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**Joanna Siwińska**

**The External Public Debt of Baltic and  
Selected CIS Countries in Years 1992–1997**

**Estonia, Latvia, Lithuania, Kazakhstan, Kyrgyz Republic,  
Moldova, Russian Federation and Ukraine**

*W a r s a w , 1 9 9 9*

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# Contents

Abstract	5
1. Introduction	6
2. The Economic Implications of External Public Borrowing for Transition Economies	7
3. External Public Debt Dynamics in the Period 1992–1996	9
4. The Costs of Debt Service	15
5. The Structure of External Public Debt	19
6. The Sustainability of Fiscal Policy	23
7. Debt Consequences: the Level of Domestic Savings	27
8. Conclusions	28
References	30
Appendix	31

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## **Abstract**

The aim of this paper is to describe the dynamics and structure of public external liabilities in Baltic countries: Estonia, Latvia, Lithuania and in selected countries of the Commonwealth of Independent States: Kazakhstan, Kyrgyz Republic, Moldova, Russian Federation, Ukraine.

The main finding of the paper is that although the present level of external public debt of these countries is not large, its growth rate has been very high.

The most rapid growth over the whole 1992-1996 period, in percentage points, was observed in Kyrgyz Republic and Moldova: their debt to GDP ratios have increased by over 40 percentage points. Such rate of growth is very high, much higher than the average growth rate of the total public liabilities in Western OECD countries and clearly unsustainable in the long run.

The debt to GDP ratio increase was also quite large – above 10 percentage points – in Kazakhstan, Ukraine and Lithuania. Although it is comparable to the average growth of public liabilities of Western OECD countries, it seems to be excessive in case of countries, that have unsophisticated and much less developed financial markets as well as much lower international credibility.

The main cause of the rapid increase in public borrowing of the selected countries have been large and persistent fiscal imbalances. A further prolonged rapid increase of government debt is unsustainable – even the present debt service requirements are putting a substantial pressure on the budget. Therefore it is crucial, that the authorities pursue in the effort to curb fiscal imbalances.

## **I. Introduction**

The aim of this paper is to describe the dynamics and structure of the public external debt in Baltic countries: Estonia, Latvia, Lithuania and in selected countries of the Commonwealth of Independent States (B-CIS) Kazakhstan, Kyrgyz Republic, Moldova, Russian Federation, Ukraine. The structure of the paper is as follows: Section II presents a brief summary of the economic implications of public external borrowing, Section III contains the statistical material on foreign public debt, Section IV assesses, within the scope of available data, the fiscal determinants of public indebtedness, Section V surveys the possible impact of public debt on domestic savings and Section VI concludes.

The main finding of the paper is that although the present level of external public liabilities of the B-CIS countries is not large, its growth rate has been very high. Further, prolonged rapid increase of government debt is unsustainable, as in the longer run it may lead to a "snowball effect" of growing debt service payments, which will impose an increasing strain on fiscal balance and in effect lead to further debt built up. Therefore the authorities of most B-CIS countries must pursue in the effort to curb fiscal imbalances, which have been the main reason of the observed increase of the public debt.

Before preceding further, a couple of words of explanation are needed. This paper concentrates only on the issue of public external indebtedness [1]. Although the external public borrowing is a very important issue (as explained in Section II below), but nevertheless it does not provide the crucial information on the total indebtedness of government. However, in the case of the B-CIS countries, most of the total indebtedness of governments is established by their external public liabilities. The domestic public debt is not large – in 1996 the domestic public liabilities did not exceed 10% of GDP, with the only exception of Russia (where the domestic debt was slightly over 10% of GDP) [2]. Therefore, in general, neither the level of total indebtedness or the ranking of countries by debt burden is not dramatically changed by excluding the domestic public debt.

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[1] Reliable and comparable data on domestic public debt was for me impossible to acquire.

[2] Data after Kapur and Mensbrugge (1997).

## **2. The Economic Implications of External Public Borrowing for Transition Economies**

External public borrowing, when used properly and is not excessive, can be highly beneficial to transition process. In many countries in transition, the amount of domestic saving is insufficient to cover large investment needs. External finance, including public borrowing, solves this problem by disentangling investment from domestic savings. Foreign government borrowing raises funds, that, if spent on productivity-increasing investments, complementing private undertakings, like investments in infrastructure, primary education, restructurisation of inefficient enterprises, etc. or on necessary structural reforms, like the reform of social security system, can enhance growth, increase welfare of citizens and in effect, by improving the tax base and by decreasing future government expenditures (like for example subsidies for inefficient enterprises), significantly improve budget developments.

Foreign borrowing also introduces a country to a world-wide collection of financial instruments, allows to lower the borrowing costs and diversify the interest rate exposure.

Although external public borrowing has benefits, it also entails costs and risks. It burdens the economy with debt servicing costs that, as opposed to domestic debt, redistribute income from domestic to foreign citizens. It also makes a country vulnerable to swings in international exchange and interest rates. The emerging market and transition economies are especially vulnerable to these risks, as the currency composition of their debt and its maturity structure is driven mainly by the low nominal interest rates, rather than by a debt strategy based on minimising the risk of adverse currency developments. During the past twenty years, some emerging market economies have experienced the adverse consequences of the movements in exchange and interest rates. For example, during 1993–1995, the external debt burden of Indonesia, Philippines, China or Hungary, had increased significantly due to their large and unhedged exposure to the yen [IMF, International Capital Markets, 1997].

Apart from the discussed aspects of external borrowing, another issue worth highlighting, when assessing the influence of public indebtedness (external or internal) on economy, is the possible impact of budget deficit and public debt on private savings and on inflation.

Considering the impact of public indebtedness on savings, there are two opposing views on this issue. A standard economic analysis predicts, that if the government finances its spending by issuing debt, in the long run it will contribute to lower level of national savings. This will raise interest rates, crowd out of private investment and lead to a

current account deficit. Therefore, according to the standard view, public borrowing, by decreasing national savings and crowding out private investment, may have an adverse effect on economic growth.

However, an opposing view – the Barro-Ricardian Equivalence Theorem proposes, that the deficit (strictly speaking, a tax-cut induced deficit) and public debt may not have any adverse effects on economy. According to this Theorem, debt is neutral: it does not have any real effects on economy. The explanation is simple: if people are fully rational and farsighted, they will recognise that today's deficit means an increase in the public debt. They will also recognise, that the government will have to repay its obligations by raising taxes in the future. Therefore today's deficit and debt implies future tax rise equal to the present discounted value of the issued debt. Because households try to smooth the consumption pattern, they will save the current tax rebate to cover the future expected tax increase. Debt is recognised as merely a postponing of taxes and therefore induces individuals to save more. Thus, as debt increases, private saving increases as well, offsetting the decrease in government savings. Hence the national saving rate, interest rate and current account are unchanged and thus public borrowing will not have a negative effect on the economy.

