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Joanna Siwińska

Public Debt Structure and Dynamics in the Czech Republic, Hungary, Poland and Romania

Warsaw, 1999

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Abstract

This paper attempts to consider in a systematic way the developments of the public debt in the Czech Republic, Hungary, Poland and Romania during the 1990's. After a brief outline of the public indebtedness of the four countries before 1989, it examines the public debt dynamics after 1990 and tries to capture its main determinants: to what extend the changes in the public debt ratio to GDP were caused by fiscal policy as opposed to other factors, like the difference between the growth rate of the economy and the effective interest rate on debt. The structure of the public debt is shown and main changes are summarised. The paper also tires to assess the implications of the countries' indebtedness to their further fiscal sustainability.

I. Introduction

I. 1. Outline

The main goal of this paper is to present and compare the stock and structure of the public debt in four Eastern European countries: Czech Republic, Hungary, Romania and Poland. The outline of the paper is as follows: Section I presents a brief summary of the economic theory regarding the influence of public debt on the economy, Section II discusses the debt developments under central planning, Section III contains the statistical material on the stock and dynamics of public debt in the four countries in the 1990's, Section IV describes the main factors that have exerted an impact on the level of indebtedness during the 90's, and Section V characterises the structure of domestic and foreign debt. Section VI contains conclusions.

I. 2. Macroeconomic effects of public debt

The fiscal policy indicators – fiscal deficit, public debt, the cost of debt service – are often at the centre of attention of policymakers, as these indicators reflect the soundness of fiscal policy, which is a necessary condition for macroeconomic stability and long run growth.

The area of fiscal policy is of especially great concern to the countries of Central and Eastern Europe. As these countries prepare themselves to become members of the European Union, they must undertake many reforms aiming at convergence to the economic level of the developed countries. Those reforms require large fiscal outlays, which will cause serious fiscal tensions in the transition economies, many of which are already coping with problems of extensive fiscal deficits and debt burdens. At the same time some of these countries are aiming to meet the Maastricht convergence criteria that will allow for an accession to European Monetary Union in the future. The compliance with the necessary reforms on one hand and fiscal sustainability and Maastricht criteria on the other poses a serious challenge for the transition economies.

The issues of fiscal deficit and debt are not absent from policy discussions also in the developed countries. Awareness of the relevance of these problems to the Western economies has been raised by the generally increasing debt ratios in the industrial countries since the 1980s which poses questions of the impact of deficits and debt on economies and the sustainability of further expansionary fiscal policy.

Although much has been written on the issues of fiscal deficit and public debt, there is still no agreement in the theoretical discussion on the effects of government debt on

the economy. The theory indicates, that the effect of public debt will depend on whether consumers will view the debt as a net wealth (see Faruqee at.al, 1996).

If people view the government debt as net wealth, they will raise their consumption. Thus in the short run debt will stimulate the economy. In the longer run however, the increase in the public debt will cause the ratio of national savings to decline, which will drive up the real interest rate and change the composition of output, and in particular, crowd out private investment. This will depress the steady-state capital-labour ratio and long run growth. Hence, according to this view, which may be called a classical view, the effects of government debt are grave for long run growth. The classical school also holds, that debt has a distribution impact, increasing the consumption of the existing generation at the expense of future generation, who will inherit a higher tax burden and will be left with smaller capital stock and less output.

But if the generations are linked to each other by altruism and people are rational, then the government debt will not be viewed as net wealth, but as the equivalent to tax financing. This thesis is the centre of the Ricardian Equivalence Theorem. The explanation is quite simple. Debt implies future taxes with the present discounted value equal to the debt; therefore if agents recognise this equivalence and care about their children, treating them as extensions of themselves (this is the equivalent to saying, that agents have infinite horizons), then their consumption will be unaffected. Since debt is merely a postponing of taxes, the individuals will not perceive the government's refinancing scheme as altering their lifetime budget constraint in any way and therefore their maximisation problem will not be changed. The only thing that changes is the saving behaviour of individuals; because disposable income is temporarily increased by the postponing of taxes, but consumption is unchanged, agents save additional income when a government issues debt, which in the future will be used by them or their children to pay the future tax liabilities. This implies that the level of national savings is unchanged: the decrease in government saving is offset by the increase in private saving. Therefore, because the consumption and national savings are unchanged, the debt/tax choice is irrelevant and debt has no real effects on the economy.

Although intellectually interesting, it has been shown, that the assumptions underlying Ricardian Equivalence are unlikely to hold in the real world. The main conditions behind the Ricardian Equivalence are: successive generations are linked to each other by altruism, capital markets are perfect, consumers are rational and farsighted, taxes are non-distortionary, the generations do not have systematically different marginal propensities to consume; it is obvious that these assumptions do not entirely hold.

Strict Ricardian equivalence is dismissed by most economist, but some argue the real effect of government debt lies somewhere in between the predictions of both schools,

lowering the steady state capital and retarding growth, but to a lesser extent than predicted by classical economists.

Another point in the discussion of the effects of government debt was brought up by Sargent and Wallace (see Sachs 1993). They pointed out, that debt financing in the long run may be inflationary. The argument is as follows: if a government builds up an excessive debt burden, that becomes too large to finance through taxes or more borrowing, the n the only way for the government to meet the payments is to print money. In that case debt financing only postpones money financing. If rational economic agents perceive the debt burden as excessive, they will assume that today's debt implies a large growth of money stock and inflation in the future. The expectations of inflation will fuel present inflation- paradoxically, a restrictive monetary policy, which allows for the expectations of higher interest rates in the future and large costs of debt servicing, can be more inflationary than monetary policy that accommodates fiscal policy. This is however not an inevitable consequence of bond-financed deficits. As Sachs and Larrain (1993) have pointed out, debt financing by itself does not allow the government to escape inflation, but it gives time to adopt other measures, that may enable the government to avoid it.

To sum up: government debt may raise the interest rate, fuel inflation, depress capital-labour ratio and harm long run growth. To that list one must add the specific effects of external debt, which redistributes income from domestic to foreign citizens. Additionally, if the external debt is excessive it may lead, especially together with current account imbalances, to a sudden foreign capital flight and serious financing crisis that can harm international creditworthiness, stability and growth.

This grave list should not however lead to a conclusion that public debt is all evil. As long as it is not excessive and does not burden the economy with large costs of servicing it, debt financing can exert a positive impact on the economy. Government borrowing raises funds, that can enhance growth and promote the welfare of citizens, if spent on productivity-increasing investments, that complement and not compete with the private sector (like investments in primary education or physical infrastructure). Another point in favour of government borrowing is that many economies, among them economies in transition, have large investment needs but domestic savings are often insufficient. In such cases external finance, including government borrowing abroad, has been helpful by disentangling domestic investments from domestic savings and also by opening the economies to the world-wide collection of financial instruments, that allows a country to distribute risk and lower borrowing costs.

Therefore, although public debt undoubtedly has negative consequences for the economy, but as long as it is not excessive – does not question the ability of the government to honour it and does not strain the fiscal balance with servicing costs – it provides funds,

that can be used on welfare-promoting investments and the implementation of the necessary reforms, needed for the effective functioning of the country.

Before turning to the analysis of the public debt of the Czech Republic, Hungary, Poland and Romania in the 1990's, it is worthwhile to consider debt developments in those countries before 1989, as the debt burden inherited from the previous regime has significantly determined the developments in indebtedness during the transition period.

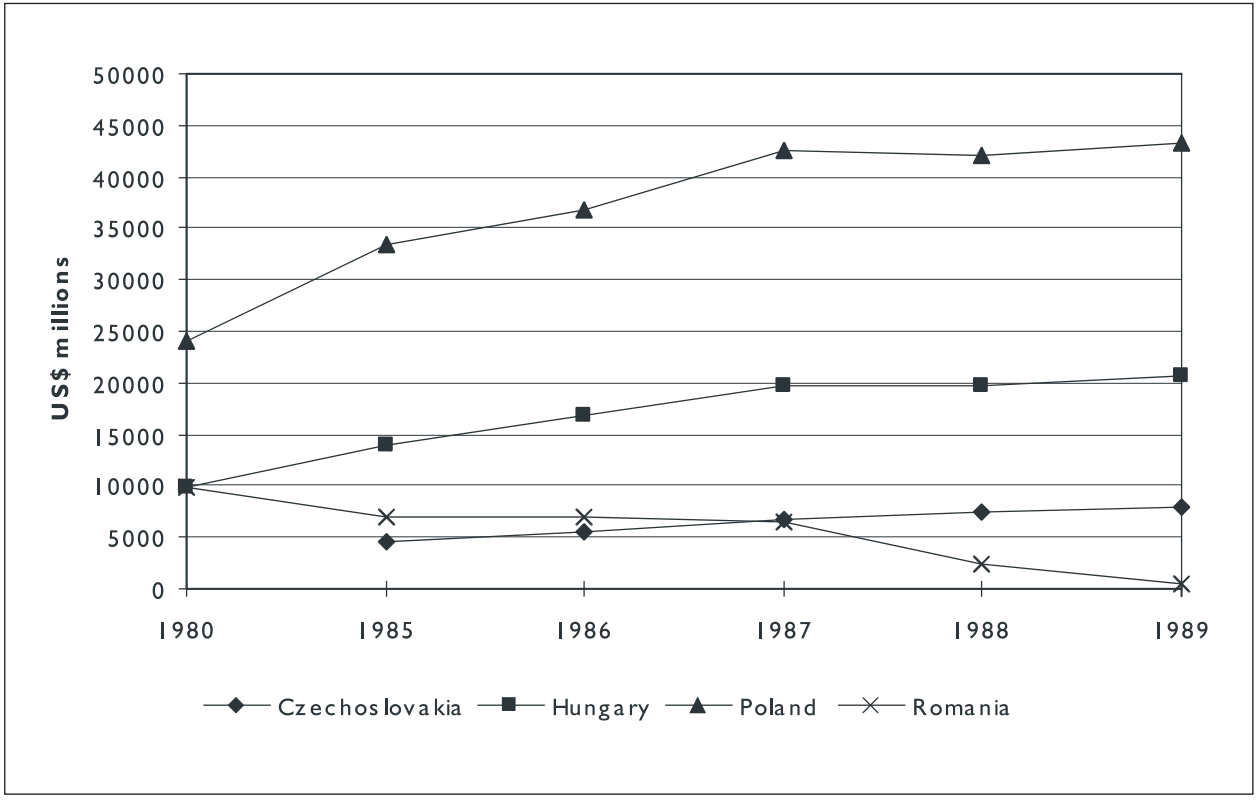
2. The developments of the public debt in Czechoslovakia, Hungary, Poland and Romania before 1989

The four countries entered the 1990's with different economic problems and imbalances inherited from the centrally planned economy (CPE). Among these problems were the aspects of public indebtedness. Poland and Hungary, along with other problems, were burdened by a huge external debt. Those loans for the most part were not used to finance growth-enhancing investments but were instead used for ineffective ones (such as for example "Berliet" or "Ursus" in Poland) or were consumed. Czechoslovakia's and Romania's external finances were in much better shape, as the foreign debts left by the communist regime were relatively small.

In a centrally planned economy the government budget was financed with a central bank credit (the central bank engaged also in quasi-fiscal activities, providing direct credit lines distributed to specific groups of enterprises). The central bank either printed money or borrowed abroad. Therefore the issue of gross public debt inherited from the CPE is equivalent to the problem of the external debt developments of those countries before the 1990s. Chart 1 shows developments in foreign debt during the 1980's.

