

The Present State of Monetary Governance in Central and Eastern Europe

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I Introduction

Monetary governance refers to the combination of the legal framework, the strategy and the operational framework of monetary policymaking in a particular country. In the economies in transition of Central and Eastern Europe, the institutional framework of monetary policy was practically created from scratch from the beginning of transformation. Six years of transition inspire us to ask what has been achieved. In this study we intend to highlight the shift from direct instruments to indirect instruments of monetary management. Furthermore, the paper gives a comparative overview of the different institutional setups of monetary policy in the countries examined. Our study is restricted to the CEFTA countries, i.e. the Czech Republic, Hungary, Poland, Slovakia and Slovenia, which appear most advanced in their respective degrees of monetary transition.²⁾ These countries also aspire to join the European Union along with five other transition economies. Sooner or later they will also voice an interest in becoming members of the prospective European Economic and Monetary Union (EMU). Though this perspective is still very remote – especially since the third and final stage of monetary union has not even started yet – we believe it is useful to examine the monetary frameworks in these countries in comparison to the monetary framework prepared for the conduct of monetary policy by the European System of Central Banks in EMU as published by the European Monetary Institute in early 1997.³⁾

In this study we focus on targets and instruments of monetary policymaking and dwell only briefly on the question of central bank independence.⁴⁾ We discuss exchange rate policy only within the context of monetary policy, concentrating mainly on the impact of capital flows on the effectiveness of monetary management. We do not go into a detailed description of the centrally-planned episode and first steps, as the topic has already been discussed comprehensively by Duchatczek and Schubert (1992 and 1993), nor do we touch on the issues of regulation and supervision of the banking industry. Specifically, we do not discuss the impact on monetary policymaking of bailouts of commercial banks by central banks.

The paper consists of five sections. After the introduction, in section 2 we briefly outline the tenets of the modern monetary framework in market economies with particular reference to the monetary framework developed by the EMI. In section 3, which is the core part of the paper, we analyze the evolution of the monetary framework in the five CEFTA countries. In section 4 exchange rate policy and regimes are briefly discussed in the context of monetary policy issues. Section 5 starts with a brief summary of the paper to proceed to the main conclusions.

2 Theoretical Underpinnings of Sound Monetary Policy

The theoretical standard for the institutional setup of monetary policy in developed market economies includes recommendations for central bank independence, monetary policy targeting, instruments, and the interdependence of monetary and exchange rate policy. The literature on these issues is still developing, with new studies steadily adding to our knowledge.

2.1 Central Bank Independence

According to the empirical evidence,⁵⁾ a strong negative correlation can be observed between the degree of central bank independence and the inflation rate. Central bank independence from political institutions is believed to allow and encourage the bank to focus monetary policy on long-run issues, especially on price stability. In this way it is free from political pressures to generate political business cycles by running expansionary policies before elections in order to support the incumbents' reelection efforts.⁶⁾ Independence has several facets: functional, personal and financial. Personal independence, for instance, is ensured by fixing terms of office for the governors of the central banks which are longer than the political election cycle or by diminishing the government's role in appointing the governor and by explicitly limiting the possible reasons for the removal of a governor to very few and transparent cases, all unrelated to monetary policy decisions. Functional independence refers to the central bank's autonomy in defining the intermediate goals of monetary policy and in implementing monetary policy. Financial independence includes, among other aspects, independence from the fiscal authority. This way the central bank cannot be forced to contribute to the financing of budget deficits either by directly purchasing government debt instruments or by simply printing money.

Whether a higher degree of central bank independence results in "a free lunch," i.e. lower inflation without the cost of wider output variability, is still hotly debated. Alesina and Summers (1993) and Walsh (1994) report no association between central bank independence and output variability, whereas Rogoff (1985) as well as Debelle and Fischer (1994) find evidence that higher central bank independence leads to stronger recessions during disinflationary processes. They suggest that a central bank should be granted only instrument independence, but not goal independence. If evidence swayed toward the latter view, then the current strong trend toward unrestricted independence would require mitigation and a critical evaluation of numerous banking acts in advanced and emerging market economies. At this stage of the debate, our stance is that the bank should be independent, but accountable. Accountability means that information about central bank targets and instruments is publicly available together with up-to-date information on the achievement of the targets.

2.2 Targets

In the medium to long run, a central bank is accountable for its adherence to the ultimate objective. Targeting has the advantage of enabling the central bank to recognize where it wants to go; it also has informational merit, as it lets the private sector know what to expect in the future. Targeting obviously makes central banks accountable for their actions. Outsiders obtain a chance to discuss the announced targets and to debate whether they are aimed in the right direction. It has become standard to describe central banks' goals by classifying them as ultimate goals and as intermediate and operational targets.

The ultimate goal could be an economic variable whose development is very important for the economy, such as price stability, the inflation rate, the rate of unemployment, the development of real GDP or the stability of

financial as well as foreign exchange markets. Multiple targets are likely to be incompatible and to create conflicts for the central bank concerned. The trade-off between some of them can be described with a welfare loss function of the government. A number of these targets, e.g. the unemployment rate or GDP growth, were proposed within the framework of an anticyclical role of monetary policy. Progress in targeting theory as well as empirical evidence have led to the widespread conviction that ensuring price stability – maybe in combination with financial stability – should be the only goal of monetary policy.⁷⁾ Disillusionment with monetary policy as a means to dampen business cycles rests on three important results of economic theory: (1) Monetary policy is unable to affect real variables in the long run; it can do so only in the short run; (2) there are long and variable lags between policy implementation and its impact on the economy, so at the time the policy becomes effective it may become counter-productive; (3) a time-inconsistency problem arises, i.e. if inflationary expectations are low and thus the marginal cost of additional inflation is low, policymakers are tempted to pursue expansionary monetary policies to push output above its normal level. The public will recognize and anticipate that behavior and adjust its expectations accordingly. Consequently, output will not change, but inflation will rise.

Economic theory establishes and explains the links between money and inflation in the following manner, depending on the time framework: In the long run, there is a systematic relationship between money and inflation, which is a purely monetary phenomenon. The quantity theory of money is valid and money is neutral, i.e. it does not influence real variables. Thus, in the equilibrium (dynamic steady) state, monetary policy can at best achieve price stability or, as the next best outcome, a desired rate of inflation.

In the short to medium run, central banks need other performance criteria than the achievement of the final goal, as monetary policy works with long (and variable) lags. Assessment can be based on monitoring the central bank's performance relative to its announced strategy, a set of procedures specifying how to act to achieve the final objective. Pure discretion would imply no strategy and no possibility of evaluating a central bank's behavior in the short run. From a different angle, the need for credibility of actions and the time-inconsistency problem decisively weaken the case for discretion. Most central bank strategies⁸⁾ are based on indirect targeting. However, one strategy that has recently gained importance – the United Kingdom, Sweden, Finland and Canada are among the countries whose central banks have adopted it – directly targets the inflation rate without a traditional intermediate stage.

The rationale for intermediate targets rests on the argument that instruments available to central banks affect the ultimate goals of monetary policy only with a long lag. This makes it hard to correct mistakes before they show up when the ultimate target is missed. Therefore, central banks use different (intermediate) variables which have strong and predictable links with ultimate goals and are easily observable. These variables are either under the direct or indirect control of the monetary authorities.

As a consequence, central banks distinguish between intermediate and operational targets.