Although very interesting, the Ricardian proposition requires strong assumptions, that are unlikely to hold in real world like perfectly rational agents or perfect capital markets. A crucial assumption needed for the Ricardian Equivalence Theorem to hold, is that households behave as if they lived forever and thus it does not matter when the government will raise taxes to pay for the debt: in the near future or during the lives of next generations. This problem was solved by Robert Barro [Barro, 1974], who showed, that this assumption will be satisfied, if one takes into account, that people usually love their children. It is then plausible, that the utility of the next generations has the same value for the individuals as their own utility: individuals treat children as extensions of themselves. If this is true, then people will save the additional income from tax decrease, even if they expect, that the taxes will not be increased during their lifetime, but during the lifetime of their children.

Some economists argue, that even this fundamental assumption is wrong. They point to the fact that, although without doubt most parents care about their children, it is impossible to assume that the bequest motive will be strong enough to balance government dissavings with private saving increase. If altruism had been sufficiently important to induce Ricardian Equivalence, than it would have also caused some rather implausible results. Because family linkages form complex networks, then strong altruism would link all families together and then all redistributive policies would be irrelevant, including tax rates. Since this is not observed, the fundamental assumption must be wrong [Bernheim, 1989].

Therefore most economist dismiss the Ricardian proposition or postulate some weak form of it, in which the increase in public debt will cause a less than proportional increase in private savings.



The public debt may also have an impact on inflation. As pointed out by Sargent and Wallace's unpleasant monetary arithmetic [for a discussion see Sachs and Larrain, 1993], debt financing may in the long run be inflationary. If the government builds up an excessive debt, that becomes too large to finance through taxes or more borrowing, the only way for the government to meet its obligations is to print money. Rational agents will recognise such possibility and the expectations of inflation in the future will fuel today's inflation. Paradoxically, these expectations will be strengthened by a restrictive monetary policy, that leads to a higher interest rate and therefore to higher debt servicing costs; a restrictive monetary policy can be more inflationary, that a policy that accommodates to fiscal policy. However, inflation is 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 to avoid it.

On the other hand, it has also been argued, that issuing foreign-currency debt can contribute to lower inflation rate, because it solves the time-consistency problem of government policy [Fontenay, Miesi-Ferreti, 1995]. When government issues debt, it is faced with the following time consistency problem: at first, it has an incentive to promise a low inflation rate, as this lowers the nominal interest rate and debt servicing cost. However, when the debt is already issued, the optimal policy for the government is to unexpectedly increase inflation rate, which reduces the value of the debt. Rational agents understand this problem and ask for a correspondingly higher nominal interest payments. Therefore in equilibrium, the inflation is higher, without the benefit in terms of public debt erosion. The problem is solved, when the government "ties its own hands" by issuing foreign currency or indexed domestic debt. In that case government has no incentive to increase inflation. Therefore the foreign-currency debt can improve the credibility of anti-inflationary policy.

### **3. External Public Debt Dynamics in the Period 1992–1996**

At the end of 1997, the external public debt burden of the Baltic and selected CIS countries was not especially high. In none of the countries, it exceeded 45% of GDP. However, in some countries it has been growing very rapidly.

In year 1992 – the first year after the dissolution of the USSR – the public external debt of all the B-CIS countries analysed here, except for Russian Federation, was close to zero. This was the result of the "zero-option" agreement adopted in 1992–1993, under which all the obligations of the former USSR were inherited by Russia and most of the other B-CIS countries were left with little or no external debt. The few existing obligations were mainly liabilities vis a vis Russia, resulting from the conversion of account

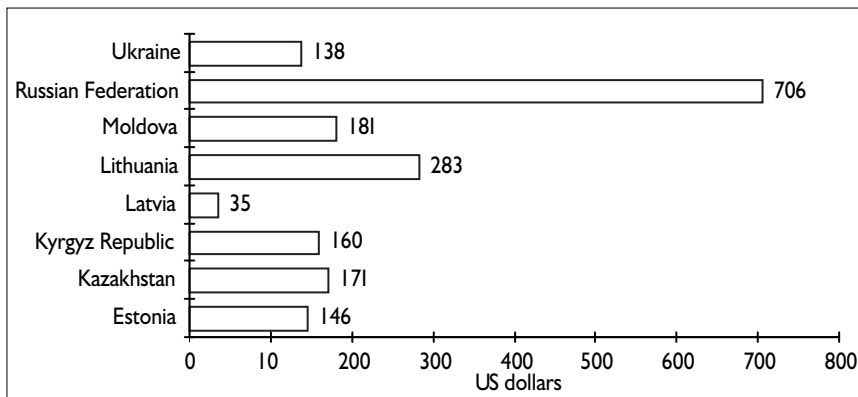
balances to the Central Bank of Russia into public debt against Russia [Kapur and Mensbrugge, 1997].

The gross external debt of Russian Federation in 1992 was over 18% of GDP, out of which 14% of GDP was long term public or publicly guaranteed external debt and the remaining part of external obligations – 4% of GDP – was short term debt [3].

Since 1992, in all of the countries, the external public debt has grown. In dollar terms, in years 1992–1997, the external long-term public and publicly guaranteed debt of the selected B-CIS countries has grown by over 80%. In 1992, the total external debt of the governments of the selected B-CIS countries was 65 billion dollars, out of which 99% was established by Russian Federation. In 1997 the total external public liabilities equalled 117 billion dollars – equivalent to 21% of the countries' GDP. 89% of the obligations belonged to Russian Federation. Therefore, during 5 years the joint debt of the selected B-CIS countries increased by nearly 52 billion dollars and about 77% of this increase was due to growth in the liabilities of Russian government.

The average *per capita* external liabilities of the 8 selected countries in 1997 amounted to 227 dollars. Excluding Russia, the average *per capita* debt in the 7 countries was 138 dollars. Graph 1 shows the amount of *per capita* public external liabilities in 1997 for each of the selected B-CIS countries.

**Graph 1. External Public and Publicly Guaranteed Long Term *per capita* Debt, in 1997**



Source: World Bank, World Development Indicators, (1999)

[3] All the statistics on external debt, GDP, exports and reserves, unless otherwise indicated, are calculated on the basis of World Bank Debt Tables [1998], that provide an excellent and comparable source of data. However, the statistics on the external short term debt are not divided between private and public debt, therefore it is impossible to tell, whether the short-term obligations are public or private. This however should not be a big obstacle to the analysis of public debt, as the short term debt in all the countries of interest is very small, under 3% of GNP.

