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Sopek, Petar

Source / Izvornik: **Newsletter : an occasional publication of the Institute of Public Finance, 2010, 12, 1 - 12**

Journal article, Published version
Rad u časopisu, Objavljena verzija rada (izdavačev PDF)

Permanent link / Trajna poveznica: https://urn.nsk.hr/urn:nbn:hr:242:863102

AN OCCASIONAL PUBLICATION OF THE INSTITUTE OF PUBLIC FINANCE

NEWSLETTER

No. 49 June 2010 ISSN 1333-4417

Institute of Public Finance • HR-10000 Zagreb, Smičiklasova 21, Croatia

P. O. Box 320; Phone: (385 1) 4886 444; Fax: 4819 365; e-mail: office@ijf.hr; www.ijf.hr

Petar Sopek*

Budget Deficit and Public Debt in Croatia

The effects of recession in 2009, together with a late fiscal policy reaction, led to a Croatian general government budget deficit of 11 billion kuna. Financing this deficit and other liabilities by new borrowing resulted in a public debt increase of 18% from 2008 to end-2009. Especially concerning might be the public debt denominated in foreign currencies which increased by 36% in only a year.

Introduction

The idea for this newsletter came as a result of frequent debates about public finance stability, expectations about this year's first budget rebalance the implementation of which was only a question of time, but also as a result of more frequent discussions about the level and sustainability of the Croatian public debt. One of the main tasks of fiscal policy representatives is to manage optimally revenue and expenditure in order to achieve the best possible financial results. It is clear that this task is not simple at all, because it depends on many factors. The Santa Clause mentality, capital projects, expenditures for various incentives and aid, but also the necessary supply of public goods, conduce to a continuous increase in budget expenditure. The raised revenues are sometimes not sufficient for covering all the mentioned expenditures in a current year, so it is necessary to cover the difference by borrowing. Constant borrowing leads to a debt increase, but also to additional budget expenses for interest and principal payments. As early as November, Bronić (2009) stressed the importance of decreasing government expenditure in 2010, which is obviously too high, but also unsustainable in times of crisis, and could bring to serious public finance destabilization and a medium run increase in public debt as a result of adverse cycles (Sopek, 2009).

Budget deficit/surplus measures

Generally speaking, financial balance can be a positive or a negative sign; in the former case we talk about a *surplus* and in the latter case about a *deficit*. Croatia is faced with a deficit year after year, just like the majority of other countries. This happens because the collec-

* Senior Analyst in Risk Policy and Methodology Division, Privredna bank Zagreb (PBZ). The views expressed in this paper are those of the author and should not be attributed to the PBZ.

The Institute of Public Finance deals with economic research and analysis related to various forms of public finances such as the budget, taxation and customs duties. Its orientation is thus to the various economic, legal and institutional topics that are important for the sound long-term economic development of the Republic of Croatia. So that the public should be able to have a better insight into certain issues, the Institute of Public Finance is launching its Newsletter, in which it will from time to time publish informed and independent analysis of economic questions. The views expressed in the articles published in the Newsletter will reflect the opinions of the authors, which do not necessarily coincide with those of the Institute as institution. Full text of Newsletter is also available on Institute's Web site: http://www.ijf.hr/newsletter.

