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Monetary Overhang, Inflation and Stabilization in the Economies in Transition

Abstract[1]

In this paper we investigate stabilization of the monetary system in the economies in transition. We assume that real sector imbalances (especially budget deficit) are under control so that a solid base exists for inflation stabilization.

Stabilization can be thought to happen in two phases. The first step is to bring the growth of money supply caused by recurrent budget deficits under the control of monetary authorities (flow problem) and to eliminate monetary overhang (stock problem) inherited from the old system. Usually monetary overhang is eliminated by a high inflation which together with price liberalization trigger an inflation process which is difficult to cope with. Thus, the second phase of the stabilization of the monetary system is to combat the inflation process.

[1] The paper benefited from the comments by my colleagues in the Unit for Eastern European Economies and by Juhani Hirvonen of the Research Department. The opinions expressed in this paper are those of the author.

1 Introduction

The problems of the economies in transition[2] can be divided into two categories: those related to stabilization of the economy and those related to restructuring the economy. The first category includes the problems of the budget deficit and inflation (internal balance) and the current account deficit (external balance). The second group deals with questions such as privatization, creation of banking and financial institutions, changing the structure of production and changing the pricing system.

This kind of classification is, however, more or less arbitrary as most of the problems are interconnected so that the solution of one problem has direct or indirect effects on the others. For example, the impact of privatization on the budget balance depends on how privatization is implemented, while the liberalization of the pricing system will undoubtedly have at least a temporary effect on inflation.

In this paper we investigate the problems of stabilization of the monetary sector. In particular, we are interested in two major problems: monetary overhang and inflation.[3] Our analysis is based on the assumption that a public sector's budget deficit is more or less under the control of authorities so that a solid base exists for monetary stabilization. Stabilization of the real sector is, however, a complicated task and thus beyond the scope of this paper.

The reason for examining monetary stabilization is that it is one of the main problems encountered in the economies in transition and there is strong evidence to support the view that it is very difficult, if not impossible, to get the economy back on the growth path if the monetary environment is very unstable. In addition, in the extreme case of monetary imbalance, ie hyperinflation, the stabilization of the real sector (budget deficit) may first require the stabilization of the monetary sector, which is reverse of the causality usually observed between the real and monetary sectors.

In this century we can find several examples of countries that have faced a serious monetary imbalance: many European countries in the 1920s, Germany after the Second World War, Latin America in the 1970s and 1980s. The latest examples are the economies in transition. In this article we try to focus on issues which help us to understand the current problems of monetary stabilization, especially in the former Soviet Union. We try to identify both the theoretical alternatives to monetary stabilization and the likely path the former Soviet republics will follow.

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[2] By the economies in transition we mean here the former socialist countries of Central and Eastern Europe.

[3] Below we concentrate on solving the problems of monetary overhang and inflation and do not address the problems they give rise to. In general, we can say that these problems include distortion of relative prices, inefficient resource allocation and a loss in the credibility of economic policies.

2 The first phase of monetary stabilization: flow and stock problems

For the market economy, with its reliance on the price mechanism and monetary exchange, it is essential that economic agents have confidence in the money that is being used. In the Soviet-type economy money never played the role it does in the market economies but developments during the perestroika period (1985-91) brought to a head the problems of the old system and revealed the importance of monetary questions on the road to a market economy.

A monetary overhang is one indication of mismanagement in monetary policy and a major impediment to stabilization policies. A monetary overhang arises when households and enterprises cannot increase their consumption as their money holdings increase because of excess money supply caused by recurrent budget deficits (flow problem). Given a fixed price system, excess demand cannot be eliminated by raising prices, ie by open inflation. On the other hand, an increase in real consumption is limited by supply factors, which means that, with prices given, producers are unwilling to produce more or that the production plan drawn up by the central authorities does not allow enterprises to produce those goods which people want to buy or that there is simply no free capacity to increase production. The unsatisfied excess demand (consumption) takes the form of increased forced savings of households and enterprises (stock problem).

