Center for Social & Economic Research

The Nature of the Fiscal Crisis in Transition Countries

by

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1. Introduction

Fiscal stance is at the center of economic debate all over the post socialist countries. The most important issues that are more or less realized seem to be following.

1. To what extend will public sector budget deficits be monetized in the future i.e., do they eventually spell inflation?.
2. How can one reconcile the "twin deficits" i.e. the current account and budget deficit with the need for long run growth and the need for servicing the external debt.
3. Is it true, as argued by M. Friedman and R. Barro that the only relevant aspects of the budget are the volume and composition of public spendings on goods and services and that the choice of financing method is irrelevant?
4. Is a financial crowding out of private saving an issue of concern?
5. How do we assess the solvency of a government i.e. how do we evaluate the consistency of the government's spending and revenue plans with its outstanding debt obligations and its inflation objectives?
6. What are the structural and distributional effects of budget deficits?

It is not easy to solve these or similar problems in mature developed market economies. Trying to answer to these questions with regards to transition economies appears to be very hard work. Specially if these problems are to be placed within the framework of fiscal crisis. Therefore it seems sensible to start the analysis with describing the nature of fiscal stance in post socialist countries and then use the concept as a background for further more detailed questions.

2. Fiscal Crisis; Setting the Scene

The concept of a fiscal crisis is a multi-dimensional phenomenon. This seems to be of a special importance if the comparative analysis is to be applied. Taking account of some traditional measures of fiscal stance like the Public Sector Financial Deficit (PSFD) is not able to explain much. Also as some think as a superior while for others as mysterious and

mystifying measure of public sector financial transactions as the Public Sector Borrowing Requirement (PSBR approach) does not change the general picture1.The example is presented in table 1.

Tab.1 Budget deficit as a % of GDP

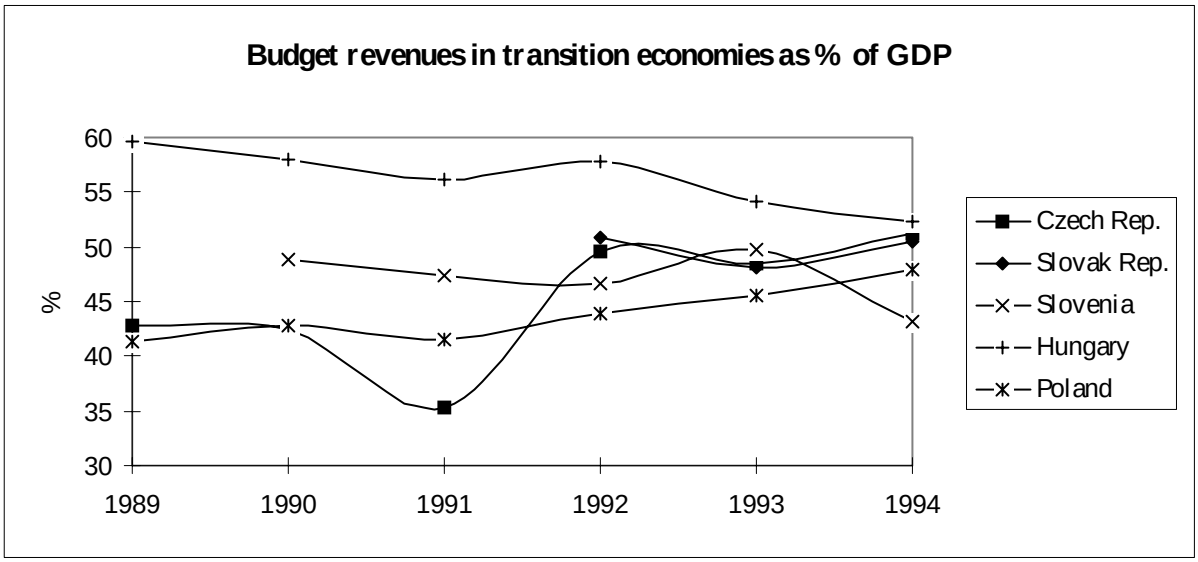
Country	1989	1990	1991	1992	1993	1994
Czech Rep.	0.4	1.2	-1.7	3.8	1.0	0.5
Slovak Rep.				-13.1	-7.0	-5.4
Slovenia		-0.4	6.3	0.2	0.4	-1.0
Hungary	-1.4	0.5	-2.2	-5.6	-6.4	-6.5
Poland	-7.5	3.0	-6.5	-6.8	-2.9	-2.5
Belgium	-6.5	-5.9	-6.8	-7.1	7.0	-5.4
Germany	0.1	-2.1	-3.2	-2.6	-3.3	-3.1
Greece	-16.6	-18.1	-14.1	-14.3	-16.3	-17.9
France	-1.3	-1.5	-2.1	-3.9	-5.7	-5.6
Italy	-9.9	-10.9	-10.2	-9.5	-9.5	-9.5
United Kingdom	-0.1	-1.5	-2.8	-6.4	-7.7	-6.0

With some exceptions the budget deficit in most advanced countries of transformation region does not differ significantly from the picture based on studying the budget deficit figures relating to developed market economies in Europe. Moreover, an impression appears that transition countries experience even greater fiscal discipline than those from the West.

Quite similar conclusion can be drawn from examining the size of the state (share of budget in GDP).

[1]See: Buiter W., Principles of Budgetary and Financial Policy, Harvester Wheatsheaf 1990, p7, 53-4.

Fig. 1



It turns out that practically all mentioned in Fig. 1 countries have already reached the West European standards of the degree of fiscalism (OECD average expenditure level - 51%, while for the West European countries - 55%). In this respect however some interesting pattern is replicated by majority of transition countries. Spending ratios quite drastically dropped in a number of countries following the onset of stabilization and liberalization program. 18 countries out of the sample of 26 transition economies decreased their total expenditure ratios at the outset of liberalization. It was due to reducing price distortions and subsidies. This drop however turned out to be a temporary achievement. The emergence of hard budget constraint on enterprises, the advances in privatization and restructuring in the firm and financial sector resulted in a substantial increase in cash benefit outlays. These increase have more then compensated for the reduction in enterprise subsidies. All these countries experienced the budget cost of rising unemployment and retirement or of consolidation of old enterprise arreas and bank recapitalization[2].

Let us now look at measures of current fiscal stance with respect to total and external debt and the ability of servicing the debt. From this point of view the situation is much more differentiated than before. At the outset of systemic transformation Hungary and Poland were highly burdened with the external debt that constituted a decisive part of the whole

[2]Barbone L., Polackova H., Public Finances and Economic Transition, November 1995

public debt. The remaining countries exhibited rather modest indebtness (former Czechoslovakia). Also in that case the domestic debt contributed to less then 10% of the total public debt. Since then the domestic debt has played more and more important role for all countries in question. As far as the agreements with Paris and London Clubs and the real appreciation of zloty have allowed to reduced the Poland's debt burden the tendency in this respect in all remaining countries is rather opposite.