The most heavily indebted country was Poland. This was the result of the authorities' attempt in the early 1970s to implement a program of major modernisation and improvement in welfare of citizens, mainly trough imports from the West. The growth of exports did not keep pace with imports, and the resulting deficit was financed by external borrowing. Although the authorities tried to restrain the external imbalances in the mid 1970s, the growing interest payments on the debt proved to be too big a burden on the economy. As a result, the external payment difficulties intensified and creditor confidence collapsed. A continuing current account deficit, together with small capital inflows, meant that Poland was unable to meet its obligations. During the 1980s the debt almost doubled and Polish authorities had to reschedule the debt-service obligation several times and finally

Chart 1. Gross external debt in 1980 – 1989



Source: World Bank, World Debt Tables (1998)

in spring 1981 announce that Poland was unable to meet its obligations. Poland's default was in fact the first country to default in contemporary history (before Mexico's default in 1982).

The developments in Hungary, which accumulated the second largest debt of the four countries, were similar. Its convertible-currency current account deficit widened in the 1970's, resulting in a build-up of external debt. During the 80's the debt rapidly grew by over 100%. Nevertheless, Hungary neither stopped servicing its debt obligations, nor has ever significantly rescheduled them.

Czechoslovakia and Romania also borrowed in the 1970. Both countries were seriously hit by the first and second oil price shocks. This adverse impact was accommodated through foreign borrowing. Both countries, however, managed to bring the debt under control in 1980's.

In Czechoslovakia, which entered the 1980 with a similar debt burden as Hungary, the early balance of payments problems were cured with a cutback in domestic absorption and import restriction in the early 1980's. This led to slower economic growth, but indebtedness stayed at a relatively low level.

In Romania, Ceausescu's regime declared foreign debt repayment as an economic and political priority and indeed brought the debt almost to zero. However, the brutal scheme of repayments sank living standards to the lowest in the region, with reports of widespread malnutrition.

Tables 1 and 2 provide further information on the structure of foreign debt that prevailed at the last stage of the CPE.

Table 1. The maturity of the gross external debt of Czechoslovakia, Hungary and Poland in 1989

Type of debt	Czechoslovakia	Hungary	Poland
Total debt	100.00%	100.00%	100.00%
Long term	54.69%	81.74%	80.20%
Use of IMF credit	0.00%	2.21%	0.00%
Short term debt	45.31%	16.05%	19.80%

Source: World Bank, World Debt Tables (1998)

Table 2 gives an insight, to why Hungary didn't want to reschedule its debt. Since the share of official creditors was low – below 12% of the total debt – rescheduling was practically impossible. For Poland, with almost 70% of the debt owed to official creditors, it was easier.

Table 2. The structure of gross long term debt of Czechoslovakia, Hungary and Poland by creditor in 1989

Type of creditor	Czechoslovakia	Hungary	Poland
Long term debt outstanding	100.00%	100.00%	100.00%
Official creditors	**7.90%**	**11.67%**	**68.53%**
Multilateral	6.19%	11.67%	1.43%
Concessional	0.00%	0.27%	0.00%
Nonconcessional	6.19%	9.30%	1.43%
IBRD	0.00%	7.57%	0.00%
Bilateral	1.73%	2.10%	67.10%
Concessional	0.00%	1.63%	4.93%
Private creditors	**92.10%**	**88.33%**	**31.48%**
Bonds	3.21%	16.99%	0.00%
Commercial banks	48.41%	52.03%	26.67%
Other private	40.48%	19.32%	4.80%

Source: World Bank, World Debt Tables (1998)

3. The stock and dynamics of the gross public debt of Czech, Hungary, Poland and Romania in the 1990's

The change of economic systems in the Eastern European countries in the early 1990's has brought a completely new era in the public financing of the CPE and a major change in the development of their public debt. The shift to market-based deficit financing has raised awareness of the serious consequences of excess deficit and debt. In the most indebted countries – Poland and Hungary – the ratio of public debt since 1990 has declined substantially. Both countries managed to regain creditworthiness on financial markets and attract a substantial amount of foreign capital. However, the public debts of Romania and recently the Czech Republic have risen, but have nevertheless stayed at a relatively low level. In the Czech Republic, Hungary and Poland, the financing of debt has been shifted from the foreign to domestic markets, resulting in a rapid increase in domestic public debt. Domestic debt markets have matured, allowing a switch from short-term instruments toward those of longer maturity. In Romania – the least advanced country of the four – the domestic

debt market has still not developed and the public sector has been financed mainly by funds raised abroad.

Here a warning concerning the data on public debt of former CPE must be made: one has to be always cautious in interpreting the data, as it suffers from definition and precision problems. For example: in the Czech Republic, according to OECD estimates (see OECD Economic Survey, Czech Republic 1997-1998), the government liabilities may by underestimated by as much as 7% of GDP. This is due to at least three factors: large government's exposure to banking sector and the perspective of future bailout, the true financial position of the National Property Fund and the actual extent of local government indebtedness

Until 1997, a large part Hungarian public debt was owned by the central bank and therefore the debt of the consolidated general government and central bank and the debt of general government looks quite different, particularly in terms of breakdown between domestic and foreign debt.

The data on Polish, Hungarian and Czech [1] public debt does not contain information on the debt of local governments and some off-budgetary government funds, therefore it does not comply fully with the Maastricht definition of the debt of public sector.

In the case of Romania, the general government balance is not a good measure of fiscal activities and is largely underestimated due to off-budgetary subsidies to enterprises and quasi-fiscal activities of the central bank, primary reflecting the extension of subsidised credits to agriculture, energy and exports (see IBCA, 1997).

Each country also has a different accounting system for privatisation receipts: in Hungary they are accounted for as a below the line item, i.e. as a mean of financing the debt, in Poland until 1997 they were treated as government revenues and in the Czech Republic all the privatisation receipts are concentrated in the National Property Fund and basically do not enter the budget revenue system. Only a small fraction are used for budget expenditure, mainly for interest payments on state debt. The data is therefore not fully comparable across the four countries and with the data on European Union countries.

The gross indebtedness of the central governments of the four countries at the end of 1997 was the following: the biggest ratio of gross consolidated government debt existed in Hungary, where it amounted to 68% of GDP, out of which 40% of GDP was domestic debt and 28% foreign. Poland had the second largest public debt of the four countries, but below 60% of GDP specified by the Maastricht criteria: in 1997 the

[1] In case of the Czech Republic, the data on the consolidated general government is available, but only since 1996. Therefore, for easier comparison, in the main text, I report the data for Czech central government.

gross debt of Polish central government equalled 48% of GDP: 21% of GDP was domestic debt and 27% of GDP was foreign debt. In Romania the general government debt equalled 33.5% of GDP, with a small domestic debt of 7.5% of GDP and an external debt equal to 26% of GDP. In the Czech Republic, which exhibited the smallest indebtedness ratio, the gross debt of the central government was 10,6% of GDP, of which 7.5% of GDP was domestic debt and 3.1% was foreign debt [2]. In comparison to 1996 the debt ratio of Hungary and Poland had been lowered by 6 and 3 percentage points respectively. In the Czech Republic it remained almost stable, rising by 0.4 percentage points, while in Romania it increased by 10 percentage points. In Hungary and in Poland the decrease in debt/GDP ratio in 1997 was mainly the effect of the fiscal policy conducted, which resulted in a primary surplus in that year of 3.1% of GDP in Hungary and 2.3% of GDP in Poland. In the Czech Republic the slight increase in the ratio of debt to GDP in 1997 was chiefly the result of a substantial slowdown in GDP growth and a sharp devaluation of national currency. In Romania, where the primary deficit in 1997 was close to zero, the increase of the debt ratio has been due to off-budgetary transfers.

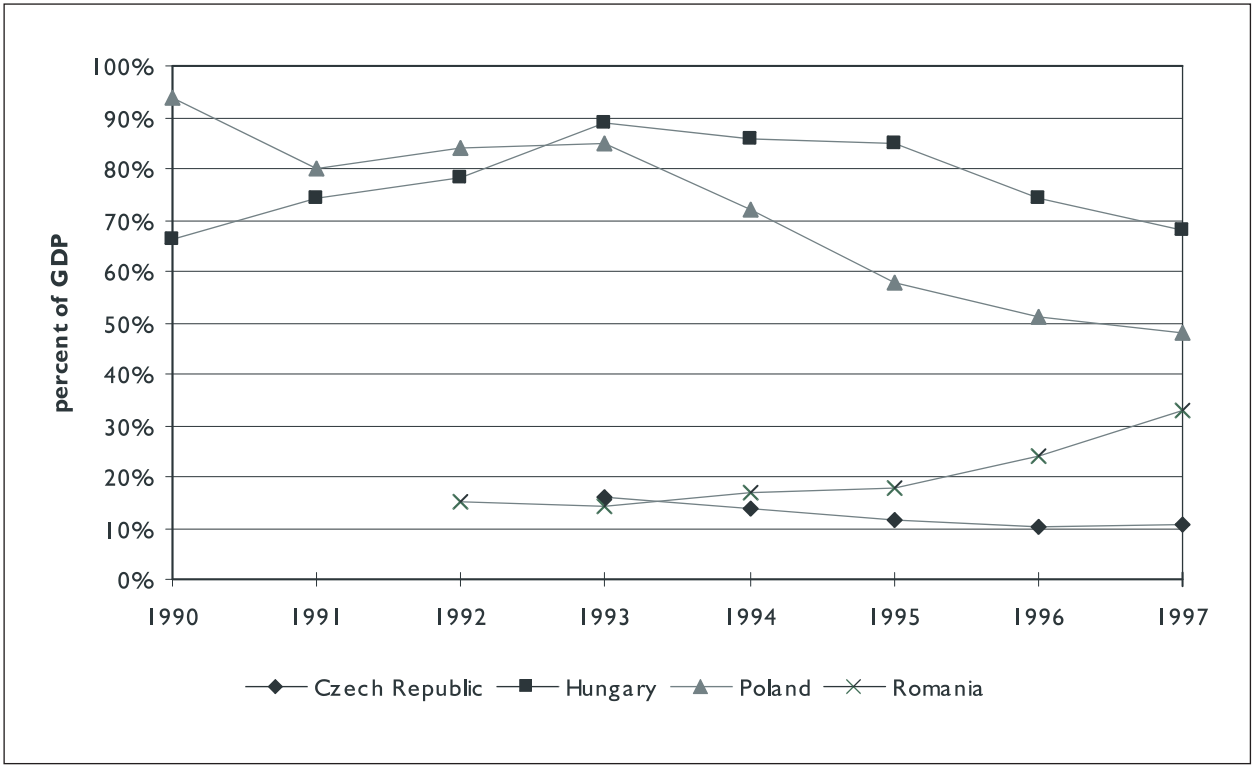
Chart 2 summarises the developments of the total gross public debt of the governments of the four countries.

The developments of the gross public debt of the four countries during the 1990s are far from homogenous. Poland experienced the most dramatic debt ratio decline of over 40 percentage points, from over 90% of GDP in 1990 to less than 50% in 1997. This decline took place in two periods: first in 1990 – 1991, when the debt fell by 14 percentage points, mainly due to a sharp real appreciation of national currency and a decline of zloty value of foreign debt. Then, after a relatively small rise in the debt ratio during the three following years, after 1993 this ratio fell by more than 35 percentage points. The fall in total debt has been almost entirely attributable to the fall in external debt ratio; the foreign indebtedness to GDP ratio decreased from 1990 until 1997 by 55 percentage points, while in the same time the domestic debt ratio rose by 10 percentage points. The lessening of foreign debt was mainly due to a negotiated reduction of debt towards the Paris and London Club. Sharp real appreciation of the national currency also helped to lower the foreign debt.