In principle, the choice of an intermediate target should be based on its measurability, controllability and ability to predictably affect ultimate goals. The perfect intermediate target is a variable that a central bank can control and that at the same time has an exact relationship with the ultimate target of the policy. Economic theory has suggested a number of intermediate targets. The most popular are the short-term interest rate, nominal GNP (GDP), different monetary aggregates and the exchange rate. Nominal GNP has only been a theoretical alternative so far, especially due to shortcomings of statistical data. The criteria for choosing intermediate targets were first proposed in a seminal work by Poole (1970) and developed by follow-up research. Basically, the choice between an interest rate and a measure of the money supply as the appropriate intermediate target depends on the nature of the aggregate demand shocks occurring in a particular economy. A prevalence of monetary shocks calls for interest rate targeting, whereas a prevalence of real shocks calls for monetary targeting. In the case of supply shocks, the theory does not offer unambiguous answers.

Problems with monetary targeting at an early stage of economic transition mainly due to uncertainty concerning money demand and the monetary transmission mechanism led to a preference for the exchange rate as an intermediate target. Since exchange rate targeting has become popular in many of the economies studied here, we will dwell a little on its merits as a target. Fixing the exchange rate implies that the money supply becomes endogenous and the central bank can only directly control its domestic component. All other nominal variables, like the price level, the nominal wage rate or the quantity of money, have to adjust to the exchange rate. Preferably, a country should peg the exchange rate to the currency of an important trade partner country with a good price stability track record. This approach is particularly attractive to countries whose monetary authorities and policies lack credibility either because they have established a bad reputation as inflation-prone or because they have no track record yet, as is the case of the transition economies. The exchange rate target gives them a way to acquire credibility via the partner institution if the commitment is supported by the necessary conservative monetary policy. The other advantage of the exchange rate fix as a target is its high visibility and transparency to the public. It is evident that exchange rate targeting is mostly applied in the high-inflation countries aiming at a significant reduction of inflation or in countries which enter multilateral exchange rate agreements, e.g. the ERM. Crawling exchange rate pegs or crawling exchange rate bands are looser commitments. They are recommended for countries with moderate and persistent inflation which have stabilized their economies but still need support for further disinflation and desire flexible monetary arrangements. These forms of crawling devaluation at preannounced rates during a given period are aimed at anchoring inflationary expectations and at the same time protecting the balance of payments. Flexibility is required to absorb various shocks (external or domestic, demand or supply) of different magnitudes which hit the economy. In

particular, movements of portfolio capital can exert pressure on the exchange rate, which a band of feasible fluctuations can help to offset without requiring a change of the exchange rate regime or large-scale intervention.

For the choice of an operational target it is important for the target to have a strong and predictable impact on the chosen intermediate target. This implies that if a monetary aggregate is the intermediate target, a reserve aggregate such as the monetary base would be the preferred operational target. On the other hand, if the desired intermediate target is an interest rate or an exchange rate, then a short-term interest rate will be the preferred operational variable. Among the most broadly used operating targets are reserve aggregates such as reserves, nonborrowed reserves, the monetary base or the nonborrowed base and short-term money market interest rates, which are more directly responsive to the instruments of central banks (open market operations, changes in the discount and/or lombard rate and changes in reserve requirements).

Direct inflation targeting does not fit the traditional division into intermediate and operating objectives.⁹⁾ It has not been used by the reviewed economies in transition yet, but it is mentioned in the framework report of the EMI as a possible alternative for the European System of Central Banks to a strategy based on monetary targeting.¹⁰⁾ The alternatives, nominal GNP targeting, interest rate and exchange rate targeting, are dismissed in the report as not viable for the conduct of monetary policy in EMU.

2.3 Instruments

Modern central banks' tool kits consist of the discount and/or lombard rate, reserve requirements and open market operations. Access to the discount window is typically rationed by quantity restrictions (quotas) if the discount rate is below comparable market interest rates. At present, a general tendency away from below-market-rate discount and lombard lending toward open market operations at market interest rates can be observed. Theorists have long proposed a penalty discount rate. The lombard rate concept, which acts as a cap on interbank market rates, is based on this idea.

Reserve requirements are too unwieldy a tool to be used in the everyday conduct of monetary policy. Small changes potentially produce large swings in base money. Extremely small changes in mandatory reserve ratios to overcome this problem are too costly to engineer. The tendency is to assign them solely the role of a prudential norm designed to guarantee a minimal solvency of financial institutions or to abolish them completely. Reserve requirements usually do not pay interest and they act as a tax on bank deposits. In a stable economy with low interest rates and relatively low reserve requirements this is not a problem, but in inflationary economies with relatively high requirements such as the economies in transition, nonremunerated minimum reserves create a considerable wedge between deposit and credit rates.

Open market purchases and sales of securities have been the most important tool of monetary policy in advanced economies for years. Open market operations occur at the initiative of a central bank, which can

completely control their volumes. They are flexible and precise enough to fine-tune the conduct of monetary policy. They can be easily reversed when necessary, and they can be implemented quickly without administrative delays. Broad use of open market transactions is conditional on the development of money markets and the availability of marketable securities. Usually, government securities are used. Repurchase operations, rather than outright purchases, predominate, as they allow for more flexibility and precision.

2.4 EMU Framework

Knowledge of central banking is reflected in the framework for monetary policy conduct that has been proposed by the EMI report.¹¹⁾ The proposed institutional setup can be treated as a benchmark towards which the monetary frameworks of countries aspiring to enter the European Union, among them the ones examined in this paper, should evolve. The role and importance of central bank independence is emphasized in the report. The final goal is the achievement of price stability. The report leaves open whether monetary targeting or direct inflation targeting should be used by the European System of Central Banks. It rightly points to the fact that the differences between these two types are largely semantic, as both strategies place monetary aggregates at the center of the set of variables to be monitored.¹²⁾ The debate at the EMI exemplifies the current stage of controversy. The EMI stopped short of recommending direct inflationary targeting, leaving the option open. The nominated president of the EMI, Wim Duisenberg, strongly opposes the idea of direct inflation targeting on the grounds of the unclear signals such a strategy produces for monetary policy. In his view, it is a “look-at-everything” approach.¹³⁾ The difference between intermediate and final-target approaches may be more apparent than real, as intermediate targets are used to promote the final target of price stability. In fact, projected inflation plays the role of the intermediate target for direct inflation targeting. A country pursuing a pure intermediate monetary target places a 100% weight on money growth relative to its target, while a country pursuing direct inflationary targeting uses several indicators, one of them being money supply growth.

In order to allow and enable the public to assess the performance of the future European System of Central Banks, its targets will be announced and published. To make the ESCB more accountable, analyses and data relevant to monetary policy will also be regularly published. Explanations of deviations from targets and of policy responses by the ESCB will also become part of the communication with the public.

The ESCB will use open market operations to steer interest rates, manage the liquidity of financial markets and signal the stance of monetary policy. It will have at its disposal five types of open market transactions: While reverse transactions will play the main role, also outright transactions, the issuance of debt certificates, foreign exchange swaps and the collection of fixed-term deposits will be possible.

A marginal lending facility will allow eligible counterparties to obtain overnight credit on their own initiative (like the current lombard loan in

several countries). Deposit facilities will be available to absorb excess liquidity. The interest rate on the marginal lending facility will provide a ceiling for the overnight market interest rate while the deposit rate will provide its floor. The access to both facilities will be unlimited under normal conditions.

The framework for the monetary policy of the ESCB includes the possibility of imposing minimum reserves on financial institutions.¹⁴⁾ The ESCB may apply a uniform reserve ratio to the whole reserve base or differentiate reserve ratios across categories and maturities of eligible liabilities. The possibility of remuneration of the reserves held is not excluded.

In the following part of the paper we will discuss how institutional setups of monetary policy conduct in these countries square with these normative propositions. The brief description of the evolution of monetary conduct will precede it to give a broader perspective of prevailing tendencies. We begin with a short account of the starting point.

