement was abolished.

It is well known[32] that variations in reserve requirements are used to implement monetary policy as a second best approach when other instruments are unavailable or very costly to use. Before the troubled banks get rehabilitated and the economy starts operating under hard-budget constraints it is hard to lower reserve requirements, despite the very high ratio.

Foreign exchange intervention has remained the main instrument of money creation.

Repurchase Agreements in Foreign Exchange

The NBC experimented with a few forward foreign exchange swaps but as the domestic money market and spot and forward foreign exchange markets are not well developed, the NBC discontinued this practice.

Repurchase Agreements in NBC Bills

The repurchase operations are an important step toward increased flexibility in monetary operations. However, the interbank money market remains limited and banks become increasingly reluctant to hold NBC bills because of their tight liquidity position. The NBC has therefore placed little reliance on this instrument preferring the use of auctions of NBC bills as its preferred intervention instrument.

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[30] *Ibid., p. 17.*
[31] *Ibid., pp. 17 – 18.*
[32] *Ibid., p. 9.*

Conclusion

Reforms of monetary policy instruments are usually based on the elimination of direct commercial banks' credit ceilings, abolishment of automatic borrowing facilities, establishment of primary and secondary market for government or central bank bills, introduction of repurchase agreements in central bank bills and other securities, reforming of central bank liquidity credits. Croatia has begun to reform its monetary policy instruments in 1993, but it still has a long way to go. Development of indirect instruments is generally a complex process and requires a considerable period of time to be completed, especially in transition economies.

As commercial banks could always borrow from the NBC via the NBC liquidity facilities it has been very difficult to develop the interbank market and trading of NBC bills. As the automatic liquidity facilities are phased out and the new ones work at the central banks discretion the banks will have to rely more on the interbank market when they need funds. The interbank money market was established in February 1993 but it is still in an early phase of development.

Still, in June 1996 there are no government securities. Safe and liquid securities should be traded in the primary market, and government should honor its obligations and cease running arrears to the banks and enterprises. Repurchase (repos and reverse repos) agreements in NBC bills, and later in government and other securities, should continue to develop. They are very flexible and easily adjusted to the purposes of the central bank.

Foreign exchange purchases by the NBC have been used as a primary tool for controlling the monetary base, thus meeting the inflation target. This was appropriate as Croatia in January 1992 had no international reserves and these had to be build up. However, it is well known that neither central banks' net foreign assets nor their loans to the government are usually amenable to active monetary policy. Traditional instruments of monetary policy affect the supply of money through changing the stock of reserve money or changing the money multiplier. Changes in foreign assets are a reflection of balance of payments inflows and outflows and should be viewed as a policy objective. They cannot generally be considered as means of changing the stock of reserve money[33], that is, they cannot equally fit two objectives: desirable exchange rate level and desirable stock of reserve money and money supply. The NBC will therefore have to develop other means of creating monetary base.

McKinnon and Shaw[34] point out that the major goal of monetary authorities should be to promote the development of domestic capital markets, so that domestic savings (of households) are attracted into the financial system. The bottleneck, in their view, is not the lack of profitable investment opportunities (which would

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[33] *Narvekar, P. R., B. B. Aghevli, M. S. Khan, B. K. Short (1979). Monetary Policy in SEACEN Countries, IMF Working Paper, 12 July 1979, p. 15.*

[34] *Ibid., p. 7.*

call for a reduction in interest rates), but the inadequate flow of monetary savings to finance investment projects. It is therefore extremely important that interest rates remain positive in real terms and become market-determined as soon as competition is achieved. It is important to mention that measures to shift ownership and effective control of banks away from borrowers (a legacy of the previous system) is indispensable as well as the rehabilitation of the banks. Both are necessary to eliminate/reduce and avoid the moral hazard problem, which could be done through bank rehabilitation and restructuring of enterprises, changing the Croatian banking industry structure from oligopolistic to a competitive one, strengthening bank supervision and regulations, developing the payment system to meet the requirements of a modern market economy, preserving central bank independence, and establishing a market-determined reference rate.

It is sometimes advisable to adopt a "belt and braces" approach during the process of transition from direct to indirect instruments of monetary control: direct and indirect instruments can coexist for a period until the financial markets are sufficiently developed to ensure effectiveness of indirect instruments. Indeed this has been the case of Croatia, but one should not overlook the fact that the central bank cannot fulfil its task of guarding the stability of domestic currency if important processes in the real and fiscal sphere lag behind.

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The Importance of Central Bank Independence in Transition Economies

by Katharine Sheppard

Katharine Sheppard, Visiting Fulbright Scholar, University of National and World Economics, and Sofia University.

Central bank independence is of continuing importance in any discussion of monetary policy. Transition economies face special concerns with newly designed systems and special problems with the shift from their former systems of banking and finance to market oriented, profit maximizing systems. Before the special nature of transition systems can be addressed as it affects the importance of central bank structure, we first must be clear on what is meant by independence. We can then evaluate the benefits of both autonomous and integrated central bank structures. Finally, the circumstances of transition economies can be added and the value of independent central banking can be determined.

Independence or autonomy is not any single factor but the synthesis of many functional and structural aspects of the central bank, the banking system and the political/social system it serves. There have been several comparisons of central bank independence using ranking mechanisms which combine criteria applying different weights to develop quantitative measures.[1] Measurements have in common a set of four factors.

The first is the appointment of members of the governing board of the central bank and the chair of its board. Included in this factor could be the lengths of the terms in office of the governors and the chair and the balance of authority between the board and the chair. In central banks we find terms that range from four and five years to the lengthy 14-year terms of the U.S. Federal Reserve board members. Balance of power between chair and board is a more qualitative element and requires assessment of experiences within a particular central bank system.

Second is the assessment of legislative independence. The focus is often on the possibility of lessening autonomy through legislative decrees. One example would be financing rules for government deficits that alter the control and flexibility of open market operations and monetary policy. Commonly we find central bank decisions are tied to government budget plans either implicitly or explicitly. Because

[1] *Alesina, Alberto and Roberta Gatti. Independent Central Banks: Low Inflation at No Cost?* ***American Economic Review****, May 1995, pp. 196 − 200.*

an exchange rate policy is often included in the basis of budget and finances, the central bank must support the rate for the duration of the budget if planning is to be viable.

A third factor to be considered is the funding autonomy of the central bank. Certainly those banks free from funding requests, such as the U.S. Federal Reserve, have a greater degree of independence than those that must justify their budget requirements. Only a small number of central banks have the luxury of being self-financed, but their level of budget need can vary dramatically even in established economies.

Finally, the policy instruments available to a central bank are a measure of its independence. Legislative authority to regulate financial structures and trade, to manage government debt and to adjust the flow of foreign currencies vary dramatically among central banks. The availability of discount mechanisms and reserve ratios also covers a large range of options.[2]

Not coincidentally we find that banks with the greatest rankings using these types of criteria have generally low inflation rates while less independence is found with those less successful at controlling inflation. Measurements of central bank independence are often tied to efforts to evaluate the sources of successful inflation control. Germany and Switzerland are often cited as the most independent, with the United States, Japan and the Netherlands also highly independent. On the other extreme we find the central banks of Spain and Australia along with the old New Zealand central bank structure achieving little autonomy.[3]

While these results fit with conclusions that the role of the central banks and the contribution of central bank independence is to control inflation, we must be careful of a causal interpretation of these observations. The central banks of the transition systems are not highly independent with these ranking factors but they show widely varying levels of success in handling inflation. Independence is unlikely to be the determining factor in these systems for inflation control. The design of the statutes in the transition economies often affords a fairly large degree of independence, but fiscal constraints effectively tie these central banks to a series of monetary measures that cannot be truly considered as independent policy actions. Transition systems are also likely to change the functioning of the central bank as political pressures shift. Such volatile systems can alter independence with fairly limited experience-based arguments for reforms. In Bulgaria the Parliament has recently instituted a reform that reduces even farther its central bank's independence by allowing Parliament control over removal of bank board members and by limiting the independent selection of board members. This was achieved with minimal open debate and no real evidence that the reforms would

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[2] *Cukierman, Alex. Central Bank Independence and Monetary Control.* ***Economic Journal****, vol. 104, issue 427, November 1994, pp. 1437 − 1448.*

[3] *Alesina, Alberto and Lawrence Summers. Central Bank Independence and Macroeconomic Performance: Some Comparative Evidence.* ***The Journal of Money, Credit and Banking****, 25, 1993, pp. 151 − 162.*

improve monetary authority or policy.

The measurement of central bank independence using these four factors is really a reduced form with the components of central bank activity no longer directly related to its actual decision framework. A more complete assessment of central bank behavior and the links of independence to monetary policy goals develops arguments both for and against central bank independence. In these remarks I will present three arguments for independence and three for a more integrated fiscal/banking system. I will then discuss these issues as they relate to the special position of transition systems.

Three Factors in Support of Independence

First, monetary policy should be isolated from political cycles.

There are several arguments that favor policies by central banks that do not follow political cycles. There exists a primary concern that politics generates policies that are inherently short-run. The political cycle favors policies that have a short-term positive economic impact during election periods. Longer-term consequences are not addressed in favor of the short-term benefits to reelection possibilities. For central banks this translates into expansionary fiscal policies and pressures to finance policies in a loose money framework. The short-term benefits become long-term inflationary pressures. The evidence of the long-term harm of inflation is repeatedly made clear. Aside from the redistribution effects to members in the economy, inflation erodes the operating stability of the financial systems.[4] In the United States there is evidence that the inflation of the 1970s contributed to the weakness in the Savings and Loan structure in the 1980s. The Bulgarian experience has also shown the difficulty banks have in adjusting to both accelerating and decelerating inflationary conditions. These contributed enormous costs to the economy and may be of particular concern for their negative effects on central bank credibility.

In addition to the election cycle, in a more general sense political goals are often self-serving or directed to a focused constituent base. The goals of central bank policy should be exempt from favoring the concerns of those currently in political power over the more long-term development of the economic and the monetary system.

Second, independent monetary authority permits the central bank to provide "outside" input on government policy questions.

Monetary authorities can provide expertise on the economy and international conditions. The credibility of their information is enhanced by autonomy. Their expertise can provide a balancing perspective on fiscal proposals that enhances the

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[4] *Mr. Willy Friedman of the Deutsche Bundesbank spoke of the costs of inflation in the long term in his remarks on Monetary Stabilization and the Real Restructuring Process presented at this Conference.*

effectiveness of policy actions. While any central bank can be critical of government proposals or policies, the degree of respect for criticisms from an independent bank is greater than for those of a bank with interconnections with the governmental system. Independent central banks can, for example, play a strong role in influencing compromise estimates of revenue from taxation used for government planning. The range of uncertainly is certainly illustrated in the recent lengthy battle in the United States over its budget, including the use of overly optimistic and pessimistic parameters for economic performance by both Republicans and Democrats. The importance of central bank opinions is greatly increased when policy decisions are made with high levels of uncertainty about future economic events, such as occur in the transition economies.[5]

Third, an independent central bank establishes a clear authority for monetary policy responsibilities.

Independent central bank policies are clearly the responsibilities of the bank's experts in monetary control. Certainly if elected officials are directing monetary policy there is much less assurance that monetary expertise will be guaranteed. This has several important ramifications. Independent central banks can pursue unpopular policies. They are exempt from the political repercussions of such policies and their policies are less likely to be considered "mistakes" and more likely to be recognized as expert recommendations. Furthermore, lack of expertise can have disturbing effects on bank sector confidence. This is particularly apparent when the political decision process is open and the financial sectors can be critical of the inexpert opinions of elected officials. The independent central bank can avoid this erosion of confidence by alleviating fears that monetary policy will be determined by novices. Central bank independence also enhances the likelihood of long-term fiscal and monetary policy coordination. Central banks that can maintain their monetary policies through fiscal policy authority and policy shifts increase the responsiveness of fiscal authorities by maintaining a framework of consistent monetary activity. Fiscal authorities must accept the long-term monetary framework in designing their fiscal activities. Greater coordination of policy actions results.