The difference between actual consumption and desired consumption in the Soviet Union started to widen in the mid-1980s, ie at the beginning of the perestroika period. It has been estimated that the monetary overhang in the Soviet Union at the end of 1990 was close to 20 per cent of GDP and equivalent to about one-third of existing financial assets.[4]

In addition to monetary overhang there is another stock problem associated with budget deficits and increased money supply, ie big loans made by the banks to state enterprises (the bad loan problem). The problem with these loans is that they are mainly the result of enterprises' soft budget constraints, and enterprises either do not intend to pay them back or they are unable to do so in the changing environment. However, the solution of both the monetary overhang and bad loan problems is an essential precondition for a well-functioning monetary system.

The first step in the stabilization of the monetary system is to bring the growth of money supply under the control of the monetary authorities (flow problem) and to eliminate both the monetary overhang and bad loans (stock problem).

2.1 The roots of the flow problem

One way to illustrate and identify the problem of excess money supply is to look at how the money supply is defined and determined. To start with the definition, the money supply (M) consists of currency held by the public (CY) and demand

[4] See Cottarelli - Blejer (1992).

deposits (DD) held by individuals and firms at banks.[5] Thus, the money supply is defined as

(1) M = CY + DD.

To see what factors affect money supply we must first define the monetary base (RM), which is also called high-powered money or reserve money. The monetary base comprises currency outside the banking system and reserves of commercial banks (R), which include currency in bank vaults and deposits of commercial banks held at the central bank:

(2) RM = CY + R.

The money multiplier (m) is defined as the ratio between the money supply and the monetary base.[6] Thus, according to equations (1) and (2) we obtain

(3) m = (CY + DD) / (CY + R).

The relation between the money supply and the monetary base can now be derived as

(4) M = m * RM.

To illustrate more specifically the components of the monetary base we can examine the balance sheet of the central bank.

Table 1. **Simplified Balance Sheet of the Central Bank**

Assets	Liabilities
Net foreign assets (NFA)	Currency outside banks (CY)
Net claims on government (DCG)	Reserves of commercial banks (R)
Claims on banks (DCB)	Other items, net (OIN)

From the balance sheet of the central bank we can see that the liabilities of the central bank constitute the demand components of the monetary base. Taking into consideration the balance sheet identity (assets = liabilities), we can write the supply components of the monetary base:

(5) RM = NFA + DCG + DCB + OIN.

[5] For the framework see, for example, Davis (1992).

[6] The money multiplier can also be written in terms of the currency deposit ratio (c) and the reserve ratio (r): m = (1 + c)/(c + r).

Combining equations (4) and (5), we obtain

(6) M = m * (NFA + DCG + DCB + OIN).

The ability of the monetary authorities to influence money supply depends on their possibilities to influence the money multiplier and the supply components of the monetary base. In practice, however, the best way to bring the current excess money supply under control is to limit domestic credit (DCG + DCB) because net foreign assets (NFA) cannot be considered to be a policy-controlled variable and the use of reserve requirements (r in the money multiplier definition; see footnote 5) as an instrument of monetary policy is subject to important limitations.

The main reasons for the current flow problems in the former Soviet republics are huge public sector deficits and their financing by central bank credit. This is reflected in a rapid increase in domestic credit. Until the budget deficit has been brought under the authorities' control, there is little that can be done to control the increase in domestic credit. Even so, the central bank should try to limit domestic credit to the "commercial" banks and enterprises.[7]

2.2 Elimination of the monetary overhang

The quantity-of-money equation (equation of exchange) is useful formula for illustrating the essential feature of the monetary overhang and possible ways to solve the problem.[8] The quantity-of-money equation is an identity and it shows that the volume of goods and services (Y) multiplied by the price level (P) must equal the money supply (M) times the velocity of money (V). Thus,

(7) M * V = P * Y

or

(7') V = (P * Y)/M.