3 Present Monetary Policy Framework

3.1 The Initial Conditions

The organizing principle of the economy under central planning as a whole was based on the classical directive Soviet-type model to run the whole economy like one factory, where all externalities are internalized. The reality of centrally planned economies, including the monetary environment, has been described in numerous articles and books. We intend to refresh the readers' memory of the basic features of the monetary environment to underscore the point of departure of the countries reviewed.¹⁵⁾ It does not, however, apply to Slovenia, which as a part of former Yugoslavia experienced a system that was labeled market socialism at the time. At a small risk of simplification, it can be said that, under socialism, monetary policy in the (proper) sense of Western economics did not exist. With the exception of household decisions about savings and consumption, money was accorded a passive role.¹⁶⁾ Its issuance was subordinated to central economic plans expressed de facto in physical units, since money was used as a unit of account only. Financial markets played no role in the allocation of scarce resources. As a consequence, the central bank provided firms with funds in order to enable them to fulfill central planner's production targets. The state credit plan mirrored the central plan and directly allocated credits to firms and sectors. The interest rate only played a marginal role in the allocation of financial resources and did not reflect market conditions; investment credit and housing credit were usually subsidized. Thus, credit was rationed on the basis of state investment and production plans. Bankruptcy was excluded; firms always obtained the funds they needed without a proper screening of output profitability or of investment projects, so they worked under a soft budget constraint.

The structure of the financial system was rudimentary. The only financial assets were currency, bank deposits and, rarely, government bonds. Banking was a state monopoly, and the banking system has been termed a monobank system because all banks were state-owned and directly or indirectly depended on the central bank, which was usually involved in commercial

activities. The two-tier structure of the banking system did not exist. The existence of so-called specialized banks – investment, foreign trade and savings banks – blurred this picture only on the surface, as they were not allowed to lend funds to enterprises or, in particular, to channel individuals' savings into commercial loans. Central banks had little autonomy and were dependent on the government in their decisions. Their *raison d'être* was to implement various elements of the central plan, e.g. the state foreign trade bank executed the state monopoly of foreign exchange and handled all foreign trade transactions. In centrally planned economies, households used cash, while the enterprise sector made payments through bank accounts. These two circuits were separated; firms held cash to pay wages, but were allowed to keep only insignificant amounts of cash otherwise.

Central banks targeted credit plans, which in detail assigned financial funds to economic entities. They used instruments of direct monetary control, i.e. credit ceilings and interest rate ceilings. The exchange rate was mainly an accounting device to translate foreign prices into domestic prices. Often, a multitude of so-called conversion ratios for specific item groups was used. Domestic currency was practically nonconvertible. Foreign exchange controls were imposed not only on capital transactions, but also on current account transactions. There was no official foreign exchange market, so the need for foreign exchange intervention did not arise. The demand for foreign currency was rationed by administrative measures.

This account outlines a rigid model of central planning. It should, however, be made clear that long before the end of communism some of the reviewed countries, in particular Hungary and to a lesser extent Poland, started discarding features of the model. Former Yugoslavia already had a two-tier banking structure and market principles to allocate credit.

In the following section, we proceed to the analysis of the current frameworks of monetary policy in the countries examined.

3.2 Status of the Central Bank

Central banks are explicitly accorded a scope for independence from other authorities. The issues of central bank independence can be classified into personal, functional and financial independence. The central bank acts of the CEFTA countries were adopted relatively early in the transition process. Poland, whose central bank act already originated in the late 1980s, is an exception, although the old law is due to be replaced soon. Hungary modified its act in 1996. We will not dwell on the issue of central bank independence as reflected in legal material,¹⁷⁾ as this topic is covered in detail by the study by Radzyner and Riesinger in this issue of Focus on Transition. For the sake of completeness, we would only like to stress that the central bank acts in the countries reviewed in our paper display convergence with the requirements of the Maastricht Treaty. The weakest point is the financing of budget deficits by central banks, which is still allowed in all countries examined. While the potential amounts are limited, they are nevertheless large enough to enable the governments to seek cover for a substantial part of their deficits. However, three out of the five countries have not used this option so far.

3.3 Strategy

At the outset of transition in 1990 to 1991, the central banks in the former socialist countries had no experience or technology to apply monetary strategies based on indirect instruments of monetary control, as practiced by the advanced market economies. Money markets did not exist; the relevant instruments had yet to be created. Since then, the monetary environment has changed dramatically. The change was fostered by central bank activity, which helped construct interbank and foreign exchange markets in these countries.

3.3.1 Targeting

Targeting plays a prominent role in the monetary strategies of the group of countries analyzed. A division into ultimate, intermediate and operating targets has been adopted across our sample of countries. At the beginning of transition, the separation was not obvious and it took several years before this division clarified and became comprehensible for the public. For example, the National Bank of Hungary started distinguishing among these targets for the first time in its Annual Report of 1993. Poland formally stated this distinction for the first time in the guidelines for monetary policy in 1996.

The *ultimate (final) goal* of monetary policy in these five countries is price stability. Over the last years, there have been no changes in the formulation of the final goals. The formulations used in the official acts vary from internal and external stability of the domestic currency in the case of Hungary to just currency stability in the remaining countries, though the wording in Poland is different, stating that the central bank is obliged to pursue the goal of “strengthening the currency.” Hungary initially interpreted the goal of external stability of the forint in terms of a sustainable position of the current account. This was the case between 1990 and 1992 and later in 1994. In 1993, the stress was put on disinflation. In the Czech Republic, Poland and Slovakia, the central bank is also explicitly obliged to support the economic policy of the government. Since all these countries experience high inflation compared to the European Union or North America, the goal should be interpreted as a reduction of inflation.

Internal and external currency stability can conflict under certain conditions, as external stability in fact pertains to exchange rate policy. This stability can be interpreted in real or nominal terms. The choice of a real exchange rate anchor would leave the price level indeterminate. The fixity of the nominal exchange rate is congruent with the goal of domestic stability of the currency, if the exchange rate is pegged to the currency of a country with a good inflation record.

The stipulated support of government policy opens another area for conflict, as in an inflationary environment the central bank could endorse a more counterinflationary strategy than the one welcomed by the government. The government may point to the rule requiring support for government policy, so that the central bank could face pressure to soften its stance. The result is slower disinflation. The Maastricht Treaty explicitly stipulates that such a support should be legally limited to the cases which do

not interfere with the final goal. In this respect, the analyzed countries will sooner or later have to amend their central bank acts. It is evident that the world-wide recognition of the limits of countercyclical monetary policy is reflected in the formulation of the final goals in our sample of countries. None of them openly lists full employment as a final goal.

At the beginning of transition, four of the countries (Slovenia was the exception) resorted to exchange rate targeting. The exchange rate had the appeal of a transparent anchor in a period of sweeping systemic change. Over the years of transition, three out of four countries have shifted to monetary targeting as one of the intermediate targets. Setting monetary targets in an economy in transition poses numerous difficulties. As the number of economic agents rapidly grows and liberalization and privatization proceed, the money demand function becomes unstable. No historical data which would give reliable grounds for the estimation of parameters of such a function have become available. Strong shocks, including supply shocks (e.g. the liberalization of prices), hit the real economy, so Poole's (1970) analysis has only limited merit in the selection of targets. On the money supply side, changes in the money multiplier may be pronounced even when the reserve requirement is constant and the monetary base is fixed. The time lags with which the changes in money supply affect the real economy are unknown. It is no wonder that central banks changed their targets quite often in such a monetary policy environment. A dose of experimenting was also necessary to gain experience.

The evolution of adopting intermediate and operating targets proceeded in step with the shift from direct monetary management to indirect monetary management. The Czech Republic, for instance, initially set a target for an increase in the domestic credit volume in 1990, then switched to net domestic assets of the banking system and from 1992 on has tracked the broad money indicator (M_2), which has been announced to the public. Poland also targeted the net domestic assets of the banking sector until the end of 1993. In 1994 to 1995, Poland switched to targeting interest rates, apparently ascribing more relevance to monetary shocks than to real shocks; a large denomination of the zloty had been planned at the end of 1994 and shifts in money demand had been expected.