While these three issues do suggest the importance of central bank independence, there are significant issues that can be raised favoring an integrated approach of monetary and fiscal authorities.

Three Factors for Integration of Central Banking

First, monetary policy should reflect the principles underlying the national

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[5] *Mr. Stefan Petranov addresses these issues in his remarks on Money Market, Forecasting and Monetary Policy during Transition. He describes the policy difficulties that result from increased levels of uncertainty under rapidly changing economic conditions.*

system. In any country monetary policy must be considered important and fundamentally it is the responsibility of the government to guarantee a useful monetary system. In a democracy this includes a system of accountability, which is achieved for the government officials by accountability to the voters. Independent central banks are not subject to this same set of criteria and reflect a different principle for a national institution.

Second, independent formation and execution of policies may conflict with government policies that have higher weight in the social welfare function of a specific economy. While no one doubts that a central bank can argue for the validity of its policy, an independent central bank may choose a set of goals that do not match a broader framework of decisions. This is particularly true regarding inflation policies, where central banks may focus on low inflation targets without regard to other goals that may supersede the inflation goal in a particular system. The focus of attention on inflation control for all central banks places an external measure on central bank behavior that increases the likelihood of central bank insensitivity to other issues. The independent central bank may not be sensitive to the larger framework outside the banking system in setting its goals.

Third, independence increases the difficulties in coordinating government and central bank goals. This factor introduces more pragmatic elements into the coordination of monetary and fiscal policy, but these are nonetheless of extreme importance to effective monetary and fiscal policy. Central bank autonomy places the separate development of monetary policy at a premium and sacrifices the benefits of achieving a coordinated monetary and fiscal plan, particularly in the short run. The planing of coordinated policies may increase the speed of inflation and the effectiveness of policies as they evolve. There may also be improvements and revisions that are needed as the policy impacts are addressed and policies revised.

Conclusions

Both the arguments for and against independence relate to the importance of development of correct monetary policy in coordination with the overall economic conditions of the economy. The ranking factors for independence that were suggested earlier are appropriate when inflation is the main target and the development of monetary policy independent of other objectives for the economy is assumed. In transition systems, however, the most important goal of the central bank is to establish what may be assumed in stable systems, a safe and sound system of capital markets and a functioning banking system.[6] Without a functioning system, the more refined objectives of monetary policy cannot be achieved. Criticisms about monetary policy raised in the framework of fighting inflation without risk to the banking framework are not germane in the newly emerging systems.

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[6] *Ms. Katja Pecarevic of the National Bank of Croatia referred to this goal for transition economies with different initial national debt positions.*

The separation of issues regarding central bank independence into a set of factors that have either positive or negative relations with monetary policy becomes more difficult. The existence of mechanisms outside the formal lines of authority clouds the assessment or measurement of central bank's actions. Moral hazard issues become much more critical to the achievement of central bank objectives. While banks may lack the necessary information to reduce adverse selection in their handling of loan portfolios, the central bank may also face adverse selection in the issuance of bank licenses. The financial system simply may not be functioning to minimize or even reduce moral hazard as we would like in a stable monetary system. Furthermore, newly forming political issues are of such importance in determining confidence in the banking system that structural issues may take a secondary position.

A more appropriate means to evaluating the importance of central bank independence would be to ask in transition economies for the identification of the objective function of the central bank. In this way the focus is more specifically on what the central bank is seeking to maximize, rather than relying on a structure that may or may not function according to its design and may or may not be the most critical factor determining central bank success.

There are two possibilities for central bank objective functions. A central bank can see itself as serving the public interest and, therefore, what is best for the country is also the best for the central bank. A second possibility would be that the central bank is maximizing self-interest. This second view falls into the arena of the theory of bureaucratic behaviors. Upon closer inspection, however, the disparity in behavior of the central bank that is generated by the two perspectives is effectively very small in the cases of transition systems. The overwhelming importance of establishing a safe and sound system transcends any other goals. In order for a central bank to pursue its own power, the banking system must exist in an orderly structure. But this is simply the overriding issue in the public interest as well. Only when the economy can afford more complementary goals and subtle aspects of its social welfare function do the more subtle issues of the independence of the central bank authority become apparent. The safety of the banking system, therefore, rests on the confidence of the population in the institutions emerging in the transition period.

Independence of the central bank provides one clear result – a separation of public perceptions about monetary and fiscal authorities. The independence of the central bank must be established as a priority in those cases where confidence in the government is lagging. Only this way can the monetary system be protected from political conundrums. In those systems with strong support for the government, care must still be taken to avoid too close a tie between banking and the fiscal authorities. The exposure of the entire stability of the system is in jeopardy particularly if governmental confidence is associated with individual power or the success of particular transition policies. Individuals or policies developing weaknesses may prove contagious to the monetary system. An independent central

bank reduces the monetary systems exposure to such potential risks.

Although independence does have social and political benefits which may be of greater value in transition periods, the effectiveness of the dichotomy does not automatically guarantee the central bank's miracle working abilities. If fiscal policies are not establishing a safe and sound market system, with investment growth, private sector money demand stability and savings as a source of investment funds, the central bank can do little to stabilize the monetary system. The monetary control mechanisms are rendered dysfunctional and independence does not achieve socially optimal outcomes.

Establishing formal close ties between the central bank and government does not provide a clear set of benefits. Although central bank cooperation might appear to be increased in an integrated system, the reality for transition systems is that central banks have limited options concerning their policies and they are forced to coordinate their policies. The need for foreign currency reserves, to service external debt and to meet the trade requirements of the import/export sector all effectively limit the actions of the central bank and its functional independence. The transition economies lack the necessary monetary reserves to allow central banks to separate their goals from those in the public interest. The structural independence of the central bank is the superior structure because it increases confidence and removes political factors from the framework of decisions. There are, therefore, definite risks to a dependent central bank and few real benefits.

The decisions facing transition systems over the nature of the independence of their central banks are paralleled in the arguments for joining monetary unions and developing single currency standards.[7] Depolicizing business circles, at least in terms of monetary factors, has the potential to reduce a wide range of risk factors and improve trade related activities. The initial decision to place monetary control outside of government hands at first suggests an action that removes responsibility and authority to citizens. However, the benefits from single currency manipulation are outweighed by the systemic benefits of a strong monetary system that enables increased real sector growth and stability. The increasing scale and scope of markets further reduce the risks of any one factor destabilizing market activities. The argument for an independent central bank in transition systems, therefore, foreshadows arguments for developing integrated currency relationships with partner nations. The preeminence of a safe and sound system, buffered from fiscal shocks, is the central issue for monetary structure objectives.

[7] *The arguments are well represented in a variety of sources, including Paul DeGrauwe,* ***The Economics of Monetary Integration****. Oxford University Press, second revised edition, 1994.*

Seignorage and Inflation

by Mariela Nenova

Mariela Nenova is a consultant to the World Bank Representation in Sofia.

Since the 1950s, the Bulgarian economy has been functioning in conditions of irrational distribution of resources and their inefficient utilization, resulting in a persistent generation of losses. This economic policy led to the 1990 collapse and subsequent continuous depression, and high inflation rates.

Inevitability of radical changes in the structures of the economy was recognized by a public consensus achieved in early 1991, when a policy of transition to market economy was adopted. Liberalization of prices and markets, mostly of foreign trade, relieved part of the tension and in mid-1991 created market equilibrium. Ostensible stability of the economy and social dissatisfaction caused by the drop in real incomes gave ground for discontinuation of the successful start of the reforms and commencement of a reverse process toward restricted freedom of markets[1]. The return back to economic policy which has proved its failure would inevitably lead to a recurrence of acutely critical situations where disproportions accumulated as a result of control and regulation of the markets would be cleared by inflation rate outbursts. Fiscal and real sectors[2] would keep on generating losses and functioning irrationally and inefficiently.

Losses in the economy are covered by external financing (used in the early 1980s, which led to accumulation of foreign debt of USD 12 billion), selling out of state-owned property (privatization), savings of households, and currency issue. In case deficits of a given real value are financed by currency issue, the central bank would fail to perform its basic function, that is, control over inflation. Money supply dynamics, and hence inflation rate levels are determined by the amount of losses.

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[1] *The exact staging of steps and setbacks concerning the reforms may be seen in the reports of the Agency for Economic Coordination and Development.*

[2] *The Annual Reports of the Agency for Economic Coordination and Development for 1993, 1994, and 1995 stressed the deficit in the real sector and its impact on the fiscal and banking sectors.*

This paper presents an assessment of seignorage for the period from May 1991 to April 1996 on the basis of the central bank balance sheets.

Seignorage and Methods of Computation

The seignorage may be calculated by the following formula:

$$S = [\pi_t /(1+\pi_t)] M_{t-1} + (M_t - M_{t-1}) \quad (1),$$

where

π_t is inflation rate for period t,

M_t is reserve money of the central bank in real terms.

The first expression on the right-hand side of the equation is the seignorage inflation rate component, and the second expression represents the change in the real component.

Seignorage calculation in the case of Bulgaria has been done after transformation of the balance sheets of the central bank by shifting net foreign assets, net relations with the budget, receivables from commercial banks to the right-hand side (assets), opposite of which, on the left-hand side remain the reserve money, capital account, and other net liabilities. Seignorage is calculated on the basis of the total amount of the assets (or liabilities) side of the transformed balance sheet.

Table 1

Seignorage and Its Components*

(million BGL)

Indicators	1991	1992	1993	1994	1995
Inflation component	35706	332	1640	1409	284
Real component	337	407	-409	-152	1322
Seignorage	**36044**	**3739**	**1230**	**1258**	**1606**

** Calculated on the basis of net foreign assets, net relations with the budget and refinancing of commercial banks. All ratios were reduced to real values as at December 1990.*

Inflation component is the main source of seignorage in this country, and two thirds of it are generated via refinancing of commercial banks, and the other part – through financing of the budget. The real component is directly related to the forex operations of the central bank. The BNB would increase the real component of seignorage by purchase of foreign exchange and would reduce it when selling foreign exchange.

Since the analysis is seeking to establish the relation between the inflation rate and seignorage, the seignorage may be calculated on the basis of that part of the reserve money of the BNB which is directed to refinance commercial banks and to finance the budget. The central bank balance sheet may be transformed again in such a way so that only net relations with the budget and refinancing of commercial banks remain at the assets side. Amount of seignorage, calculated in view of the new distribution of the BNB operations, is shown in Table 2.

In macroeconomic terms, currency issue by the central bank would be normally related to financing of fiscal and quasi-fiscal deficits. Seignorage in the developed countries is a negligible source of resources (no more than 0.5% of GDP), but in the developing countries where serious problems for limiting losses in the economy exist, the average amount of seignorage is about 5% of the gross domestic product. Unlike taxation, seignorage is a significant source of resources in crisis periods, where revenues to the budget drop abruptly due to unfavorable economic conditions.

Table 2

Seignorage and Its Components*

(million BGL)

Indicators	1991	1992	1993	1994	1995
Inflation component	35632	3325	1636	1406	283
Real component	-1643	1311	568	75	43
Seignorage	**34000**	**4637**	**2205**	**1482**	**325**

** Calculated on the basis of the central bank's net relations with the budget and refinancing of commercial banks. All ratios were reduced to real values as at December 1990.*

Table 3

Basic Ratios Compared to Gross Domestic Product[1]

(%)

Indicators	1992	1993	1994	1995
Seignorage	12.5	6.1	4.0	0.9
Inflation component	9.0	4.5	3.8	0.8
Primary balance[2] of the general government budget	-0.5	-1.3	3.3	3.9
Cash balance[2] of the general government budget	-4.6	-6.8	-3.8	-3.6
Total borrowing need of the budget	9.1	15.8	11.9	11.8

***Note**: Seignorage has been calculated on the basis of relations of the BNB with commercial banks and the budget (Table 2).*

[1] All relations have been calculated on the basis of the real value of the variables.