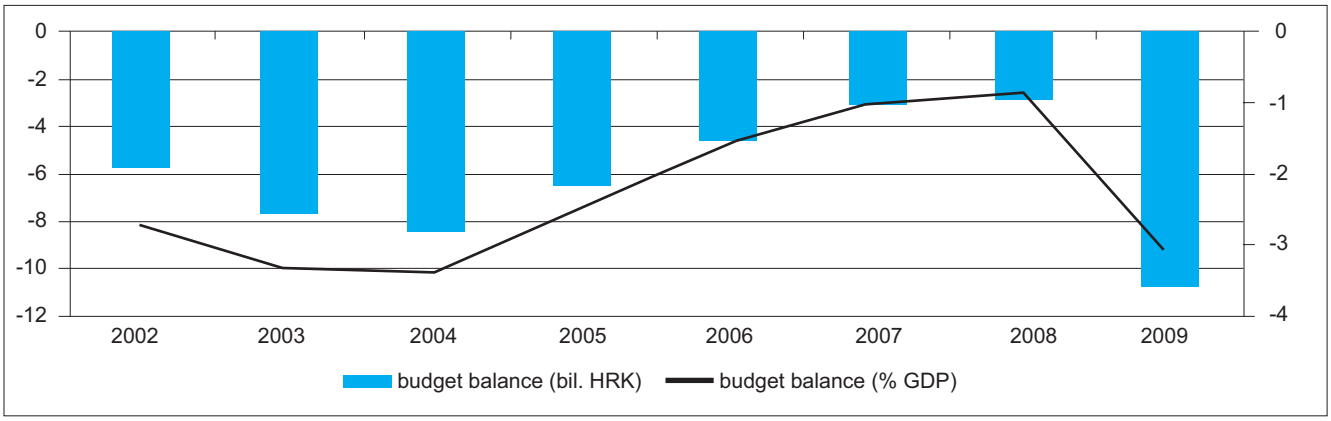
ted tax, social contributions, grants and other revenues cannot cover all public needs.

According to the ESA 95 methodology (European Communities, 2002), a deficit represents net borrowing, i.e. a negative realization of the accounting item 'net lending/borrowing' (item ESA B.9) in the observed year. It is actually the difference between total revenue (operating revenue and revenue from the sale of non-financial assets) and total expenditure (operating expenditure and expenditure for the acquisition of non-financial assets). A most frequently used deficit indicator is the deficit as a share of gross domestic product (GDP). Figure 1 shows the realised general government budget deficit in nominal terms and as a percentage of GDP in the period from 2002 to 2009.

Realised deficit in 2002 amounted to 6 billion kuna or 6% of GDP. Until 2004, the deficit had increased, both in nominal terms and as a percentage of GDP; after that a downward trend was observed, and by 2008, the general government budget deficit dropped to 3 billion kuna, i.e. 1% of GDP. At the end of 2008, Croatia was hit by recession, which had a strong impact on the realised deficit in 2009 which stood at almost 11 billion kuna, or 3.2% of GDP. Excessive growth of the budget deficit in times of crisis is particularly dangerous, because it is uncertain how and under what conditions will the deficit be financed. Apart from that, an increase in the budget deficit tends to lead to a further expansion of public debt, and therefore the Croatian Government must try to maintain the planned level of budget deficit in 2010 (Bronić, 2010).

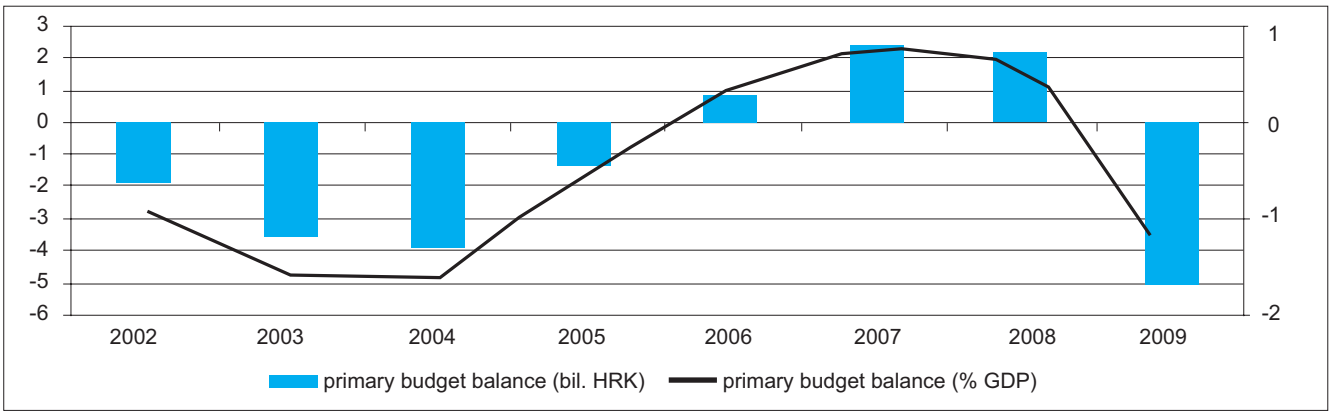
Besides the deficit, the so called *primary deficit* is often monitored, i.e. a measure of the budget deficit that excludes from the deficit the whole amount of expenses for interest payments in the observed period. The primary deficit is an especially important measure in highly indebted countries because it indicates the result of the current Government activity, which is a contribution to the public debt increase or decrease. Figure 2 shows the realised primary budget deficit of the gene-