At present, the *intermediate targets* of the countries in question vary little more than final goals. The countries which target the exchange rate have usually adopted another target as well. The Czech Republic, Slovakia, Hungary and Poland have more or less stringent versions of fixed exchange rates (see Annex), so they have to adjust monetary growth accordingly. Therefore monetary targets can only be supplementary, as total money supply becomes endogenous under a fixed exchange rate regime and the central bank can control only its domestic component. The Czech Republic, Slovakia and Poland track broad money aggregates. In the Polish case, monetary targeting is more meaningful than in the Czech Republic or Slovakia, which have fixed exchange rates due to the looser exchange rate system of a crawling band. Slovenia, which formally has a managed floating system, is an exception, as it uses a narrow money aggregate: It has been targeting M_1 since 1991. This choice is based on the empirical evidence that

the money demand for M_1 is stable enough to warrant such a policy. Hungary does not supplement its preannounced exchange rate devaluation target with explicit targets for monetary aggregates, as money demand is believed to be too unstable to credibly validate such an announcement.¹⁸⁾ In the past, it targeted domestic credit expansion along with the real exchange rate or nominal exchange rate when the current account constraint was less binding (in 1993).

Table 1

Changes in Intermediate Targets in the Period of Transition							
	1990	1991	1992	1993	1994	1995	1996
Czech Republic ¹⁾	Increase in the domestic credit volume	Exchange rate and net domestic assets in the banking system	Exchange rate and net domestic assets in the banking system	Exchange rate and M_2	Exchange rate and M_2	Exchange rate and M_2	Exchange rate and M_2
Hungary	Real exchange rate and net domestic loan stock	Real exchange rate and net domestic loan stock	Real exchange rate	Real exchange rate and net domestic assets	Real exchange rate and net domestic lending	Exchange rate	Exchange rate
Poland	Exchange rate and net domestic assets	Exchange rate and net domestic assets	Exchange rate and net domestic assets	Exchange rate and net domestic assets	Exchange rate and interest rates	Exchange rate and interest rates	Exchange rate and broad money
Slovakia				Exchange rate and M_2	Exchange rate and M_2	Exchange rate and M_2	Exchange rate and M_2
Slovenia	n.a.	M_1	M_1	M_1	M_1	M_1	M_1

¹⁾ 1990 to 1992: Czechoslovakia.

In all of the countries with the exception of the Czech Republic, *operational targets* are compatible with monetary intermediate targets. Monetary intermediate targets call for reserve aggregates as operating targets, such as the monetary base, the nonborrowed base or bank reserves. Poland and Slovenia adopted base money, while the Czech Republic targets the interest rate, namely the one-week PRIBOR (Prague interbank offered rate), which endogenizes central bank money and thus potentially conflicts with the M_2 target. Since the fixed exchange rate takes precedence over the monetary target, this does not necessarily have to be problematic for monetary policy coherence. Hungary targets the interest rate differential vis-à-vis the main financial markets to influence short-term capital flows. It thus monitors the repo rate. In the past, it targeted open market operations (limits on repurchase agreements were set in 1993 to 1995) and refinancing by the central bank (1990 to 1992). Slovakia does not announce its operational target, but monitors the monetary base. The National Bank of Slovakia (NBS) is of the opinion that foreign exchange inflows compromise its ability to control the operational target, therefore it stops short of announcing a formal target.¹⁹⁾

Day-to-day central banking practice shows that central banks in these countries monitor other variables, in particular, interest rates, the trade balance, the current account or domestic credit expansion. For example, the National Bank of Poland monitored short-term interest rates in the first half

of 1996 and in the autumn of 1996 became sensitive to domestic credit expansion in the context of the rapidly worsening trade balance despite formally meeting its intermediate and operational targets.

3.3.2 Instruments

With the exception of Slovenia, perhaps, all of the examined economies started with transitory and inadequately developed financial systems.²⁰⁾ For this reason, at the beginning of transition direct instruments of monetary management played a prominent role in guaranteeing that monetary developments remained under control. All these countries experienced a decline in GDP as well as a surge of inflation during the period of price liberalization. Therefore, they needed monetary restraint to eliminate excess liquidity. Since then, direct instruments such as interest rate ceilings or credit ceilings have been abolished in all countries reviewed (see Table 2).

Table 2

Removal of Direct Controls		
	Interest rate ceilings	Credit ceilings
Czech Republic	1992	1993
Hungary	1991	1990
Poland	1990	1993
Slovakia	1992	1995
Slovenia	1991	1991

Since the onset of transition, central banking in the group of countries analyzed has been evolving to meet standards of the advanced Western economies. All sampled central banks use standard instruments from the tool kit of monetary control, so that the classification of instruments into discount rate,

reserve requirements and open market operations is applicable to each of them (see Table 3). The shift to give greater importance to “supply” driven instruments relative to “demand” driven instruments is noticeable. Discount and lombard facilities have been losing significance relative to open market operations over the course of transition.

The gradual approach to the removal of direct controls dominated. Slovenia was an exception, as it eliminated direct controls immediately after the declaration of independence. Poland phased out such controls in 1993. The Czechoslovak Federation phased them out in 1992, but Slovakia reintroduced them in 1993, to finally eliminate them at the end of 1995. Auctioned credit and repurchase tenders, which are indirect control procedures, have become common instruments instead.

Table 3

Introduction of Indirect Instruments of Monetary Management			
	Open market operations	Discount rate	Reserve requirements
Czech Republic	1993	1990	1990
Hungary	1990	1989	1987
Poland	1992	1990	1990
Slovakia ¹⁾	1993	1990	1990
Slovenia	1992	1991 ¹⁾	1991 ¹⁾

¹⁾ Inherited from the Federation.

Open market operations

Open market operations (OMOs) did not exist at the beginning of transition, and the creation of the necessary infrastructure could not happen overnight. They had to be implemented from scratch, and their importance has risen considerably. Over the years, the evolution of instruments was largely driven by changing problems of monetary policy. Commonly, central banks had to inject liquidity in the first years of transition. Only later on did they have to cope with the excess liquidity of the banking sector, after foreign exchange inflows had increased and after banks, having accumulated bad loans and having learned from the failures of the first years, restricted credit to the economy. OMOs were installed rather as defensive operations, i.e. to offset the impact of other factors on the monetary base, than as dynamic operations, i.e. to change the level of the monetary base or bank reserves permanently. Hence, new instruments were sought mainly to respond to the new challenges, in particular to the challenge of capital inflows, but the search also proceeded in accordance with a "vision" of what modern central banking should be. A distinct feature of these countries is a proliferation of central-bank-issued papers to help withdraw excess liquidity and contain the domestic loan expansion of banks, as state (Treasury) papers are not available in sufficient volumes. The auction system has become a method of choice to introduce market principles, i.e. ration liquidity by means of the interest rate. There is a visible shift to using OMOs to affect only the short end of the yield curve (Czech Republic, Hungary and Poland), where the markets are most liquid and directly exposed to central bank policy changes. The following table of refinancing in Slovakia illustrates trends which are common to all CEFTA countries: Central bank refinancing exhibits a downtrend while OMOs have gained considerable significance. The issuance of central bank securities has also dramatically increased.

Table 4

Relative Use of Monetary Instruments in Slovakia				
	1993	1994	1995	1996
	<i>Average volume SKK billion</i>			
Discount loans	4.4	2.0	0.8	0.9
Other refinancing	39.5	33.2	32.6	31.7
OMOs	0.0	0.4	2.1	13.0
Central bank bills	0.0	0.0	5.1	21.9

Source: National Bank of Slovakia.