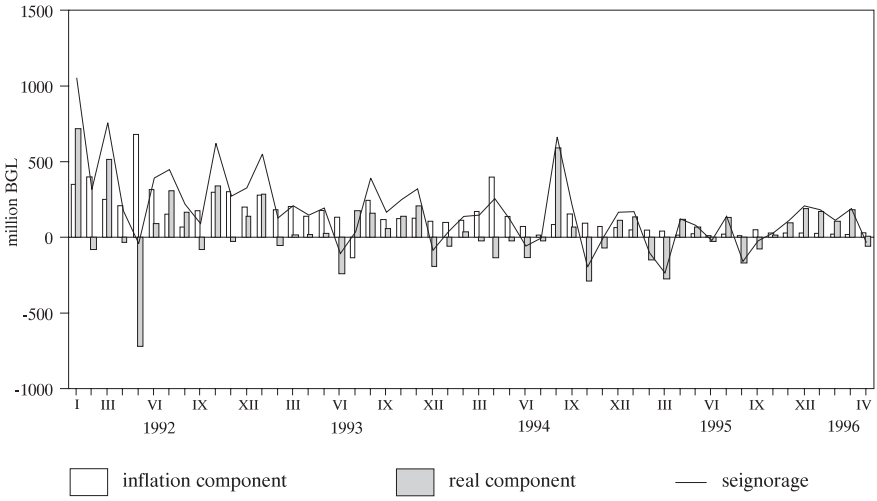
[2] Deficit (–), surplus (+).

Relation between seignorage[3] and deficits in the economy is not directly proportional, since the deficit may be covered in several ways. To the extent that inflation is generally accepted as a monetary phenomenon, central banks are aiming at limiting the currency issue. If a significant foreign financing is lacking as it was the case of Bulgaria after the 1990 moratorium on foreign debt, and there is no privatization process, deficits in the economy may be covered by savings and by means of currency issue.

[3] Seignorage calculated on the basis of net relations of the central bank with the budget and refinancing of the commercial banks is used in the subsequent analysis.

Chart 1

Seignorage on a Monthly Basis



The use of savings to finance fiscal and quasi-fiscal losses would maintain a high level of interest rate. On the one hand, savings should be directed toward the banking system, and, on the other hand, granting of long-term (investment) loans should be restricted (banned). Seignorage is an indicator for that part of losses in the economy which is not covered by foreign sources and savings, but by means of currency issue and its significance in macroeconomic terms is related mainly to the inflation level.

Econometric Model of the Dynamics of Seignorage Inflation Rate Component

Calculation of the seignorage and its components per formula (1) will provide evaluation of their change by month. It is of interest to consider the dynamics of the inflation component of seignorage which features also the best characteristics from a statistical point of view[4] in comparison to seignorage as a whole. The real component as an average value is near to zero.

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[4] *The aim of the econometric analysis is very modest due to the poor results of the statistical tests, seasonality, and instability. In terms of theory, the results obtained present acceptable description of the processes of the past period, but it would be too ambitious to use them as imperative conclusion and forecasts. The economic system is very unstable. It is under development and adaptation to the market environment. The economic policy conducted is inconsistent, and frequently conflicting.*

A process of gradual decrease of seignorage and its inflation component may be traced in the period until August 1995. The structural change in the inflation component occurred after the crisis in March 1994. This conclusion was made on the basis of statistical evaluation of models with fictitious variables, which consider various points of time as turning points of the trends.

$$LN(INF) = 5.2 + 0.16\,\pi - 0.036\,t - 0.015\,Dt \quad (2)$$

$$(31.2) \quad (10.0) \quad (-9.34) \quad (-3.2)$$

$R = 0.952$ $F(3,55) = 173.7$

$R^2 = 0.904$ $SEE = .403$

$R^2 adj. = 0.899$ $DW = 1.85,$

where

INF is the inflation component of seignorage by month,

π is monthly level of inflation,

D is fictitious variable, $D = 0$ for $t = 1, ...34$, and $D = 1$ for $t = 35, ... 60$. T-statistics data is given in brackets below the coefficients of the equation.

Change of inflation component during the time period until March 1994 crisis is:

$$LN(INF) = 5.2 + 0.16\,\pi - 0.036\,t \quad (2a),$$

or monthly average rate of decrease of inflation component is -0.036.

After March 1994 the model is as follows:

$$LN(INF) = 5.2 + 0.16\,\pi - 0.05\,t \quad (2b),$$

or monthly average rate of change becomes -0.05.

An assumption has been made at the beginning of this analysis that the reserve money of the central bank was a function of that part of the deficit in the economy which could not be covered by external financing and savings. A good statistics is available in Bulgaria concerning government budget deficits. It is difficult to make an evaluation of loss of companies, and of quasi-fiscal deficits of the BNB, and of supply of foreign exchange in accordance with the basic exchange rate of the central bank on the basis of the published information. Regardless of the fact that the reported budget deficit is only a part of the total deficit of the economy and in accordance with statistics, it is completely financed through issuance of government bonds (since 1994), for the purpose of this analysis the budget deficit was assumed to be a measure for all losses in the economy. The practice since 1990 showed that when losses in the real sector, and hence in the bank sector, turn into an obstacle to the normal operation of the financial system, it is transferred in some form (debt, subsidies to the budget), and in the long run it would have an impact on the budget deficit. Commercial banks would buy out more than 90% of the monthly issue of government securities which may be used as collateral for obtaining refinancing from the central bank.

Therefore, the analysis assumed that seignorage dynamics depends on the change in the budget deficit and savings in the banking system.

Fiscal sector maintains a relatively permanent cash deficit in real terms.

Budget deficit until March 1994 resulted from negative primary balance of the budget and government debt servicing. Indexation of incomes of public employees, pensions, and social benefits was a burden for the budget in this period and it became one of the main causes which led to the foreign exchange crisis at the end of 1993 and the beginning of 1994.

Between May 1991 and March 1994, the budget channeled funds from the banking system (the central bank included) to the households. After March 1994, the direction of financial flows was reversed and the budget began to reallocate tax revenues from the nonbank sector for covering its debt payments to the bank sector. The change in the primary balance of the budget (Table 3) enabled a portion of the interest payments on domestic and foreign debt of the state to be covered in a noninflationary way, but it failed to reduce significantly the cash deficit, due to increase of the government's debt by means of transfer of state sector liabilities to the budget.

Passing the Law on Settlement of Nonperforming Credits of state-owned companies made for a decrease in their accounting of net losses, but failed to bring in changes in the type of their behavior. The average operating profit concerning the state sector continues to be near to zero, and half of the companies have achieved zero or positive operating profit, and the other half – a negative one. At the same time, the Law on Settlement of Nonperforming Credits of state-owned enterprises

Chart 2

Revenues and Expeditures of the Government Budget on a Monthly Basis

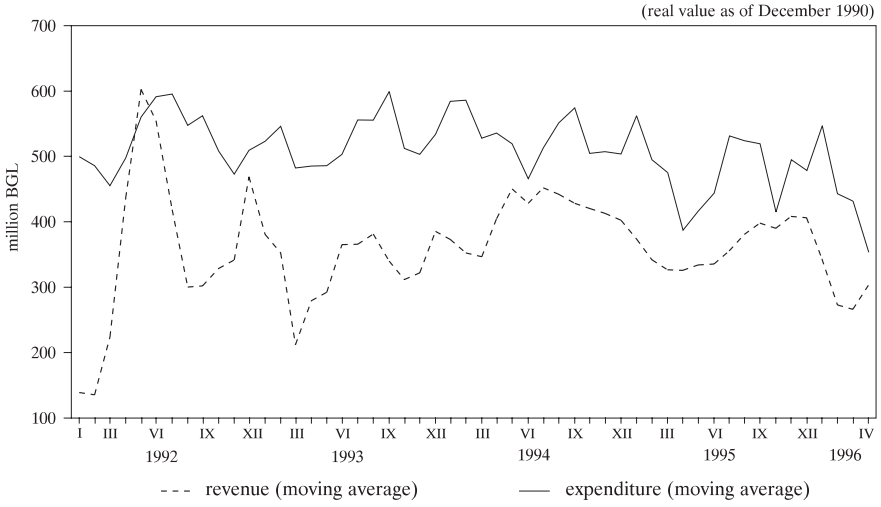
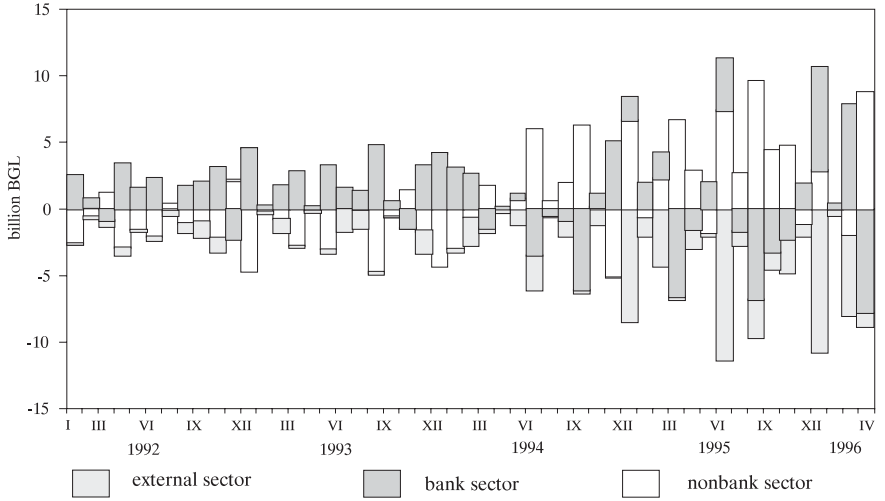


Chart 3

Net Financial Flows by Sector



***Note**: Net Financial Flows = flows into the budget from the respective sector in a given month − expenditures of the budget for the respective sector in that month. Bank sector includes commercial banks and the BNB. Nonbank sector includes nonfinancial organizations and population.*

has increased the instability of the financial system due to injecting large amounts of liquid funds into a limited number of banks[5] at certain points of time, which created problems for the government budget regarding financing of such expenditures.

Resorting to currency issue to cover the deficit in the economy will depend on the dynamics of savings and their distribution over time. Since 1992, on average, savings of households in the banking system feature a constant real value (they do not increase in real terms), despite significant variations caused by the price level shocks[6]. Dynamics of quasi-money would present an evaluation of the savings of the population (households and companies).

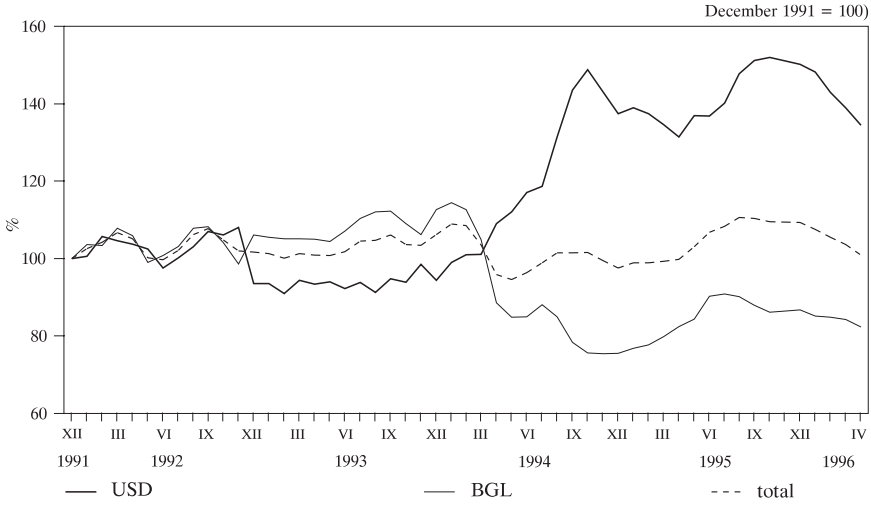
Since the end of 1993, an essential change in the structure of savings has occurred. Foreign exchange deposits began to grow at a high rate, and lev deposits (in real terms) have begun to decrease quickly, and at end-April 1996 they accounted for about 80% of their end-1992 level. This narrowed the inflation tax base, and the population became highly sensitive to any change in the real yield of

[5] *In accordance with the Law on Settlement of Nonperforming Credits of state-owned enterprises, the minimum price of the issued bonds is determined by the central bank at each three months. Price level did not allow for the even distribution of LSNC bonds in the banking system.*

[6] *The reason for most of the shocks was the change in the level of prices, fixed by the government.*

Chart 4

Quasi-money Dynamics (in real terms)



lev and foreign exchange assets.