Hungary experienced a sharp increase in the debt/GDP ratio from 1990 until 1993 – during that time debt rose by more than 20 percentage points, reaching almost 90% of GDP in 1993. In those years domestic debt added an additional 10 percentage points,

[2] The public debt of the Czech consolidated general government amounted to 12% of GDP in 1996 and 13.1% of GDP in 1997.

Chart 2. The gross debt of the central governments of the Czech Republic, Hungary, Romania and Poland, as percent of GDP



Source: IMF, Czech - Statistical Appendix (1998), IMF, Hungary - Statistical Appendix (1997), Polish Ministry of Finance (1998) and IBCA, Sovereign Report - Republic of Romania (1997).

and the debt due to exchange rate loss (debt held by NBH) rose by 8 percentage points relative to GDP [3]. In 1993 – 1994 the ratio of total debt to GDP stabilised, showing some tendency for a decline and since 1995 there has been a sharp fall in this ratio. It fell 11 percentage points in 1996 as a result of the fall of the debt due to exchange rate loss held by National Bank of Hungary (NBH) (that is equivalent to saying that the external debt had been lowered), and further 8 in 1997 – result of declining domestic debt. By the end of the century the authorities are intending to reduce the debt/GDP ratio below the 60% Maastricht criterion.

Romania entered the 1990's with a very small public debt, lower than the debts of any countries characterised here. During the last years however, the debt to GDP ratio has noticeably risen: in 1994 it exceeded the Czech debt ratio and the gap between Romania's debt and that of Poland and Hungary has been systematically narrowing. The most of the debt ratio increase occurred after 1995: in 1992 – 1995 it stayed on a stable level of 15 – 17% of GDP, while in 1996 – 1997 it has risen by 16 percentage points. The chief reason was Romania's increased borrowing abroad, that resulted in the enlargement of external debt by 12.2 percentage points over the two years with a rise by 8.5 percentage points in 1997 alone. Nevertheless Romanian indebtedness is still is on a relatively low level.

In the Czech Republic the ratio of public debt to GDP is no cause for concern, but after a decline of 6 percentage point between 1993 and 1996, when both the external and domestic debt were decreasing, in 1997 this trend ceased and the ratio of total debt to GDP stabilised at the 1996 level (even rising slightly by 0.4 percentage points). According to the authorities, this was a one year incident due to the flood, that hit the Czech Republic in the mid 1997, and the projected fiscal adjustment is supposed to move the economy towards a balanced budget (and therefore a primary surplus) in the next two or three years.

The developments in debt dynamics, with a division between domestic and external debt are shown on the charts 3 to 6.

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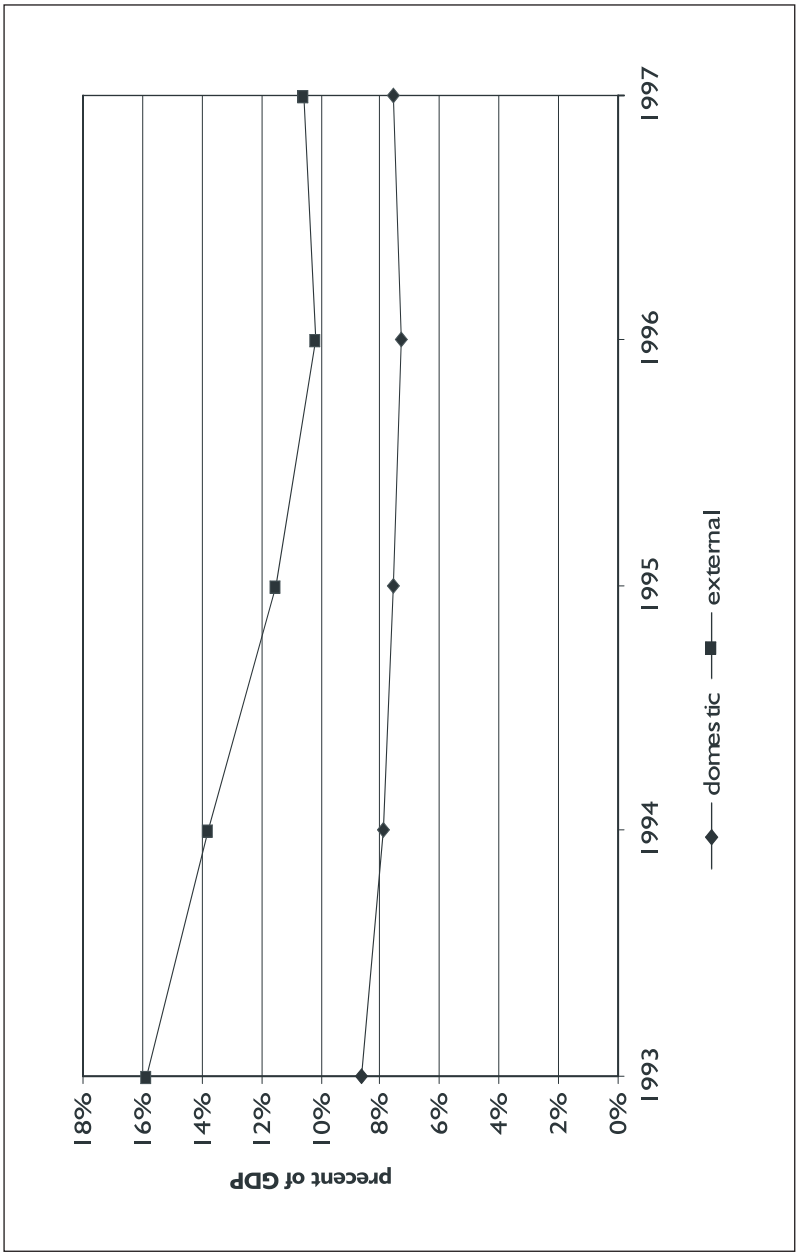
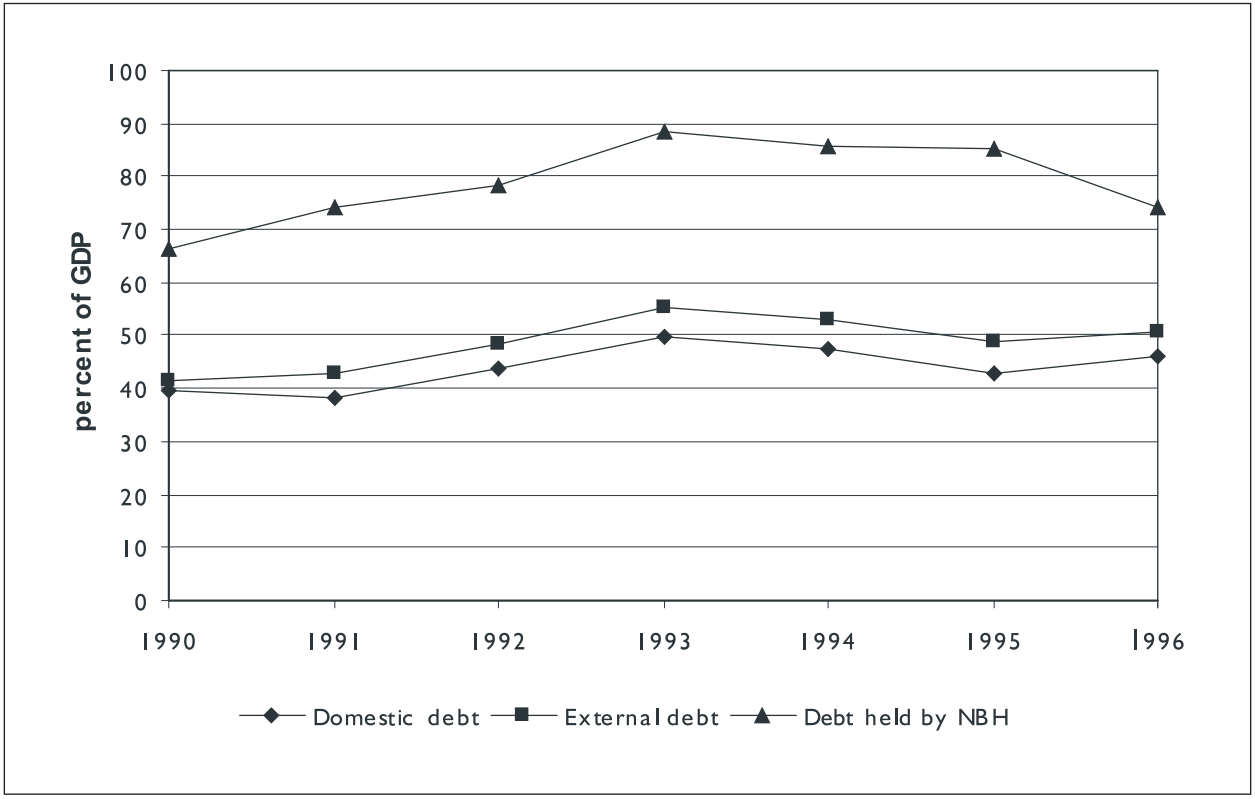
3 The non-interest bearing debt held by NBH is a special element of the Hungarian public debt. It origins from the NBH's credits to government before 1991. The preferential rates of government liabilities did not cover excess interest and principal revaluation due to devaluation of Forint. Therefore the NBH provided a credit, called the devaluation debt, without maturity and at zero interest and it depicts the accumulated exchange rate losses on the foreign debt of NBH. On January 1 1997 the government swapped the stock of non-interest bearing debt with foreign exchange denominated liabilities to the central bank. The operation was designed in such a way, as to ensure, that the new stock of the central bank foreign claims on the government was the same in terms of size and maturity to the net foreign exchange position of the central bank.

Chart 3. The debt of Czech central government, in percent of GDP



Source: Czech Ministry of Finance

Chart 4. The public debt of Hungarian central government, in percent of GDP

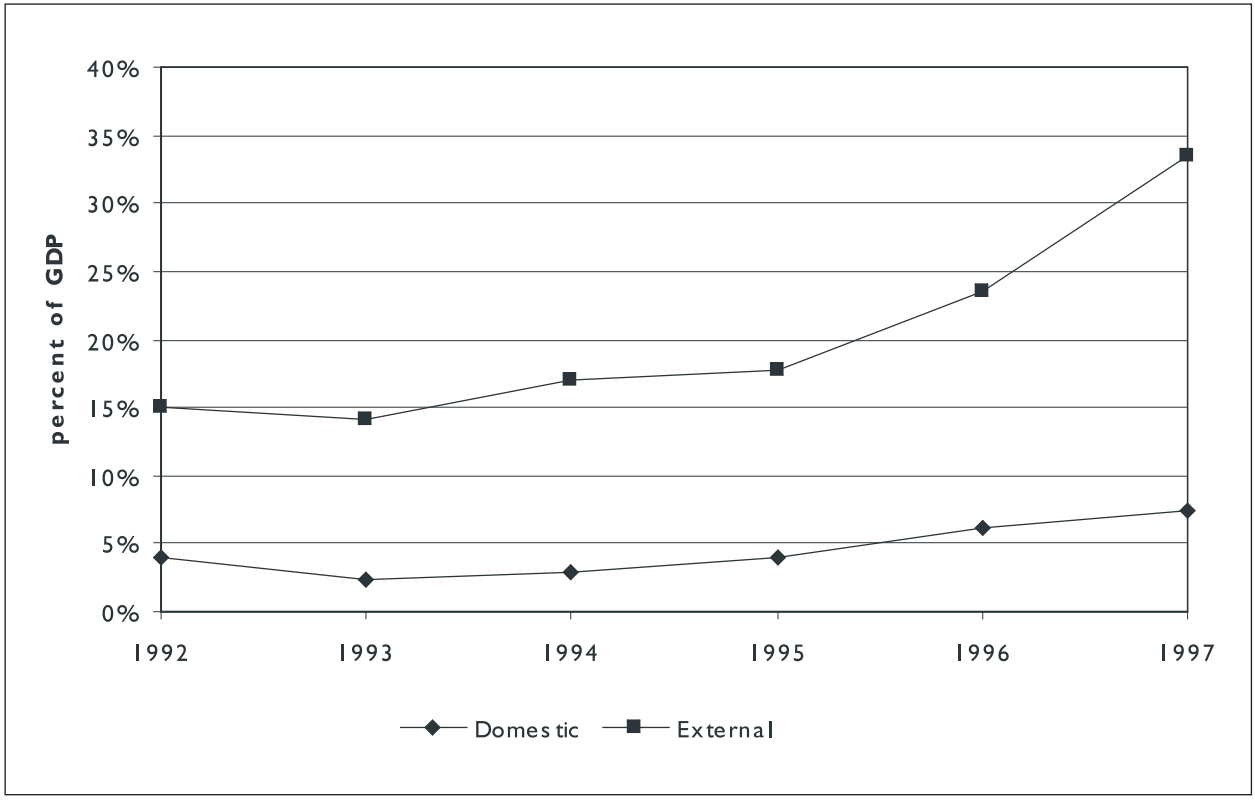


Source: Hungary - Statistical Appendix, IMF (1997)

Chart 5. The debt of the Polish central government, in percent of GDP

Source: Polish Ministry of Finance

Chart 6. The debt of Romanian consolidated general government.