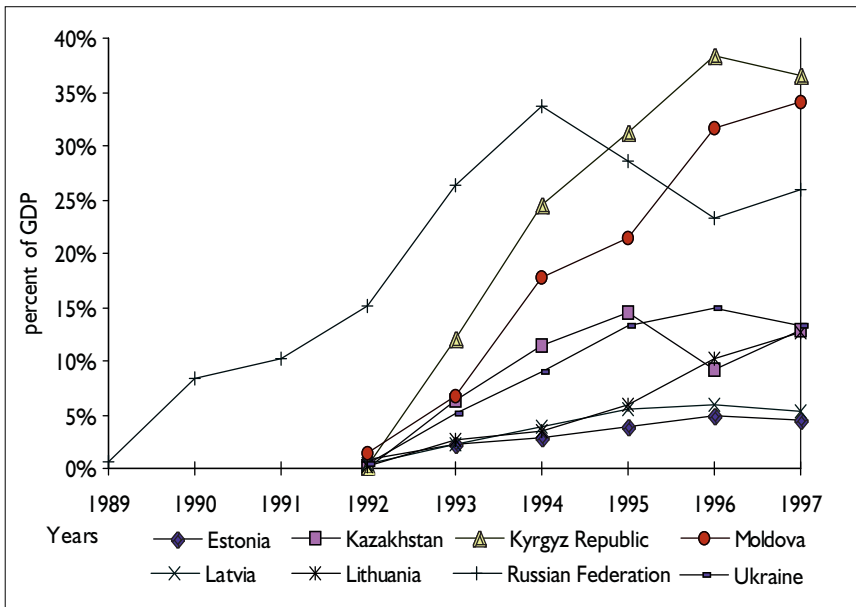
The Russian government has incurred the largest external liabilities *per capita*. Lithuania has the second largest *per capita* debt, much smaller than Russian, but still about 50 dollars larger, than the average debt of the remaining six countries (i.e. excluding Russian Federation and Lithuania).

More useful than *per capita* measures, are the indicators that compare the volume of debt to the size of the economy or to level of international reserves.

The developments of the external public and publicly guaranteed long-term debt compared to GDP for all of the countries are provided in Graph 2.

In 1997, the most indebted countries, out of the group of eight economies, were Kyrgyz Republic and Moldova – their public external debt amounted to over 40% of GDP. The foreign indebtedness of governments of remaining countries was much lower. The public external liabilities of Russian Federation – the third most indebted country – were under 25% of GDP. Ukrainian and Kazakhstan's external public debts were around 14% GDP. The smallest long-term public external debt ratio belonged to Baltic countries: Lithuania's debt equalled 11% of GDP, Estonia's: 5% of GDP, and

**Graph 2. The External Public and Publicly Guaranteed Long Term Debt to GDP in B-CIS Countries, 1992–1997.**



Source: World Bank Development Data (1998) and World Development Indicators (1999)

Latvia – a country with the smallest debt ratio – has incurred public debt equal to 2% of GDP.

Such debt ratios are not very high compared to OECD standards: the average gross government liabilities in the Western OECD countries in 1997 equalled 77% of GDP. However, when the external indebtedness of the B-CIS countries is compared to the average public external debt of low and middle income economies, that in 1996 was 23,5% of GDP, the debt ratios of Kyrgyz Republic and Moldova turn out to be significantly higher.

While the debt ratios in 1997 were not extremely high in any of the countries, but the very short time, that some of these economies have reached their indebtedness level, is remarkable. The growth rate of public external debt especially in Kyrgyz Republic and Moldova, has been very high. The relevant statistics, together with the average growth for Western OECD and low and middle income countries, are shown in Table I.

**Table I. The Annual Growth of the Ratio of External Long-term Public and Publicly Guaranteed External Debt to GDP, in Percentage Points**

<b>Country</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1992-1997</b>
Estonia	1.38	0.67	1.10	1.05	-0.40	3.79
Kazakhstan	6.30	4.91	3.13	-5.12	3.43	12.64
Kyrgyz Republic	11.80	12.05	5.76	6.74	4.88	41.22
Latvia	1.85	1.47	1.73	0.40	-4.38	1.08
Lithuania	2.37	0.96	2.28	4.33	0.77	10.70
Moldova	5.19	10.93	3.73	9.79	10.94	40.57
Russian Federation	11.26	7.39	-5.03	-5.29	0.55	8.88
Ukraine	4.47	3.85	4.16	1.68	-0.61	13.55
Western OECD countries *	6.4	1.3	4.1	1.2	-1	12
Low and middle income economies	0.01	0	-0.01	-0.03	0.04	0

\* total government liabilities

Source: World Bank Development Data (1998), World Development Indicators (1999), OECD Economic Outlook, (1998)

The most rapidly increasing external liabilities in the period 1993–1997 belonged to governments of Kyrgyz Republic and Moldova: public debt to GDP ratios of these countries have increased by over 40 percentage points.

In Kyrgyz Republic, the most rapid growth rate of external public liabilities was noted in years 1993–1994, when the debt had grown by over 10 percentage points. Since then, the magnitude of growth has been falling. In 1997 the debt has increased by less than 5 percentage points, which was the smallest increase since 1993. However, even after such a decrease in the growth rate, it is still very high by OECD standards, not to mention the low and middle economies average growth rate.

In Moldova, contrary to Kyrgyz Republic, the growth of debt in recent years has been gaining speed. In 1994 the debt increased by over 10 percentage points, but in next year the country has managed to decrease the rate of growth: the debt has grown by less than 5 percent of GDP. However in 1996 and 1997 external public liabilities have again resumed very rapid growth: around 10 percentage points in each year.

Such rapid growth in both countries is very alarming – it is much larger than the average growth rate for OECD economies – and is clearly unsustainable. In the longer run, further vigorous growth, if not suppressed, will lead to large indebtedness level and serious debt-servicing and fiscal problems, that may hamper reform process and further growth.

The other countries that have experienced significant growth of public external liabilities – over 10 percentage points during 1993–1997 – are Ukraine, Kazakhstan and Lithuania. Although such debt increase is comparable to the Western OECD countries' standard, but in the case of countries, that have much lower international credibility, less experience in managing external debt, and less developed financial markets, this magnitude of growth seems to be excessive in the longer run.

In Ukraine the debt ratio has been steadily growing by around 4 percentage points annually, over the period 1993–1995. In 1996 the growth rate declined and in 1997 the debt to GDP ratio has even decreased, although slightly. Over the whole 1993–1997 period, the Ukrainian debt ratio increase was equal to over 13 percentage points.

The external public indebtedness of Kazakhstan, after a period of positive, although declining growth rate, in 1996 decreased by over 5 percentage points. In 1997, the debt ratio increased again, by over 3 percentage points. Over the whole period, the ratio of the debt has increased by over 12 percentage points.

In Lithuania the debt to GDP ratio in 1992–1997 has grown by 10 percentage points. The largest increase was noted in 1996 – over 4 percentage points. In 1997 however, the debt ratio has remained almost stable.