Disparity between growth in savings by month and needs of the budget for fresh funds is covered by the intervention of the central bank, either by direct lending to the budget or by buying-out the unsold part of the government securities issue.

After the inflation jump in March 1994, a relative equilibrium was achieved in the economy on the basis of low level of real incomes and devaluation of lev liabilities of the borrowers. This led to a decrease in the level of losses in the period following the crisis, but did not result in changes in the behavioral patterns in the economy. Factors generating losses in the economy have not been eliminated. At the same time, an impetus was given to the process of substitution of local currency for foreign exchange, which marks a change in the saving pattern of the population.

Relatively low level of inflation in 1995, resulting from the increased administration and control over prices, provided for by the clauses of the Law on Prices has artificially reduced inflation. The ostensibly low and stable inflation gave ground for a decision to lower the basic interest rate, and in four months (from April to July 1995) its level was reduced from 72% down to 34%. The fast drop in the interest rate level in 1995 reversed the trend toward increase of lev deposits.

In the light of fundamental parameters of the economy, the drop in the basic interest rate should lead, as it did, to a new increase in nonperforming loans in the commercial banks' portfolios. A 2.5% economic growth rate for the year was fi-

nanced at the expense of the increased arrears between companies and arrears of companies to the banks. This has resulted in considerable losses incurred by banks at the end of the year. The seignorage increase in late 1995 and early 1996 (Chart 1) indicates that a new equilibrium in the economy may occur after a new inflationary outburst, prompted by the need to cover the deficit in the economy by currency issue.

Relation between Inflation Component of Seignorage and Inflation

No systematic relation between the nominal growth of reserve money and inflation may be outlined. The average monthly growth rate of reserve money for the period is about 1.03%, while for inflation it is 6.13%. But the nominal change in the reserve money varies in a much wider range than inflation, thus creating instability in the system. Since deficits determine reserve money dynamics, the efforts of the central bank to limit currency issue and to pursue a restrictive monetary policy have a campaign nature and cause dramatic fluctuations in the reserve money dynamics.

The transmission mechanism from currency issue to inflation consists of a number of intermediary links. It may be stated that given the negative primary balance of the budget between May 1991 and March 1994, the relation between the two variables was more direct. Analysis of the Agency for Economic Coordination and Development concerning the type of the consumer function regarding Bulgaria indicates that the population saved no more than 10% of its permanent income and therefore it is likely that the bulk of financial flows toward it have been spent on consumption. Following the March 1994 crisis, the budget deficit was related to servicing the domestic and foreign debt of the state, with fresh money coming into the banking system, and then distributed in accordance with its needs – for the purchase of government securities, granting loans to the non-bank sector or for the purchase of foreign exchange.

The econometric model of the inflation component of the seignorage in a function of inflation enables the evaluation of the maximum value of the inflation tax, and the dynamics of variables after the critical point – March 1994.

$$LN(INF) = 2.4 + 0.88\pi - 0.53\pi D - 0.05\pi^2 + 0.04\pi^2 D \quad (3)$$
$$(12.3)\ (11.2)\ (-8.8)\ (-6.2)\ (5.5)$$

$R=0.92$ $F(4,54)=71.3$

$R^2=0.84$ $SEE=.525$

$R^2adj.=0.83$ $DW = 0.93$

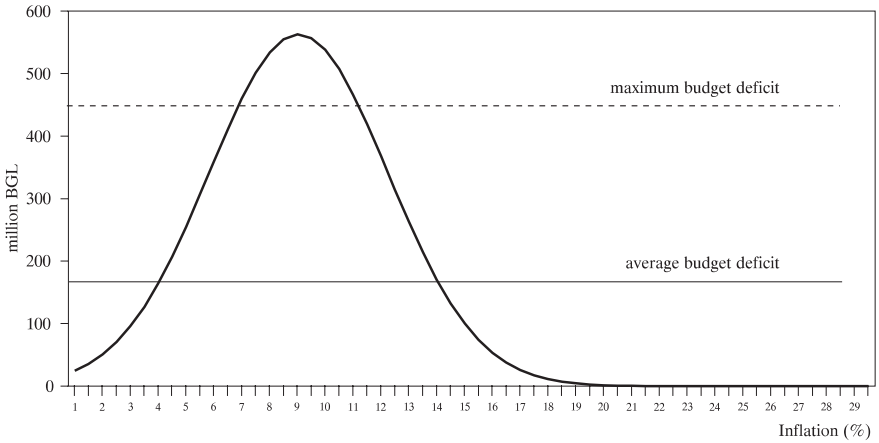
(Designations are the same as in equation (2)[7].

The equation will be as follows in relation to the period until March 1994:

[7] *Statistics would show the presence of instability and correlation in the remnants of the regression.*

Chart 5

Inflation Component of Seignorage (in real terms)



Equation: $lnINF = 2.368 + 0.877\ CPI - 0.0485 CPI^2$

Period May 1991 – March 1994

$$LN(INF) = 2.4 + 0.88\ \pi - 0.05\ \pi^2 \quad (3a).$$

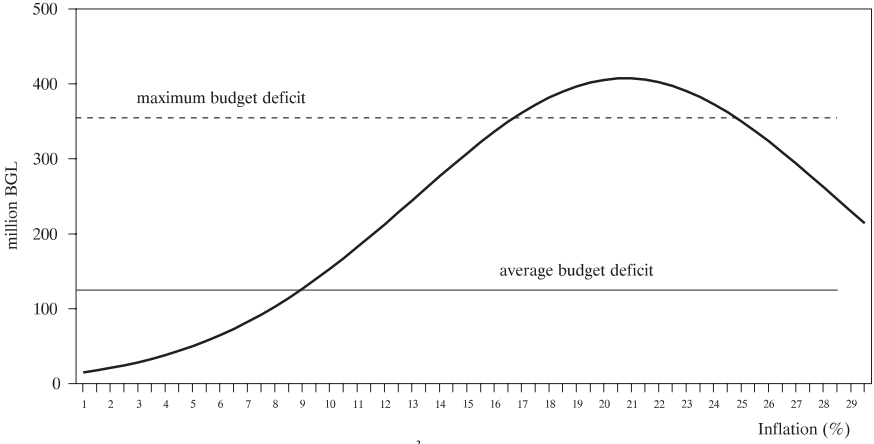
The maximum value of BGL 560 million of the inflation component for the period from May 1991 to March 1994 was reached at inflation rate of 9% per month. The average monthly budget deficit in real terms (December 1990 prices) was BGL -160 million, with a maximum value of BGL -444 million. An average monthly inflation rate of up to 7% for that period would have been sufficient to fully finance the budget deficit by means of the inflation component of the seignorage and the average level of the budget deficit was financed at a 4% inflation rate.

The inflation tax curve for the period until March 1994 has the following two peculiarities: first, it enables the collection of high inflation tax at a relatively acceptable level of inflation; second, change over from a stable pattern of the system to unstable hyperinflation solution may be reached very quickly. The cause of a sudden acceleration in inflation in March 1994 does not reflect the deficits in the economy, it was rather a result from the systematic impact of inflation on money demand by the population. Given the underdeveloped capital market in the country and the limited range of financial assets[8], money inflow into the economy through seignorage went on the offensive against the foreign exchange rate in the

[8] *Money resources of the population and companies may be deposited as lev-denominated deposits with the banking system or as foreign exchange.*

Chart 6

Inflation Component of Seignorage
(in real terms)



Equation: $lnINF = 2.368 + 0.35\ CPI - 0.0084\ CPI^2$

Period March 1994 – April 1996

long run. The dramatic devaluation of the Bulgarian lev would accelerate inflation which pushes the economy toward the bad right-hand side of the Laffer curve. A 22% inflation rate registered in March 1994 obviously was a hyperinflation value.

After March 1994, the equation changed significantly:

$$LN(INF) = 2.4 + 0.35\ \pi - 0.008\ \pi^2 \qquad (3b).$$

The value of inflation which gives the maximum value of the inflation component of the seignorage is increased to 21%, and the value of the maximum tax is reduced to BGL 408 million. The average value of the budget deficit after March 1994 is BGL -110 million and its maximum value is BGL -355 million. In view of the change which has occurred in the structure of the Laffer curve, it is evident that the new average level of the budget deficit might be financed at an inflation rate of 9% per month. The systematic impact of the currency issue on the foreign exchange rate continues since there are no essential changes on the capital markets.

The change of behavior of the economic system after the March 1994 crisis gives ground for the following conclusions to be made:

• financing of fiscal and quasi-fiscal deficits in the economy by issuing currency would maintain a high level of inflation and interest rate respectively;

• exchange rate stability may be easily undermined when a change in the ratio between inflation and interest rate occurs;

• shock devaluation of the exchange rate, resulting from injection of liquidity

into the financial system when funding the deficit by currency issue, would inevitably lead to dramatic increases in inflation and destabilization in the economy.

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Government Debt in the Light of Monetary Policy

by Garabed Minasian

Garabed Minasian is Chief Research Fellow, D. Sc. (Ec.), Institute of Economics, Bulgarian Academy of Science.

On 16 December 1995, Bulgaria officially applied for membership in the European Union. The applications for EU membership of the eight eastern European countries will be considered in the second half of 1997. A serious attitude toward the desire expressed for association into the European Union would require making efforts to comply with the Maastricht fiscal criteria, adopted in 1991 and set in relation to the formation of the European Currency Union.[1]

European Union Criteria

Inflation

Each country should have a sustainable price dynamics, namely in the preceding year the CPI index of the applying country should not exceed by more than 1.5% the CPI indices of the three countries showing best price stability.

Fiscal Performance

Central budget deficit should not exceed 3% of GDP and government debt should not exceed 60% of GDP, unless the deficit is a temporary exception, or is getting down to the required level at an agreeable rate.

Interest Rates

Long-term interest rates throughout the preceding year should not exceed by more than 2% the rates of the three countries showing best price stability.

Exchange Rate (European Exchange Rate Mechanism)

Maintaining an exchange parity (within normal limits) without serious tensions at least over the last two years. No two-way devaluation of the domestic currency

[1] *Barrel R., J. Morgan, N. Pain. The Employment Effects of the Maastricht Fiscal Criteria. Paper presented to the LINK Spring Meeting, New York, 25 – 28 March 1996; EEA Meeting Focuses on Transition Economies European Integration. IMF Survey, 9 October 1995, p. 302.*

(on the country's own initiative) is allowed in the above period.

This paper is not aiming at considering the whole set of criteria, but rather focuses on just one criterion – fiscal performance and its influence on monetary policy.

Information Support

Government debt consists of two basic elements – external debt and domestic one. Statistics on both components is not quite reliable.

There is a discrepancy between external debt data provided by different official national and international financial institutions, with no plausible explanation for this (Table 1). It is the BNB which has the final say on the accuracy of information, all the more so as various agreements reached on rescheduling of old payments and establishing new ones, as well as external debt servicing would require a reliable data base to be in place.

Table 1

Bulgaria's Gross External Debt

(billion USD)

Year	[A]	[B]	[C]	[D]	GED/GDP, % [A]	GED/GDP, % [*]
1986	5.9	5.5			29.1	
1987	8.3	7.4		6.1	29.4	
1988	8.9	9.1		8.2	39.6	
1989	10.1	10.7	9.2	9.2	48.0	
1990	10.9	11.1	10.0	10.0	57.0	59.5
1991	12.0	11.2	11.4	11.8	124.3	140.7
1992	12.2		12.1	13.5	118.3	140.7
1993	12.3		12.5	12.5	124.9	115.7
1994			10.4	10.4	106.8	103.0
1995				11.4		90.5

Sources:

[A] – World Debt Tables, 1994 – 1995, WB, 1995, p. 62;
[B] – Economic Survey of Europe in 1991 – 1992, U.N., ECE, N.Y., 1992;
[C] – The Bulgarian Banking System, BNB, Sofia, Nov. 1995, p. 68;
[D] – Business Central Europe. The Annual, Dec. 1995, p. 37 (IMF Source);
[*] – As per BNB and NSI statistics.