In Czechoslovakia, OMOs were started on a very small scale in 1992, when the expected dissolution of the monetary union lowered money demand and a stronger inflow of foreign capital led to unwanted increases in money supply. Since a broader use of state securities for open market operations was not possible because the country had run budget surpluses for years, the CNB had to issue its own bills in 1993 to supplement repurchase operations in Treasury bills. In that year, seven CNB bond issues with a two-week maturity each were effected. In 1994, the CNB offered one- and three-month bills on the primary market. Repo tenders were introduced in secondary trading. Since 1994, the operational monetary management of the CNB has been based on repo operations, which replaced the hitherto

auctioned refinancing credits. The recourse to repo operations was propelled by the need to sterilize foreign currency inflows. In 1996, repo tenders of one- and two-week maturities were used to influence the one week PRIBOR. Table 5 – reproduced from Hrnčíř (1997) – presents evidence on the rapidly increasing relevance of OMOs for the monetary policy of the CNB.

Table 5

Liquidity Drainage by Open Market Operations of the CNB							
	1990	1991	1992	1993	1994	1995	1996
	CZK billion						
Reverse OMOs	0.0	0.0	-11.8	-26.4	-70.4	-89.4	-138.4
Refinancing	17.4	21.1	15.1	6.5	7.1	7.3	13.4

Source: Hrnčíř (1997).

Note: (-) drainage and (+) injection of liquidity.

In the middle of 1990, the *National Bank of Poland* (NBP) started to auction one-week NBP bills in an attempt to drain the excessive liquidity of the banking sector. Thus, rudimentary open market operations were started. The NBP diversified its sales of bills to three- and six-month maturities in 1991. It started to auction one- and three-month Treasury bills in May 1991, and due to the growing supply of Treasury bills, it suspended auctioning of NBP bills in early 1992. The launching of one- and three-year government bonds in 1992 enabled the central bank to conduct repurchase agreements and reverse repurchase transactions for the first time. In 1994, open market operations took off as the country's international reserves began to grow rapidly. The NBP stood ready to sterilize their impact on the money supply. The role of one- to fourteen-day reverse repurchase agreements became dominant. Outright operations of Treasury bills involved smaller amounts, as the NBP was reducing its portfolio of short-term Treasury securities. In November 1994, as the excess liquidity of the banking system became chronic, the NBP resumed auctions of its own bills. The introduction of the book entry form of government securities in 1995 boosted outright sales of Treasury bills, since their physical denominations were large and nonmarketable, while the book entry form has made it possible to break them into smaller amounts.

In *Hungary* OMOs are conducted by means of outright sales/purchases of government securities, repurchase/reverse repurchase agreements and foreign currency exchange swaps. Starting in 1993, the significance of open market operations increased steadily. Until 1993, the NBH had influenced a large part of the yield curve with posted interest rates, but later on withdrew and focused solely on the short end of the curve. Currently, one-day, one-week and overnight facilities exist. The one-week repo rate has been quoted since January 1994. In 1994, foreign exchange deposit swaps of one to three years were also actively used to ensure the medium-term liquidity of banks with foreign currency deposits. They were phased out in 1995, as they created too much liquidity and were replaced by foreign exchange deposit swaps available only for the purpose of project financing. Repurchase agreements were another plentiful source of banking sector liquidity in 1994. At the end of 1995, reverse repurchase agreements were activated in

order to drain the excessive liquidity of the banking sector caused by the unexpected inflow of foreign currency. Outright sales were also an important sterilization tool. In 1995, outright sales of government securities from the NBH portfolio were the main instrument, but this changed in 1996, when the reverse repo replaced them in significance. In 1995, to tighten monetary policy, daily limits on repo transactions were introduced, but they do not apply to a special overnight facility designated to ease unexpected liquidity problems. In return for this availability, the NBH charges a penalty rate of interest. Compared with standard lombard loans, it is a very expensive facility, especially if the loans are rolled over (everyday compounding interest rate).

As has been already mentioned, the development of open market instruments in *Slovenia* was catalyzed by the need to sterilize the inflow of foreign currency into the country, which in the 1992 to 1994 period averaged over 4% of GDP annually. In 1991 to 1993, the current account posted substantial surpluses, while in 1995 to 1996, the capital account posted a large surplus; in 1995, short-term capital inflows were estimated at nearly 10% of GDP.²¹) This excess supply of foreign currency conflicted with the counterinflationary policy of the Bank of Slovenia (BoS) in pursuing the ultimate goal of domestic currency stability. The BoS wants to reduce the Slovenian inflation rate to the levels recorded in the European Union. The variety of available instruments makes Slovenia distinct not only among transition economies.²²) Since the government has conducted a very prudent fiscal policy of surpluses or a balanced budget throughout the period of transition, too few government securities exist, so that the central bank cannot rely on them to conduct open market operations. To fill this vacuum, it had to introduce its own securities, driven by the need to reduce the monetary base. Foreign currency reserves have become practically the only channel of creating the monetary base since late 1991.

The central bank issues tolar bills with various maturities ranging from 2 to 60 days, so-called "twin" bills denominated in tolar and Deutsche mark, bills with warrants and foreign currency bills. Tolar bills indeed have characteristics of certificates of deposit, as they are nonmarketable. In contrast, foreign exchange bills with maturities of between two months and one year are transferable. Such bills with maturities of less than 120 days can be used to comply with minimum requirements for foreign exchange cover (see below). The most sophisticated instrument is the tolar bill with warrants, which has a maturity of six months and bears a fixed nominal interest rate. The attached warrant, which can be stripped, makes the paper attractive, as it gives an option to buy additional bills at a discount, which is in turn positively related to any excess of actual inflation and domestic currency depreciation over the officially projected rates. It is evident that this instrument is a bridge between instruments based on real and on nominal rates. Thus, it offers a hedge against adverse developments. Twin bills with maturities of between three and six months comprise tolar and foreign currency parts, which can be traded separately. They are sold at a discount and priced in tolar. Both instruments were broadly used in 1994 and 1995. Repurchase agreements concluded at daily auctions, in which the BoS buys

Standing facilities

The decommercialization of central bank activities involved redefining central bank lending facilities, making them available to banks rather than businesses. This process has taken place gradually, as the central banks inherited the financing of large public investment projects, a commitment they could dismantle only over time. Forms of preferential financing have been scaled down, though they still exist in all countries examined. For example, the NBH has schemes for investment project financing and export credit. All countries have discount rates and, with the exception of Hungary, also lombard rates. The structure of NBH interest rates is the least transparent, as it announces the so-called base rate, to which all other rates are related, and there are numerous rates. The discount rate, which stands a few points above the base rate, is one of them. The relevance of the discount window as a facility to inject liquidity has declined over the years. There is a tendency to eliminate discount loans as a form of a subsidized credit, and access to the discount window is limited. Slovenia discontinued discount loans in 1992.

The lombard rate, which at the beginning marked the price of another important source of liquidity, has been assigned the role of a ceiling on market rates and is used when central banks want to perform the role of a lender of last resort. This tendency is best exemplified by the evolution in Slovakia, where the lombard rate had originally been pegged to the discount rate, then tied to the discontinued auctioned refinancing credit rate and finally set autonomously. In Poland, access to the lombard facility is unlimited, and the lombard rate serves as a cap on interbank market rates. Forms of refinancing credit other than discount and lombard lending were used extensively at the beginning of transition. They were gradually subjected to a greater degree of market principles, e.g. auction refinancing credit in the Czech Republic. The lombard rate could not have been used from the beginning in any of these countries, as a portfolio of assets which could be provided as collateral was almost nonexistent. In Hungary, the overnight repurchase facility replaced the lombard window.