Because equation (7) is an identity, its use does not necessarily mean that we commit ourselves to some specific economic theory (eg monetarism). On the other hand, one must use identities very cautiously because we don't know exact causality or simultaneity between the variables and in practice equation (7) can be shown to be valid only ex post. However, we can use it to make some preliminary

[7] However, in the current situation it is difficult to know what are the results of squeezing credit supply to the business sector because banks' loan decisions may not be based purely on economic factors. The current credit squeeze could mean that profitable small enterprises will be crowded out and that the bad loan problem will worsen. Thus, structural changes (eg privatization) are needed to alleviate these problems.

[8] In this paper we use the quantity-of-money equation in the same manner as Dornbusch and Wolf (1990) to describe the problems and possible solutions. Edwards (1991) deals with the same questions using concepts of the actual real stock of money (M/(P*Y)) and the desired stock of money $(M/(P*Y))^*$.

assessment of particularly sizable imbalances in the monetary sphere. From equation (7') we see that, with fixed prices and constant or decreasing production, the growth of money supply will decrease the velocity of money. Since in a well-functioning monetary system the velocity of money is relatively stable, we can assume that a substantial decrease in velocity is an indication of fundamental problems in the monetary system.[9] An extreme case is where domestic money no longer serves as a medium of exchange, which means that the velocity of money becomes almost nil. In that case domestic money is replaced by foreign currencies and barter deals become widespread in the economy.[10]

From equation (7') we can see that, in principle, there are two ways to re-establish the "normal" value of money velocity. In other words, there are potentially two different ways to start the stabilization process:

1) an increase in the price level (P), ie a period of rapid inflation, and

2) a reduction in the money supply, ie monetary reform (M).

An increase in production (Y) is not considered a realistic option for eliminating monetary overhang. By contrast, we can argue that the stabilization of the monetary system is a prerequisite for an increase in production and ensuring that the goods produced are not used to build up inventories but are instead sold in markets. Intuitively, also it seems plausible to assume that people are not willing to voluntarily increase their money assets (which would mean a fall in the velocity of money (V)) in a situation where their standard of living is relatively low and future consumption possibilities are very uncertain.

On the other hand, the quantity-of-money equation (7') clearly shows that stabilization and structural policies are connected via production. For example, privatization could increase the amount of goods available for markets and thereby also help to stabilize the monetary system. However, in a very unstable situation the government may hesitate to convert its real assets into money assets and in any case the privatization process is too slow to be able to help solve the acute problems of monetary overhang.

According to the quantity-of-money equation (7'), a rise in the price level and monetary reform are equivalent policies for solving the problem of monetary overhang. They have both been tried out in practice too. The most famous example of monetary reform is Germany after the Second World War. An example of the use of inflation to eliminate the monetary overhang is Chile in the mid-1970s.

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[9] It should be noticed that we are dealing with an underdeveloped monetary system where a decline in velocity is not an indication of the monetization of the economy.

[10] A good example of this is Romania in the late 1980s, when Kent cigarettes were widely used as a means of payments.

2.2.1 Inflation

As the quantity-of-money equation shows, the monetary overhang can be eliminated by an increase in the price level. To succeed, this policy option requires that the financial system is not prepared for inflation. If savings are indexed or interest rates can freely reflect inflation expectations, it is difficult to eliminate the monetary overhang by a rise in the price level.

It is, however, extremely difficult to implement a one-time increase in the price level because prices tend to continue rising after the initial increase. Thus, a planned one-time change in the price level can trigger a protracted inflation process. When households and enterprises become accustomed to living with inflation and especially when indexation systems start to develop, it becomes very difficult to stop inflation.