Fig. 2

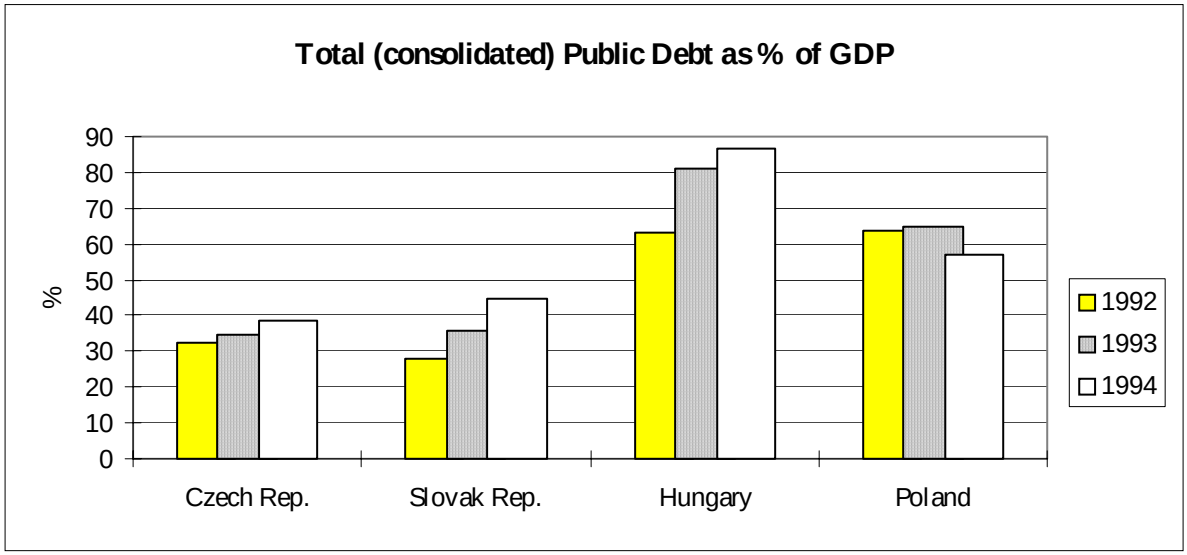


Fig. 3

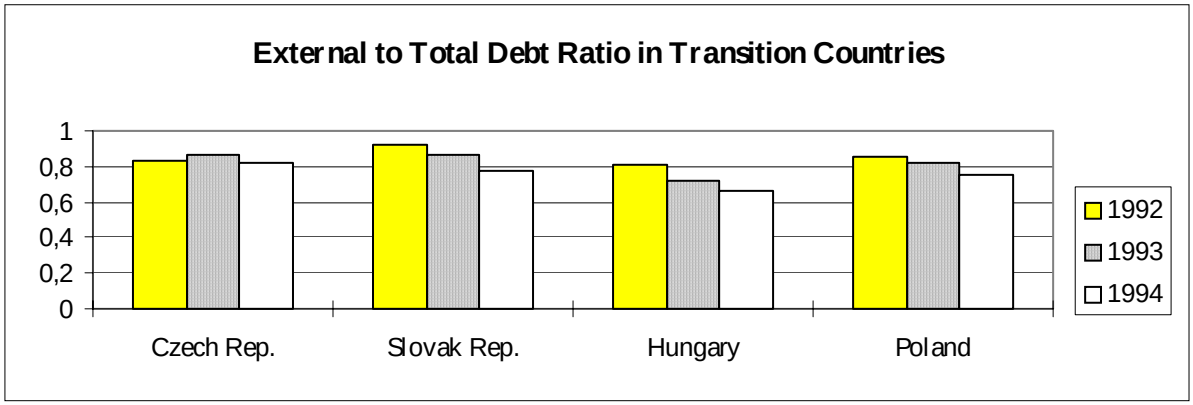


Fig. 4

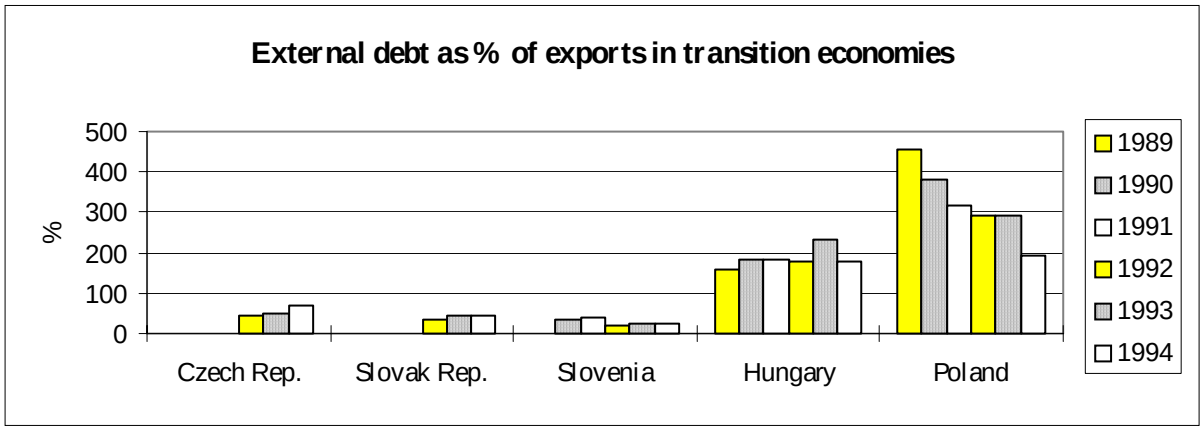
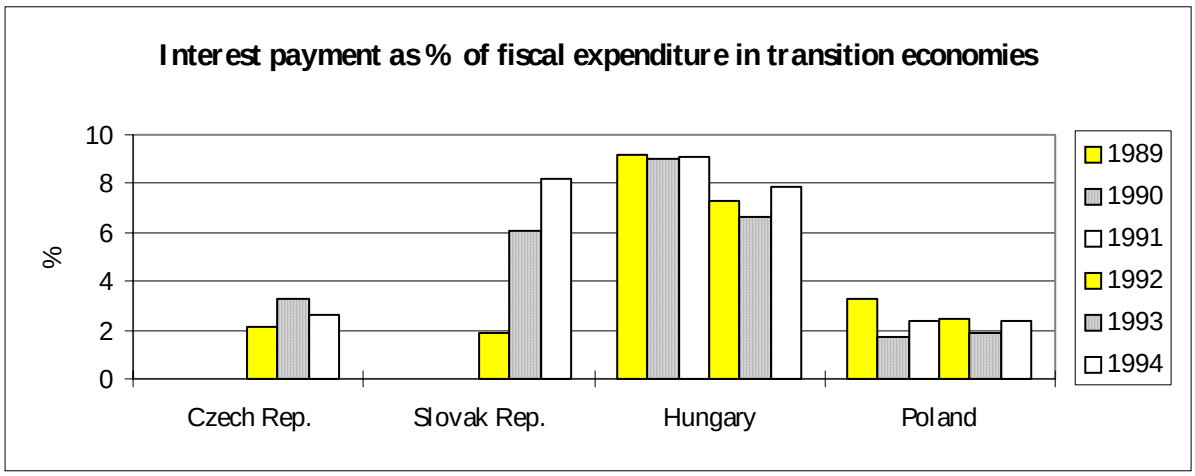


Fig.5



Trying to appreciate the scale of the fiscal crisis from the viewpoint of servicing the external debt (which as was shown above stans for the essential part of the whole public debt in Visehrad countries) is again very hard for drawing meaningful conclusions. These economies are much closer to fulfill (some even have already fulfilled) the Maastricht requirements with respect to both the current fiscal deficit and the Debt/GDP ratio.

It is obviously possible to enrich the set of specific measures describing the fiscal stance that could undermine the view of fiscal crisis at least in the most advanced transition economies. In order however to say something more sensible about criteria that could

include or exclude a given economy to or from area of fiscal crisis one must take advantage of three aspects[3].

1. All specific measures should be expressed in a relative manner to for instance GDP per capita or money deepening level. By doing this we will be able to classify conditions of functioning the economy in much more differentiated way. We will see the true or real differences among different countries.
2. We should rather be interested not in current values of fiscal conditions but in their present discounted values. This approach requires adequate knowledge about the processes that are likely to take place in the future. Therefore it is assumed high degree of rationality in expectations.
3. Third aspect concerns the integration of the economies in transition with the European Union. It is obvious that the mechanics of integration will work providing the newcomers do not diverge much in their fiscal structure. Otherwise it will be costly to the EU or the transition countries will experience a new kind of transformation recession and social and political problems.