The liabilities of Russian Federation, the third most indebted country in the group, have grown by less than 10 percentage points. After the initial rapid growth in 1993 and 1994, in 1995 and 1996 they have declined by over 10 percentage points. This was due to the rescheduling of the principal as well as interest payments by official and private creditors. In 1997 the public debt ratio was nearly stable.

The remaining Baltic countries have displayed a very modest debt ratio increase. In 1997, the debt ratios of Estonia and Latvia have even decreased, in Latvia quite significantly, by over 4 percentage points.

Summing up the public debt developments of the selected countries: although the external indebtedness of the B-CIS governments is not very high, the rapid increase in government liabilities in some of the countries is alarming. If it is not decreased, these countries might find it unsustainable and leading to a further deterioration of fiscal position and to debt-servicing problems. The biggest increase of public debt ratio, much above OECD average, was noted in Kyrgyz Republic and Moldova. The growth of public external debt in Ukraine, Kazakhstan and Lithuania, although much lower, than in the above two countries, has also been high, considering that the B-CIS countries have less developed financial markets and still low international credibility.

An aspect that is worth indicating, when discussing the growth of the public external liabilities of the B-CIS countries, is the often haphazard strategy of external borrowing. As Kapur and Mensbrugghe [1997] explain: "the absence of a large existing debt has possibly encouraged some borrowers to be less prudent, than otherwise in their financing". It is not uncommon, that the government grants guarantees on foreign borrowing, that are for purely commercial purposes and at unconcessional terms. Such actions increase exchange and interest rate risks as well as lead to a possibility of bunching of debt-service obligations, and therefore future external borrowing "must be consistent with a country's medium term adjustment strategy and be based on careful assessment of repayment capacity of a budget" [Kapur and Mensbrugghe, 1997].

Another indicator of the public external indebtedness is the ratio of international reserves to a gross public debt. It shows the ability of a country to earn foreign currency and its potential to repay foreign obligations, without further borrowing.

One has to keep in mind however, that the repayment of the debt by means of decreasing the level of international reserves, if sufficient primary surplus is non-existent, is related to the increase in internal government liabilities.

This ratio of international reserves to external public liabilities for the selected B-CIS countries is given in Table 2.

In the Baltic Countries the stock of international reserves exceeded the stock of public external debt during the whole 1993–1996 period. The largest ratio has been noted in Estonia: in 1996 international reserves were almost three times larger than the public external debt. In Latvia reserves were 2,5 times larger and in Lithuania they were a bit more than equal to the level of public debt. In 1996 Kazakhstan also noted an excess of international reserves over public debt. This was due to a decrease in debt of almost 900 million dollars.

**Table 2. International Reserves to Public and Publicly Guaranteed Gross External Debt, in 1993–1996**

<b>Country</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Estonia	458.42%	411.05%	365.98%	295.52%
Kazakhstan	43.86%	54.60%	59.07%	101.24%
Kyrgyz Republic	13.20%	14.86%	20.64%	18.54%
Latvia	425.89%	308.77%	222.10%	250.37%
Lithuania	211.50%	222.76%	195.52%	106.19%
Moldova	38.71%	54.24%	54.41%	56.03%
Russian Federation	8.77%	6.68%	17.96%	16.21%
Ukraine	4.69%	14.42%	16.77%	28.85%

Source: World Bank Development Data (1998)

The smallest debt to reserves ratio was observed in Russian Federation and in Kyrgyz Republic: in 1996 reserves were equal respectively to around 16 percent and 19 percent of public external debt.

## **4. The Costs of Debt Service**

The amount of debt service requirements establish the current burden of the debt on the economy. 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.

Table 3 shows the debt service payments of the selected B-CIS countries, relative to the size of their economy.

The debt service to GDP ratio in B-CIS countries is not large: in most countries it is under 1% of GDP. In Moldova and Kyrgyz Republic this ratio is higher – above 4% of GDP.

Both countries had difficulties in servicing the debt on time, and as a result have acquired interest and principal arrears, equal to about 1–2 % of GDP. However, in 1996 both countries managed to lower these arrears.

**Table 3. The Ratio of Debt Service: Payments Actually Made and Interest and Principal Arrears to GDP**

Country	Item	1993	1994	1995	1996
Estonia	payments actually made	0.34%	0.50%	0.26%	0.48%
	arrears	0.00%	0.00%	0.00%	0.00%
Kazakhstan	payments actually made	0.03%	0.24%	1.00%	1.18%
	arrears	0.09%	0.53%	0.83%	0.00%
Kyrgyz Republic	payments actually made	0.02%	0.87%	3.49%	2.49%
	arrears	0.05%	1.62%	1.36%	0.21%
Latvia	payments actually made	0.15%	0.35%	0.43%	0.61%
	arrears	0.04%	0.00%	0.00%	0.00%
Lithuania	payments actually made	0.07%	0.77%	0.41%	0.96%
	arrears	0.00%	0.00%	0.00%	0.09%
Moldova	payments actually made	0.03%	0.53%	2.85%	2.10%
	arrears	0.20%	1.31%	2.30%	0.06%
Russian Federation	payments actually made	0.52%	0.99%	1.61%	1.36%
	arrears	2.54%	5.98%	8.40%	7.91%
Ukraine	payments actually made	0.04%	0.07%	0.29%	0.24%
	arrears	0.01%	0.25%	0.03%	0.02%

Source: World Bank Development Data (1998)

Russian Federation is the only country that has faced large debt obligations, close to 10 percent of GDP. Russia also has had serious troubles in servicing the debt on time. The arrears on principal and interest payments were much larger, than the payments actually made. In 1996 the arrears were equal to 8% of GDP while the payments actually made were equivalent to 1.4% of GDP. Such situation is very alarming, because it indicates, that the government has trouble in servicing the debt, what can lead to a change in investors sentiments and a foreign debt crisis.

In fact, that is exactly, what has happened in Russia in 1998. Large debt service costs and the fall of investor confidence in the government honouring them, have been one of



the major causes of the Russian financial crisis in the summer of 1998. During the second half of 1998 the government faced a built-up of service payments, with GKO/OFZ [4] redemption and coupon payments averaging over \$ 1 billion a week through May 1999 [IMF, World Economic Outlook, 1998]. As a result, the investor confidence fell and selling pressures mounted in debt, equity and foreign exchange market. In addition fears of bank failures led to deposit withdrawals. This has led to a currency, debt and banking crisis and to a serious destabilisation of the whole economy.

The ability of a country to service the foreign debt is indicated by the debt service to reserves ratio. Table 4 contains the public external debt to reserves ratio in selected B-CIS countries.