Particulary if the tax system is underdeveloped, a very high inflation rate tends to increase budget deficits and thus hinders the elimination of excess money supply (flow problem). The increase in budget deficits is related to the decrease in real budget revenue under high inflation, and in many hyperinflation cases it seems that the standard causality between inflation and budget deficits is reversed. Thus, the balancing of budget deficits requires that inflation is first dampened. Evidence of this so-called Oliveira-Tanzi effect can be found from European hyperinflations in the 1920s and from the experience of Latin American countries.[11]

It is also obvious that an inflation adjustment would lower the public's confidence in the reform programme. For example, in Poland after the initial price increases more than 50 per cent of all savings were still held on foreign currency accounts, which clearly demonstrates that people did not have confidence in domestic currency or in the government's reform policy.[12]

2.2.2 Monetary reform

The purpose of monetary reform is to reduce money supply (M) and bring it into a line with a stable price level. In principle, three different types of monetary reforms can be distinguished:[13]

- A nominal reform involves the introduction of a new currency unit without any change in the real values of monetary flows and stocks. The purpose of such a reform might be to eliminate a number of zeros, to obtain information

[11] See Franco (1990) on European hyperinflations and Bruno et al. (1988) on Latin American experiences.

[12] Edwards (1991), p. 12.

[13] Dornbusch – Wolf (1990), pp. 9-11.

about income and wealth distribution or to determine the legality of monetary assets.[14]

- The freezing of savings or their conversion into claims on the state.

- A confiscatory monetary reform whereby cash and/or savings are cut by some rate. The reduction is real because the rate used to reduce flow variables is more favourable than that used to reduce stock variables.

In the following we deal only with the last two types of monetary reform.

It is difficult to implement monetary reform because it is impossible to know the size of the monetary overhang or the "right" value of the velocity of money. If monetary reform is to be accompanied by a price liberalization, it is even more difficult to estimate how big the reduction in money supply should be. A reform which includes both monetary reform and price liberalization will influence not only the money supply but also the amount of goods available in markets (Y) and the price level (P). Because of the importance of price liberalization and its links to monetary reform and inflation adjustment, we will discuss it below in separate section.

Thus, there is no rule for determining how big the money supply reduction should be and so we have to assess the size of the reduction in relative terms: would it be better to have too big a cut rather than too small a cut? According to the quantity-of-money equation it is clear that, if the cut in money supply is too small, inflation will accelerate or it will be necessary to continue applying price controls.

Too big a cut in money supply would curb domestic demand and lead to a deepening recession but, on the other hand, it could be corrected, if needed, by a one-time increase in money supply.[15] Stringent monetary policy can also force enterprises to increase the supply of goods (Y) by running down their inventories, which would also alleviate inflation pressures.

2.3 Bad loan problem

It was noted above that there is another stock problem besides the monetary overhang, ie uncertain and non-performing loans of state enterprises. The new banking system inherited these loans from the old system and originally they were a result of soft budget constraints. We can be almost certain that in the new

[14] Poland has been planning to effect a nominal monetary reform in 1993.

[15] A one-time increase in money supply would increase the government's seigniorage receipts. However, the share of seigniorage receipts in GNP seems to be very significant only in the case of hyperinflation. In a normal situation or in an environment with high but stable inflation seigniorage receipts seem to have a lesser role. For example, when inflation accelerated in Bolivia in 1982-84, seigniorage receipts in relation to GNP increased to 10-15 per cent, compared to about 2 per cent before. In Brazil, inflation was rather high but stable in the early 1980s, and the ratio of seigniorage to GNP was 2-3 per cent; see, Vegh (1991), pp. 21-22.

environment enterprises will not be able to pay back a large share of these loans and so they represent a serious risk for the emerging financial system.

Monetary reform and inflation affect both the assets and liabilities in the balance sheets of banks. In the case of inflation the effect will depend on how assets and liabilities are protected against a rise in the price level (indexation, interest rates). However, the outstanding amount of these bad loans is so enormous that the problem is not amenable to solution by inflation or monetary reform alone. Thus, it is evident that government measures are needed to improve the asset side of the banks' balance sheets because otherwise the banks might go bankrupt or be forced to reduce new lending to the extent that a credit crunch becomes a serious threat.