3. Maturity Level and Fiscal Crisis

As it was stressed above traditional measures of fiscal stance like the Maastricht criteria can only be comparable basis for relatively similar economies of developed countries. As far as the transition economies are concerned one needs to modify the measures or add some new. First of all there is in many respects a huge distance between developed economies and transition ones. This makes the direct comparison rather difficult. The same figure may mean something else. For instance similar ratio of government spending to GDP in Visehrad countries and EU should be interpreted not as an achievement of Visehrad group but as a very important obstacle to join the EU. In addition the long

[3]This introductory analysis should be saupplimented by other conventional measures like unfunded government and banking liabilities. Unfortunatelly the data are across the transition countries are either not attainable or uncomparable.

tradition of suppressed inflation in reforming countries undermined the credibility of their home currencies. From this point of view there were considerable differences among particular countries. Similarly the development of financial market institutions does not coincide. The time span and determination in reforming are also important factors according to which transition economies differ among themselves.

It is then quite tempting to show the real distance between the fiscal stance of developed market economies and economies in transition. It is also equally important to set some criteria differentiating the deepness of fiscal crisis among the transforming economies.

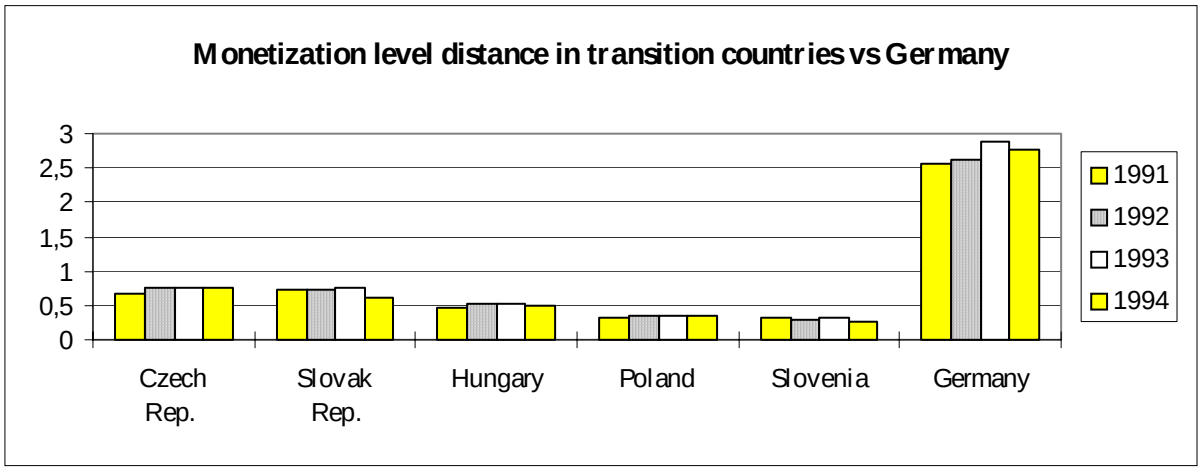
The first basis of maturity level is money deepening or monetization level. It shows the ratio between monetary aggregates like M2 and GDP. As a rule the more mature and stable the money market the higher the monetization level. Money deepening category is a form of money demand:

$$\begin{aligned} &\frac{M2}{P} = S_m Q \\ &\frac{M2}{P} = \mu\left(Q, R, \pi^e\right) \\ &\textit{which}\ \text{gives} \\ &S_m = \frac{\mu\left(Q, R, \pi^e\right)}{Q} \end{aligned} \qquad (1)$$

The first relation is the Fisher equality, second - the demand for M2 depending positively on real income Q, and negatively on nominal interest rate R and expected inflation as another measure of opportunity cost of holding money. The monetization index shows then the real demand for money for real GDP unit. This category reflects three important factors. First is the reputation of home currency, second is the GDP per capita level and third is the maturity of money market. High income countries exhibit high transaction demand for money. Therefore one may expect deeper monetization in richer countries. People who are accustomed to get rid of money due to high opportunity cost are very much reluctant to hold money balances. In that case the velocity of circulation increases diminishing the level of monetization. Finally if money market is immature both in institutional and instrumental meaning the money demand cannot be large.

Let us look at the differences among transition economies and Germany in this respect.

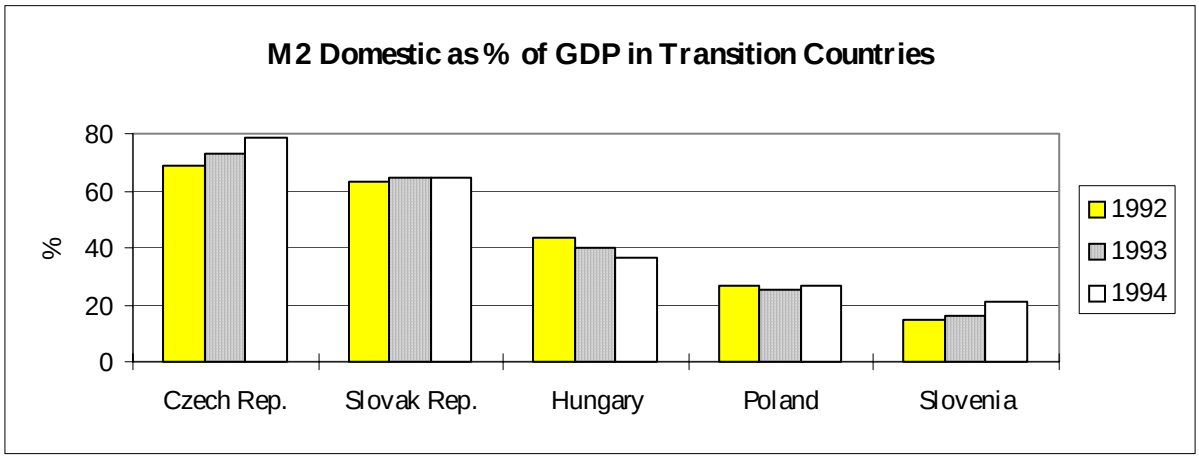
Fig. 6



German economy is several times more monetized than transition economies. Among them Czech and Slovak economies substantially exceed the rest and specially Poland's and Slovenian's ones. The striking thing is that during 1991-1994 there was very little if any progress in monetization. It shows how long distance is to be overcome by transition countries.

Taking account of the domestic part of M2 the differences are even more visible. Looking at the tendency the Hungarian economy appears to be the worse example. The Czech economy on the other hand has been experiencing the best results both in the level of monetization and with respect to the pattern over time.

Fig. 7



To what extent this relation states the development trap one can appreciate by expressing the monetization level as GDP per capita fraction. The rate of growth of the monetization level can be expressed as:

(2) $$m = \mu + n - 2(g + \pi)$$

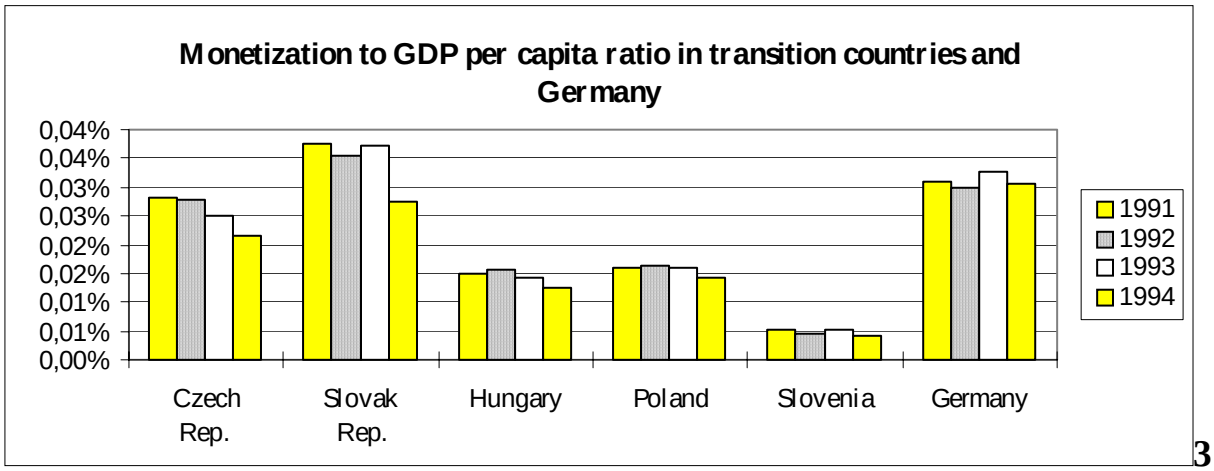
where μ is the monetary expansion growth rate, π - inflation, n - the growth rate of population and g real GDP growth rate. Assuming long horizon where the growth rate of monetary expansion is equal to inflation we get the following relation for increasing monetization to GDP per capita ratio:

(3) $$\mathbf{g} > \frac{\boldsymbol{\pi} - \mathbf{n}}{2}$$

Here we have some kind of development trap. It requires high real growth of the economy and low inflation. Thus, even if in the long run inflation is approximately a strictly monetary phenomenon, monetary growth is in turn a fiscal phenomenon. That is why the monetization level is in the long perspective a function of the fiscal stance.

Looking at fig. 8 both Czech and Slovak Republics seem to catch the stable economy standard. The second group is represented by Hungary and Poland while Slovenia diverge much in this respect. The explanation is straightforward. Poland has very long tradition of accute shortage inflation where holding money did not make much sense. Although the situation has drastically improved the custom has remained. It also might be the result of still high inflationary expectations that reduce the money demand. Likewise some underdevelopment of money market may be at work. Slovenia similarly to Poland experienced hiperinflation period as a part of former Yugoslavia. In addition to that it is situated close to war region where the demand for money is always low. Former Czechoslovakia on the other hand never experienced such an inflationary pressure like Poland. Macrofundamentals exhibited by this state were always much better than in any other part in that region. There was also little need for dolarization of the economy. In other words low monetization of Czech and Slovak economy results from relatively low per capita income and has practically nothing to do with currency reputation. Slovenian economy, on the other hand, that is the richest one from transition countries suffers mostly from the lack of currency credibility. Hungary and Poland seem to be in between.

Fig. 8

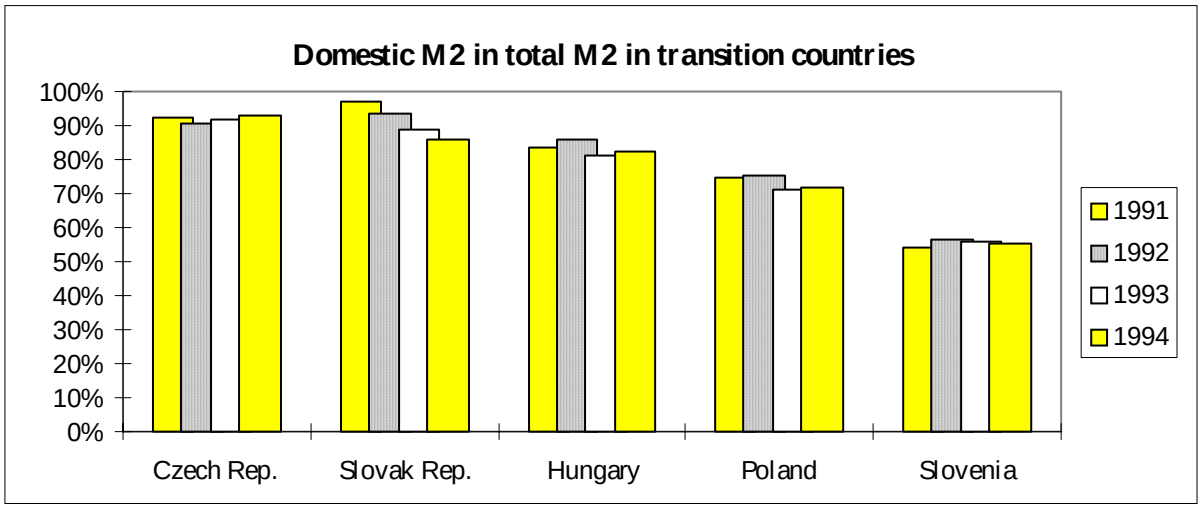


3

.1. Domestic Currency Credibility

As a first approximation of the domestic currency reputation one can use the share of domestic part of M2 in total M2 (Fig. 9). This seems to support the view of the currency credibility role in monetization of Visehrad economies. Also this measure show that Czech and Slovak M2 consisted during 1991-1994 of the largest share of domestic money in M2. Slovenia lies at the other extreme.

Fig. 9



Now the attention will be paid to the behaviour of the public in assessing the currency credibility from the viewpoint of currency portfolio. It is assumed that people behave in that respect in a rational manner . We also assume that the weak form of market efficiency holds. It means that if the exchange rates data that are publicly available and virtually costless to obtain ever conveyed reliable signals about future people would have learned already to exploit the signals.

On the basis of past exchange rates we will construct the optimal currency portfolio to provide the lowest possible risk for any given level of expected return.

Suppose a proportion denoted by λ is held in foreign currency denominated deposits, and the reminder 1-λ indicates the share of home currency deposits. The rate of return on such a portfolio will be:

$$R = \lambda R^f + (1-\lambda)R^h \tag{4}$$

where R^f and R^h mean return on deposits denominated in foreign and home currency respectively. The return on foreign deposits includes of course the interest rate and the rate of depreciation of the exchange rate, i.e.:

$$R^f = R^f_{dep} + e \tag{5}$$

The expected rate of return on the portfolio is then the weighted average of expected returns on the component deposits with portfolio proportions as weights:

$$E(R) = \lambda E\left(R^f_{dep} + e\right) + (1-\lambda)E\left(R^h\right) \tag{6}$$

The variance of the two currency portfolio is:

$$\sigma^2(R) = \lambda^2\sigma^2\left(R^f_{dep} + e\right) + (1-\lambda)^2\sigma^2\left(R^h\right) + 2\lambda(1-\lambda)Cov\left(R^f_{dep} + e, R^h\right) \tag{7}$$

Minimization of the variance with respect to the shares of both currencies in portfolio given the total return produces the following result:

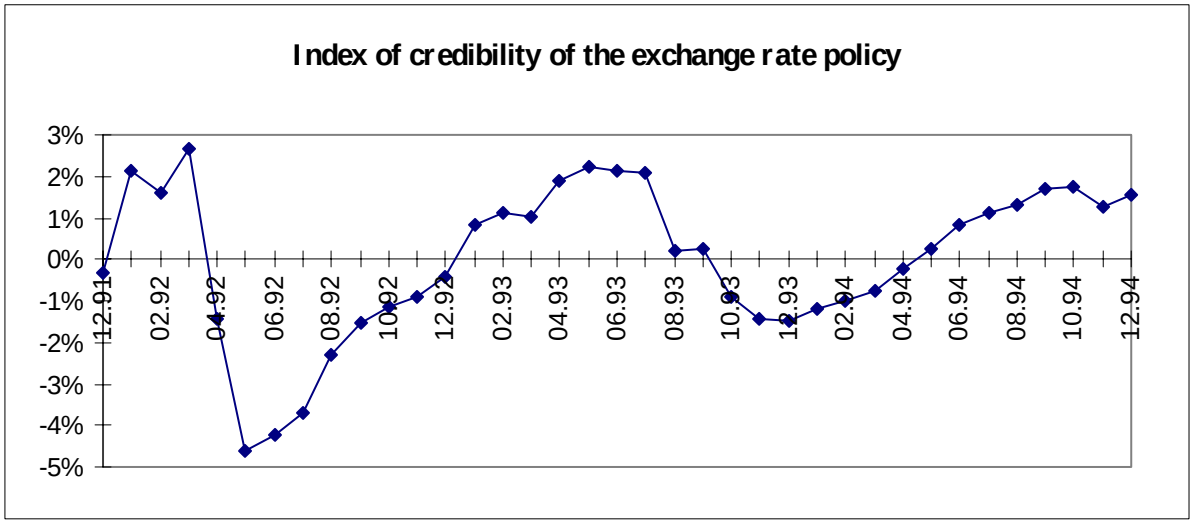
$$\lambda_{opt} = \frac{\sigma^2\left(R^h\right) - Cov(R^h, R^f_{dep} + e)}{\sigma^2\left(R^h\right) + \sigma^2\left(R^f_{dep} + e\right) - 2Cov(R^h, R^f_{dep} + e)} \tag{8}$$

The formula (8) shows the optimal share of foreign denominated deposits based on past interest rates and the past history of depreciation of the home currency.