Figure 1 Realised general government budget balance, 2002-2009; in bil. HRK (left scale) and as a % of GDP (right scale)



Source: Ministry of Finance (2009; 2010); CBS (2009); author's calculation.

Figure 2 Realised primary budget balance of the general government, 2002-2009; in bil. HRK (left scale) and as a % of GDP (right scale)



Source: Ministry of Finance (2009; 2010); CBS (2009); author's calculation.

ral government in nominal terms and as a percentage of GDP in the period from 2002 to 2009.

In the period from 2002 to 2004, the realised primary deficit was showed an upward trend, but started to decline afterwards and in 2006, the first primary surplus was recorded, which was maintained only until 2008. In 2009, as a result of the recession effects on public finance, the realised primary budget deficit was expectedly high.

Public debt

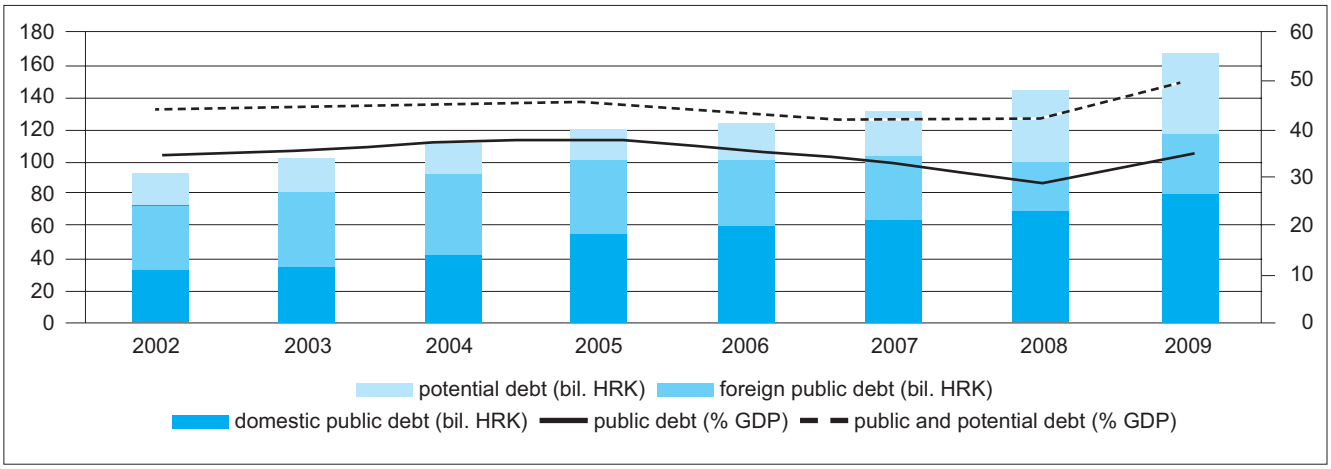
If a deficit is created in an observed year, then the government, unless it wants to sell its property, has no other choice but to cover this deficit by borrowing. The sum of all budget deficits realised in some previous period constitutes debt. In other words, it can be stated that the debt is a stock variable measured at some point of time, while the deficit is a flow variable measured over a time period (Rosen, 1999). This also implies that a debt increase over a period of one year is the result of the realised deficit in that year.