Source: IBCA, Sovereign Report, Republic of Romania (1997)

The share of external debt in the total debt of the countries described here has been falling (except for Romania), nevertheless it still encompasses a large portion of total government indebtedness. In 1997 the share of external debt in the total debt was the following: in the Czech Republic it was the lowest – around 30%, in Hungary it was around 54% (of the total debt of government and the central bank) in Poland 55% and in Romania 79%. Therefore foreign liabilities still remain a phenomenon, that not only has a significant impact on the conduct of fiscal policy, but also on the external position of the countries and their relations with foreign investors.

3. 1. External public debt of the Czech Republic, Hungary, Poland and Romania

External indebtedness is an important macroeconomic variable, as it affects economic stability and the conduct of both fiscal and monetary policy. It is also a crucial factor in influencing a country's creditworthiness, an aspect especially important for the transition economies, most of which are experiencing liquidity constraints and are in need of foreign finance.

In the early 1990's many economists had serious doubts, whether the most indebted countries – Poland, Hungary and Bulgaria – would be able to attract foreign resources, because while a sensible external debt ratio is not the only element that affects the inflow of foreign capital, it is among the most important. Indeed, until 1992 the inflows were small, but after 1993 they gained momentum; their chief destination was three countries: Czech Republic, Hungary and Poland. The major factors that attracted the foreign capital were: the credibility of the reform process, enhanced by sound macroeconomic policies, a program of structural reforms, prospects for growth and the strengthening of a countries' external position. For Poland, the only country among the four described in this paper, that experienced serious debt-servicing problems, agreements with the IMF and normalisation of relations with the Paris and London Clubs were crucial for entry into the world capital markets.

Below data on public and publicly guaranteed external debt is summarised. One thing must be emphasised: in the case of the Czech Republic the private debt

[4] The amount of public and publicly guaranteed long-term external debt in Czech Republic, in billions of US dollars, was the following:

	1993	1994	1995	1996
Public debt	3.9	3.0	2.8	2.1
Private guaranteed debt	6.3	7.1	10.1	8.9

Source: Economic Survey of Europe in 1996-1997

guaranteed by the government is relatively large – in 1996 it exceeded public debt by over four times [4] – therefore all the numbers reported for the Czech Republic are larger than the statistics, that were reported in the previous sections. In the case of the Czech Republic this is especially prevalent, but with respect to other countries one also has to remember, that the data reported in this sections is larger than the amount of the external debt belonging only to government.

Chart 7 shows the dollar value of the external debt of the four countries

In nominal (dollar) terms, Poland has had the largest external debt, followed by Hungary, Czech Republic (before 1993 Czechoslovakia) and Romania. Polish debt, reduced by the agreements with creditors, has fallen since 1990 by 10 billion dollars, the Hungarian debt after rising by 6 billion dollars in 1990 – 1995, in 1996 had fallen by 5,4 billion, nearly to its 1990 level, (due to a 3.6 billion dollars principal repayment to the private creditors). The Czech public and publicly guaranteed external debt rose by 12 billion dollars, almost equalling in 1996 the Hungarian debt. The debt of Romania has also increased, from zero level in 1990 to over 6 billion in 1996.

Such absolute measures are not very informative. The most popular measures of the external debt burden are the ratios of external debt to GNP and to the value of export of goods and services. The ratio of public external debt to GDP was reported in the previous section, in Chart 8 the ratio of foreign public and publicly guaranteed debt to exports is reported

The foreign debt to export ratios of both Poland and Hungary fell and in 1996 they reached 100% of the export of goods and services, which is generally perceived as a safe ratio, characterising mildly indebted economies. The Polish foreign debt to export ratio has fallen from over 250% in 1990 and the Hungarian ratio from over 150%. This is due both to the vigorous growth of the Polish and Hungarian exports: (Polish export rose from around 18 billion dollars in 1993 to 40 billion in 1996 and Hungarian exports from 11 billion in 1994 to 20 billion in 1996); and to the fall in the amount of the external debt.

The ratios of public and publicly guaranteed external debt to exports of both Romania and the Czech Republic have grown, the Czech debt ratio slightly, Romania's more substantially (this country had started from almost 0%). The growth of these countries' ratios resulted from both the growth of external debt and poor export performance (in the case of the Czech Republic, poor growth of export was noted in 1996). However, debt to export ratios have stayed under 100%, but are likely to exceed it, if the recent trends will continue [5].

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[5] Indeed, the preliminary IIF data shows, that the Romania's debt to export ratio in 1997 exceeded slightly 100% and the projections for 1999 are 113%.

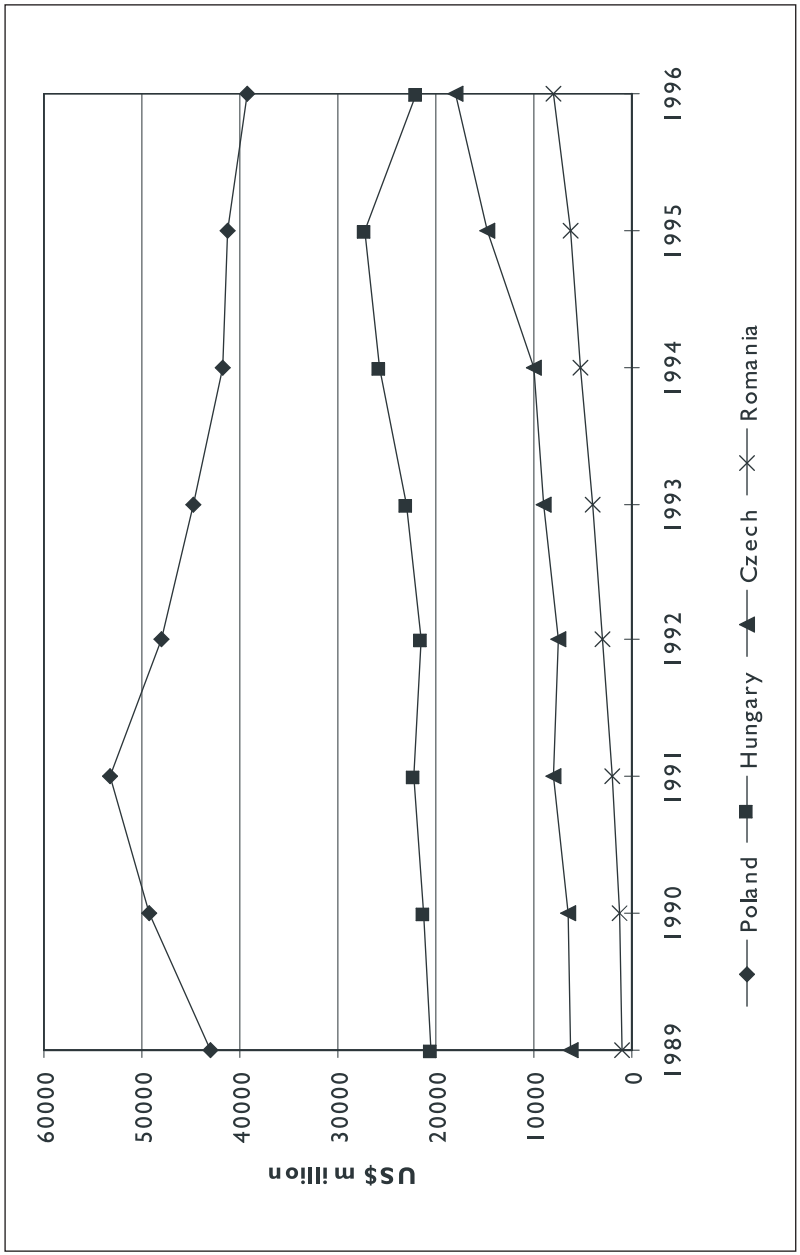
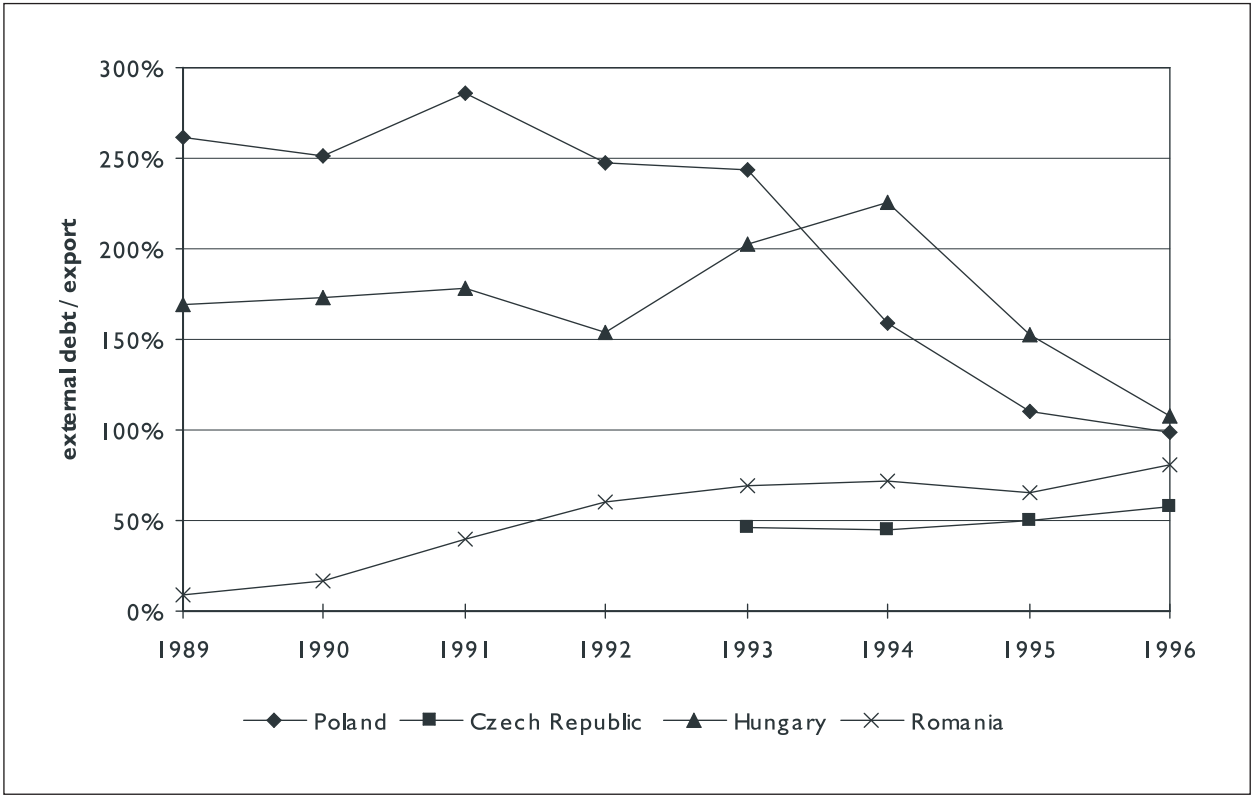


Chart 7. The public and publicly guaranteed gross external debt.