By comparison the proportions one can draw a conclusion about the reputation the public put on domestic currency. If in a given period the actual share of foreign denominated deposits exceeds the optimal one something must have happened that undermined the credibility. As a result of this new unanticipated event people switched towards to foreign currencies to a greater extend then they should have while taking account of the all past information allowing to construct the optimal portfolio. If, on the other hand, the optimal share exceeds the actual one some new information caused gaining the credibility.

The interesting and quite unexpected result for Poland is shown in the fig.10. It looks like people followed closely the information regarding construction of the optimal currency portfolio. The discrepancies are quite insignificant and the actual portfolio structure seems to have chased the optimal one.

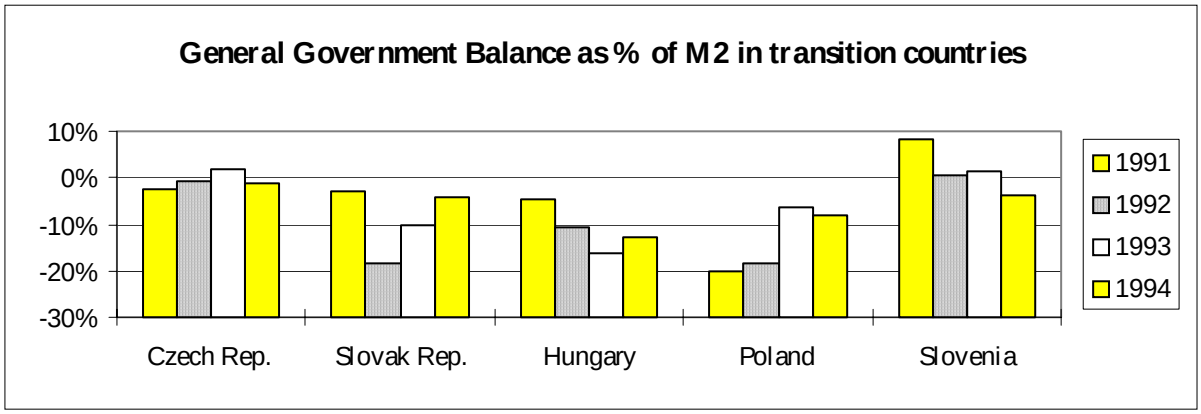
Fig.10



3.2. Relative Measures of Fiscal Stance

How important for the stability of economic processes is monetization of the economy one can show by expressing the government deficit or surplus in relation to broad money stock.

Fig. 11

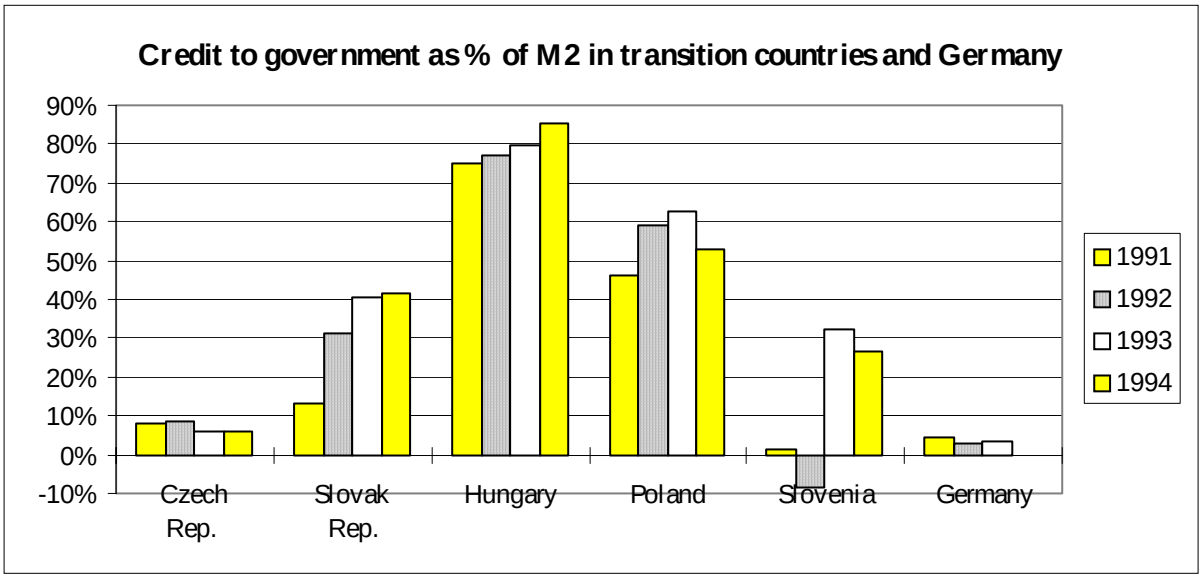


From that standpoint the Czech's economy is in the best position. To cover the deficit in 1994 Czechs needed to engage just 1.14% of M2. Slovenia had to use 4.06% of M2.

Slovak Rep. used 4.06%, Poland 8.20% and Hungary 12.99% of M2 stock. It is worth stressing that Slovak and Poland situation continued to improve while Hungarian deficit kept destabilizing the monetary environment.

The next measure of fiscal stance is the contribution of change in the government credit (net) to total domestic credit creation. Again only Czech's economy exhibits the "civilized" coefficient comparable somewhat to German's position. The Hungarian monetary system in turn is much more sensitive to what is happening in the fiscal sphere than the remaining countries. Additionally Slovak and Hungarian cases seem to be worsening over time. In 1994 Hungarian government had to use 85.25% of M2 increment for borrowing purposes. Polish government engaged 52.79%, Slovak - 41.46% Slovenian - 26.65% and the Czechs only 5.89% of total M2 change. This indirectly shows how the budget deficit financing influences the velocity of money and how much it contributes to inflationary processes.

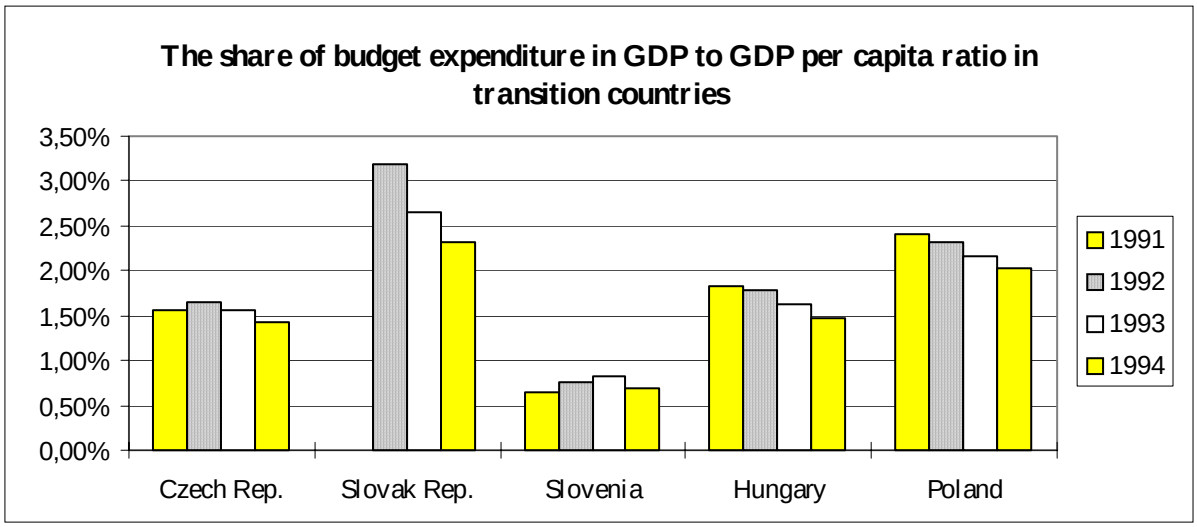
Fig. 12



The last approach shows the ability to long run economic growth. The history of quickly growing western economies after the SWW or fast developing Asian countries distinctly support the view the growth is associated with relatively low share of budget expenditures in GDP. As GDP per capita increases the state share in total expenditures has the tendency to raise. Here the highest potential seems to have Slovenia. The worst situation

relates to Slovak Rep. On the other hand Slovak economy made the most spectacular progress.