In conjunction with the monetary reform implemented in Germany after the Second World War, the intra-bank Reichsmark-claims, the Reichsmark-claims against the Third Reich and the Reichsmark assets of the public sector were cancelled. To balance these measures and strengthen the assets side of the banks' balance sheets, new claims on the Länder were granted in Deutche-marks.[16]

2.4 Price reform

Prolonged regulation of prices tends to distort relative prices. A distorted price system was a problem in Germany after the Second World War. For the former Soviet republics it has been and continues to be one of the main problems they have inherited from the central planning system. Apart from its negative impact on the allocation of resources, a distorted price system compounds the problem of eliminating the monetary overhang through monetary reform or a one-time inflation. To illustrate how a distorted price system obstructs the elimination of the monetary overhang, we write out equation (7') again in disaggregated form.[17] Thus,

$$(7'') \quad V = (P_1 * Y_1/M) + \ldots + (P_n * Y_n/M).$$

Different indices can be used to depict price movements in different products (agricultural products, raw materials etc), different price categories (fixed prices, regulated prices and free prices) or different markets (official markets, black markets). Correcting a distorted price system means that different prices (P_i) must be multiplied by different coefficients. In principle, the correction can result in the general price level (P) decreasing, increasing or remaining unchanged. In practice, however, a price reform will always increase the aggregate price level. But, as we can see from equation (7''), the liberalization of prices means that, for example, black market prices must decrease at least in relation to other prices, which will thus limit the rise in the aggregate price level.

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[16] See Dornbusch-Wolf (1990), p. 26.

[17] Disaggregated formula is based on the idea that the total value of production is a sum of the value of production of different sectors.

Simultaneous implementation of price reform will make it more difficult to stabilize the monetary system but if the distorted price system itself is not corrected, the problems of monetary imbalance will re-emerge. This is one of the reasons why price reform (liberalization) was an essential ingredient of the German monetary reform after the Second World War and why it is a part of the stabilization programmes of the economies in transition.[18]

Furthermore, price liberalization increases the amount of goods available to the markets by increasing production and making it pay to reduce inventories. This helps to offset the excess demand caused by the monetary overhang and consequently diminish the size of the inflation or cut in money supply needed to eliminate the monetary overhang.

In the case of Germany after the Second World War, monetary reform and simultaneous price decontrol were critical preconditions for the subsequent strong production performance.[19] In the case of the economies in transition, however, the effect of price liberalization on production has so far been less evident. The main reasons for this is that the enterprise sector in these countries is highly monopolized and there is a severe lack of the institutions and traditions which are prerequisites for functioning markets. Taking into consideration these critical deficiencies and the time needed to rectify them, we can conclude that elimination of the monetary overhang and price reform are not sufficient alone to reverse the decline in production. They are, however, necessary conditions for getting these economies back on a sustainable growth path.

[18] Price liberalization is an essential element of orthodox stabilization programmes where the other basic elements are tough fiscal and monetary policies. A temporary price freeze is, on the other hand, one element of heterodox stabilization programmes where the other elements are typically exchange rate anchoring and income policy.

[19] See Dornbusch-Wolf (1990), p. 29.

3 The second phase of monetary stabilization: reduction of inflation

In practice, the elimination of the monetary overhang through inflation and simultaneous price liberalization will trigger an inflation process which is very difficult to cope with. Good examples of this are, for example, Chile in the 1970s and Poland in the early 1990s.

The reduction of inflation is an important element of any economic programme for a high inflation country because a high inflation rate, inter alia, tends to distort relative prices and hence the resource allocation mechanism, thereby impairing economic growth. To reduce the inflation rate the government has to select some intermediate target variables which are important for the inflation process and which can be influenced by the government's policy measures. In the real sector, the most obvious intermediate target or anchor is a balanced budget because protracted sizable budget deficits tend to generate excess money supply and hence higher inflation.

Having a real anchor (eg a balanced budget) may not, however, be enough to stop inflation process. Experiences from many countries show that besides real anchors we also need some nominal anchor or anchors for reducing inflation. In a formal sense anchoring means that by fixing one nominal variable (eg money supply, wages or the exchange rate) we can find a unique solution for a certain mathematical model of an economy.[20]

In the following, we will focus only on questions related to monetary stabilization and nominal anchors. Doing so we assume that real sector imbalances are under control so that a solid base exists for inflation stabilization. As already mentioned, stabilization of the real sector is a complicated and extensive task and thus beyond the scope of this article.