None the better is the situation with domestic debt statistics. Since 1991, the BNB has been publishing official information on the domestic debt in its publications, but given the equivocal position on and the ambiguous composition of domestic debt, early 1990s information is an attempt at assessment rather than real data.

In mid-1990s, domestic debt statistics is brought to a more precise makeup. Our statistics on domestic debt is officially comprised of three components: 1) di-

rect indebtedness to financial and credit institutions; 2) indebtedness on government securities issued to finance the budget deficit; 3) indebtedness on government securities issued in exchange for nonperforming loans of state-owned companies to banks under the Law on Settlement of Nonperforming Credits (LSNC or the Bulgarian popular acronym – ZUNK).

However, the issue of defining the term state-owned companies' nonperforming credits is bashfully evaded. In fact, the state seems to be stepping aside from state companies' debts which are not officially accepted as nonperforming credit under the LSNC. But in the OECD and in the European Union debts of state-owned companies are deemed public debt.[2]

Consolidated data on the financial position of nonfinancial public and private enterprises has been published in Bulgaria since the beginning of 1994.[3] In the classification adopted, public enterprises include state-owned enterprises, municipal ones, and cooperatives, which hinders identification of the state-owned enterprises' indebtedness. State-owned enterprises, however, are supposed to prevail.

Public enterprises have accrued both liabilities and receivables. It is therefore advisory to calculate net liabilities of public enterprises, and consequently, to extend the basis of calculation of domestic government debt.

Table 2

Government Debt

(% of GDP)

Year	External debt	Officially accepted domestic debt	Unofficial domestic debt (net)	Total
1993	115.7	37.2	15.2	168.1
1994	103.0	50.6	18.1	171.7
1995	90.5	40.6	17.1	148.2

In any case, the total amount of government debt is high enough to be a cause of concern (Table 2).[4] Concern about the scale of public debt is aggravated by adverse economic developments in the country in the first half of 1996. The significant depreciation of domestic currency (approximately twofold in the first five

[2] *It is worth making a reference to the meaning of what official British statistics calls Public Sector Borrowing Requirements (PSBR), underlying the definition of public debt in the OECD and the EU: "PSBR is the budget deficit of the central and local governments plus the deficit of nationalized industries" (Begg D., S. Fischer, R. Dornbusch. Economics, Third Edition, 1991, p. 421).*

[3] *Financial Position of Enterprises, a quarterly publication of the NSI.*

[4] *Gross public debt in Hungary for 1995 is assessed at 86.6% of GDP (Transition. WB, vol. 7, No. 1, 1996, p. 20). It is worth noting that some EU countries – Italy, Belgium, Greece – maintain public debt levels exceeding GDP, but processes and economic problems there are incomparable to Bulgaria (Barrel R., Morgan, N. Pain. The Employment Effects of the Maastricht Fiscal Criteria. Paper presented to the LINK Spring Meeting, New York, 25 – 28 March 1996).*

months of 1996) has caused a proportional rise in the level of public debt. The liquidation of 64 loss-making enterprises undertaken by the government will legalize their debts, which will contribute to the upsurge in the absolute value of the government debt in real terms.

Debt and Government Budget

Government debt is a burden which impedes the normal functioning of basic financial institutions.

The government budget faces considerable difficulties in its effort to maintain budget equilibrium and normally service government debt. The external debt reduction agreed upon in the arrangements with the Paris and London Club has indirect rather than direct impact on financial equilibrium, as long as direct debt reduction (for example, by debt buy-back at a reduced price per unit of face value) makes a comparatively small share of it.[5] Interest payments on both domestic and external debt are drastically growing, and the only perspective is of deterioration of the situation (Table 3).

Table 3

Interest Paid by the Government Budget

(billion BGL)

Year	External debt	Domestic debt	Total	Relative to cash deficit, %
1993	3.1	24.7	27.8	84.2
1994	6.5	64.1	70.6	198.3
1995	24.5	98.1	122.6	211.0

External debt interest payments will yet increase, while those on domestic debt have a long record. Interest payments make respectively 22.2%, 23.1%, and 28.4% of officially recognized domestic debt in 1993 – 1995. The scale of these payments is seen against the total expenditure side of the general budget. As per IMF data for 1993, out of a sample of 72 countries, both developed and developing, only three countries have interest payments exceeding 25% of overall budget expenditures (Kenya – 32%, Greece – 29%, Sierra Leone – 25%)[6]. At the same time, the share of interest payments against all general budget expenditures in

[5] *Negotiations held with more than 300 commercial banks on the external debt restructuring and servicing were finalized on 28 July 1994. External debt totaling USD 8,273 million was restructured and USD 1,027 million were bought back at 25 cents for US dollar (Commercial Bank Debt Restructuring: The Bulgarian Experience. IMF Survey, 17 July 1995, p. 232).*

[6] *The 1993 data reveals mixed fiscal performance and divergent spending patterns.* IMF Survey, *19 March 1996, p. 92.*

Bulgaria is: 1993 – 31.5%; 1994 – 42.1%; and 1995 – 48.5%!

Maintaining domestic debt at a certain level requires allocation of government budget funds for interest payments. These increase budget deficit, which is funded by issues of government securities. Net revenues from such funding, however, require a gross issue continually growing in amount (Table 4).

Table 4

Government Securities Issues for Budget Deficit Financing

(billion BGL)

Year	Gross issue	Redemption of government securities	Net revenues	Gross issue per unit of revenue
1993	52.7	24.5	28.2	1.87
1994	91.5	54.3	37.2	2.46
1995	154.5	84.6	69.9	2.21

Consequently, each additional unit of domestic debt will require interest payments covered by a budget deficit. This interest is financed by net revenues from government securities issues, and the revenues, in turn, require a higher gross issue of government securities. This increases domestic debt and winds round the accelerating spiral.[7]

If the 1995 proportions are sustained, each additional unit of induced domestic debt will increase the total amount of domestic debt by 1.7 units, and will require the allocation of 0.76 units of interest covered by government budget. It is already clear for 1996, however, that with a record high level of the basic interest rate (108%) and upsurge of the exchange rate, government debt servicing will be additionally impeded.

The process of interest and debt accrual depends strongly on the actual ratio of interest paid to aggregate domestic debt, as well as on the proportion of government securities gross issue to net revenues. The multiplier in this particular case is 2.7, but under specific conditions it may sharply rise and interfere with budget balancing. For example, it will be enough to have interest payments rise to one third of domestic debt, on the one hand, and the ratio of net revenues to approximate one third of gross issues, on the other, and the budget deficit increase will grow beyond control, resulting in hyperinflation.

A large budget deficit is a source of domestic debt growth. Likewise, neighboring Greece has been maintaining a budget deficit of over 10% for the period 1980 – 1994 with a resulting government debt increase from 24.2% in 1980 to

[7] *Various theoretical possibilities for budget deficit financing and the dynamics of the proportion of printing money to debt increases are studied by Dornbusch R. Exchange Rates and Inflation. The MIT Press, 1995, pp. 384 – 385.*

114.1% in 1994.[8]

It becomes clear why the IMF envisaged such drastic conditions in the fiscal policy section of the new standby arrangement in mid-1996. In particular, in spite of the growing need for budget financing of various activities, enforced measures envisage an excruciating growth of the revenue side of the government budget, primarily at the expense of higher taxation, and further cutting down on budget expenditures. Efforts are aimed at achieving a positive primary budget deficit which would facilitate regular government debt servicing.

There are only a few alternatives to gain control over the situation.

First, the most efficient and radical decision would be to get free of the debt burden, resulting from poor financial performance of state-owned enterprises, by privatization, debt-for-equity swaps, or simply by liquidation. All the more so as the manner of payment – in cash or by relevant bonds – will hardly matter. From a certain point of view, payment in privatization deals by Brady bonds is preferable as it creates conditions for more active integration in the international financial structures. In addition, this infers a twofold debt reduction. On the one hand, inefficient fixed tangible assets are privatized and the state is thus freed from its obligations related thereto, and, on the other hand, external debt is reduced, provided payments are effected in external debt bonds.[9]

Liquidation of loss-making state-owned enterprises is an extreme measure, which alleviates government debt only partially. Bad debts remain and the owner – the state – should assume the responsibility for their elimination, mainly through issues of government securities. However, further accumulation of unpayable debts on principal will be halted. At the same time, the ultimate and pressing need of liquidation is an indication that any delay in the privatization of the bulk of state-owned enterprises will result in their irrevocable decapitalization and ultimate uselessness.

The humane motive often quoted in support of loss-making enterprises which generate government debt sounds trivial. Prior to making such a statement one should clearly point out that the employees of these enterprises are parasites on other taxpayers, and then ask other properly working employees if they are prepared to pay undeserved salaries to employees in loss-making enterprises. Besides, the latter should also be asked if they want to receive alms. The government's task is not to support loss-makers, but rather to provide efficient jobs, especially if the enterprises are state-owned.

Second, another credible and radical solution will be to create conditions for a

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[8] *Masson P., M. Mussa. Long-term Tendencies in Budget Deficits and Debt. IMF working paper, WP/95/128, December 1995, p. 19.*

[9] *The requirement for cash payment, often made a condition under deals for the privatization of state-owned enterprises, is in practice an official admission of the instability of Bulgarian financial institutions. In fact, the abolition of any limitations as to the manner of payment (in government securities, Brady bonds or in cash) is a criterion of the seriousness of government's intentions to bring the process of macroeconomic stabilization to an end.*

fast economic growth so that existing debts are redeemed without making new. According to IMF experts C. Aerdt and J. Houben "*... the servicing of Bulgaria's external debt should be consistent with GDP growth rates rising to 4% annually over the medium term."*[10]

Possibilities for turning around trends, provided by the development of the business cycle in the country in mid-1990, were thoughtlessly frittered away. Economic growth achieved in 1995 was mainly on the account of energy-intensive productions, which took advantage of low energy prices, and even did not pay for it. In 1996, economic reality is rather stark, and economic growth will have to give way to the need for another economic stabilization.

Third, ensuring bigger revenues into the government budget by increasing tax rates, respectively decreasing government's expenditures, is an unpopular and extreme solution. An acceptable alternative to this would be to enhance tax collectability by improving financial discipline and by active efforts to curb the so-called "*shadow economy,*" that is, unregistered business activities. Therefore, debt servicing would require the issuance of less government securities, which in turn will allow for a reduction of the debt burden. Cutting down on government expenditures in Bulgaria provides little opportunities, as current government expenditures and programs have been curtailed to the utmost[11].

In a situation of lacking possibilities (or good will) for liquidation, privatization, and economic growth, it is an ingenious managerial strategy to throw the ball into someone else's yard. The alternative involves repayment of government debt by making new debts, or by expanding the monetary base (money supply) respectively. This alternative boils down to monetary policy trickery[12].

Debt and Monetary Policy

Monetary policy provides several luring possibilities for decreasing the direct impact of debt on budget ratios. In the current decade, BNB was tempted, or

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[10] *IMF Survey, 17 July 1995, p. 230.*

[11] *A special study by well-known IMF experts V. Tanzi, L. Schuknecht asserts that "... by 1994 average government outlays in the industrial world had reached 47.2% of GDP... revenue had increased to more than 43% of GDP" (Countries With Big Governments Run Risk of Slower Growth. IMF Survey, 19 February 1996, pp. 68 – 69). As per final statistics, expenditures make 44.6% of the consolidated government budget, while revenues make 38.3% of GDP (Statistical Yearbook of the General Budget, NSI, 1995, pp. 185 – 186), that is, the revenue side is significantly lagging behind the ratios featured by industrialized countries, while expenditures should not be further cut short.*

[12] *On this issue see also Botusharov P. Servicing Possibilities and Dynamics of Domestic Government Debt.* ***Bank Review****, issue 3, 1993.*

Avramov R., K. Genov (Rebirth of Capitalism in Bulgaria, ***Bank Review****, issue 2, 1993) focus particular attention on the flows of losses between individual sectors of the economy. They leave unclarified, however, the issue of transferring losses from the budget sphere to the banking system generated by maintaing a high level of domestic government debt.*

forced, to try almost all of them, and always failed.