Fig. 13



The presented above some relative measures of fiscal stance prove the view that the fiscal problems are much more diversified across the transition region than one could conclude from the traditional approach. Generally the Czech's economy seems to be closer to EU standards than the rest of Visehrad countries. Slovakia and Slovenia follow the leader although differ among themselves much. Poland and Hungary that are slightly behind in fulfilling the fiscal stance requirements in many respects resemble one another. The important difference between them regards the fact that Poland's economy starting initially from less favourable circumstances has made bigger progresses showing the right tendencies in each of considered here dimensions.

4. Sustainability of Current Pattern of Government Spending

The basic question that will appear is if the transition countries are able to generate sufficient revenues that will cover their spending pattern. To examine the question let us start with the consolidated budget identity of the general government and the central bank.

(9) $$P\left(C^{g}+\Delta K^{g}\right)+RB-P\left(T+\rho K\right)-ER^{f}F_{res}\equiv\Delta H+\Delta B-\Delta EF_{res}$$

C^g is the government consumption, K^g the public sector capital stock, the ρ rate of return on public capital stock accruing to government net of depreciation, R the nominal

interest rate on the public debt, R^f the interest rate on foreign reserves F_{res}, H monetary base, B the stock of interest bearing government debt, E nominal exchange rate, P the GDP deflator.

Let now the non monetary liabilities of the public sector B-EF_{res} net of government capital stock denote by D, then

$$\Delta D = P\left(C^g + \Delta K^g\right) + RB - P\left(T + \rho K\right) - ER^f F_{res} - \Delta H \tag{10}$$

Expressing this relation relative to nominal GDP gives:

$$\frac{\Delta D}{PQ} = \frac{C^g - T}{Q} + R\frac{B}{PQ} + \left[\frac{\Delta K^g}{Q} - \rho\frac{K}{Q}\right] - \left[R^f \frac{EF_{res}}{PQ} + \frac{\Delta H}{PQ}\right] \tag{11}$$

where Q is the real GDP.

The debt burden consists then of four parts. The first is the primary deficit of the general government. The second component is the debt service. Next part comprises the net increment of the public sector stock diminished by the dividends from state owned property. Finally there are financial receipts from the foreign reserves and the seigniorage revenues. If we put some limit on the debt-GDP ratio which means that $(\Delta D/PQ)=0$ then the primary deficit relative to GDP takes the following form:

$$\frac{C^g - T}{Q} = \left[\rho\frac{K}{Q} - \frac{\Delta K^g}{Q}\right] + \left[R^f \frac{EF_{res}}{PQ} + \frac{\Delta H}{PQ}\right] - R\frac{B}{PQ} \tag{12}$$

In other words for any given level of the debt burden different levels of primary deficits-GDP ratios are possible. From that point of view several special cases can be distinguished.

1. Higher level of the primary deficit relative to GDP is attainable if the privatization revenues are devoted to finance the government consumption. If the public sector capital stock is being sold to the private sector then $\Delta K^g<0$. The likely effect of the partial privatization in transition countries is that the rate of return on the remaining assets in hands of the government may increase. This is so because by selling shares of public enterprises to the private sector the efficiency of enterprises partly owned but no longer directly controlled by the state is very likely to raise. At the same time the government may also experience the capital gain from the remaining part of the

private sector capital stock. These two effects of privatization more or less offset the losses bringing about by the drop in state property which may tempt to further enlargement of the primary deficit. Once however the government consumption is increased it will probably have to be remained. On the other hand the privatization receipts are not inexhaustible. Therefore this source of financing the government spendings will have to be replaced by either bond financing or higher seigniorage. Both solutions undermine the credibility of government because of additional crowding out effect and/or higher inflation.

2. The additional primary deficit can also be financed from effects of mistakes in export promotion policy. Within the framework of fixed exchange rate regime the revenues from increasing stock of international reserves and exchange rate policy may allow to spend more. Growing foreign reserves increase however the total money supply. That may exert a downward pressure on the interest rates. Two effects are possible. Firstly, lower interest rates bring about higher demand on goods and services including growing demand on imports. Secondly the capital inflow might be hampered or even reverted to net capital outflow. In both cases the international reserve stock shrinks. In order for the export to be sustained one needs to lower the primary deficit i.e. to increase the government saving. This however contradicts the initial goal of increasing the government consumption. The additional effect of continuing this very pattern of spending is higher inflation which means higher nominal interest rate and larger cost of servicing the debt.
3. Under the floating exchange rate the export promotion policy appreciates the domestic currency. The interest rate parity makes the domestic interest rate be lower. This reduces the cost of debt servicing increasing at the same time demand on goods market. Resulting from these two facts higher demand on imports depreciates the exchange rate and bring the whole system back.

In other words in any case that involves using temporarily obtained funds for current government spendings requires in the long run more intensive borrowing and/or using seigniorage.

Now we are in the position to clarify the intertemporal choice by using simplified model. Rational economic agents take into account not only the current budgetary situation

but above all the future state of nature. The problem that appears in this respect is the solvency issue as the base for credibility assessment. In principle there is a question of repaying the debt from future flows of government revenues.

The simplified form of budget constraint for general government is:

$$B_{t+1} \equiv (1+\Sigma_t)B_t + G_t - T_t - \Delta H_t \tag{13}$$

where G represents total government spendings. Today's debt is then:

$$B_t^* = \frac{B_{t+1}}{1+\Sigma_t} + \frac{P_t[T_t - G_t]}{1+\Sigma_t} + \frac{\Delta H_t}{1+\Sigma_t} \tag{14}$$

which means that it consists of discounted values of tomorrow's debt, primary surplus (deficit) and money creation. Using the same procedure for the stock of debt in time t+2, t+3 and so and substituting all these relations into (14) we end up with the following equation:

$$B_t^* = \frac{P_t[T_t - G_t] + \Delta H_t}{1+\Sigma_t} + \frac{P_{t+1}[T_{t+1} - G_{t+1}] + \Delta H_{t+1}}{(1+\Sigma_{t+1})(1+\Sigma_{t+2})} + \ldots + \frac{P_{t+\Theta}[T_{t+\Theta} - G_{t+\Theta}] + \Delta H_{t+\Theta}}{(1+\Sigma_{t+1})\ldots(1+\Sigma_{t+\Theta})} + \tag{15}$$
$$+ \frac{B_{t+\Theta+1}}{(1+\Sigma_{t+1})\ldots(1+\Sigma_{t+\Theta+1})}$$

where all right hand side variables are discounted. The initial debt is then equal to present discounted values of all future surpluses and discounted values of all future seigniorage. The rate at which the economic units evaluate the future flows depends on the today's knowledge about the future economic performance. Therefore it is likely that the evaluation of the public debt based on this set of information may exceed its current level i.e.

$$B_t^* > B_t \tag{16}$$

The opposite situation is also plausible.