**Table 4. Public and Publicly Guaranteed Debt Service to International Reserves**

<b>Country</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Estonia	3.47%	4.30%	1.80%	3.30%
Kazakhstan	1.13%	3.87%	11.72%	12.58%
Kyrgyz Republic	1.28%	24.30%	56.84%	36.82%
Latvia	1.56%	2.97%	3.54%	4.13%
Lithuania	1.18%	9.72%	3.62%	8.92%
Moldova	1.31%	5.56%	24.69%	12.09%
Russian Federation	23.01%	44.98%	31.99%	36.91%
Ukraine	96.99%	34.14%	97.00%	57.60%

Source: World Bank Development Data (1998)

When looking at the debt service requirements, as a fraction of international reserves, the only country, that seemed to be in tight situation is Ukraine. In 1995 the servicing of foreign debt was equal to 97 percent of reserves. In 1996, due to growth of amount of reserves, this ratio fell to 58 percent.

To survey more broadly the burden of public indebtedness on the B-CIS economies and assess their ability to incur new debt, it is useful to calculate two more ratios: the debt service to government revenues and to government expenditures. The debt service to government revenue ratio assesses the ability of government to service the debt out of its income and the debt service to expenditure ratio provides a measure of how much expenditure must be provided to service the debt, relative to other government expenditure. These ratios are provided in Tables 5 and 6.

Apart from Baltic countries and Kazakhstan, since 1995 the debt service payments to both revenues and expenditures are high and put significant pressure on the budget of the

[4] GKO are ruble-denominated discount instruments, and OFZ are ruble-denominated coupon bonds.

**Table 5. Budgetary Debt Service, in Percent of Government Revenue**

Country	1993	1994	1995	1996
Estonia	...	...	...	...
Kazakhstan	0	0	0.8%	0.8%
Kyrgyz Republic	1.1%	6.2%	25.9%	21.7%
Latvia	2.5%	3.8%	2.5%	3.5%
Lithuania	0	0.4%	1.2%	3.0%
Moldova	0.7%	2.4%	10.3%	5.7%
Russian Federation	5.5%	5.7%	10.5%	18.2%
Ukraine	1.1%	12.0%	8.8%	5.7%

Source: Kapur and Mensbrugge, 1997, p.39

**Table 6. Budgetary Debt Service, in Percent of Government Expenditure**

Country	1993	1994	1995	1996
Estonia	...	...	...	...
Kazakhstan	0	0	0.7%	0.7%
Kyrgyz Republic	0.8%	4.2%	14.8%	15.3%
Latvia	2.6%	3.7%	2.4%	3.4%
Lithuania	0	0.3%	1.1%	2.6%
Moldova	0.6%	1.9%	8.8%	4.8%
Russian Federation	4.6%	4.4%	8.9%	14.4%
Ukraine	0.7%	10.0%	7.8%	5.2%

Source: Kapur and Mensbrugge, 1997, p.40

CIS countries. In Kyrgyz Republic the debt service requires over 20 percent of budgetary revenues, in Russian Federation the ratio has risen steeply and in 1996 was close to 20 percent, in Moldova and Ukraine in 1996, it was around 6 percent.

In terms of budget expenditure, again with the exception of the Baltic states and Kazakhstan, the debt service requirement established from over 20 percent of public expenditure in Kyrgyz Republic to almost 6 percent in Ukraine and Russian Federation.

The strain put by public debt service requirements in medium term will probably increase. The revenue to GDP ratios over the last years have been declining [5] and unless this trend is halted, even constant debt service requirements will place a huge burden on the budget in the future. Since the public borrowing has been mainly intended

[5] The median revenue to GDP ratio declined from 36 percent in 1993 to 24 percent in 1996 (data is from Kapur and Mensbrugge, 1997).

to cover government consumption and not investment expenditures [Kapur and Mensbrugge, 1997] and at the same time the structural reforms in many B-CIS countries have been lagging behind, the consequences of such actions are likely to be grave. Financing government consumption by external borrowing, while at the same time neglecting the necessary reforms must lead to further troubles in collecting sufficient amount of revenues and therefore to a considerable pressure imposed on budget by debt service payments in the medium run.

In addition to the lowering of revenues, there is also a limited flexibility on the expenditure side, that results from large social entitlement programs. All these developments might lead to significant problems in timely servicing the debt. They may increase the pressures for money creation or short-term borrowing at high costs, which might endanger further stabilisation and reform progress

## **5. The Structure of External Public Debt**

Apart from the volume of the debt, very important for the economy is also the structure of the debt. It is postulated, that the maturity profile together with currency composition of public debt contribute as much to the vulnerability to external shocks as the total volume of debt does [IMF, International Capital Markets, 1997].

It is noteworthy, that in the B-CIS countries, except for Estonia most of the total external debt have been established by public liabilities. In 1997, the public long term debt made up over 60% of the countries' total external debt. The short term debt has been small – again with the exception of Estonia – in most countries it was under 10% of the total foreign liabilities. The dominance of long term debt is generally perceived as a favourable feature of external indebtedness, as it smoothes the country's stream of obligations and increases safety of the debt, safeguarding it from a sudden change of investor's sentiment, although limiting the possibility of borrowing at a particular point in time. Table 7 delivers the relevant statistics.

The largest share of public long term debt in total external liabilities – around 80 percent – existed in Kyrgyz Republic and in Russian Federation. In Moldova and Lithuania the government long-term liabilities established approximately 70% of total borrowing. The lowest shares of public long term debt, apart for Estonia, were noted in Latvia, Kazakhstan and Ukraine, but still these liabilities exceeded 60% of total debt.

It is worth highlighting, that the structure of the Estonia's external liabilities differs from the rest of the B-CIS countries analysed here. In 1997, the dominant part of the Estonia's indebtedness – over 45% of total debt – was short term debt. Public and

**Table 7. The Structure of Total External Debt in the Selected B-CIS Countries, in percent of Total External Debt in 1997**

<b>Item</b>	<b>Estonia</b>	<b>Kazakhstan</b>	<b>Kyrgyz Republic</b>	<b>Latvia</b>	<b>Lithuania</b>	<b>Moldova</b>	<b>Russian Federation</b>	<b>Ukraine</b>
Total debt stock	100%	100%	100%	100%	100%	100%	100%	100%
1. Long term debt	45.14%	79.90%	78.66%	69.98%	71.88%	75.48%	84.58%	67.98%
1a. Public and publicly guaranteed	32.52%	65.97%	78.66%	64.02%	68.12%	75.48%	83.07%	64.01%
2. Use of IMF credit	8.21%	11.94%	17.78%	17.10%	17.60%	22.40%	10.53%	22.03%
3. Short-term debt	46.66%	8.16%	3.56%	12.92%	10.52%	2.12%	4.89%	9.99%

Source: World Bank Development Data (1998).