3.1 Nominal anchors

In practice, anchoring means that policy makers choose one or several variables which are important in explaining the inflation process and for which they can fix some target values. These intermediate targets (anchors) must be determined so that achieving them will result in a lower inflation rate.

Anchoring indicates that economic policy has been changed and that some concrete targets exist for the new anti-inflationary policy. The success of the new policy can be directly tested by comparing developments in actual figures with those in target values. In this respect, however, anchors differ from each other in that for some variables the information is more accurate and available sooner than for other variables.

A target value can be a fixed value (fixed exchange rate or interest rate) or a stable path (stable increase in money supply). The most frequently used nominal anchors are the exchange rate, the domestic interest rate or monetary aggregates.

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[20] See Bruno (1990), pp. 7-12.

In principle, wages and prices can also serve as nominal anchors, but in the case of the economies in transition a wage or price freeze will be troublesome at least in the initial stage of the transition process. In a more limited sense, indexation of public debt can in some cases be considered equal to anchoring.

3.1.1 The exchange rate as a nominal anchor

In stabilization programmes, the exchange rate is probably the most frequently used intermediate target for an anti-inflationary policy. Using the exchange rate as a nominal anchor involves pegging the exchange rate to some foreign currency or a basket of currencies and ensuring that its value is not adjusted for any difference between domestic and foreign inflation.[21]

There are some obvious reasons for using the exchange rate as a nominal anchor. First, a falling exchange rate is one of the best indicators of mismanagement in economic policy and everyone can observe exchange rate changes immediately. Thus, in an unstable environment, fixing the exchange rate is a clear way to demonstrate that economic policy has been changed. This kind of transparency is not so evident in the case of most other anchors. Second, a fixed exchange rate makes it easier to compare domestic and foreign prices and improves the functioning of the price system. A well-functioning price system can by itself reduce inflationary pressures and help policy makers to attain their targets.

An economic programme which relies on exchange rate pegging must also include the liberalization of foreign trade and payment flows (current account convertibility) because otherwise it is not possible to effectively link domestic prices to international ones. Foreign trade liberalization will also increase competition in the domestic market, which is an essential precondition in the fight against inflation. Without the liberalization of foreign trade and payments it is difficult to see how exchange rate pegging could help to stabilize the domestic economy. Liberalization of foreign trade has been a key element of, for example, the economic programme introduced in Chile in the 1970s and in Poland at the beginning of 1990.[22]

The main problem with pegging to the nominal exchange rate is that the inflation process cannot be stopped immediately and so the real exchange rate appreciates. An appreciation in the real exchange rate decreases the international competitiveness of a country and, depending on the inflation rate, leads sooner or later to balance of payments difficulties. A delayed adjustment of the nominal exchange rate gives rise to speculation against the currency and to ward off speculative attacks interest rates have to be kept at a very high level or exchange controls and trade restrictions have to be tightened. Ultimately, however, limited currency reserves and availability of foreign financing will force policy makers to devalue the domestic currency with potentially disastrous consequences for their credibility. In Latin America, the overvaluation of the domestic currency and

[21] Adjusting the exchange rate for inflation differences would be identical to anchoring through the real exchange rate.

[22] For a comparison of the Chilean and Polish cases, see Edwards (1991), Table 2.

resulting increase in regulation has been one of the major problems.[23] This is also a real threat in the case of the economies in transition.