Reserve requirements

Reserve requirements were adopted early in the transition process and given the role of an operational instrument. Their initial levels were quite prohibitive to lending, as the reviewed countries wanted to check inflation, which accelerated in the wake of price liberalization. Less important in the beginning was the issue of the prudential impact of high minimum reserve requirements. After the initial phase, a tendency to reduce these ratios has been visible. However, this tendency has been frustrated at times by the need to use required reserve ratios as operational instruments to control the liquidity of the banking sector. The Czech Republic, Hungary, Poland and Slovakia resorted to this instrument in order to tighten monetary policy, even when they were well advanced in transition. Slovenia has left minimum reserve requirements unchanged for almost two years now and seems to be in the best position among these countries to approach Western standards in this field.

Table 8

	1990	1991	1992	1993	1994	1995	1996	1997 ¹⁾
Czech Republic ²⁾	1	0	2	2	1	1	1	1
Hungary	1	1	0	1	2	4	6	0
Poland	3	1	1	0	1	1	1	2
Slovakia	1	0	2	0	0	1	1	0
Slovenia	n.a.	3	1	0	0	1	0	0

¹⁾ Until April 15, 1997.

²⁾ 1990 to 1992: Czechoslovakia.

The use of minimum reserve requirements to contain unwanted money supply growth indicates that financial markets are still underdeveloped in these countries. Open market instruments to cope either with excess liquidity (reverse repos) or with shortages of liquidity within the banking system (repos) still have to be supplemented with “blunter” tools in situations of stress. Each of the countries realize that required reserve ratios are still too high by Western European standards, i.e. range between 8 and 20% for demand deposits, and will have to be lowered in order to reduce the cost of financial intermediation, which will help domestic banks compete with their foreign rivals. This need presents a challenge to monetary policy, as the money supply tends to grow when reserve ratios are lowered due to a higher money multiplier; this increase is hard to offset. These reserves are not commonly remunerated. Only Hungary and Slovakia provide interest, but interest rates are fixed well below respective inflation rate.

In *Czechoslovakia*, minimum reserve requirements were introduced in 1990, but until 1992 they were the same for demand and time deposits. Since 1992 minimum reserve requirements have played the role of an operational instrument. They were raised for the first time in November 1992 in conjunction with the removal of credit ceilings. When the country split, the Czech Republic effected a further increase, which was later reversed. Thus 1993 marked the year in which reserve requirements became an active instrument of monetary management. They were again raised in the Czech Republic in reaction to high capital inflows in 1994. Most recently they were raised in August 1996 and are scheduled to be lowered in May 1997 to 9.5% on deposits with commercial banks.

Unlike in the other countries in transition, the central bank in *Slovakia* did not use minimum reserve requirements as an operational instrument of monetary policy in earlier years. It had maintained reserve requirements at 9% on demand deposits and 3% on time deposits through August 1, 1996, when the latter was raised to 9% as well, but savings deposits earmarked for dwelling construction were excluded, so that the required reserve ratio remained at 3% on these deposits. The increase represented one of the NBS's efforts to tighten monetary policy.

The *Hungarian* central bank has used reserve requirements as an operational instrument. In 1987, it introduced a uniform requirement on liabilities of commercial banks. The mandatory reserves were gradually reduced until the launch of the stabilization program in March 1995 in order to make Hungarian banks more competitive. Subsequently they were raised

in a few successive steps, as monetary policy needed to be tightened. They were relaxed again in parallel with disinflation. At present, they are still high enough (12% for all deposits with commercial banks and 8% for deposits with savings banks) to create a wedge between deposit and credit rates. To narrow this wedge, the NBH pays interest on mandatory reserves, which distinguishes Hungary from the other countries reviewed in the paper. This interest rate is relatively high in nominal terms, but negative in real terms. The remuneration policy took twists, as this interest rate was drastically reduced in 1993 to 1994, to be increased again in 1995.

Reserve requirements were put in place in *Poland* in 1990 and have been actively used since then. The NBP introduced separate reserve requirements on foreign currency deposits, which accounted for more than 70% of total money supply in 1990. Different ratios were imposed on demand and time deposits. At the beginning of transition, the NBP frequently manipulated the minimum reserve requirements on domestic deposits. They were raised to the legal limit of 30% in 1990 and then slowly decreased. Yet these ratios²³⁾ are still very high by OECD standards. The declared course is to gradually align these ratios to the levels that will enable domestic banks to compete with foreign banks from OECD countries once their entry to the Polish market has been liberalized by the end of 1998. So far it has been more a verbal commitment than a fact. To the contrary, the minimum reserve ratio on foreign currency deposits has been raised twice since 1995 to lower their attractiveness relative to domestic deposits. The NBP believes that banks are more sensitive to changes of the reserve ratio than to changes in headline interest rates. The mandatory reserves do not pay any interest, which especially under the condition of high inflation is a penalty tax for banks and drives a considerable wedge between deposit and credit rates. Poland reduced the requirements on demand deposits in 1996 to establish a downward tendency ahead of the planned liberalization of financial services in 1998, but raised them again in February 1997 as an attempt to slow down domestic credit expansion by banks. Following this move, reserve requirements on time deposits were raised in May. Reserve requirements on foreign currency deposits were increased on the same dates in an effort to realign them with the requirements on domestic deposits.

Reserve requirements were in place in former Yugoslavia. In *Slovenia*, they gained operational meaning between October 1991 and April 1992. Since then they have played a passive role, consistent with their prudential function. The general tendency has been to reduce this requirement to levels in line with standards in more advanced economies. In this respect, minimum reserves on deposits with maturities of over one year were eliminated. From April 1992 to April 1995 the requirements remained unchanged. The most recent changes were introduced in April 1995. The scheme of reserve requirements is more complex than in other countries, where discrimination between demand and time deposits is standard, because Slovenia distinguishes among more categories of deposits.²⁴⁾

There are no reserve requirements on foreign currency deposits in Slovenia; instead, there are foreign exchange cover regulations. In the initial stage of independence, the lack of foreign currency reserves prompted the

BoS to adopt a regulation requiring banks to maintain 35% of the average monthly inflow and outflow in foreign currencies in the preceding three months in the form of liquid assets denominated in foreign currencies. This foreign reserve minimum was additionally imposed on household deposits to guarantee their safety and to boost the confidence of the public. The scale of the coverage ranges from a high of 100% on demand deposits to 5% on foreign exchange deposits of over one year. A slightly different scale applies to the accounts of nonresidents.

4 Exchange Rate System and Monetary Policy

At the beginning of transition, the reviewed countries generally favored more rigid exchange rate regimes compared to more flexible ones. With the exception of Slovenia, they introduced fixed exchange rates. Hungary chose the softest version, the adjustable peg, which explicitly allowed for discretionary devaluations. Slovenia adopted managed floating right from the start of independence. Their respective choices were motivated by a number of considerations.²⁵) Since then, a tendency toward more flexible exchange rate regimes has been observed in response to substantial inflows of foreign currency, which started interfering with the central banks' disinflation-oriented monetary plans. Fluctuation bands have been either introduced or widened to create more uncertainty as to the possible course of the exchange rate. Intra-band intervention has been allowed and used. In parallel to this process, the tendency to introduce more transparency to pegs can be recorded as well: The Czech Republic, Hungary and Slovakia reduced the number of currencies in their respective baskets. These general conclusions are supported by detailed facts.

The CNB sets the exchange rate. The regime of a fixed peg against a basket has been maintained since the start of the reforms. The original basket of five currencies was replaced by the basket of only two currencies, the DEM (65%) and the USD (35%), after the split of the Federation in 1993. In March 1996, the band for feasible fluctuations was widened to $\pm 7.5\%$ from $\pm 0.5\%$ on either side of the central rate. Since the Czech crown has been subject to upward pressure from the beginning of transition, the CNB mainly bought foreign exchange to meet its exchange rate target and sterilized its impact on the money supply to a considerable extent. It resorted to unconventional methods as well, since the deposits of the National Property Fund and Telecom were moved to the central bank from commercial banks, which meant draining liquidity from the banking sector. To curb excessive liquidity, the maximum limit on short-term (up to one year) open positions against nonresidents was set at 30% above claims against them with an overall limit of CZK 0.5 billion, effective August 3, 1995. To discourage trading with the CNB and to stimulate trading among banks, a 0.25% fee is charged on foreign exchange transactions with the CNB. Such transactions have no effect on money supply. Sterilization of capital inflows cost the CNB 0.3% of GDP in 1994 and 0.5% of GDP in 1995.