**Table 8. The Creditor Structure of Long term Public and Publicly Guaranteed External Debt, in percent of Total Public and Publicly Guaranteed Debt, in 1996.**

	<b>Estonia</b>	<b>Kazakhstan</b>	<b>Kyrgyz Republic</b>	<b>Latvia</b>	<b>Lithuania</b>	<b>Moldova</b>	<b>Russian Federation</b>	<b>Ukraine</b>
Public and publicly guaranteed	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>1. Official creditors</b>	<b>74.92%</b>	<b>66.98%</b>	<b>94.81%</b>	<b>76.98%</b>	<b>53.03%</b>	<b>84.20%</b>	<b>62.4%</b>	<b>69.54%</b>
Multilateral	58.57%	30.33%	44.67%	54.93%	30.68%	45.79%	2.75%	17.44%
Bilateral	16.40%	36.65%	50.15%	22.08%	22.35%	38.41%	59.65%	52.08%
<b>2. Private creditors</b>	<b>25.08%</b>	<b>33.02%</b>	<b>5.19%</b>	<b>22.99%</b>	<b>46.97%</b>	<b>15.80%</b>	<b>37.6%</b>	<b>30.48%</b>
Bonds	17.83%	10.35%	5.19%	11.58%	20.20%	0.00%	1.07%	17.36%
Commercial banks	0.00%	0.00%	0.00%	0.00%	7.58%	12.26%	15.5%	1.47%
Other private	7.25%	22.67%	0.00%	11.41%	19.19%	3.54%	21.03%	11.64%

guaranteed debt established only approximately 30% of the debt. This structure been due to a very rapid increase in short term liabilities since 1995. In the period 1995–1997 the short term debt has grown by 300 million dollars, while in the same time, the longer term liabilities have increased by 180 million dollars. Although short-term debts tends to have larger servicing costs then long-term liabilities and is perceived as less save, in Estonia the dominance of short-termed debt should not pose a significant problem, since total debt is very small compared to the size of the economy.

The most part of the public and publicly guaranteed long term debt of the selected B-CIS countries was held by official creditors. Table 8 contains the structure of creditors.

In most of the surveyed countries, over 60% of the long-term public and publicly guaranteed external debt in 1996 was owned to official creditors. Such structure is comparable to the indebtedness of low-income countries. The debt owed to private creditors established from 47% of total public external debt in Lithuania to 5% in Kyrgyz Republic.

Another important feature of the public debt, determining the cost of debt service is the share of concessional debt, as well as the amount of nonconcessional debt at fixed and variable rates.

**Table 9. Structure of Long-term Public and Publicly Guaranteed External Debt, in Percent of Total Debt, in 1996**

Country	Concessional	Nonconcessional	
		Variable	Fixed
Estonia	14.6	49.1	36.4
Kazakhstan	6.6	65.2	28.2
Kyrgyz Republic	57.2	40.6	2.1
Latvia	21.4	57.8	20.8
Lithuania	13.3	44.6	42.1
Moldova	28.0	66.5	5.6
Russian Federation	27.1	43.8	29.1
Ukraine	3.4	77.2	19.5

Source: World Bank, Global Economic Prospects (1998), p.204

Larger amount of concessional debt implies lower servicing costs and the debt outstanding at variable rates increases the foreign interest rate risk.

The largest share of concessional debt in total external public debt belongs to Kyrgyz Republic – nearly 60% of total debt. In fact, this is the largest share of all European and

Central Asian countries. The second largest share out of the selected B-CIS countries belongs to Moldova – nearly 30% of total debt. Therefore, the most indebted countries have had also the largest access to concessional borrowing.

The largest share of the safer, fixed-rate debt in 1996 – around 40% of public external indebtedness – belonged to Lithuania and Estonia.

## **6. The Sustainability of Fiscal Policy**

Changes in public debt are often used to assess the sustainability of fiscal policy. As experience of many countries indicate, persistently high and rising government debt is costly and eventually unsustainable. Therefore a fiscal policy is perceived as sustainable, when it does not lead to an increase in debt to GDP ratio.

The ratio of debt to GDP depends on factors directly under the control of budgetary authorities, such as revenue and spending programs, that result in a certain budget outcome as well as factors beyond their direct control, as the growth rate of the economy or interest rate. Expressed relatively to GDP, the changes in public debt to GDP ratio depend on the primary deficit to GDP ratio ( $pb$ ), the difference between the interest rate on public debt ( $r$ ) and the growth of GDP ( $g$ ), the initial debt to GDP ratio and non-budgetary items ( $a$ ):

$$\Delta d = pb + [(r-g)/(1+g)]d_{-1} + a$$

where  $\Delta$  indicates the change from previous to present.

The above equation summarises the main factors behind the change in debt to GDP ratio and makes it clear, 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.

This equation states, that if the budget displays a primary deficit, than the debt ratio will be rising, unless the effective interest rate on debt is sufficiently smaller than the growth rate of GDP. Then increase in debt due to interest payments will be smaller than increase in GDP, and debt ratio will fall. If the non-budgetary developments are positive, they will also contribute to a decrease in the debt ratio.

Real changes in the exchange rate will have an impact on the ratio of debt as well: the real appreciation (depreciation) of domestic currency will decrease (increase) the effective interest rate paid on public debt, when expressing the variables in domestic currency, or increase (decrease) the growth rate of GDP, when expressing the variables in dollars.

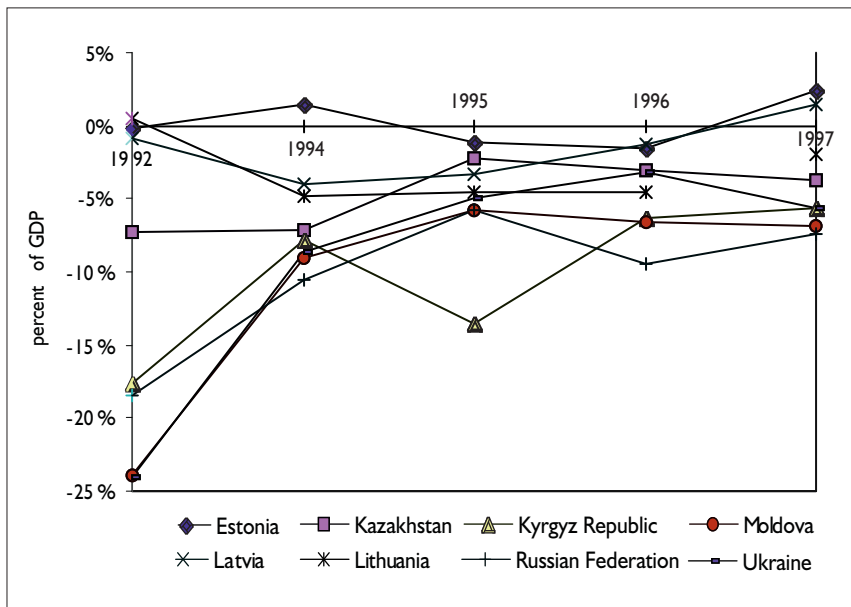
Although I do not possess the complete data needed to calculate the whole identity, examination of the data concerning the budget deficit shows the scale of fiscal imbalances and gives an idea of the contribution of primary surplus to the growth of the debt.