First, the most immediate way-out is sought by reducing the basic interest rate (BIR) as an instrument to control interest rate levels and thus suppress domestic debt payments. Temptations are in the domain of so-called fine-tuning, that is, interest rate follows closely inflation fluctuations. It is quite indicative that the basic interest rate has been changed 25 times in the last five years, that is, once in 75 days on average!

The BNB usually explains this frequent interference with its desire to provide stimuli for economic enterprise. It should be noted, however, that the basic interest rate was changed thrice in 1994, while the arithmetic mean of the capitalized basic interest rate was 81.8%, striking a record high in recent Bulgarian history. Nevertheless, the Bulgarian economy registered for the first time in the last five years a positive economic growth (1.8% as per the latest NSI data[13])!

The impact of BIR on economic activity is asymmetrical. With positive real interest rates, economic activities are rationalized – a small number of more profitable and less risky investment projects are carried out. The opposite is not always true. To use J. Galbraith's successful metaphor, it is like a flexible cord – by tightening the regime the cord pulls the arresters, but letting it loose does not always involve a push[14].

Economic history knows real cases of such asymmetry. For example, interests rates of the New York Federal Reserve Bank in the later years of Hoover's presidency (about 1931) were significantly lowered, many American banks were full of money without this having any positive effect on production. In the years following the Great Depression, Swedish economists also abandoned the hope that the central bank would expand investment by decreasing interest rates. This is the time when ideas, later brilliantly formulated by J. M. Keynes and having direct relation to present developments in this country, were getting momentum.

Second, a possibility to alleviate the debt burden on the budget is offered through BNB-provided stimuli for commercial banks to purchase government securities, which are after all of pecuniary character, but are not directly at the expense of the government budget. In practice, stimuli would mean purchasing government securities at more unfavorable primary conditions, which are compensated by the possibility of an additional benefit from the attendant credit facilities provided by the BNB.

Providing additional incentives for purchases of government securities was related to the need to establish a primary capital market. However, the idea that the primary market should have a parallel active secondary capital market is just wishful thinking. In this setting, additional stimuli increase real yield of government securities, which is paid not by the issuer only, but part of it is transferred to other participants in the money market. An additional concern poses the fact that

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[13] *Statistical Yearbook of the General Government Budget. NSI, 1995, p. 147.*
[14] *Galbraith, J. Economics in Perspective. C., 1996, p. 254.*

real yield of government securities is concealed by various additional stimuli.

Such an incentive is provided for by the Resolution of the BNB Managing Board of 22 January 1996 for *"reducing the reserve requirement for banks (excluding the SSB) by 1.5 points (from 11 to 9.5), provided they use the amounts thus released for outright purchases of short-term or medium-term government securities, offered by the BNB"*[15]. In early 1996, monetary aggregate M1 was about BGL 100 billion, which means that about BGL 1.5 billion were withdrawn from low-interest required reserves and were invested in high-yielding government securities bearing a 50 percentage points higher interest. This would mean that someone will have to pay BGL 750 million more per year in order to ensure demand for government securities. In the end, it is the BNB which misses other opportunities to utilize this money.

Again, to stimulate primary trade of government securities, the BNB accepted to accrue (until March 1996) interest amounting to half of the basic interest rate on the part of required reserves which a commercial bank has sold as government securities to nonfinancial institutions. As per official data, government securities bought by nonbank institutions and households amount to BGL 27.8 billion, which means that the BNB has paid about BGL 3.5 billion additional interest on the corresponding part of commercial banks reserve requirements (one third more than BIR). This money is again paid by the BNB.

In the recent past, an additional benefit was provided by the tax exemption of amounts paid for government securities. No attempts are known to have been made at a quantitative evaluation of this additional incentive, to which the state budget was indifferent on its deficit financing side, but rather the losing party on the revenue side.

Another opportunity is provided by the Lombard facility for acquiring loans against collateral of government securities. The Resolution of 10 August 1995 of the BNB Managing Board provides for *"the amount of loans against collateral of government securities, issued by the MF pursuant to Regulations No. 5 of one month to five years maturity, depending on the residual maturity as follows: over 180 days – 70% of face value; from 91 to 180 days – 75% of face value; within 90 days – 80% of face value."*[16] A special resolution stipulates that "*the Lombard interest rate is determined by the BNB Managing Board and will be maintained at one percentage point below BIR.*"[17]

Table 5 shows real data as per BNB information bulletins. Lombard refinancing is deviating from the requirement of interest accrual of one percentage point below BIR. For example, in January 1996, it is four percentage points higher. Nevertheless, the relatively high yield on government securities (long-term in this particular case) allows for speculative operations.

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[15] *Monthly Bulletin. BNB, No.1, 1996.*
[16] *Monthly Bulletin. BNB, No. 8, 1995.*
[17] *The Bulgarian Banking System. Sofia, Nov. 1995, p. 24.*

Thus, as a first step, a commercial bank purchases government securities expecting a particular yield. As a second step, the commercial bank pledges purchased government securities and receives a Lombard loan in the amount of 80% of government securities pledged as collateral at the announced interest rate. As a third step, the commercial bank purchases government securities at the amount of the Lombard loan. As a fourth step, it pledges the new government securities, thus obtaining a new Lombard loan, and so on, and so forth.

Following the whole endless process, we observe that in the end the commercial bank makes a profit in the form of marginal interest rate and marginal yield, as a result of the differences between the yield on government securities and the interest rate on Lombard loans. This marginal yield is shown in column 4 of Table 5. It is consistent with reported real interest rates on government securities and for Lombard refinancing against collateral of government securities.

Marginal yield is not always realized, and this is why it is marginal. It represents the value of probable and feasible maximum yield which can be made by this type of trades. This possibility means that in the hypothesis of maximazing yield, real yield on government securities tends to reach this margin. The question is who is to cover the margin, that is, the difference between the accounted yield and the marginal yield on government securities, and the answer is – BNB.

Table 5

Annualized Compounded Interest Rates

(%)

Month	Basic interest rate	Yield on long-term government securities	Lombard loans against collateral of government securities	Marginal yield
1995				
April	84.5	86.9	78.7	119.5
May	68.0	67.8	69.3	61.5
June	63.1	64.1	60.2	79.8
July	48.9	49.0	48.4	51.4
August	38.6	43.1	41.8	48.3
September	38.6	47.8	41.2	74.3
October	38.6	40.4	41.2	37.2
November	38.6	47.3	41.2	72.0
December	38.6	50.1	41.2	85.9
January 1996	38.6	46.8	43.7	59.2

According to current BNB regulations, Lombard loans against collateral of government securities are extended in cases of extreme need. What is more important in this case is that such an operation allows for additional yield, and the latter determines explicitly or implicitly the price of traded government securities. A possibility exists, for example, for agreements between commercial banks on using such Lombard loans under the conditions determined by the BNB. In addition,

BNB Lombard loan interest rate affects such relationships in the interbank market, where the SSB, again a state-owned institution, is the major creditor.

Due to the specific nature of 1995 refinancing, the amount of Lombard loans in the second half of the 1995 is relatively small, but quickly growing. In January 1996, it is BGL 2.2 billion, and coupled with a differential of 12.4% this increased BNB tacit support to domestic government debt from BGL 270 million to BGL 4.5 billion per annum.

Third, a peculiarity of the 1995 monetary policy has veiled the real scale of the banking crisis of early 1996. The troubled financial position of two big state-owned banks – the Economic Bank and Mineralbank, generated in essence by the burden of a large domestic government debt – led to the adoption of Decree No. 89 of the Council of Ministers and Resolution No. 181 of 19 April 1995. By Article 2, para. 1 of the latter decree[18], the government has approved issuance of government securities to be repurchased, with 7-year maturity, 4-year grace period, and redemption by equal semiannual payments, interest rate applied – BIR, in exchange for the LSNC bonds held by the two banks. Article 3, para. 2 suggests that the BNB and SSB stop refinancing of these two banks until their liquidity is restored.

The exchange of government securities was effected by the BNB and disclosed in the accounts of June 1995. The recommendation to discontinue refinancing of these two banks was accepted and applied not only by the BNB and SSB but by almost all banks. A shock situation resulted.

Refinancing by Lombard loans dropped from BGL 21.6 billion in May to BGL 0.9 billion in July, short-term unsecured deposits decreased from BGL 11.6 billion to BGL 0.8 billion, total refinancing was reduced from BGL 37.1 billion to BGL 7.2 billion, or almost 5.3 times!

Lev-denominated money market trades between commercial banks were sharply reduced, mainly due to the withdrawal by the SSB of deposits which in May amounted to BGL 61.2 billion, down to BGL 37.3 billion in June.

This drastic change was accompanied by an increase in BNB turnover portfolio, as the Bank realized purchases amounting to BGL 39.1 billion, compared to BGL 2.7 billion in the preceding month. As a result, the change in the BNB portfolio within a month ranged up to BGL 27.7 billion, while total refinancing dropped by BGL 26.6 billion, and interbank money market trades by BGL 23.9 billion, or a total reduction of BGL 50.5 billion. This limited access to refinancing in the foreseeable future.

In the following month, the BNB drastically reduced purchase agreements (from BGL 50.5 billion to BGL 16.1 billion) and repurchase agreements (from BGL 60.3 billion to BGL 16.4 billion).

In June, the BNB in practice did not change the amount of liquidity provided to commercial banks (Chart 1). The lack of refinancing was offset by the in-

[18] *State Gazette, issue 37 of 21 April 1995.*

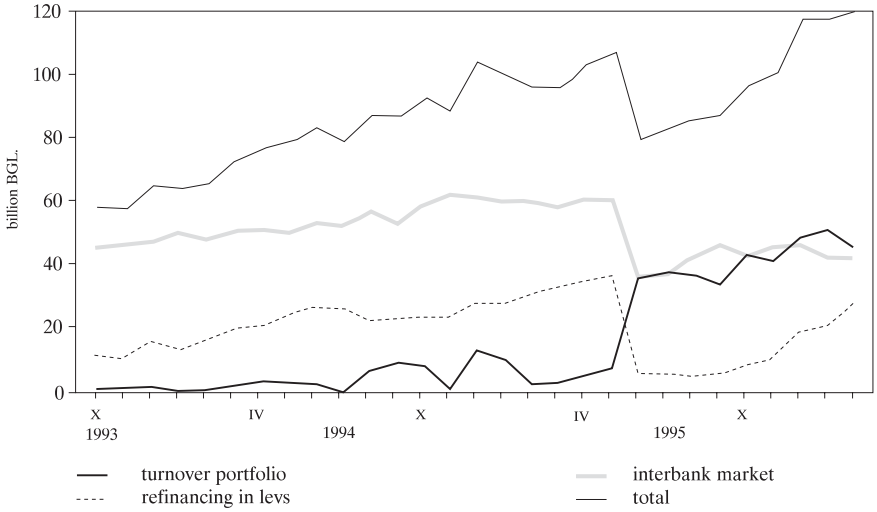
creased turnover portfolio. This initial impetus continued in the months to come, and caused a change in money market proportions. It considerably reduced money turnover in the interbank market, where the SSB is the leading creditor and refinancing agent. As a result, refinancing was practically discontinued for months to come.