One way to mitigate the pressure on the exchange rate is to implement a suitable large initial devaluation. In Poland, the zloty was devalued by 46 per cent at the beginning of the stabilization programme to the level of the black market rate and policy makers managed to keep it fixed until May 1991. In Chile, the peso was initially devalued by 85 per cent in 1973, but the exchange rate was not fixed until 1979, when the authorities decided to abandon the crawling peg system.[24] Nominal exchange rate anchoring was an essential part of the Polish programme and it can be argued that it helped to reduce inflation to double digit level sooner than, for example, in the Chilean case. On the other hand, it should be added that a fixed nominal exchange rate cannot alone halt inflation. Rather, other anchors or measures are needed as well.[25]

3.1.2 Domestic monetary policy targets

In principle, domestic monetary aggregates (M1, M2, M3) or interest rates could also be chosen as nominal anchors instead of the exchange rate. However, there are important limitations on the use of domestic monetary policy targets in the transition economies.[26]

As can be seen in the quantity-of-money equation (7), the effective use of domestic monetary aggregates as anchors presupposes that accurate data are available on money velocity and output. At least in the initial phase of the transition process such data will not be available because the statistical system must first be developed and there will, in any case, be breaks in the time series. In addition, all the parameters that are needed to determine domestic monetary targets will be highly unstable during the transition process.

Similar problems arise if we choose to target the interest rate. Here too the authorities would need to know, for example, what is likely to be the impact of price liberalization on inflation and inflation expectations so that they could assess how high a real interest rate would result with a given nominal rate. Besides, targeting the interest rate is difficult because the link between the interest rate and output during the transition process is very vague.

Domestic monetary policy targets can be used as intermediate targets despite the problems of forecasting. There is, however, a danger that implementation of the chosen strategy will call for a freeze in liberalization policies and an increase in rationing. An increase in rationing would slow down the reform process and reduce the credibility of the programme. This caveat, however, does not only

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[23] See Edwards (1991), p. 35.

[24] See Edwards (1991), Table 2.

[25] In the Polish case another nominal anchor was wage policy, which the government used to try to prevent a price-wage spiral from starting.

[26] For a critical view of using domestic monetary targets as nominal anchors in the economies in transition, see Bofinger (1991).

concern the use of monetary aggregates or the interest rate as nominal anchors but applies equally to a fixed exchange rate policy. An overvalued fixed exchange rate would also force the authorities to increase rationing.

3.1.3 Other anchors and supportive measures

One important element of the programmes aimed at combatting prolonged high inflation is incomes policy. In the extreme case this can mean temporary wage freeze (often accompanied by a price freeze), so that wages are used as nominal anchor for the economy. The problems associated with wage and price freezes nevertheless restrict their use to situations where relative prices are "correct" and where it is possible to reach agreement between the government, employers and trade unions on such measures. In transition economies, after the transition process has been initiated it is likely to take several years before relative prices have been corrected. Moreover, the institutional framework does not yet exist for incomes policy or for public support for a general wage freeze in the first years of transition.

On the other hand, a taxation-based incomes policy or direct wage controls in the public sector could be useful tools for anti-inflationary policies in transition economies. A taxation-based incomes policy is one where the government tries to limit wage increases by applying very high marginal tax rates. There are, however, some factors which make it difficult to implement taxation-based incomes policies in the economies in transition. First, in the initial phase of the transition the institutional basis for taxation-based incomes policy may not exist because of the lack of an effective tax collection system and, in general, the lack of tradition in taxation and making social contracts between the government, employers and trade unions. Second, the use of incomes policy early on in the transition process may preserve the old structures of the economy and inhibit the necessary change in the labour markets. Thus, the use of incomes policy could result in the continuation of the old tradition according to which the government bears the main responsibility in wage policy. Third, the use of taxation-based incomes policy requires that enterprises have hard budget constraints so that they cannot finance wage increases by "soft" loans.

Later on, it may become evident that to halt chronic, high inflation it is necessary to reach a social consensus among the major incomes policy parties on anti-inflationary wage policies. The experience of Chile, Mexico and Israel, for example, shows that incomes policy based on a social contract is needed to increase the credibility of the stabilization programme and to combat inflation.[27]

In the case of the economies in transition, as long as there continues to be a large public sector and more general incomes policy implementation is not feasible, the government should use direct wage controls in the public sector to support, for example, an exchange rate anchor and to maintain the inflation targets.[28]

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[27] For Chile and Mexico, see Edwards (1991, pp. 35-40). For Israel, see Bruno (1990, pp. 24-29).