**Table 10. General Government Balance, in Percent of GDP**

	1992	1994	1995	1996	1997
Estonia	-0.2	1.4	-1.2	-1.5	2.4
Kazakhstan	-7.3	-7.1	-2.2	-3.0	-3.7
Kyrgyz Republic	-17.6	-7.8	-13.5	-6.3	-5.7
Latvia	-0.8	-4.0	-3.3	-1.3	1.4
Lithuania	0.5	-4.8	-4.5	-4.6	-1.9
Moldova	-23.9	-9.1	-5.8	-6.6	-6.8
Russian Federation	-18.4	-10.5	-5.8	-9.5	-7.4
Ukraine	-24.0	-8.7	-4.9	-3.2	-5.6

Source: IMF, World Economic Outlook, 1998

**Graph 3. General Government Balance**



Source: IMF, World Economic Outlook, 1998



The fiscal deficits experienced by the CIS countries seem to be the main reason behind the increase in public indebtedness level of these countries. The fact, that the economies, which have the biggest fiscal imbalances, namely Russian Federation, Moldova and Kyrgyz Republic, have also the largest external public debts, confirms this proposition.

The amount of budget deficits, together with revenue and expenditure developments are shown in Table 10 and in Graph 3.

Most of the countries have been suffering from large fiscal imbalances. Except for Baltic countries and Kazakhstan (Estonia and Latvia in 1997 displayed fiscal surpluses, Lithuania had a deficit equal to –2% of GDP and Kazakhstan's deficit was –4% of GDP), in all of the countries the deficits since 1992 have remained above 5% of GDP. Such persistent fiscal imbalances are unsustainable in the longer run and are the main cause behind the rapid build up of the government debt observed in CIS countries.

The reasons for the emergence and persistence of fiscal deficits in the CIS countries were widely discussed in the literature [see for example IMF, World Economic Outlook, 1998 or IMF, Occasional Paper, 1995]. The main factors made responsible for the deficits are substantial revenue shortfall [see Table 11] distorted structure of expenditures, and significant weaknesses in the institutional arrangements.

**Table 11. General Government Revenue, in percent of GDP**

Country	1989 or 1991*	1992	1994	1995	1996	1997
Estonia	37.0*	34.6	41.3	39.9	39.0	39.4
Kazakhstan	35.4	24.5	22.5	24.6	22.9	23.4
Kyrgyz Republic	38.0	17.5	20.8	16.7	17.1	17.6
Latvia	37.4*	28.1	36.5	35.5	36.5	39.0
Lithuania	509.0	31.6	32.7	32.8	30.1	33.5
Moldova	24.7*	30.3	33.5	33.9	32.1	34.3
Russian Federation	41.0	38.3	34.6	31.9	32.1	33.0
Ukraine	38.3*	34.0	41.9	37.8	36.7	38.4
Average		29.9	33.0	31.6	30.8	32.3
Average, exc. Baltic Countries		28.9	30.7	29.0	28.2	29.3
Major advanced economies		36.2	36.2	36.5	36.8	37.3

\* asterisk denotes data for 1991

Source: IMF, World Economic Outlook, 1998, p.99

**Table 12. General Government Expenditure, in percent of GDP**

<b>Country</b>	<b>1992</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>
Estonia	34.8	39.9	41.1	40.5	37.0
Kazakhstan	31.8	29.6	26.8	25.9	27.1
Kyrgyz Republic	35.1	28.6	30.2	23.4	23.3
Latvia	28.9	40.5	38.8	37.8	37.6
Lithuania	31.1	37.5	37.3	34.7	35.4
Moldova	54.2	42.6	39.7	38.7	41.1
Russian Federation	56.7	45.1	37.7	41.6	40.4
Ukraine	58.0	50.6	42.7	39.9	44.0
Average	41.3	39.3	36.8	35.3	35.7
Average, exc. Baltic Countries	47.3	39.3	35.4	33.9	35.1
Major advanced economies	40.0	39.7	39.8	39.6	38.8

Source: IMF, World Economic Outlook, 1998, p.99

The decline of revenues since 1989, and the persistence of their low levels in the CIS countries have been determined by several factors. Among them is the significant fall in output level experienced by all of the countries, which has caused an erosion of tax bases. In many countries the traditional tax bases: state enterprise surpluses, wages and salaries and official retail turnover, have shrunk even more than GDP, reflecting the sharp fall in the industrial production of the enterprise sector.

The poor revenue performance reflects also the problems in the design and administration of taxes. The progress of tax reform in many countries has been inadequate. The tax systems remain complex, with many exemptions and narrow tax bases. It is unable to capture the private sector in the tax net and therefore the enlargement of this sector fails to boost the government revenue.

To the revenue problems of former Soviet Republics have also added the declines in large explicit and implicit transfers, that these countries have been receiving from Russia.

Contributing to the fiscal imbalances are also the problems on the expenditure side. As indicated in the previous section, interest payments are becoming a significant item of the government spending, an item that is likely to increase over time, as the persistent deficits will add to the accumulated public debt. The pension expenditures are also a growing burden on the budget. The average public pension expenditure in the B-CIS countries, in percent of general government spending, has grown from 13.6% of government expenditure in 1992 to 17.7% in 1996. These items establish a relatively

fixed part of expenditures, very hard to decrease and therefore in light of low revenue levels, seriously endangering the fiscal developments.

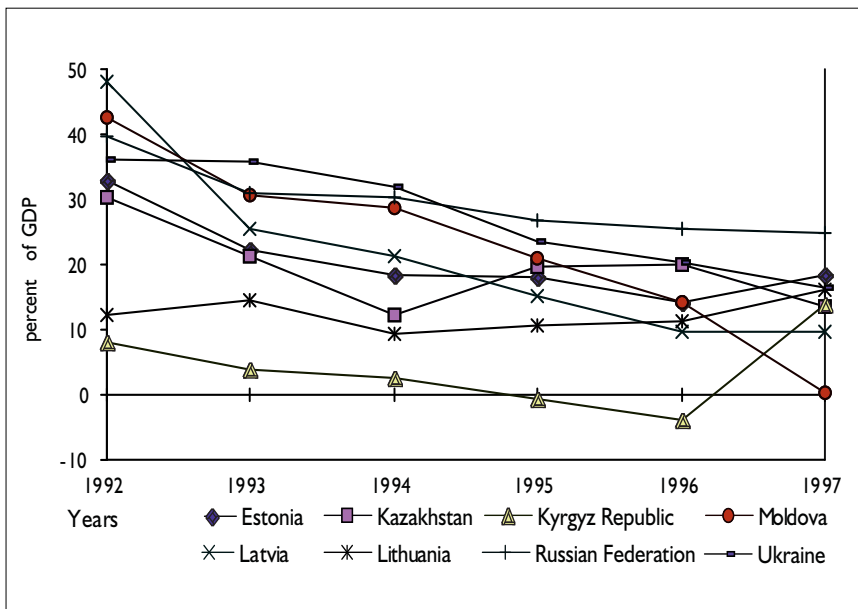
All of the countries additionally have large implicit fiscal liabilities related to restructurisation of pension and bank systems, that are likely to contribute to future fiscal problems.