The period until year-end was time for observation and reflection. The BNB could not evade its function of lender of last resort (Chart 1). It gradually retreated to its former position, as there were no changes in initial prerequisites. Interest rates remained relatively low in a situation of lacking liquidity. The adverse effect of going back into the spiral is that renewed refinancing is primarily on the account of BNB short-term unsecured deposits with commercial banks (more than two thirds of total refinancing in February 1996). Actually, an unsuccessful attempt at an administrative solution of an economic problem was made – half a year later problem banks experienced another liquidity crisis, but in the meantime three private banks went bankrupt.

An operation, not very different to the above mentioned, was effected in the summer of 1994, but with different actions taken by the BNB, and different consequences. The BNB bought up from Economic Bank lev-denominated LSNC-bonds at face value, and the amount of refinancing provided by the BNB to the Economic Bank was reduced by the equivalent amount on the bank's books. This operation was effected on 1 August 1994. Total refinancing in August 1994 dropped by 16% as compared to July same year, mainly on the account of Lombard loans (which decreased by 38%), but its level was restored in the follow-

Chart 1

Refinancing Provided to Commercial Banks



ing months, and the interbank market marked a 9% growth thus maintaining the level of aggregate refinancing.

Quite often the issue of the impact of public confidence in state and government institutions on the progress of economic processes is thoughtlessly disregarded. Undermining confidence leads to consequences difficult to foresee and to elements of chaos. Banks are on top of the pyramid of confidence and their collapse may threaten the country's social and economic life[19].

As late as mid-1996, the government attempted to solve the problems in the banking system related, first and foremost, to the snowballing domestic debt by applying a universal approach – closure of loss-making enterprises and problem banks. Developments in banks and enterprises are incomparable. Closing an enterprise rather would affect its employees, while closing a commercial bank creates fears and panic in a large part of the public – both among depositors in the bank subject to liquidation, and in the rest of the population. The latter is all the more dangerous in a society where the germs of financial panic have been sown. This is the reason why it would be more appropriate to seek alternative solutions to problem banks, that is, through mergers, acquisition by other banks of a failed bank's assets at a token price, etc. Latest world history provides such examples.

The rationale behind shock operations in the monetary policy of mid-1995 is reflected in the effort to solve the issues related to domestic government debt by transferring the burden from one head to another. In this particular case, deliberately or not, the burden was borne by the banks which are not directly involved in LSNC-bonds, that is, banks with a majority private holding. Their normal functioning was impeded as the BNB played the role of an onlooker of their difficulties.

Refinancing was decreased with a shock effect but with relatively low interest rates being maintained. In market relations interest rates on discount loans and those on refinancing should reflect money demand, as is the case of overdraft. It is commercial banks' business to design their own credit and monetary policies corresponding to the situation in the money market. When money demand is stronger, interest rates set by the central bank should be higher, which sets higher requirements to borrowers' efficiency.

The other administrative alternative features maintaining a relatively high interest rate, combined with curtailed supply. In this case, money demand remains relatively high, commercial banks shrink their liquidity, and consequently a crisis results. The liquidity crisis in our case was also intensified by a poor coordination

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[19] *A special study by the Vienna Institute of Comparative Economic Research (WIIW) states that "...harsh restrictiveness does not necessarily seem to imply fast and lasting disinflation and occasional laxity does not seem to necessarily yield higher inflation. A necessary, but not sufficient, condition for the policy to be effective is its credibility" (Podkaminer L. et al. Transition Economies: Economic Developments in 1995 and Outlook for 1996 and 1997. WIIW Research Reports, No. 225, February 1996, p. 4).*

of various monetary policy instruments applied by the BNB – in the spring of 1995 required reserves of commercial banks were increased from 10% to 12%, consistent with the expected drop in the basic interest rate, but throughout the summer restrictions on refinancing were not accompanied by a parallel reduction of the minimum reserve requirement[20].

The BNB's retreat to its former stance on this issue is a good lesson on the futility of experiments of unclear consequences. Surely, there is no easy solution to serious economic problems, all the more so if the solution to poor financial and administrative discipline (both in state-owned enterprises, and in the banking sector) is sought in the context of accounting tricks. Shock changes lacking good preliminary preparations are bound to fail. It is the BNB's right to use all instruments at its disposal for controlling money supply, but with the significant proviso of transparency of activities and with preliminary and adequately committed arrangements. The BNB's activities in the money market cannot compensate for the weaknesses in its supervisory and regulative functions, which should be performed ex ante, not ex post.

However, there is something new in the spiral of BNB's retreat – the basic interest rate is considerably higher. Monetary policy instruments act with a significant lag and the policy of fine-tuning has never produced positive results[21].

It is a widely held view that high interest rates shrink credit resources. In actual fact, this is a delusion. Reasonably high interest rates accumulate public savings which are nothing else but investments[22]. They provide an additional attrac-

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[20] The same lack of coordination was also seen in early 1996. Increasing BIR twice was aimed at reducing commercial banks' liquidity to maintain the exchange rate; at the same time, the minimum reserve requirement was reduced by 2.5% altogether (from 11% to 8.5%), which slackened restriction. Probably, BNB's purpose was to abide by the international capital adequacy requirements adopted in December 1987 in Basle which provide for "a minimum level of capital to be held against risk adjusted assets which is expected to be 8 percent" (Klein G. Dictionary of Banking. Second Edition, PITMAN, 1995, p. 34). The same percentage was fixed as mandatory in the Law on Banks and Credit Activity (Art. 21, para. 2). Banking financial discipline in this country, however, hardly meets the assumed international level, which in itself is a prerequisite for unpenalized violation of the above quoted requirement in the Law on Banks and Credit Activity. This was officially admitted by the BNB Managing Board in making the decision on imposing restrictions on the activities of Mineralbank on 17 May 1996. It is worth noting that the capital adequacy ratio in Poland is 12%.

[21] "For many years our government has been trying to fine-tune monetary and fiscal policy in order to avoid both unemployment and inflation. A growing number of people – inside government and outside – have concluded that such fine-tuning has not worked. It has not prevented repeated recessions. It has not prevented worse and worse inflation"; "The government cannot fine-tune the economy to eliminate every up and down. Its attempts to do so have made the ups and downs worse, not better" (Friedman M. Bright Promises, Dismal Performance. 1983, p. 114, 197).

[22] A special large-scale research on this issue for a number of developing countries comes to the conclusion that "in upper-middle-income developing countries the household saving rate is likely to increase significantly as interest rates move up, and the response is unlikely to be very different from what would typically be observed in industrial countries" (Ostry, J., C.

tion for foreign capital in the form of specific risk premium[23]. The threshold to entry is higher and requires better investment efficiency. In fact, there is no danger for the BNB to produce a counteractive effect by its relatively high interest rate, as BIR is not mandatory for the commercial banks. The high interest rate may, however, effectively and permanently reduce the need of refinancing, not instantly, and not necessarily tomorrow, but under a particular condition – if the BNB does not directly or indirectly force commercial banks to conform to its movements. In fact, commercial banks' interest rate policy is under heavy pressure because of a peculiarity of the government securities issued in this country – they are directly tied to BIR.

In 1995, yield on almost all government securities issued for budget deficit financing was tied to BIR. The negative effect of this practice is that BNB operations with BIR in order to maintain certain, unrelated to BNB's monetary policy ratios (for example, in terms of foreign exchange policy) have rather undesirable than the anticipated effect on monetary policy. Changes in BIR affect government securities' attractiveness with an unanticipated effect. Higher BIR increases yield on government securities, boosting investment, which forces commercial banks to follow suit after the BNB, without any need to, and sometimes with a negative effect. The BNB's operations are almost always aimed at regulating commercial banks' liquidity, but not by infringing upon free relations in the money market.[24]

If, for example, the BNB and MF issue fixed-yield government securities, competition between interest rate policies of individual institutions, licensed to attract investments by households and companies, will increase, and this would enhance both efficiency of utilization of financial resources and effectiveness of BNB's policy. Another alternative is to issue government securities based on domestic currency purchasing power – by determining the real, not the nominal interest rate to be paid[25].

Reinharrt. Savings and the Real Interest Rate in Developing Countries. Finance and Development, December 1995, p. 18). Another similar extensive research is cited in ***The Economist*** *(2 – 8 December 1995, pp. 81 – 82): "Governments should avoid fiddling with interest rates directly in a misguided attempt to appease borrowers or boost growth. Not only will they do real harm to the economy, but they are likely to be booted out of office by a swarm of angry savers."*

[23] If foreign capital is not attracted, however, the reason should be sought somewhere else, especially in the high degree of uncertainty and unsafety. The inflow is also impeded by certain bureaucratic obstacles.

[24] In actual fact, the central bank interest rate is not considered to be the most efficient instrument for controlling commercial bank liquidity when there are no restrictions on market mechanisms. Commercial banks should not be restricted in their activities in the credit market, which is related to establishing an equilibrium interest rate on loans and deposits. Their liquidity rather should be governed by requirements as to the minimum reserve requirement, the discount rate and through open market operations of the central bank. This is the way to effectively control currency in circulation. (Friedman, M. Bright Promises, Dismal Performance, 1983, p. 235).

[25] Ibid., p. 274.

Do not carry all your eggs in one basket! Portfolio diversification is a basic rule for minimization of losses. Expectations about interest rate reduction encouraged mass issuance of government securities tied to BIR. The hard and painful movements in the opposite direction (rising BIR) have, however, considerably increased interest payments. Moreover, this is against market principles of formulating commercial banks' interest rate policies, thus striking an additional blow to the stability of financial relationships.

Conclusions

First, the issue of government debt is versatile. The understanding that a government debt can be maintained without any adverse consequences for the economy is a fiction. This is particularly true for economies in crisis, with a strong deficit of financial resources to provide sustainable economic growth, and, consequently, for the economy of Bulgaria. Such a conclusion may sound trivial and probably this is why it is often overlooked.

Second, the adverse repercussion of government debt is felt through all the areas of economic activity. The state budget gasps in providing the necessary financial resources to effect regular payments. The attendant budget deficit requires more government securities to be issued, which additionally increases the internal debt. The requirements for holding foreign exchange reserves in order to meet Bulgaria's foreign liabilities lead to continuous difficulties in balancing the balance of payments.

Third, the large government debt impedes the normal functioning of the banking system. The need for timely financing of the budget points to the need to make the government securities issued more attractive, not through the interest rates, but through alternative "*gratis*" means, which distorts the real picture. Otherwise the principle of market equilibrium would be breached and the operation of market mechanisms limited, which would inevitably lead to ineffective distribution of financial and material resources.

Only with decreasing interest rates can government finances be eased, by tying government securities to the basic interest rate. The picture is entirely different in the opposite case, in particular with regard to maintaining markedly positive real interest rates. Worldwide experience shows that only by positive real interest rates can stability of the financial system be maintained. Another trouble is that normal interactions in the money market break. With a view to decreasing the possible adverse effects, a more diversified structure of government securities issues should be created.

Fourth, the BNB is obliged and bound to maintain the stability of the Bulgarian lev as provided for by the Law on the BNB, by any means. The BNB interest rate policy should be asymmetrical; on the one hand, it should involve a rapid and dramatic raise in the basic interest rate under deteriorating conditions, and, on the other hand, a careful and cautious reduction where signs of stabilization appear.

All estimates show that the biggest concern about economic growth is seen in the highly volatile macroeconomic stability.

It is not the BNB's responsibility and its monetary policy goal to be concerned with the size of government debt, except in providing the necessary foreign exchange reserves, that is, once again in the context of the stability of the national currency. It is the responsibility of the government to put the government debt into an acceptable frame. There are widely known ways for doing this. The BNB interest rate policy should not assume too many functions.[26]

Fifth, in the financial system all kinds of shocks are harmful. The events in the middle of last year demonstrate clearly that shock measures proved ineffective. All the more this is true for the measures introducing administrative elements and disturbing the logic of market relations.