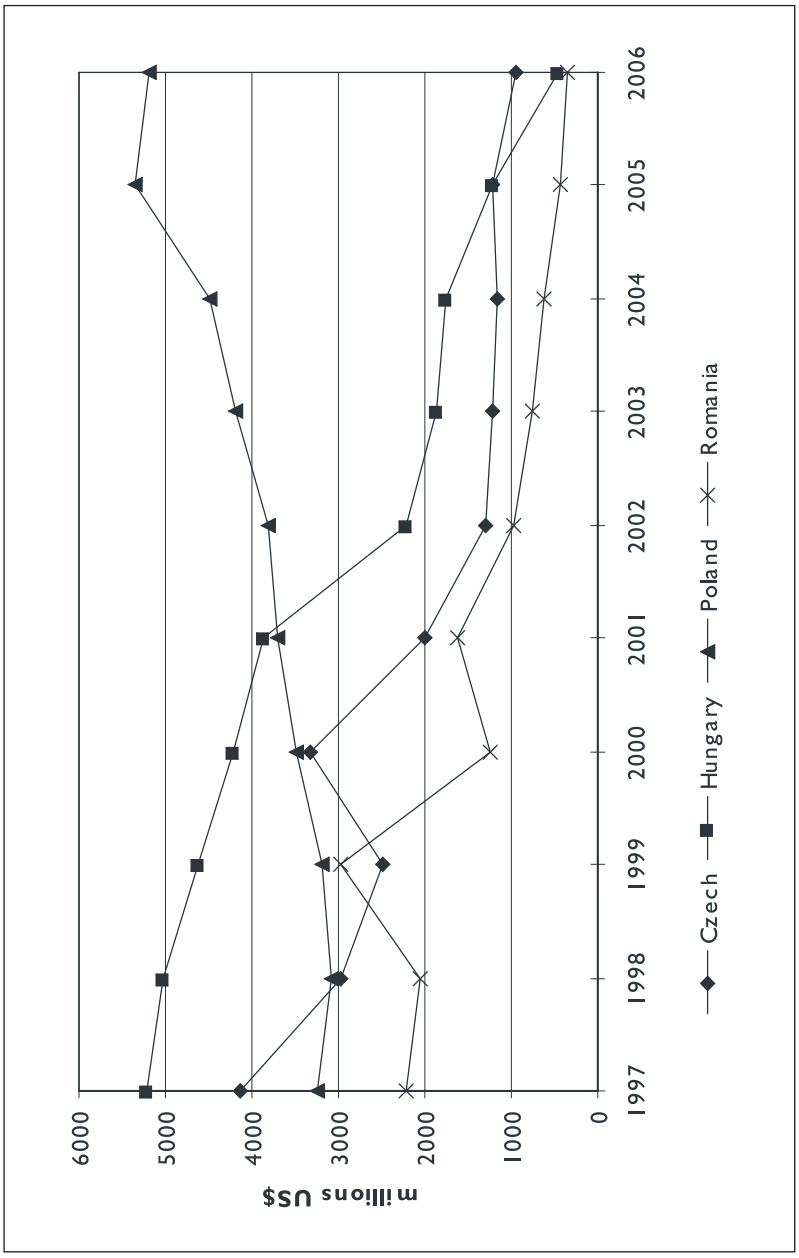
Source: World Debt Tables, World Bank (1998)

Chart 8. Gross public and publicly guaranteed external debt to exports.



Source: World Debt Tables, World Bank (1998)

Chart 9. Contractual obligations outstanding on long-term external debt.



Source: World Debt Tables, World Bank (1998)

Other important debt statistics are the external debt service requirements. These requirements exert an impact on the long run fiscal as well as monetary, policy. If the government does not want to borrow additional resources from abroad, meeting the obligations on foreign debt requires a trade surplus and/or a sufficient level of currency reserves. The use of each of the sources however, has implications on monetary policy and the domestic private sector. If the trade surplus is used, then unless the government displays an adequate primary surplus, the servicing of foreign debt will require a private domestic savings surplus, that will finance the necessary growth of internal indebtedness. If reserves (or non-debt creating foreign capital inflow) are the means of servicing the foreign debt, then in effect there will also be an increase in the domestic liabilities of the government (if the primary surplus is not sufficient), but it will be financed by foreign savings. Therefore a better strategy seems to be the financing of foreign liabilities through accumulated reserves, as this method does not absorb domestic savings.

Chart 9 shows debt obligations on outstanding long-term foreign debt. Beginning in the year 2001, the obligations of Hungary, Romania and Czech rapidly decrease, while the obligations of Poland rise. This, of course, is the consequence of the agreements with the Paris and London Clubs and the rescheduling of principal repayments scheduled to accumulate after the year 2000 (this was done in order to give Poland the time to strengthen its balance of payments outcome).

Hungarian obligations in 1997, the largest obligations of the four countries in that year, reached over 5 billion dollars. In the same year the Hungarian current account displayed a deficit of 864 million dollars, but its external reserves amounted to 8.4 billion dollars. In 1998 and 1999 the current account is projected to display a deficit of over 1 billion dollars, however it is estimated, that the reserves will reach over 10 billion dollars, more than doubling the payment obligations [6].

In 1997, Polish foreign reserves equalled 20.6 billion dollars, which together with smaller external debt requirements posed no problem in regards to foreign debt service requirement. If the balance of payments does not change dramatically over the next years, Poland should be able to meet its external obligations without having to borrow heavily abroad.

The Czech Republic had a very sound financial positions, as its foreign reserves in 1997 were above 16 billion dollars, while obligations were around 4 billion – therefore the ratio of reserves to obligations was the biggest out of the four countries.

Of the four countries, only Romania seems to be in a tight financial situation. It's debt service payments were over 2 billion dollars in 1997 and are projected to increases to

[6] data after Hungary Economic Report, IIF (1998),

nearly 3 billion dollars by 1999, while in 1997 the stock of reserves was about 2.2 billion dollars and is predicted to remain at this level through 1999 [7]. Romania's debt service ratio has sharply deteriorated, from 10% (of total debt service to the exports of goods and services) in 1995 to just under 20% in 1997, indicating, how fragile the external situation of Romania is and how easily it can erode.

4. Determinants of public debt dynamics in the four countries after 1990

The factors, that have contributed to the change in the stock of the public debt of the four countries can be extracted by the means of the following equation (see IMF, 1997):

$$\Delta D = I - P + A - S, \tag{1}$$

where ΔD is the change in public debt, I is interest payments, P is primary surplus, A is other items besides the budget deficit, that affect indebtedness, such as devaluation losses, external debt reductions, issuance of bonds for bank recapitalization and S is monetary financing. This equation states, that the debt will grow when the primary surplus together with monetary financing (seniorage) are smaller than interest payments on the debt together with non-budgetary items that affect indebtedness.

In order to compare the debt dynamics across countries and analyse the sustainability of debt, it is useful to write equation (1) in terms of ratios to GDP (omitting the money financing) [8]. This results in:

$$\Delta d_t = -p_t + \frac{(i_t - g_t)d_{t-1}}{(1+g_t)} + a, \tag{2}$$

where $d = D/GDP$, $p = P/GDP$, $a = A/GDP$, i is the nominal interest rate and g is the nominal rate of growth of GDP,

Equation (2) states, that the debt to GDP ratio will rise, when the interest rate on debt is greater than the growth rate of GDP, unless the primary surplus is big enough to offset this difference. This representation allows us to investigate, the main factors

[7] data after Romania Economic Report, IIF (1998).

behind the change in debt to GDP ratio and to what extend debt dynamics are determined by fiscal policy compared to factors not directly controlled by the government, such as GDP growth and interest rate.

Tables 3 to 6 below provide the decomposition of public debt dynamics, according to equation (2). The interest rate was calculated by adding the devaluation losses to the actual interest payments. Because I have not included seniorage, the non-deficit item *a* also includes a residual due to this inaccuracy.

Table 3. Decomposition of the change in gross debt of the Czech central government (in percent of GDP, unless otherwise indicated)

	1994	1995	1996	1997*
Change in debt (Δd)	-2.1%	-2.2%	-1.4%	0.4%
Primary surplus (- p)	-1.7%	-0.7%	-0.8%	-0.1%
$(i_t - g_t)d_{t-1}/(1+g_t)$	-1.0%	-1.7%	-0.4%	1.1%
Non-deficit items (a)	0.6%	0.2%	-0.2%	-0.6%
Memorandum items:				
Change in domestic debt	-0.7%	-0.3%	-0.3%	0.2%
Change in external debt	-1.4%	-1.9%	-1.1%	0.1%
g (percent)	14.0	17.1	13.9	7.6
i (percent)	15.6	-0.1	9.9	19.0
Interest payments	1.2%	0.2%	0.9%	1.1%

* The estimates of seniorage until 1994 can be found in Buitler (1997)

Source: Czech Ministry of Finance, IMF, Czech Republic – Statistical Appendix (1997), my own calculationspreliminary data

In the Czech Republic developments of government debt, excluding the year 1997, can be characterised as a slight decline in the ratio of state liabilities. The budget was almost balanced, with a primary surplus that covered or almost covered debt service payments, and therefore in absolute terms the budget deficit did not add to the accumulation of new debt. The growth rate of nominal GDP was greater than interest paid on the debt, which contributed to the decline of government debt relative to GDP.

In 1997 the debt grew slightly, by less than 1% of GDP. This surprisingly was not the effect of the budget deterioration, which might have been expected, as a consequence of severe flooding which hit the Czech Republic in 1997. The fiscal cost of the flood has been estimated at 34 billion CZK – around 2% of GDP – a result of decreased tax

revenue and enforced reconstruction expenditures. The fact, that the budget did not exhibit a greater deficit is explained by the fact, that most of the expenditures have been covered from extra-budgetary resources.

The main cause behind the increase in the debt ratio was a slowdown in GDP growth and a depreciation of domestic currency, a consequence of the 1997 currency crisis. This has resulted in a positive difference between the interest rate on debt and the growth rate of GDP.