According to the Budget Act (Official Gazette 87/08), *public debt* or the *debt of the public sector* from 1 January 2009 comprises the debt of the general government, which no longer includes the so-called potential debt in the form of financial and factual guarantees issued, and the debt of Croatian Bank for Reconstruction and Development (HBOR)[1]. Depending on whether the state borrows on domestic or foreign financial market, public debt can be classified as domestic (internal) or foreign (external). The main advantage of domestic borrowing is that the money used for debt repayment does not go out of the country's borders, which automatically restrains the possible loss of liquidity towards the outland. Besides that, inland borrowing brings to stronger development and regulation of the domestic financial market. As concerns foreign borrowing, the main advantage indicated are lower interest rates. Figure 3 shows movements of domestic, foreign and potential public debt at the end of the period 2002-2009.

At the end of 2009, the Croatian public debt, according to the Ministry of Finance (2009), amounted to 118 billion kuna (35% of GDP), which represents an increase by almost 18% in comparison with the debt stock at-end 2008. The process of fiscal consolidation of public debt started in 2004, involving a gradual decrease in deficit and the stabilization of the public debt-to-GDP ratio, as well as a new borrowing strategy the purpose of which is to start borrowing mainly on domestic markets (Švaljek, 2007). The result of this process can be clearly seen on Figures 1, 2 and 3. It is important to stress that the nominal public debt was about 100 billion kuna in the period 2005-2008, while the public debt-to-GDP ratio decreased by about 9 percentage points in the period from 2004 to 2008.

The nominal public debt declined in the period from 2007 to end-2008. However, in 2008 a deficit was accumulated. This anomaly was due to the exclusion of the Croatian Motorways (HAC) from the general government in 2008, as a result of the harmonisation with the ESA 95 methodology. Consequently, the decrease in

Figure 3 Movements of public and potential debt in the period 2002-2009; in bil. HRK (left scale) and as a % of GDP (right scale)



Source: Ministry of Finance (2009); CBS (2009); author's calculation.

[1] In line with the Act on the Croatian Bank for Reconstruction and Development (HBOR) (Zakon o Hrvatskoj banci za obnovu i razvitak, NN 138/06) the state guarantees all its debts, so that the HBOR debt is often added to the total amount of guarantees.

the Croatian nominal public debt in 2008 was only due to the methodological inconsistency.

The increase in the potential public debt might be disturbing because it went up about two and a half times over the observed period, from 20 billion kuna at the end of 2002 to a high of 50 billion kuna at the end of 2009. The share of potential debt in GDP rose by about 5 percentage points in the period 2002-2009.

Public debt can also be divided into the debt denominated in the domestic currency and that denominated in foreign currencies. This is particularly interesting because it shows what share of public debt is exposed to currency risk. The foreign currency-denominated public debt is calculated as the sum of total foreign public debt and the part of domestic public debt denominated in foreign currencies (Babić et al, 2003), which is shown on Figure 4.