During the last two years, the BNB allowed three big mistakes to occur, which may be a lesson to learn from. The *first mistake* was made in the spring of 1994 when the BNB acted unjustifiably slow in containing the foreign exchange market, whereby the national currency was considerably devalued. The *second* occurred in the summer of 1995 when the BNB showed unjustifiable and surprising aggressiveness in the money market, making an abrupt change in the rules of the game. The *third* was made in the period immediately following the New Year's eve of 1996 when the BNB did not manage to assess correctly developments in the foreign exchange market, was late to take serious measures and permitted a significant reduction of foreign exchange reserves. Undoubtedly, the mistakes were made not without active assistance and interference (implicit or explicit) by the different governments, yet the financial responsibility for this is borne by the BNB.

Sixth, these reasonings inevitably lead us to the key point – about central bank independence. According to M. Friedman, "*money is a very serious thing, to be entrusted with the central banks.*"[27] Monetary relationships have an extremely strong effect on economic processes in the country, and, hence, monetary policy should be viewed in the context of overall macroeconomic policy. In this sense, the BNB cannot stay away and be independent from the macroeconomic governance and regulation of the country.

The coordination of actions, however, must not contradict the implementation of the main function of the BNB – to maintain *"the internal and external stability of the national currency. For this purpose, it shall formulate and implement the national monetary and credit policy and shall contribute to the creation and maintenance of efficient mechanisms of payments."*[28] For instance, it is inadmissible to disturb (even to destroy) the stability of the financial system because of the

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[26] *The situation is similar to the game of chess where one chessman is overloaded with many functions. This almost always leads to the irreversible – a failure.*

[27] *Friedman, M. Money Mischief, Episodes in Monetary History. Sofia, 1994, p. 294.*

[28] *Law on the BNB. Banking Laws and Regulations, Sofia, 1993, p. 7.*

government's unwillingness to radically settle the government debt problem. The failures of the two scenarios are incomparable, at least because distrust always gets strongly into people's minds, whereas it may take years to restore the credibility in the state institutions. The same challenges are in place when "*stimulating*" economic activity or "*maintaining*" the budget equilibrium through establishing relatively low interest rates. In these cases, the central bank is no longer an anchor in troubled waters, but rather a paper boat.

Seventh, the BNB must shape its own position concerning expected and possible changes in the economy. The operation of monetary instruments is long-term so the method of experiments and mistakes should be avoided. The BNB must not follow events, but rather foresee their possible developments since it may have to respond to a possible event in the medium- or even in the long-term future. The change in monetary policy instruments has to be accompanied by a committed assessment of the consequences.

Finally, the past 1995 may be viewed as the most favorable in terms of conditions for economic progress. Unfortunately, the chance was thoughtlessly missed. The current 1996 for a period of 5 – 6 years will probably depend mostly on the nature of macroeconomic governance. It will not be exaggerated to say that at every point of the scale of economic estimations there are possibilities to stand still – from the worst (a depletion of the foreign exchange reserves, failed contacts with international institutions, an uncontrollable growth of the budget deficit, inflation respectively, etc.) to the best (overcoming the tension within the budget and monetary dominions, a substantial acceleration of privatization and reduction of the debt burden, a halt in the declining international image of the country). During the current year, both the government and the BNB have no right to make mistakes – they can undertake any kind of actions, but only with a clear vision of possible consequences.

European Monetary Union and the Countries of Eastern Europe

by Lionel Price

Lionel Price is Director of Central Banking Studies, Bank of England.

Most of the countries of central and eastern Europe are eager to join the European Union, and many have already signed association agreements with the Union. Last year the European Commission published a white paper mapping the way forward for applicant countries. In the financial sphere, as in others, many of the applicants are already taking steps to bring their laws and regulations into line with the requirements of the Union.

Central and eastern European countries are also working to bring the structure of their financial systems into line with those of western Europe. I would suggest that in this respect the prospect of EU membership makes little difference. The transition to a market economy itself requires each country to establish a sound banking and financial system – a goal which the scale of bad loans in countries like Bulgaria is making it difficult to achieve. But beyond this need to create a sound financial system, there is no unique model in western Europe to which the eastern countries should be aiming to move. The financial systems of the countries of western Europe have developed in different ways – not so much because of different legal requirements, but because market forces have produced different outcomes over time in the different nations. Possibly each country has secured an outcome which best suits its needs, though that would be impossible to prove. What now seems likely is that, with closer integration, market forces will lead the various financial systems to coalesce, keeping, one hopes, the best bits of each. So, for the transition economies, there is no single model to aim at. For the time being they have their own priorities – not just solving the immediate bad loan problem, but also in developing a financial structure which will assist and promote good corporate governance.

I want to address the remainder of my remarks to the other aspect of integration of most concern to central banks, and that relates to the prospective European Monetary Union. I have the impression that some of the applicant countries see themselves as joining the EMU – and thereby replacing their national currency with the euro – at the moment they become members of the European Union, or even earlier. Each applicant country will in due course need to negotiate an acces-

sion treaty with the EU, and none of us can know how those negotiations will progress. The extent of the uncertainties surrounding this process, and how Bulgaria might respond to them, has been set out in a recent paper by Christov and Mihailov (1995). But I would be surprised if the present member states were to insist on immediate membership of the monetary union for the applicant countries – indeed, they may not wish even to permit it. Previous accession treaties for new members have granted them transition periods in various fields, and I would expect this to happen in the monetary sphere. Why? Because the admission of any member state to the EMU is a decision which impinges not just on that one member; in admitting the new member, the other countries will be undertaking various obligations to it. They might even consider that the present or future state of the economy of the prospective new member risks damaging the euro and the EMU itself.

This risk is not of course confined to the applicant countries. During the negotiation of the Maastricht Treaty, which provides for the establishment of the monetary union before the end of the century, it was recognized that the soundness of the new currency could be threatened, or some members of the monetary union might face unacceptable costs, if countries were admitted to the EMU before the state of their economies was sufficiently similar to those of the other members. So the Treaty sets out various criteria – relating to inflation and interest rates, government debt and deficits, and exchange rate stability – which prospective EMU members should meet before they can be admitted.

In view of this well-founded caution to admitting countries to the monetary union, I should be very surprised if its members were willing to admit any country to the EMU *before* that country had become a member of the European Union itself. Indeed, I do not believe the present Treaty provides for this. An applicant country is not of course precluded from deciding to tie its currency to the euro, but that would be a unilateral decision, entailing no obligation on any other country nor on the European Central Bank to support the applicant's currency.

More difficult to know is whether applicant countries will be *required*, on or after entry into the EU, to join the monetary union as soon as they meet the Maastricht criteria – which might of course not be till several years later. Under the Maastricht Treaty, 13 of the present EU member states have no choice in the matter. If their economies meet the Maastricht criteria at the time, then they will be obliged to join the EMU in 1999. Britain and Denmark negotiated different arrangements: if Britain meets the criteria, then it can choose whether or not to join; and Denmark will not join. The creation of a monetary union between a group of the existing member states whose economies are already well-aligned is a sufficiently uncertain and fragile process that I would be surprised if those involved wished to complicate it further by insisting that a central or eastern European country should join the EMU at an early date.

A recent study by Chadha and Hudson (1996) of the history of monetary unions shows some of the problems which would have to be overcome for the

successful admission of new members to the EMU. Chadha and Hudson studied the 13 monetary unions listed in the table. Six of these unions endure to this day. Of these six, those in Britain, the United States, Italy and Germany have been associated with parallel political unification.

Economists asked to advise whether countries should form a monetary union would usually turn to the theory of optimal currency areas. They would want to know whether the countries concerned traded extensively with each other, whether their economies had similar structures, and whether they were unlikely to be exposed to different external shocks. But Chadha and Hudson argue that such considerations have played little role in previous decisions to establish monetary union. It is perhaps then not surprising that a number of monetary unions have broken up.

Table

Monetary Union	Period of Operation
England-Scotland Union	1707 – present
The Federal Reserve System of the United States	1781 – present
British Irish Union	1800 – 1979
Scandinavian Currency Union (SCU)	1825 – 1924
Nineteenth century German monetary unification (GMU I)	1834 – 1919
Italian monetary unification in the nineteenth century (Italian)	1847 – 1920
Latin Monetary Union (LMU)	1865 – 1927
The International Gold Standard (GS)	1867 – 1931
The East African Standard (EAC)	1917 – 1977
The Belgium-Luxembourg Economic Union (BLEU)	1922 – present
The former Soviet Union (FSU)	1923 – 1993
The CFA Franc Zone (CFA)	1945 – present
Twentieth century German unification (GMU II)	1989 – present

Chadha and Hudson suggest that monetary unions have been prone to fail where some members have entered the union with significant external debts. For example, Italy had entered the Latin Monetary Union with sizeable debts to France; once Italy was in the union a large outflow of coin back to France destabilized the whole union. In contrast, the Anglo-Scottish Union was marked by payments from England to Scotland of around one half to one percent of GDP, and the recent German monetary union has been facilitated by large fiscal transfers from western to eastern Germany. Fiscal transfers can certainly help stabilize a monetary union where the requirements of an optimal currency area are not met, and payments from the French Treasury have helped sustain the franc zones in Africa. But more generally taxpayers are reluctant to finance transfers outside their own country. This suggests that a monetary union can prosper either if it is between economies sufficiently similar to meet the requirements of optimal currency theory or alternatively if its members are sufficiently politically cohesive to be willing to undertake fiscal transfers to remedy variations in economic develop-

ment.

Another of Chadha and Hudson's findings is that monetary unions do not usually long survive the departure of a member. The only exception to this finding seemed to be the gold standard whose "rules" admitted the possibility of members leaving at times of difficulty and returning later. The prospective EMU is certainly not such an arrangement: the Maastricht Treaty makes no provisions for members to leave. So the members of the union will be wary of admitting a country they think might destabilize the union, either by being a weak member within it or, worse, leaving the union (despite there being no legal provision for this).

The requirements for a successful monetary union in Europe were set out at greater length last year in a paper by Dr Issing of the Bundesbank (1995). For him, "The transfer issue is at the heart of the problem." He goes on to argue that the existing European Union transfer system is based on quite different criteria from those which would be necessitated by monetary union. "If the Community wishes to keep open the option for the European countries in transition to join, reform of the *existing* transfer system will be required. It would be disastrous if enlargement of the Community were hindered by failure to meet this need for reform, or if new members entered the union with financial illusions which could not be realized." Dr Issing also warns that "social union" – in the sense of a harmonization of social standards at the highest possible level – would "impair the potential for adjustment in the labor market and thus undermine the chances of the monetary union's success."

At the moment we do not know how many of the existing members of the European Union will meet the Maastricht criteria and so be eligible to join the EMU at its inception, but it seems certain that there will be a number of "outs" who remain outside the monetary union for the time being. And I have suggested above that caution on the part of the existing member states anxious to establish the euro as a sound noninflationary currency may lead them to delay the entry of some central and eastern European countries to the monetary union even after they have met the Maastricht criteria. The list does not preclude there being some exchange-rate linkages between these countries and the euro. Indeed, a new exchange rate mechanism for the "outs" amongst the existing member states is already being actively discussed. This is partly at the instigation of some member states who are worried that countries outside the monetary union might undertake competitive devaluations (even though it is now generally accepted that such a strategy could secure only temporary trading gains, the longer-term result being merely inflation). Membership of this new exchange rate mechanism will not be compulsory, at least for current members of the European Union, but they will undoubtedly be strongly encouraged to join.

But the central and eastern European countries should be wary of tying their exchange rates prematurely, either by joining the monetary union or by setting a fixed parity against the euro, while their economies are still in transition. For some years ahead, the transition economies should be experiencing rates of productivity

growth well in excess of those in western Europe and in consequence their exchange rates should be undergoing a real appreciation. Already these economic forces are leading to sizeable capital inflows and the importation of inflation into transition economies which are trying to resist the nominal appreciation of their currencies. In general, if the successful transition economies wish to sustain the low rates of inflation now seen in most western European countries, they will have to be willing to permit their nominal exchange rates to rise over time.

But even if the applicant countries should not expect, or even seek, to join the monetary union quickly it will be in their own interests to try to meet the Maastricht criteria. The achievement of sound public finances and low inflation which those criteria represent provides a good basis for continued economic development.

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