Table 4. Decomposition of the change in gross debt of the Hungarian consolidated central government (in percent of GDP, unless otherwise indicated)

	1992	1993	1994	1995	1996	1997
Change in debt (Δd)	4.3%	10.4%	-2.8%	-0.8%	-11.0%	-6.0%
Primary deficit (- p)	2.1%	3.4%	0.6%	-2.2%	-4.9%	-3.1%
$(i_t - g_t)d_{t-1}/(1 + g_t)$	-1.4%	1.3%	-1.9%	3.8%	-3.5%	0.1%
Non-deficit items (a)	3.9%	5.7%	-1.3%	-2.0%	-2.3%	-1.7%
Memorandum items						
Change in domestic debt	5.4%	6.1%	-2.2%	-4.4%	3.2%	-6%
Change in external debt	-1.1%	4.3%	-0.6%	3.6%	-14.2	0%
i (percent)	15.6	22.6	20.3	33.0	14.9	20.6
g (percent)	17.8	20.6	233.0	27.0	19.7	20.5
Interest payments	5.5%	4.5%	6.6%	9.0%	8.5%	9.1%

Source: IMF, Hungary – Selected Issues, (1997), p.23

In Hungary the debt ratio is far from stable. After an increase during 1992-1993, since 1994 the share of public debt to GDP has been declining. The developments in the domestic and external debt ratios have also been not uniform.

In the early 90's the main aspects behind the debt ratio build up were the deteriorating fiscal deficit – a result of a sharp increase in government expenditures – and the issuance of substantial amount of capitalisation bonds, mainly for the recapitalization and consolidation of banks and in order to cover losses from earlier housing loans. All this resulted in an accumulation of domestic debt of over 10 percentage points relative to GDP.

The fiscal adjustment process, that has began in early 1995 and achieved trough sharp expenditure cuts, has resulted in a primary surplus, that has been one of the key factor explaining the debt ratio decline over 1995 – 1997.

Another element that has had a significant impact on debt decline since 1994 is non-deficit related revenues, mainly from privatisation, which has more that quantiluped over 1994 – 1996. The fall in the total debt ratio has been divided between the lowering of both internal and external debt ratios: since 1995 both have fallen by over 10 percentage point relative to GDP. However the fall in external debt was concentrated in one year [8], while the domestic debt fell first in 1995 and then again in 1997.

The ratio $(i_t - g_t)d_{t-1}/(1+g_t)$ has lowered the debt ratio in a number of years: the interest rate was much lower than the GDP growth ratio, mainly due to the fact, that foreign exchange liabilities held by NBH did not bear any interest. Only in a few years was this term positive: in 1993 and 1995 – reflecting the sharp depreciation of the forint, and in 1997, as a result of the swap of liabilities between the central bank and the government, which replaced the zero interest debt held by NBH with foreign exchange liabilities to the central bank (the full impact of this operation on interest payments is expected to be felt in 1998, but part of the domestic debt will still bear a below the market interest rate).

It is noteworthy, that although fiscal consolidation started in 1995, the Hungarian debt ratio has been declining since 1994. The improvement in 1994 was due to the two elements described above, that is large privatisation receipts and the fact, that the effective interest rate on debt has been smaller than nominal GDP growth, which in that year was caused to a large extent by real appreciation. In 1994 therefore, rather than fiscal policy, the monetary policy contributed to the debt ratio decline.

The interest payments on the debt are very high, the highest among the four countries. Payments have been growing rapidly, in 1997 establishing over 36% of total budget expenditures and over 9% of GDP. This poses a very serious problem for fiscal policy, as the debt service payments are substantially larger than the primary surplus, which results in a large fiscal deficit and debt build-up, leading to a snowball effect of growing debt and interest payments. Until real GDP growth is high, the economy can still "outgrow" the debt and its burden, but when the economic growth pace slows, the authorities may find themselves on an unsustainable debt path of large fiscal deficits, due to growing interest payments and an increasing debt to GDP ratio.

The ratio of Polish debt has shrunk spectacularly and virtually all the decline in debt was due to a fall in external debt. There are two main factors that have influenced the decrease of external debt.

Firstly, Poland was granted a debt reduction by the Paris and London Clubs. In April 1991 an agreement with Paris Club was reached, resulting in a reduction of the net

[8] in 1995 NBH repaid around 4 billion dollars of its external debt, using the currency reserves.

present value of the Polish debt by 50%. In September 1994 Poland negotiated a reduction of the debt held by the London Club by 49%, according to the Brady plan (for more details of both agreements, see Appendix 1). The agreements were the main force behind the reduction of Polish external debt from 53 billion dollars in the end of 1991 to 42 billion at the end of 1994.

Table 5. Decomposition of the change in gross debt of Polish central government (in percent of GDP, unless otherwise indicated)

	1992	1993	1994	1995	1996	1997
Change in debt (Δd)	4.0%	1.0%	-16,3%	-14.4%	-6.8%	-3.0%
Primary deficit (- p)	3.0%	-0.8%	-1.7%	-2.4%	-1.4%	-2.3%
$(i_t - g_t)d_{t-1}/(1+g_t)$	-0.2%	-2.6%	-9.4%	-10.4%	-2.8%	-0.4%
Non-deficit items (a)	1.1%	4.4%	-5.2%	-1.6	-2.6%	-0.3
Memorandum items						
Change in domestic debt	5.0%	2.0%	1.0%	-3.8%	-0.9%	-1.0%
Change in foreign debt	-1.0%	-1.0%	-17.3%	-11.6%	-5.9%	-2.0%
i	38.1	30.8	15.7	10.2	18.1	21.1
g	38.6	36.4	35.1	37.2	25.7	22.4
Interest payments	3%	3.8%	4.4%	4.9%	4%	3.7%

Source: Polish Ministry of Finance, my own calculations

The second factor that has significantly contributed to the decline in the foreign debt ratio is the sharp real appreciation of zloty. This has resulted in a negative difference between the nominal effective interest rate on public debt and the rate of growth of nominal GDP and in effect has lowered the external debt ratio. This difference was also increased by the lower interest payments on external debt due to a 80% reduction in those payments granted by the official creditors. It is worth noting, that in comparison to the other three countries, the influence of the $(i_t - g_t)d_{t-1}/(1+g_t)$ factor in Poland has been the largest, the excess of growth rate over interest rate reaching over 25 percentage points in 1995.

The primary surplus, prevailing since 1992, has also contributed to the decline in the debt, but not significantly. Only in 1997 when debt fell by 3% and the primary surplus reached 2.3% of GDP, could one say, that the fall in debt was due to fiscal developments.

The cost of debt service is high; in 1997 it accounted for 13% of total government expenditures and almost 4% of GDP. It is growing relatively to GDP and is now the chief reason behind the absolute growth in the public debt, as it has been much higher than

primary fiscal surplus. The decline in the debt cost dynamics, noticeable in 1996 and 1997 is only temporary; it is due to the swap of some of the t-bills with two and five year bonds, which will increase the costs in years the 1999 – 2000. This together with service obligations on foreign debt, that are expected to concentrate after year 2000, will pose a serious strain on government finances and requires a supply of savings, preferably made by the government in the form of primary surplus.

Just like in the case of Hungary, the large debt cost poses a serious thread of explosive growth, This problem has no easy solutions, as the cost of domestic debt service is proportional to the nominal interest rate which is close to the rate of inflation. The inflation rate is in turn quite strongly dependent on the level of the budget deficit, which is related to the cost of debt servicing.

Table 6. Decomposition of the change of gross public debt of Romanian government (in percent of GDP, unless otherwise indicated)

	1993	1994	1995	1996	1997
change in debt (Δd)	-0.7%	2.8%	0.6%	6%	9.9%
Primary deficit (- p)	-0.4%	0.5%	1.2%	2.1%	0.1%
$(i_t - g_t)d_{t-1}/(1+g_t)$	-0.9%	-2.2%	0.2%	-0.2%	-0.1%
Non-deficit items (a)	0.6%	1.7%	-0.8%	4.1%	9.9%
Memorandum items					
Change in domestic debt	-0.6%	0.5%	0.9%	2.3%	1.1%
Change in foreign debt	-0.1%	2.3%	0.3%	3.7%	8.5%
i	164.6	54.6	48.1	48.4	126.2
g	232.3	148.4	45.8	50.9	128.1
Interest payments	0.8%	1.3%	1.4%	1.7%	4%

Source IBCA (1997), my own calculations

Since 1994 the public debt ratio of Romania has been rising, gradually until 1995, and gaining speed after 1996. The main reasons behind the sharp deterioration of the debt ratio in 1996 – 1997 were off-budgetary and quasi-fiscal outlays. Official estimates indicate, that in the 1996 the additional quasi-fiscal subsidies amounted to 8.2% of GDP, bringing the public sector deficit to 13.9% GDP (see IBCA, 1997). Taking into account, that during the 1990s the fiscal balance largely underestimated true fiscal outlays, it is surprising, that until 1996 the government managed to keep the public debt from rising further. This reflects the practice of the old government (the Iliescu government in power until the November 1996 presidential and parliamentary elections) to monetize

the quasi-fiscal deficits. The acceleration of the growth of the debt is probably due to the halting of these practises by the new government.

The raise in the debt ratio was due mainly to the increase in borrowing abroad. Although in 1996 the IMF and World Bank suspended disbursements , which resulted in a fall in the share of total medium and long term debt owed to official creditors, the government took advantage of the good conditions in international capital markets and raised funds by borrowing from private creditors (in the form of credits from commercial banks and the issuance of bonds). In 1997, the further inflow of funds from private creditors was strengthen by increased borrowing from international financial institutions, made possible by the implementation of the stabilisation program supported by the IMF and World Bank.

Interest payments on government liabilities remained low until 1995 but the switch to private external creditors caused payments to increase sharply in 1997. This will put a large strain on a budget, already suffering from falling output and a deteriorating enterprise finances making it difficult to realise the tax revenue targets.

5. The structure of public debt

The different classifications criteria of the public debt, such as maturity, debt instruments and type of debt holders, allow public debt to be presented from several perspectives. Below I will deal with each of these criteria in turn.

5.1. The structure of domestic public debt.

The structure of instruments used to finance debt in the four countries has changed significantly during the 1990's: the share of securities has increased and their maturity has lengthened. This reflects the shift to a market-based system of deficit financing and a stabilisation of the securities market.

The structure of the public debt in the four countries with respect to the debt instruments is presented in Table 7 to 9.

In the Czech Republic, as in the other countries of the former CPE, there is a strong tendency to substitute credit financing of debt with the issuance of securities. In 1996 and 1997 almost the whole of domestic debt was financed by bills and bonds.

The proportion of short to long term securities in domestic debt financing was roughly equal until 1995, but in 1996 the share of short term instruments rose sharply and they dominated as a mean of financing the domestic debt. In 1997 however, the share

of short term instruments declined, and the proportion of both kinds of instruments came closer to equality-long term bonds financed around 44% of the domestic debt and short-term instruments 52% of domestic debt.

Table 7. The structure of Czech public debt

Type of debt	1993	1994	1995	1996	1997
Total debt (I+II)	100%	100%	100%	100%	100%
I. Domestic debt	55%	57%	61%	69%	71%
I.1 Treasury bills and bonds	24%	34%	49%	66%	68%
long-term bonds	13%	19%	25%	26%	31%
short-term bonds & bills	11%	15%	24%	40%	37%
I.2 Long-term loans	31%	24%	11%	3%	0%
I.3 Short-term loans & advances	0%	0%	0%	0%	3%
II. Foreign debt	45%	43%	39%	31%	29%

Source: Czech Ministry of Finance

This roughly equal proportion between the short and long term instruments, maintained since 1993 is contrary to the development of the debt structure in Hungary and Poland, where although the share of longer maturity bonds in domestic debt is roughly the same as in the Czech domestic debt, it has been growing quicker than the share of short-term bills, and therefore, the ratio of longer term instruments to short term has been increasing.