The central bank is responsible for exchange rate policy in *Slovakia*, which maintains a system of a pegged exchange rate against a basket of currencies that was streamlined from five currencies to two, i.e. USD (40%)

and DEM (60%). The growing external disequilibrium in 1993 led to a discretionary devaluation of the koruna by 10% against the basket, but since then the currency has been stable. The band has been gradually widened, like in the other countries of the region; it was expanded from $\pm 1.5\%$ to $\pm 7\%$. After the dissolution of the Federation, Slovakia temporarily reintroduced certain limits on currency convertibility due to a drop in international reserves. Considerable inflows of foreign currency in 1995 led to major purchases of foreign currency by the NBS by means of outright purchases, and the NBS conducted sterilization operations on a large scale in 1995 and 1996.

Both the central bank and the Ministry of Finance are responsible for exchange rate policy in *Hungary*. The initiative rests with the government, but its proposals are subject to the approval of the NBH. Hungary maintained an adjustable peg until March 13, 1995. Before the introduction of the crawling peg, the forint was frequently devalued in rather moderate to small steps. After a 9% devaluation in March 1995 against the basket, that system was replaced by the preannounced crawling peg with an initial monthly devaluation rate of 1.9% versus the basket, a rate which was later reduced to 1.1%. The composition of the basket was modified several times. The most important change was the reduction of the number of basket currencies to two. Other changes were driven either by disinflation considerations or by the competitiveness issue. Since January 1997, the basket has comprised DEM instead of ECU (70%) and USD (30%). This modification is intended to signal the determination to curb inflation. The width of the band within which the forint is allowed to fluctuate is relatively small at $\pm 2.25\%$. This reflects the fact that upward pressure on the currency is a relatively new phenomenon which has not been accounted for yet. Sterilized intervention policy started in late spring 1995.

The evolution of the exchange rate system in *Poland* from a rigid to a more flexible one went through several stages: the abolition of a fixed peg against a single currency (the USD) and the shift to a basket, the introduction of a crawling peg and then of a crawling band of 7% on either side of the central rate. In 1990 to 1993, the balance-of-payments constraint acted as a catalyst for exchange rate changes aimed at striking a balance between anchoring inflationary expectations and securing the necessary competitiveness to protect a sustainable current account position. In 1994 to 1995, the current account surplus and capital inflows put upward pressure on the zloty. The endogeneity of money supply under the crawling peg started frustrating NBP targets, so the central bank opted for more monetary independence. The crawling band was widened to 7% on either side of the central rate, which at the end of the 1995 had to be revalued. The crawling devaluation rate was reduced to 1% monthly against the basket in January 1996. Sterilization by means of purchases of foreign currency from commercial banks was only partial and very costly due to wide interest rate differentials. It is estimated that sterilization cost 0.6% of GDP in 1995 and 0.8% of GDP in 1996.²⁸⁾ Poland's basket of five currencies has not been modified since 1991.

According to law, the *Bank of Slovenia* is in charge of exchange rate policy. The country adopted a managed floating system from the beginning of

independence after an intellectually interesting debate between adherents of a fixed and a flexible regime.²⁹) For much of the period, Slovenia implicitly targeted the real exchange rate, actively using the option of managed floating. In 1994, large sterilizations of currency inflows were necessary. This intervention proved very costly, as evidenced by the fall in the BoS's operating surplus from SIT 17 billion in 1992 to SIT 1 billion in 1994. Total sterilization costs were estimated to reach 2.6% of GDP in 1992 to 1994, with the percentage spread evenly in 1992 and 1993 and jumping to 1.4% in 1994. The BoS intervenes on the foreign exchange market by means of purchases of foreign currency called "temporary repurchase agreements." Their construction resembles that of a foreign currency swap and purchase of foreign exchange with the right to repurchase by the counterparty. In 1995, the bank launched a new instrument, i.e. the sale of foreign exchange against a purchase of foreign exchange bills. Starting in April 1996, the BoS simultaneously offered a triple combination of existing instruments – foreign currency purchases, foreign exchange swaps and purchases of its own foreign exchange bills – to arrest appreciation of the tolar. Outright purchases played a smaller role. Sales of foreign currency and purchases of own foreign exchange bills were introduced in 1995, when the upward pressure on the tolar reversed in the second half of the year after the introduction of a series of administrative controls on inward capital movements.

Capital controls were reinstated in early 1995 and strengthened in 1996. A 40% non-interest-bearing tolar deposit on financial borrowing from abroad up to seven years was put in place in 1995. In 1996, 10% retention deposits were imposed on all foreign credits, and portfolio investors were required to open a fiduciary account with a Slovenian bank through which all transactions are performed. According to anecdotal evidence, this regulation induced enterprises to arrange longer maturities of loans (e.g. borrowing for 7 years and one day) and was gradually circumvented, which renewed tension on the forex market in 1996.

5 Summary and Conclusions

In this paper, we have sketched and analyzed how monetary governance has changed in the five Central and Eastern European economies which have advanced most in their transition from centrally planned to market systems. All of the countries managed to progress from direct instruments of monetary control to indirect instruments in a relatively short period of time, i.e. at most within three years. Their starting points were characterized by a lack of infrastructure for indirect monetary policy. Interbank markets did not exist. The conduct of open market operations was impossible because there were no marketable Treasury or central bank securities. Since then, significant progress has been made. The basis for modern central banking has been established. All countries have established the necessary infrastructure for open market operations, whose use has dramatically risen from zero levels. This change has been successful, as no major retreat was observed. The search for new instruments mainly responded to arising challenges, in particular to the challenge of very large capital inflows and the need to contain the excess liquidity of the financial sector. But the developments

were also in accordance with these countries' understanding of modern central banking.

The shift to indirect instruments of monetary policymaking could not proceed without a parallel development of financial markets, as experience clearly shows. Poland's early move away from direct instruments in 1990 was not successful, and it had to return temporarily to the use of credit ceilings, as it could not handle the excess liquidity of the banking sector in any other way because of the lack of instruments and markets for these instruments.

However, financial markets still remain underdeveloped, which determines the specific features of monetary governance in the countries analyzed. The central banks of these countries have developed instruments to cope either with excess liquidity (mainly reverse repurchase agreements) or with shortages of liquidity within the banking system (repurchase agreements). As the markets are immature, these operations have to be supplemented with "blunter" tools in the situation of stress, e.g. with required reserves. Required reserves still play a role as an operational instrument to control liquidity within the banking sector in Hungary, the Czech Republic, Poland, and Slovakia. Slovenia is in the best position to soon approach Western standards in this respect. Required reserves are still relatively high compared with those in Western European economies and will have to be reduced to lower the cost of financial intermediation and to improve local banks' international competitiveness. The (gradual) reduction of required reserves poses a challenge for monetary policymakers, as money supply will tend to grow and liquidity-enhancing effects will have to be offset. The proliferation of securities issued by the central banks in order to help withdraw excess liquidity and contain domestic loan expansion and because state (Treasury) securities cannot fulfill this function is another common phenomenon in the countries reviewed.