Let us now specify some more important cases where the current and discounted value of the public debt may diverge.

1. *Unpleasant monetarist arithmetic*. As we know the deficit covered by selling the debt may take place even though the primary deficit remains unchanged (as it has been in Poland since 1993). The possibility however arises that if the real interest rate on the government debt is higher then the growth rate of the economy the so called Ponzi

scheme according to which government attempts to service the debt by issuing new debt may take place At some point the public might refuse to hold more such government liabilities because of the doubtful ability of the government to service the debt. Then the government will have to switch into money financing [Sargent T. Wallace N][4] . The deficit will then be eventually covered with inflation tax. That case is of a special importance for the transition countries having the option to be included to the so called convergence club.

To see the long term consequences for the growth let begin with the household budget constraint which says that the disposable income net of consumption equals the accumulation of money and debt.

(17) $$PQ_d + RB_{-1} - PC = \Delta M + \Delta B$$

where Q_d is the real disposable income net of debt interest accrued and real consumption C. After some calculations we end up with the following relation:

(18) $$\left[Q_d - C + r\frac{B_{-1}}{P_{-1}} \right] - \left[\frac{B}{P} - \frac{B_{-1}}{P_{-1}} \right] - \pi \frac{M}{p} = 0$$

where r is the effective real interest rate on public debt, π - inflation rate which in the long run is assumed to be equal the money growth rate. Note that the real private savings must be equal to the change in the real value of debt plus the inflation tax. In other words if people want to maintain real value of their money balances they will have to sacrifice some part of savings in the form of inflation tax. In the long run private savings stand for the essential basis for investment. The foreign financing by running permanent current account deficit is not possible. In other words if economic entities appreciate the whole set of information regarding the future economic performance in such a way that the future inflation tax will substantially reduce the ability to economic growth the present discounted value of government debt exceeds its current level undermining the economy's credibility.

[4]See their article: Some Unpleasant Monetarist Arithmetic, Federal Reserve Bank of Minneapolis Quarterly Review, 1981.

2. *Privatization and structural changes*. Crucial fiscal problem for practically all transition economies is the social security system. In the long run this problem can be resolved through the privatisation process. However if the privatization receipts are perceived to finance the current and future deficits instead of financing structural changes that could alleviate the future pressure on budget the expected level of public debt may increase. Also in that case the same mechanism will work. Economic units will have to evaluate the ways of financing the future deficit which in any case entails reduction in savings as a source of future development. The same effect will take place if the privatization is going to slow down or if it takes the form of quasi state economy etc.

3. *Unfunded government liabilities*. This problem is of a special importance in transition countries. During the socialist period the financial sphere was totally subordinated to real one. Systemic changes showed that a bulk part of previously granted credits were misallocated. The banking sector found a large part of its assets as bad. In some countries like Poland the process of recapitalizing the banking sector has taken place. The government gave to the banking sector the so called restructuring bonds. Furthermore, some credits financing investments undertaken by the state sector enterprises are still guaranteed by the government. If then in the future the restructuring of the real sphere goes in wrong direction the costs of the whole operation will have to be covered by the budget. Similar repercussion might appear due to necessity of restructuring some regions (e.g. Silesia) or some sectors like agriculture.

In other words rational economic agents create their own view on budgetary situation depending on kinds of macroeconomic policy that is going to be performed, the government attitude to structural changes, the perception of the development of political scene etc. All these factors are taking into account for evaluation of discounted value of budget deficit and public debt.

5. The Integration Framework of Fiscal Crisis

A decade ago, Central and Eastern European countries were isolated economically from the western economies and integrated among themselves through the Council for Mutual Economic Assistance (CMEA). Now the CMEA no longer exists and the whole region is more or less disintegrated. For any form of integration with the developed market economies some prerequisites must be fulfilled. Most of necessary conditions seems to have been achieved at least for Visehrad countries. All these countries have internally convertible currencies, market clearing prices, eliminated or substantially reduced subsidies and sufficient price sensitivity of excess demand (M.J. Fry, P.J.N. Sinclair)[5]. Much difficult to fulfill is however to gain the credibility of fiscal situation.

The economy of low reputation has little if any chance to integrate with the EU because the integration process will cost much either the already integrated economies, the newcomer or which is most likely both sides. Therefore it is worth looking at some aspects of credibility in this respect.

Credibility is rather complex phenomenon. It appears in many dimensions. Depending on what target one wants to achieve different aspects are taking into account. For instance if the government policy with respect to inflation looses its reputation at the same time there might be quite strong confidence that the exchange rate policy is going to be credible. Such a situation results from relatively different appraisal of investing in government bonds or assets denominated in foreign currencies. The other example is the interest rate credibility. If there is a risk of a negative real interest rate people might assess switching from home currency deposits to, say, stock exchange to be more profitable. In other words looking at what kind of risk is attached to given sort of activity we are able to derive a conclusion how the current economic policy and general situation is perceived. This is the basic way of appreciating different aspects of credibility resulting from fiscal stance.

Moreover the reputation is also a function of the time span one wants to be involved in economic activity in a given country. The situations marked above looks in a different way

[5]See their paper: Monetary Integration of Central and Eastern Europe: How to proceed?, International Finance Group University of Birmingham 1995.

if the long run is concerned since many kinds of long run risks are taking into account simultaneously. If there is a long run danger of devaluation the behaviour relating for instance to portfolio investment will be quite different from the speculative short run portfolio investments. In general the long run consequences are much more associated with one another than in the short run case. Then the market fundamentals seem to be in work. Furthermore, the long run perspective is also very much sensitive on political and social issues which are difficult to measure.

5.1. Interest Rate Parity

As a broad measure of how the economy is perceived we can use the interest parity concept according to which the difference in interest rates among two countries is covered by expected appreciation (depreciation) of domestic currency vis-à-vis the foreign currency:

$$(19) \qquad R - R^f - \frac{\Delta E^e}{E} = 0$$

Taking into account the actual depreciation (appreciation) instead of expected one we can compare actual return on home and foreign financial assets i.e.

$$(20) \qquad R - R^f - \frac{\Delta E}{E} = \eta$$

Two cases are possible:

1. $\eta<0$, which means that the return on foreign assets exceeds the return on domestic assets. The difference can result from the lack of credibility of the foreign country.
2. $\eta>0$, which indicates that the foreign investors did not take advantage of the arbitrage possibility due to the lack of home country credibility.