The structure of Hungarian government debt has been dominated by credit from the NBH and the non-interest debt held by NBH. In 1996 treasury bills and bonds made up 34% of the debt, while 16% was credit from NBH and 43% was held by NBH. However during the 1990s the share of credit from the central bank has been falling rapidly (since 1991 the NBH can finance the government only by purchasing marketable securities) in favour of financing through the issue of bills and bonds.

In 1992 a system of the regular issue of t-bills was developed, and since then their role in deficit financing has been rising. The marketable bond issues for government financing started at the end of 1991, but their share has been increasing only since 1993: their part of the total debt has risen since 1993 by 6 percentage points and in deficit financing from 7% in 1993 to 40% in 1996. Because a budget deficit turned out to be a permanent phenomenon, under these circumstances the most important task faced by the debt management was to increase the security of finance by increasing maturity. However over a third of the deficit is still financed by short-term instruments.

Table 8. The structure of public debt in Hungary

Type of debt	1991	1992	1993	1994	1995	1996
Total public debt (I+II+III)	100%	100%	100%	100%	100%	100%
I. Domestic interest bearing debt	60%	52%	56%	56%	55%	50%
I.1 Deficit financing	34%	31%	35%	32%	32%	30%
I.1.1 Treasury bills & bonds	2%	4%	13%	17%	20%	21%
– treasury bills	1%	3%	7%	7%	8%	9%
– state bonds	1%	1%	6%	10%	12%	12%
I.1.2 NBH credits	32%	27%	21%	15%	12%	9%
I.2 Non-deficit financing	26%	20%	21%	24%	23%	21%
I.2.1 NBH other credits	24%	19%	14%	10%	8%	7%
I.2.2. Bonds	2%	2%	7%	14%	15%	13%
II. External debt of the central government	3%	6%	6%	6%	6%	7%
III. Non interest bearing debt held by NBH	37%	42%	39%	38%	38%	43%

Source: Hungary – Statistical Appendix, 1997

This path of debt market development has also been observable in Poland, i.e.: in the first stage the authorities introduced short term bills (3 and 6 months) and then, as the market matured and the reform program gained credibility, the authorities have began to issue longer-termed securities

Non-deficit related financing constitutes over 20% of the total debt. Here also financing by means of credit from the central bank has been decreasing in favour of bond financing. These bonds include, among others, securities issued to purchase the non-performing rubel debt owed to NBH and the recapitalization bonds issued under the bank consolidation programs.

The structure of the government debt of Poland, the second most indebted country in the group is provided in Table 9.

Since 1993 almost the entire Polish domestic debt has been financed by the issuance of bills and bonds, but until 1996 deficit financing debt was dominated by short term bills (with maturity up to 52 weeks). As more long-term instruments were introduced – in 1994 fixed rate 2 and 5 years bonds and in the end of 1995 a 10 years floating rate bond, the share of medium and long term bonds grew rapidly. In 1997 they constituted 46% of the deficit financing debt. This increases the safety of financing and also reflects the growing creditworthiness of the government and credibility of the anti-inflation program..

Table 9. The structure of the public debt in Poland

Type of debt	1992	1993	1994	1995	1996	1997
Total public debt (I+II+III)	100%	100%	100%	100%	100%	100%
I. Domestic debt	25%	29%	37%	40%	43%	45%
I. 1. Deficit financing	11%	15%	21%	25%	28%	28%
I.1.1. Treasury bills	9%	14%	18%	17%	16%	15%
I.1.2 Bonds	2%	1%	3%	7%	12%	13%
I. 2. Passive bonds (non-deficit financing)	6%	10%	13%	12%	12%	13%
II. Other	7%	3%	2%	3%	3%	4%
III. Foreign debt	75%	71%	63%	60%	57%	55%

Source: Polish Ministry of Finance

Over 10% of the debt is non-deficit financing debt, which includes restructurization bonds, bonds for recapitalization of banks and bonds issued for meeting the agreement with the London Club, which was in fact a method of swapping a part of foreign debt to domestic debt.

Unfortunately, I was unable to find exact data on the structure of Romania's domestic debt. Most of the government imbalances were financed by external borrowing, therefore the domestic debt was low, standing in 1997 at 7% of GDP and 20% of total public debt. The market for domestic debt is still underdeveloped. The existing domestic debt has been financed mostly from commercial banks. The majority of the papers have a maturity of 90 days. It was only in 1997 that legislation was put in place, that provided for market-based T-bill auctions and secondary market trading. Non-residents, for the first time will be allowed to buy domestic government securities.

Another relevant classification criterion is the creditor structure of domestic public debt. The data on that subject concerning Polish and Czech debt is presented below.

Table 10. The outstanding domestic debt of the Czech central government by debt holder – in percent of domestic debt

Type of creditor	1993	1994	1995	1996	1997
Other levels of government	0.00%	0.05%	0.00%	0.02%	4.88%
Monetary authorities	50.63%	42.25%	13.52%	0.00%	0.00%
Commercial banks	48.25%	54.58%	70.16%	69.27%	48.38%
Other domestic sectors	1.12%	3.12%	16.33%	30.71%	46.74%

Source: Czech Ministry of Finance

In the Czech Republic the share of the amount of public debt held by monetary authorities has been declining sharply, and reached zero level in 1996 – a favourable trend, as it eliminates

the inflationary debt financing. The share of commercial banks since 1995 has also been falling, in favour of the non-banking sector, especially other financial institutions – in 1997 the non-bank financial institutions held 33.5% of domestic debt, compared to 19% in 1996 and 13% in 1995.

Table 11. The creditors holding Polish domestic debt – in percent of domestic debt

Type of creditor	1992	1993	1994	1995	1996	1997
Central Bank	48.1%	39.1%	35.2%	15.2%	14.2%	15.4%
Commercial banks	46.8%	52.4%	52.3%	64.4%	60.4%	56.5%
Domestic non-banking sector	5.0%	8.4%	12.0%	15.4%	21.7%	21.9%
Foreign investors	0.1%	0.1%	0.5%	5.0%	3.6%	6.2%

Source: Ministry of Finance

The management of the creditor structure of Polish public debt is a subtle matter, as it has to be combined with the conduct of stabilising monetary policy. With a given path of inflation rate reduction and the need to maintain a real increase in the value of bank credits to the private sector, the possibility of monetary financing is limited.

In the Polish case, central bank financing is highly inflationary due to the low ratio of zloty money to GDP: in 1996 this ratio was 31%. Under those circumstances the switch to non-monetary and non-bank financing is the more important.

Indeed the share of debt held by central bank is declining sharply. Since 1995 the share held by commercial banks has been falling as well, in favour of the non-banking sector. This however is not a perfect solution. When the level of saving is low, as it is in Poland, then a substantial share of the non-financial sector in debt financing might cause a decline in the already low credit capability of the banking sector. A better way out might be to use foreign savings, but with the high liquidity of securities, this increases the risk of a speculative sell-out. Therefore this method of financing should be kept within reasonable bounds

5. 2. The structure of public and publicly guaranteed external debt

The structure of the public and publicly guaranteed external debt: maturity and creditor structure is provided in the Tables 12 to 19.

Table 12: Maturity of the Czech public and publicly guaranteed external debt

Type of creditor	1990	1991	1992	1993	1994	1995	1996
Total debt stock	100%	100%	100%	100%	100%	100%	100%
Long-term debt	53%	62%	70%	72%	75%	71%	65%
Short-term debt	47%	38%	30%	28%	25%	29%	35%

Source: World Bank, World Debt Tables (1998)

Table 13. Maturity of the Hungarian public and publicly guaranteed external debt

Type of creditor	1990	1991	1992	1993	1994	1995	1996
Total debt stock	100%	100%	100%	100%	100%	100%	100%
Long-term debt	84%	87%	90%	89%	91%	90%	89%
Short-term debt	16%	13%	10%	11%	9%	10%	11%

Source: World Bank, World Debt Tables (1998)

Table 14. Maturity of Poland's public and publicly guaranteed external debt

Type of creditor	1990	1991	1992	1993	1994	1995	1996
Total debt stock	100%	100%	100%	100%	100%	100%	100%
Long-term debt	80%	81%	86%	91%	95%	98%	100%
Short-term debt	20%	19%	14%	9%	5%	2%	0%

Source: World Bank, World Debt Tables (1998)

Table 15. Maturity of Romania's public and publicly guaranteed external debt

Type of creditor	1990	1991	1992	1993	1994	1995	1996
Total debt stock	100%	100%	100%	100%	100%	100%	100%
Long-term debt	18%	20%	18%	56%	70%	75%	76%
Short-term debt	82%	80%	82%	34%	30%	25%	24%

Source: World Bank, World Debt Tables (1998)

The external public and publicly guaranteed debts of the four countries are dominated by long term debt, i.e. debt with an original maturity of more than one year. This is a favourable feature of the external debt as it smoothes the country's stream of obligations and increases the safety of the debt, safeguarding it from a sudden change in investors sentiments, although limiting the possibility of borrowing at a particular point in time. In Poland the share of long term debt is the largest – in rose from 80% of the debt in 1990 to 100% in 1996, the share is also very high in Hungary – nearly 90% in 1996, in Romania and Czech Republic over 65%. In the case of Romania the share of long term debt has grown substantially. Over the 1990s the value of short term external debt was roughly the same: around 800 million dollars, while long term debt grew on average by 1 billion dollar per year.

Table 16. The creditor structure of the Czech public and publicly guaranteed external debt

Type of creditor	1990	1991	1992	1993	1994	1995	1996
Public and publicly guaranteed	100%	100%	100%	100%	100%	100%	100%
Official creditors	6%	13%	23%	21%	19%	15%	11%
Multilateral	4%	11%	16%	14%	13%	10%	8%
Concessional	0%	0%	0%	0%	0%	0%	0%
Bilateral	2%	2%	7%	7%	6%	4%	3%
Concessional	0%	0%	1%	0%	0%	0%	0%
Private creditors	94%	87%	77%	79%	81%	85%	89%
Bonds	1%	5%	5%	16%	12%	9%	4%
Commercial banks	49%	54%	52%	41%	52%	67%	80%
Other private	43%	28%	21%	22%	16%	9%	5%

Source: World Bank, World Debt Tables (1998)

Table 17. The creditor structure of the Hungarian external public and publicly guaranteed debt

Type of creditor	1990	1991	1992	1993	1994	1995	1996
Public and publicly guaranteed	100%	100%	100%	100%	100%	100%	100%
Official creditors	15%	20%	22%	20%	20%	18%	19%
Multilateral	14%	18%	18%	17%	16%	15%	15%
Concessional	0%	0%	0%	0%	0%	0%	0%
Bilateral	1%	3%	3%	3%	4%	4%	4%
Concessional	0%	0%	0%	0%	1%	2%	2%
Private creditors	85%	80%	78%	80%	80%	82%	81%
Bonds	26%	32%	38%	51%	61%	66%	72%
Commercial banks	54%	43%	36%	26%	18%	14%	8%
Other private	5%	5%	5%	3%	2%	1%	1%

Source: World Bank, World Debt Tables (1998)

Most of Czech and Hungarian public and publicly guaranteed external debt is owed to private creditors, which is the normal structure for a middle-income country. While in the Czech Republic loans from commercial banks dominate, in Hungary those loans are being swapped for bonds.