The following tendencies, which are consistent with tendencies noted in the more advanced countries, are observable in the countries reviewed: Open market operations have become the most important monetary instrument. The tendency to reduce amounts of central bank lending is visible. Tenders of repurchase agreements are popular. A shift to affect only the short end of the yield curve by open market operations is also evidenced by shortened maturities. A move toward monetary targeting has occurred. However, a relative ineffectiveness of monetary targets similar to that in advanced economies can be noted, as the targets are exceeded most of the time, e.g. in Slovakia, in the Czech Republic, in Hungary and to a lesser extent in Poland. Even if they are met, the course of inflation may prompt the central bank to attempt to influence interest rates, the exchange rate or simply to use moral suasion (e.g., Poland in 1996).

With the notable exception of Slovenia, all other countries in the group analyzed here started with a policy of exchange rate targeting. Hungary, however, did not commit itself to a nominal peg, but chose the looser form of an adjustable peg. The trend toward more flexibility in the exchange rate system followed has set in, as the countries are striving to free their monetary policies from external constraints resulting from large capital inflows. Poland exemplifies this path best with its shift from a peg to the

U.S. dollar to a crawling peg and then to a crawling band. Thus, at present exchange rate policies are not converging toward the Western European standard of increasing monetary integration, which requires fixed exchange rates.

The evolution of monetary governance will continue in the present direction, albeit at a slower pace concomitant with the widening and deepening of financial markets, whose development will boost the reliance on open market operations. The significance of central bank lending facilities will continue to diminish. Mandatory reserves will be lowered to levels compatible with Western European levels and will stop functioning as an operating instrument. The elimination of forms of preferential credits is indispensable to stop subsidized central bank credits. Discount credit can in fact be a form of such a subsidized credit, like the remnants of socialist state investment projects and other schemes such as export or agriculture financing. Lines of credit in the context of privatizations will probably be the last to be eliminated.

An attempt to use direct inflationary targeting as a monetary strategy cannot be excluded, as the difficulties of monetary targeting remain pronounced despite a certain stabilization of the demand for money compared to the early stages of transition. We do not foresee a reversal of the trend toward more flexible exchange rate regimes anytime soon. In the future, a reversal toward more stable exchange rate arrangements will be necessary when these countries start seriously preparing for participation in European Monetary Union. For now, it appears more reasonable for these countries to enjoy a somewhat higher degree of monetary autonomy in order to be able to deal with the problem of excessive capital inflows and to avoid (real) exchange rate developments which would contribute to unsustainable external imbalances.

Annex

Targets and Instruments of Central Banks in the CEFTA Countries

	Czech Republic	Hungary	Poland	Slovakia	Slovenia
Targets:					
a) ultimate target	a) safeguarding the stability of the domestic currency and supporting the government's economic policy	a) internal and external currency stability	a) strengthening the stability of the domestic currency and supporting the economic policy of the government	a) safeguarding the stability of the domestic currency and supporting the economic policy of the government	a) currency stability
b) intermediate	b) fixed exchange rate, M ₂ ;	b) exchange rate, M ₂	b) broad money (a proxy for M ₂), exchange rate;	b) fixed exchange rate M ₂	b) M ₁
c) operational	c) 1 week PRIBOR	c) interest rate differential	c) monetary base	c) no official target	c) base money
Instruments:					
a) direct controls	a) phased out in 1993	a) phased out in 1991	a) phased out in 1993	a) terminated in 1996	a) none since 1992
b) indirect controls	b)	b)	b)	b)	b)
1. interest rates	1. discount rate, lombard rate	1. discount rate, base rate	1. discount rate, lombard rate	1. discount rate, lombard rate	1. lombard rate
2. reserve requirement	2. in place, no interest	2. in place, pays interest below market (and below CPI inflation) rates	2. in place, no interest	2. in place, required reserves pay small interest	2. in place, no interest
3. open market operations	3. CNB bills, 1W and 2W tenders	3. repurchase and reverse repurchase agreements, outright sales of government securities, forex swaps	3. reverse repo transactions, outright sales of T bills, NBP bills	3. repo transactions, repo tenders, outright purchases and sales, issues of NBS bills	3. repurchase agreements, foreign exchange bills, twin currency bills, BoS forex bonds, BoS bond sales, forex swaps
Exchange rate system:					
a) type	a) fixed peg	a) crawling peg	a) crawling band	a) fixed peg	a) managed float
b) basket	b) 65% DEM, 35% USD	b) 70% DEM, 30% USD	b) basket: 45% USD, 35% DEM, 10% GBP, 5% CHF, 5% FRF	b) 40% USD, 60% DEM	b) not applicable
c) band	c) ± 7.5%	c) ± 2.25%	c) ± 7%	c) ± 7%	c) not applicable

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- 1 Both Foreign Research Division, OeNB; Maciej Krzak also The Vienna Institute for Comparative Economic Studies. The views contained herein do not necessarily coincide with those held by the institutions with which the authors are affiliated. This is an abbreviated version of a paper presented by the authors on the occasion of the SUERF Colloquium 1997 in Budapest, May 16, 1997.
- 2 Romania is not an object of this study, as it will only join CEFTA in July 1997.
- 3 See European Monetary Institute (1997a).
- 4 For a detailed discussion of the present state of central bank independence in Central and Eastern Europe see Radzyner and Riesinger (1997) in this issue.
- 5 See Cukierman (1992), Alesina and Summers (1993).
- 6 For a short summary of the arguments for an independent central bank see Schubert (1997).
- 7 See Mishkin (1997) for the relevant arguments.
- 8 The EMI (1997a) identifies five key elements of any monetary strategy: 1. a quantified definition of the final objective; 2. a communications policy; 3. the availability of a broad set of indicators; 4. detailed information on monetary aggregates; and 5. tools to allow for forecasts of inflation and other economic variables.
- 9 An explicit inflation target is set, as are the index, its target level, the tolerance interval, the time frame and possibly the situations under which the target can be modified or even disregarded. In a useful simplification, inflation targeting is a monetary framework under which monetary policy decisions are guided by expected future inflation relative to an announced target. Inflation targeting has been explicitly adopted by New Zealand, Canada, the United Kingdom, Sweden, Spain and Finland. See Leiderman and Svensson (1995).
- 10 See EMI (1997a).
- 11 See EMI (1997a) and (1997b).
- 12 See Haldane (1995) for more information on this topic.
- 13 See *The Financial Times*, March 22, 1997.
- 14 It is interesting that only one role in the conduct of policy is mentioned in the document, i.e. stabilizing money market interest rates and possibly contributing to the control of monetary expansion by creating or enlarging a structural liquidity shortage.
- 15 This stylized description extensively draws on Duchatzek and Schubert (1992).
- 16 In the pure model, consumption is also rationed by administrative instruments and prices only register trades.
- 17 This would involve a study in its own right, whereas the purpose of this paper is to give an overview of the monetary policy framework in the reviewed countries. We recommend readers interested in details of central bank independence in Central and Eastern Europe to refer to the latest study by Radzyner and Riesinger (1997) or earlier work by Hochreiter and Riesinger (1995).
- 18 See Neményi (1997).
- 19 See Makúch and Nemeč (1997).
- 20 See section 3.1.
- 21 See Mencinger (1997).
- 22 This description draws on the *Annual Report of the Bank of Slovenia (issues from 1991 to 1995)*, on OECD (1997) and on Kranjec (1995).
- 23 As of the date at which this paper was written, they stood at 20% for demand deposits, 11% for time deposits and 5% for foreign exchange deposits.
- 24 As of the date at which this paper was written, they stood at 12% for deposits up to 1 month, 6% for deposits between 1 and 3 months, 2% for deposits between 3 and 6 months and 1% for deposits between 6 and 12 months.
- 25 See Krzak (1995) and Radzyner and Riesinger (1996) for a more detailed analysis.
- 26 See Gomulka (1997).
- 27 See, e.g. Lavrac and Stanovnik (1996) or Mencinger (1993) for an exposition of arguments.

Editorial close: May 2