Fig. 14

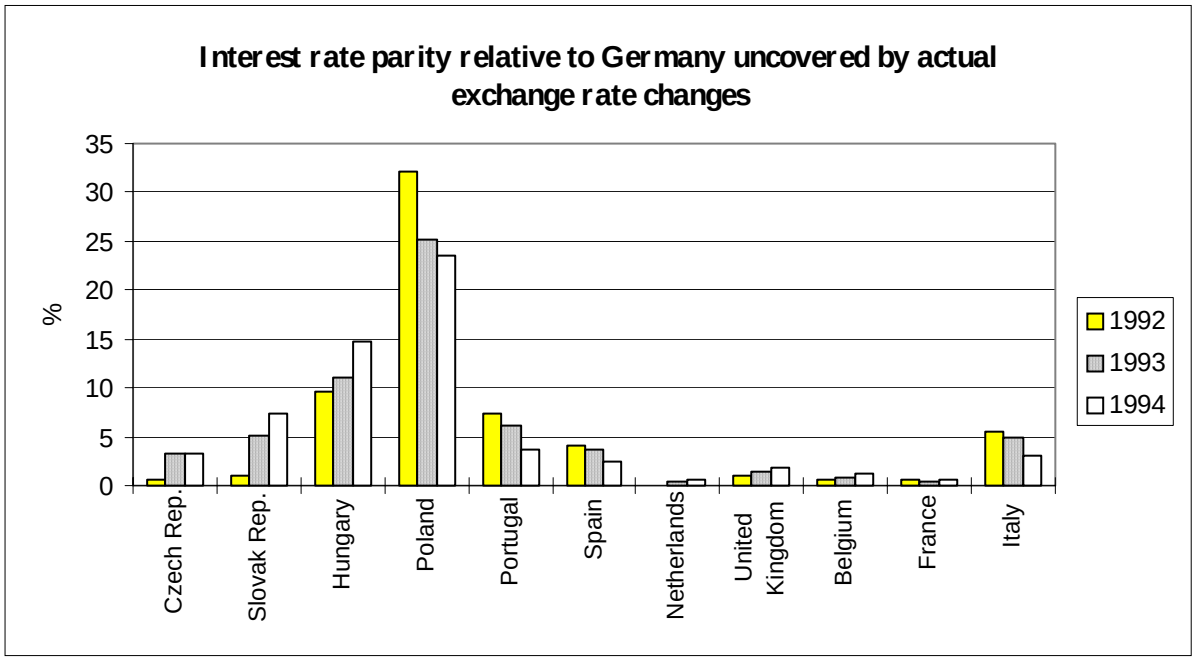


Fig.15 shows the differences in credibility assessment relative to German's economy. As we can see there are three groups of countries. The first group encompasses the most stable and credible Western countries like United Kingdom, Belgium, France and Netherlands. The second group is composed by some less credible and stable Western economies like Portugal, Spain, Italy but also the most credible transition countries i.e. Czech Republic and Slovak Republic. Hungary and Poland represent the third group of countries. Here the credibility is far from being accepted as members of EU. Between these countries however there is an important difference. Poland seems to have been gaining credibility year by year. Contrary to Poland Hungary have been loosing the reputation.

5.2. Macroeconomic Policy Credibility

To check if the fiscal policy is perceived as credible i.e. if it is restrictive enough to carry on stabilization of the economy one may make use of the term structure of the treasury bills interest rates and some interest rates burden with risk premium as the interbank deposit interest rate. Since the inflation risk and required real return can be assumed as equal in both cases the difference in the interest rates measures the default risk in the banking system. This kind of risk depends on two elements. First it is a specific factor risk that can be boiled

down to the maturity of the banking system (quality of banking supervision, management, procedures being used in the selection process of credit applications etc.). Secondly, the risk is associated with the macroeconomic policy restrictiveness. Given the first kind of risk the looser the macroeconomic policy the lower the risk of the interbank deposits. This is so because the insolvency risk of the debtors tekes the government (by softening the firms budget constrain) while the insolvency risk of creditors (banks) shares the budget and/or the central bank (by recapitalization of banks from budget sources or alleviation of refinancing rules by the central bank).

Let Θ_t^i be the annualized i-th month interbank deposits interest rate and R_t^i represent the annualized i-th month treasure bill interest rate, then the term structure of both interest rates can be shown as follows:

$$(21) \qquad \begin{aligned} \Theta_t^i - \Theta_t^j &= \left(E\pi_t^i + r_t^i\right) + \rho_t^i - \left(E\pi_t^j + r_t^j\right) - \rho_t^j \\ R_t^i - R_t^j &= \left(E\pi_t^i + r_t^i\right) - \left(E\pi_t^j + r_t^j\right) \end{aligned}$$

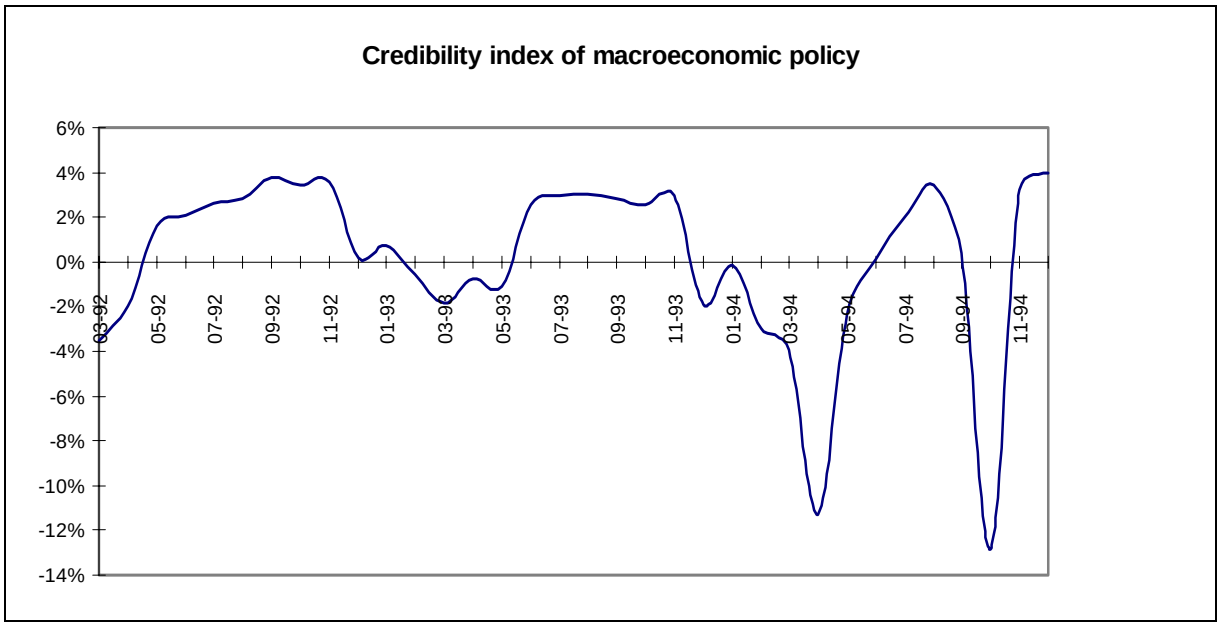
where i>j and p is the inflation, r - the required real interest rate and r the risk premium of interbank deposits all expressed in the annualized form. Deducting these two equations by sides we get:

$$(22) \qquad \left(\Theta_t^i - \Theta_t^j\right) - \left(R_t^i - R_t^j\right) = \rho_t^i - \rho_t^j$$

The following two cases can be distinguished:

1. If $\rho^i_t - \rho^j_t > 0$, then the increased level of macroeconomic policy restrictiveness is expected. The risk premium of i month interbank deposits exceeds the analogues risk premium of j month interbank deposits. The economic units expect then that both fiscal and monetary policy will be tighter in the longer run then in the short run and consequently neither the government nor the central bank is going to share the risk the banking system experiences.
2. If $\rho^i_t - \rho^i_t > 0$, looser policy is expected.

Fig.15



Taking for instance 12 and 3 month interest rates the credibility of macroeconomic policy restrictiveness for Poland looks like in fig. It is worth noting that since the second half of 1992 till November 1993 the economic subjects expected rather restrictive macroeconomic policy. Since December 1993 and for practically the whole 1994 the opposite opinions prevailed. Also the variability of the credibility index is much higher after 1993. This may suggest inconsistent views on this issue.

6. Conclusions

The evaluation of the deepness of fiscal crisis in transition countries requires using non traditional measures and approaches. Short history of market rules entailing immature and underdeveloped markets does not provide objective and comparable signals one can use in appreciating the fiscal stance. Therefore some indices that can be calculated and evaluated from this standpoint have to be supplemented with analysis of a qualitative nature. The actual state of fiscal situation requires considerations on possible future effects of current macroeconomic policy, today's attitude towards the direction and deepness of economic reforms, understanding the political environment etc. All these categories should be taken into account while discounting the future development and its impact on budgetary situation. All transition countries apply for being members of European Union. Standards and requirements to be fulfilled by applicants determine in many respects the reform

process. Thus the credibility of transition economies seems to be a kind of additional criterion that one must include while examining the fiscal crisis issue.