Table 18. The creditor structure of the Polish external public and publicly guaranteed debt

Type of creditor	1990	1991	1992	1993	1994	1995	1996
Public and publicly guaranteed	100%	100%	100%	100%	100%	100%	100%
Official creditors	71%	75%	77%	79%	79%	78%	78%
Multilateral	1%	2%	3%	4%	5%	5%	6%
Concessional	0%	0%	0%	0%	0%	0%	0%
Bilateral	70%	74%	74%	75%	74%	73%	72%
Concessional	10%	8%	30%	30%	27%	27%	26%
Private creditors	29%	25%	23%	21%	21%	22%	22%
Bonds	0%	0%	0%	0%	20%	20%	21%
Commercial banks	25%	22%	21%	21%	1%	1%	1%
Other private	4%	3%	2%	1%	1%	0%	0%

Source: World Bank, World Debt Tables (1998)

Table 19. The creditor structure of the Romanian public and publicly guaranteed external debt

Type of creditor	1990	1991	1992	1993	1994	1995	1996
Public and publicly guaranteed	100%	100%	100%	100%	100%	100%	100%
Official creditors	71%	75%	77%	79%	79%	78%	78%
Multilateral	1%	2%	3%	4%	5%	5%	6%
Concessional	0%	0%	0%	0%	0%	0%	0%
Bilateral	70%	74%	74%	75%	74%	73%	72%
Concessional	10%	8%	30%	30%	27%	27%	26%
Private creditors	29%	25%	23%	21%	21%	22%	22%
Bonds	0%	0%	0%	0%	20%	20%	21%
Commercial banks	25%	22%	21%	21%	1%	1%	1%
Other private	4%	3%	2%	1%	1%	0%	0%

Source: World Bank, World Debt Tables (1998)

In Poland and Romania most of the public and publicly guaranteed debt is owned to official creditors, a structure which is comparable to the indebtedness of low-income countries. However, in Romania during 1990 – 1996 the debt toward private creditors rose by 35 percentage points relative to the total debt.

In Poland the debt toward private creditors in 1996 amounted to 20% of the total debt. Until 1993 most of this debt had the form of a credit from commercial banks, but as a result of the agreement with the London Club, 55% of the debt remaining after the buy – back (Poland bought back around 26% of its debt) was swapped for 30-year Brady bonds, 11% for the par bonds and 5% for new money (see Appendix 1). This completely changed the structure of the indebtedness toward private creditors. Additionally in 1995 Poland started to issue Eurobonds, which amounted to 1% of the total debt in 1997.

Romania's indebtedness toward private creditors substantially increased in 1996. The National Bank of Romania raised nearly 1 billion dollars through three bond issues; a three year Samurai bond (issued in March'96 at 340 basis points), a three year Eurobond (issued in June'96 at 305 basis points) and a five year Samurai bond (issued in September'96 at 315 basis points). In addition, the central bank borrowed 600 million dollars in the form of syndicated bank loans at maturity of 1 – 3 years. These operations have increased the cost of debt servicing and shortened the average maturity, which has already lead to a sharp rise in debt payments in 1997.

6. Summary and conclusions

This paper has attempted to consider in a systematic way the developments of the public debt in the Czech Republic, Hungary, Poland and Romania in the 1990's. During this time the stock and structure of the public debt of the four countries has undergone major changes.

Hungary and Poland, the two countries that entered the transition period with the largest debt burden, managed to substantially lower the debt to GDP ratio.

The improvement in the Hungarian debt ratio can be attributed to the conduct of fiscal policy, that resulted in primary surpluses, as well as to the inflow of non-deficit revenues, mainly privatisation receipts. The fall in the public debt ratio was also due to a high nominal growth rate of GDP that was greater than the interest payments, resulting in the economy "outgrowing" the debt.

In the case of Poland the debt ratio improvement can be attributed mainly to external debt reduction, which was the result of the agreements with the Paris and London Clubs. Other important factors were the fast rate of real GDP growth and the real appreciation of zloty, that resulted in the phenomenon, which has also occurred in Hungary, namely, that the nominal rate of GDP growth was bigger than the debt service payments, which resulted in lowering the debt to GDP ratio.

The remaining two countries, which in the beginning of the decade had relatively low public debts – the Czech Republic and Romania – did not experienced such a spectacular debt ratio decline.

Romania experienced a debt ratio increase, although its indebtedness is still under the 60% of GDP specified by the Maastricht Criteria and lower than the liabilities' ratio of Hungary and Poland. The debt built up has been occurring since 1994, and was especially dynamic in 1996 and 1997. The chief reasons have been non-deficit and quasi-fiscal imbalances.

In 1997 the Czech Republic also noted a debt ratio increase, although very small in magnitude. The increase was mainly due the currency crisis and the flood, both of which hit the country in 1997, and resulted in a deterioration of GDP growth.

The structure of the debt of the four countries has also undergone major changes. In the Czech Republic, Hungary and Poland the share of foreign debt has fallen in favour of domestic debt; in Romania, on the other hand, the share of foreign debt has substantially increased. The shift to market-financing of the debt has resulted in growing share of securities in the domestic debt financing. The progress in development of the debt market and the growing credibility o the governments has allowed to increase the maturity of bonds.

For further economic development and stability of the four countries, sustainable financial policies are crucial. Although the debt ratios of Hungary and Poland are falling and both countries display primary surpluses, and the debt ratios of the Czech Republic and Romania are relatively low, each of the countries faces hazards that threaten further fiscal sustainability.

The Czech Republic seems to be in the best situation. The debt ratio decline has been halted in 1997, but provided, that the country manages to keep its fiscal deficit in boundaries and regain economic growth, its financial situation looks quite stable. However, the Czech Republic has still not resolved the problem of hidden public debt arising from the existence of bad debts in the banking sector. According to OECD estimates (OECD, 1998), its true indebtedness is underestimated by as much as 7% of GDP. In Poland and in Hungary this debt was made explicit by the issuance of bonds, that financed the restructurisation of banks

The fiscal developments of Hungary and Poland are more vulnerable to negative shocks. Both countries face large interest payments – in Poland they reached in 1997 almost 4% of GDP and in Hungary 9% of GDP. These payments are larger than the primary surpluses run by the governments of both countries and therefore add to the debt built-up. Any change in the economic environment, that results in a contraction of GDP growth, may cause interest payments to outweigh the nominal GDP increase,

which can lead to a snowball effect of growing debt ratio and interest payments, a path that is unsustainable in the longer run and leads strait to economic crisis. Poland, although its interest payments are smaller at present, will face a debt service built-up after the year 2001. Any problems with the roll-over of the debt, caused for example by a deterioration in the investment rating of Poland, might cause serious troubles in servicing the debt.

Government sectors of the former CPE, in addition to explicit public debt ,are also burdened wit a high implicit public debt of the social security system. The estimation performed for Poland (Gomulka, Jaworski, 1998) illustrate the magnitude of the problem – Poland's implicit debt is about 200% to 270% of GDP. As a necessary change to a capital-funded system is implemented, this debt gradually becomes explicit.

Thus it is necessary, that policymakers in the three countries make an effort to perform further fiscal adjustment, especially by curbing government spending and improving their quality (see IMF 1998). All the advanced transition countries appear to spend more than the long-run revenue generating capacities can sustain and more than efficiency conditions call for.

The situation of Romania is the most fragile. The observed dynamics of the debt are unsustainable in the longer run and the country is suffering from major economic imbalances, that are far from being solved. Although the debt to GDP ratio remains low, in 1996 – 1997 it increased by nearly 16 percentage points. The underlying cause has been a huge fiscal imbalance, rising from a large quasi-fiscal deficit and off-budgetary transfers. Although the authorities committed themselves to a stabilisation program, backed by the IMF and World Bank, most criteria agreed upon with the IMF were not met, including the fiscal deficit target that widened to 6% of GDP in January – June 1998, with a primary deficit of 0.6% of GDP. Those budgetary imbalances were exacerbated by large off-budgetary losses resulting from the failure to close or privatise loss-making state enterprises (see IIF (1998)).

Fiscal policy will not enter a sustainable path without reforming the whole economy,.

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Appendix I

Poland's agreement with the Paris Club

During the 1980's Poland rescheduled its debt towards the Paris Club several times, it was however not until the Agreed Minute signed on April 21, 1991, that a breakthrough occurred. This agreement provided for the reduction of 50% of the net present value and a reorganisation of the whole of the Polish debt, amounting to 33 billion dollars, owed to the governments of the 17 countries, associated in the Paris Club.

The agreement was carried out in two stages. The first stage – April 1991 to March 31, 1994 – provided for a reduction of the debt by 30% in terms of Net Present Value. The implementation was conditional upon the IMF approval of the reform programme (which was received a day before the signing of the agreement). In the second stage, which commenced on April 1 1994, Poland has received a further reduction of 20% of NPV.

Each creditor country chose between three options, but each was to give a 50% NPV reduction by 2009. Those options were:

A. principal reduction

B. interest reduction

C. capitalisation of interest and a substantial delay of repayments

In the first stage of the agreement, during the 3 years, from April 1991 to April 1993, Poland's interest payments were lowered to 20% of the actual payments – about 1.7 billion dollars, with the remaining 80%, around 6.1 billion dollars, cancelled. Due to bilateral agreements reached in 1991 and 1992, six countries chose option A (US, UK, Netherlands, Finland, Germany and Sweden), which reduced the debt by 2.9 billion dollars. 10 countries – France, Brazil, Austria, Canada, Italy, Switzerland, Belgium, Denmark and Spain, chose option B. Japan chose option C.

The implementation of the second stage was conditional on the implementation of the IMF approved reform program, on reaching an agreement with the London Club and on the full servicing of the agreed interest payments to the Paris Club. Poland adhered to those conditions and the second stage was implemented in 1994. In this stage the principal payments (to the countries that chose option A) were reduced by a further 3,3 billion dollars. Interest payments were reduced from 984 million dollars to 540 millions in 1994 and from 1,4 billion dollars in 1995 to 679 million dollars. Until the end of the century the interest payments towards the Paris Club will be around 660 million dollars.

The total advantage resulting from both interest and principal payments reduction amounts to 1 billion dollars per year.

The agreement is constructed in such a way that the first large principal of 1 billion dollars will be due in 2001. In the following years (until 2008), the principal payments will grow quickly, but at the same time the interest payments, will be gradually declining. The idea of the agreement is to postpone the debt service burden for the years after 2000. It is assumed that by that time the projected rise in balance of payments surplus will allow a full service of the reduced debt.

Poland's agreement with the London Club

The final agreement with commercial banks associated in the London Club was signed on September 14, 1994. It provided for reduction and conversion of debt into other forms, in accordance to the Brady Plan principles. The main elements of the agreement were:

1. Buybacks: Poland bought back 22% of its debt for the price of 41 cents per dollar of the basic debt. This operation has provided for the greatest debt reduction but also was very costly – the implementation cost 1.3 billion dollars.
2. The remaining basic debt: The creditors could choose between three options concerning the conversion of Poland's remaining (after the buyback) basic debt into bonds:

– Par bonds – 30-year parity bonds issued by the Ministry of Finance. The debt reduction results from the below the market interest rate.
– Discount bonds – also 30-year bonds issued by the Ministry of Finance, subject to a one-off redemption after that period, bearing a discount of 45 percent.
– New Money – the debt is changed to 25-year bonds with below – the – market interest rate and the banks, which chose this option are obliged to grant Poland new money, equivalent to 35% of the amount involved.

1. The debt resulting from revolving credits (some 900 million dollars) has been exchanged for a 30-year parity bonds (RSTA bonds) with a below the market rate.
2. The past due interest has been exchanged for 20-year bonds (PDI bonds) also with below the market rate. This debt has been also additionally reduced by around 22%.

The agreement reached with the London Club provides for a total NPV debt reduction of 49.2%. The debt service payments were adjusted to the expected capacities of the Polish balance of payments, i.e. the payments will be low until 2008 – in the period, in which the debt service payments to the Paris Club are high, and after that time they will grow.

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