## 7. Debt Consequences: the Level of Domestic Savings

As it was indicated in the Section II of the paper, public debt, apart from burdening the budget with servicing cost, can also exert a negative impact on the growth rate of the economy, by decreasing the level of domestic savings and increasing the domestic interest rate. However, if as a consequence of debt, consumers increase their savings (as predicted by Ricardian Equivalence Theorem), public debt will not hamper growth rate.

Does the public debt in B-CIS countries decrease their output growth rate? The analysis of the pattern of domestic saving rate in these countries suggest, that the answer to the above question is: yes.

**Graph 4. Gross Domestic Saving, in percent of GDP**



Source: World Bank, Development Data 1998 and World Development Indicators, 1999

The developments in gross domestic saving, i.e. in joint saving of the public and private sector, are shown in Graph 4.

In every country, except Lithuania, the gross saving rate has fallen. This suggests, that Ricardian Equivalence Theorem [6] is not valid in B-CIS countries. The private saving rate has not offset the fall in government savings. Therefore the budget deficit and public indebtedness may have all the negative effects predicted by the standard economic analysis, namely an increase in the real interest rate, crowding out of private investment and as a result a slowdown in growth rate.

Lithuania is the only country, where the domestic saving rate has increased since 1992. This indicates, that the government deficit and public debt have not decreased the domestic saving rate, and therefore might have not attributed to an increase in the interest rate and to slowdown in economic growth. However for a definite conclusion, detailed econometric analysis is needed, for which the length of available time-series does not yet allow.

## **8. Conclusions**

This paper has attempted to consider in a systematic way the developments of the external public debt in the selected B-CIS countries in years 1992–1997.

In 1992 the public external debt of the B-CIS countries, except for Russian Federation, was close to zero. During the next five years the external public debts of all of the countries have grown, in some countries remarkably fast. Although there are considerable advantages from foreign borrowing, nevertheless the rapid increase of external debt of some B-CIS countries suggest, that consideration needs to be given to the risk of excessive borrowing, that burdens the economy with large debt-servicing costs.

The most rapid growth over the whole 1992–1996 period, in percentage points, was observed in Kyrgyz Republic and Moldova: their debt to GDP ratios have increased by over 40 percentage points. Such rate of growth is very high, much higher than the average growth rate of the total public liabilities in Western OECD countries and clearly unsustainable in the long run.

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[6] The Ricardian Equivalence Theorem proposes, that the decline in government savings should not have any effect on the level of national savings. Since the gross domestic savings in B-CIS countries is declining, the private saving rate has not offset the decline in government saving rate. Of course, this is only a proposition, a formal proof would require econometric studies.

The debt to GDP ratio increase was also quite large – above 10 percentage points – in Kazakhstan, Ukraine and Lithuania. Although it is comparable to the average growth of public liabilities of Western OECD countries, it seems to be excessive in case of countries, that have unsophisticated and much less developed financial markets as well as much lower international credibility.

The growth of external debt implies also, that the international capital markets will have a growing impact on the domestic economy of the B-CIS countries. Although such developments are a normal consequence of the closer integration with the world economy and should not be discouraged, in the B-CIS countries this risk is often enlarged by the often haphazard manner in which these countries are borrowing [Kapur and Mensbrugge, 1997].

The main cause of the rapid increase in public borrowing have been large and persistent fiscal imbalances of the CIS countries. The fiscal imbalances are a consequence of the very low level of public revenue, which is caused, among others, by the insufficient reform of tax system and a contraction of traditional tax bases. The fiscal imbalances are also worsen by the large share of fixed expenditures (interest payments, pension payments) in total expenditures, what makes it hard to lower their level. Therefore the key element in debt sustainability is the improvement of fiscal position.

The cost of debt service, relative to the size of economy, has not been very large in B-CIS countries (at least until 1996). The only exception was Russian Federation, where the debt servicing costs amounted to 10 % of GDP. Russian Federation had also troubles in timely servicing the debt, as indicated by the large payment arrears.

The servicing of external public debt, although not large relative to GDP, was a big burden on the fiscal balance in CIS countries. Since most of the borrowing is used to finance government consumption, the capacity to service the debt will not increase, therefore this strain on budget developments will probably grow even more.

The structure of the external debt of the selected B-CIS countries (with the exception of Estonia) is dominated by the long term public and publicly guaranteed liabilities, that are mainly owed to official creditors. The dominance of long term liabilities is a favourable feature of the indebtedness, as it increases the safety of the debt.

The paper also briefly assessed the impact of public indebtedness on the level of domestic savings. The domestic savings in most of the countries have fallen, what suggest, that the Ricardian Equivalence is not valid in the B-CIS countries and therefore the public debt increase might induce the rise in interest rate, crowding out of private investment and as a result a lower rate of output growth.

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## Appendix

The public external borrowing influences yet another important characteristic of the economy – its sovereign rating. This rating influences the ability of a country to borrow abroad and the cost of this borrowing. The sovereign credit ratings of the selected B-CIS countries are given below.

**Table 1A. Sovering Credit Ratings of the B-CIS Countries, as at October 1998**

<b>Country</b>	<b>Moody's</b>	<b>S&amp;P</b>	<b>Fitch IBCA</b>
<b>Estonia</b>	<b>Baa1</b>	<b>BBB+</b>	<b>BBB</b>
Kazakhstan	Ba3	B+	BB
Kyrgyz Republic			
<b>Latvia</b>	<b>Baa2</b>	<b>BBB</b>	<b>BBB</b>
Lithuania	Ba1	<b>BBB-</b>	BB+
Moldova	B2	NR	B
Russian Federation	B3	CCC-	CCC
Ukraine	B3	NR	NR

Source: IMF, World Economic Outlook – Interim Assessment, 1998

	<b>Moody's</b>	<b>S&amp;P and IBCA</b>
Investment Grade	Aaa, Aa, A, Baa	AAA, AA+, AA, AA-, A+, A, A-, BBB+, BBB, BBB-
Noninvestment Grade	Ba, B	BB+, BB, BB-, B+, B, B-
Default Grade	Caa, Ca, C, D	CCC+, CCC, CCC-, CC, C

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