[28] In addition to wage ceilings for the public sector, Bruno (1992, pp. 30) recommends price and wage controls for monopolistic non-tradable industries in the private sector.

To gain credibility for the anti-inflationary policies, it is essential that the public can trust that the government has no interest in continuing inflationary policies. Distrust may, however, emerge if the government's financing needs are sizable and people think that the government is trying to mitigate its debt service costs by allowing high inflation to continue despite having announced anti-inflationary policies.[29] These inflationary expectations can be reduced by indexation of the government's domestic debt. Under indexation, the government's debt repayments are pegged, for example, to a consumer price index or to an exchange rate so that the government's real debt burden is not reduced by inflation. This decreases inflation expectations and increases the credibility of the reform programme.

Usually, there are several factors contributing to inflation and no simple policy rule for combating it. The most important thing is, however, that fiscal policies are tight enough to ensure that the budget deficits will no longer be a source of inflation. The same applies to monetary policy. Other elements of anti-inflationary policies can include exchange rate anchoring, incomes policy and various other arrangements (for example, indexation of public debt) by which the government commits itself to tight budget policy and low inflation.

[29] Guidotti and Kumar (1991, p. 17) give a good example of why a government may be tempted to increase inflation rather than use tighter fiscal policies to reduce its debt burden. If the public debt is 25 per cent of GNP, then an unexpected inflation of 10 per cent would reduce the government's real debt burden by an amount equal to 2.3 per cent of GNP. To achieve the same result using fiscal policies would require, for example, that the fiscal situation improves by an amount corresponding to 0.6 per cent of GNP every year over a five-year period.

4 Concluding remarks

The Soviet-type socialist system was always more a political than an economic system, and one which in many ways belittled or misunderstood fundamental economic principles. As a result of these mistakes, the economies in transition inherited from the old regime, inter alia, a monetary system that had collapsed. Now, one of the first things the former Soviet republics have to do is to re-establish a functioning monetary system and restore the credibility of domestic currencies. To put this another way, the economies in transition have to re-establish the traditional functions of money (as a means of payment, unit of account and store of value).

In the former Soviet republics, a major part of the monetary overhang has been eliminated by the high inflation resulting from price liberalization in early 1992. The problem now is how to reduce the high rate of inflation, which at least in the rouble zone is approaching hyperinflation. Another serious problem in the monetary sector is the bad loans of enterprises and inter-enterprise crediting. The core of the problems in Russia and other rouble-zone countries lies in the fact that the budget deficits are not under the control of individual governments which means that even the first-phase flow problem has not yet been solved. At the same time, wage and price indexation practices are developing rapidly which makes it more difficult to cut the inflation process in the future.[30]

Up till now, the Baltic countries and Ukraine are the only former Soviet republics to have introduced their own currencies and which are trying to stabilize their economies independently of the policies in the rouble area. However, monetary reform alone is not enough to guarantee that the monetary sector will be stabilized and confidence in the domestic currency restored. Indeed, the need for prudent fiscal and monetary policies is only further accentuated. But though major problems still remain, Estonia, Latvia, Lithuania and Ukraine can now avoid many of the problems directly related to the rouble. On the other hand, the governments of these countries no longer have any excuses for their policies, as is still the case in the rouble zone republics.[31]

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[30] The continuing disintegration within the current rouble-zone makes it more difficult to implement the necessary decisions because the governments do not trust each other and it is still unclear which countries will stay in the rouble area.

[31] In June, 1992, Estonia introduced its new currency kroon and a currency board system, which does not leave much room for domestic monetary policy. Latvia is following a more traditional route but its monetary reform will not be completed until the new currency lat, introduced at the beginning of March, 1993, replaces the current Latvian roubles. Lithuania has suspended the use of the rouble but has yet to introduce its new currency, the lita. For the time being coupons are being used. Ukraine is clearly behind the Baltic countries in implementing economic reforms but in the mid-November they also suspended the use of the rouble. Up till now, only coupons are being used and the new currency, the grivna (hryvnia), is yet to be introduced.

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