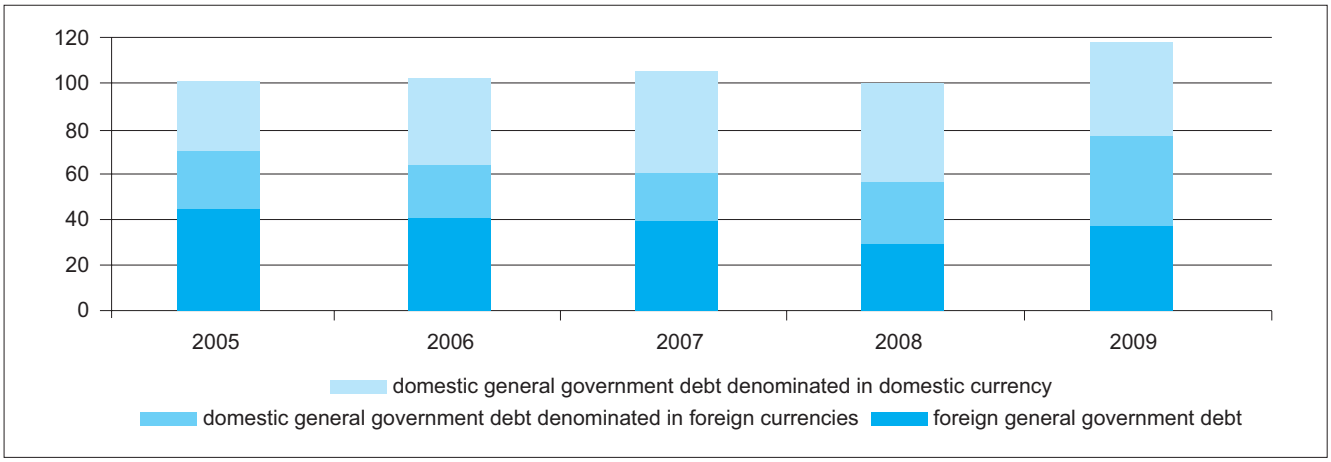
At the end of 2008, public debt denominated in foreign currencies (mainly EUR, USD and JPY) amounted to 57.3 billion kuna, while at the end of 2009, it increased by 36% to 77.7 billion kuna. This means that this portion of debt is exposed to currency risk which is fully exogenous, because it mainly depends on world monetary trends, but also on the domestic monetary policy. Since the kuna is more or less tied to the main European currency, current turbulences on the monetary market that impair the value of the euro automatically imply an increase in the debt denominated in other foreign currencies. Especially dangerous for the public debt growth would be the depreciation of the kuna which is slightly overvalued, according to the International Monetary Fund (IMF). However, the balance sheet deterioration and the recessionary impact in the event of even a moderate nominal depreciation of the kuna would be significant, given large private and public sector foreign currency exposures, while competitiveness gains from exchange rate realignment would fully materialize only when the growth in trading partners improves and the structure of Croatia's economy becomes more outward-oriented (IMF, 2010). It is obvious that a stable exchange rate policy remains an absolute imperative, so that it is realistic to expect that there will be no exchange rate corrections in the short run.

Public debt sustainability

Debt sustainability is defined as a debtor's ability to fulfil his financial obligations to creditors in the long run, with an economically acceptable revenue and expenditure balance. If the debt starts to grow faster than the debtor's ability to pay it off, it becomes unsustainable. This highly depends on market expectations and movements of many variables (interest rates, exchange rates, revenue/expenditure growth rates etc.).

A static sustainability analysis actually examines the sustainability, i.e. stability of public debt on the basis of indicators like budget deficit, primary budget deficit and real interest rate needed to stabilize the debt at a previous year's level. This type of analysis mainly relies on the analytical framework derived in Mihaljek (2003), but in accordance with the definition of debt change as defined in Hiebert and Rostagno (2000)[2].

Figure 4 Currency structure of public debt, 2005-2009; in bil. HRK



Source: Author's calculation based on Table A1 in the Appendix.

[2] The concept of the analysis follows the concept of the scientific paper by Mihaljek (2003); however, the analytical framework is different, although in accordance with the definition of debt change set out in Hiebert and Rostagno (2000), due to identification consistency. Mihaljek (2003) defines debt change in the period of one year as $D_{t+1} - D_t = B_t$, while in Hiebert and Rostagno (2000) it is defined as $D_{t+1} - D_t = B_{t+1}$, i.e. the change of debt from one year-end to another is exactly equal to the budget deficit realised in the observed period.

Basic assumptions of the static sustainability analysis are that the debt stock in some period changes only for the amount of budget deficit realised in this period and that the whole deficit amount is financed exclusively with bonds issuing. Of course, in the case of Croatia the situation is much simpler because the deficit is also financed by borrowing from banks, international organisations etc. Therefore, the debt stock represents the total amount of issued bonds, and the change in debt over a one-year period (actually, from one year-end to another) represents the sum of expenses for interest payments and the realised primary deficit in a current year.

The deficit ($\bar{b}_t$), primary deficit ($\bar{b}_t^p$) and real interest rate ($\bar{r}_t$) needed to stabilize the debt in a certain year t are given in the following expressions:

$$\bar{b}_t = -\frac{g_t^n}{(1+g_t^n)} d_{t-1} \quad (1)$$

$$\bar{b}_t^p = \frac{i_t - g_t^n}{1+g_t^n} d_{t-1} \quad (2)$$

$$\bar{r}_t = g_t + (1+g_t)\frac{b_t^p}{d_{t-1}} \quad (3)$$

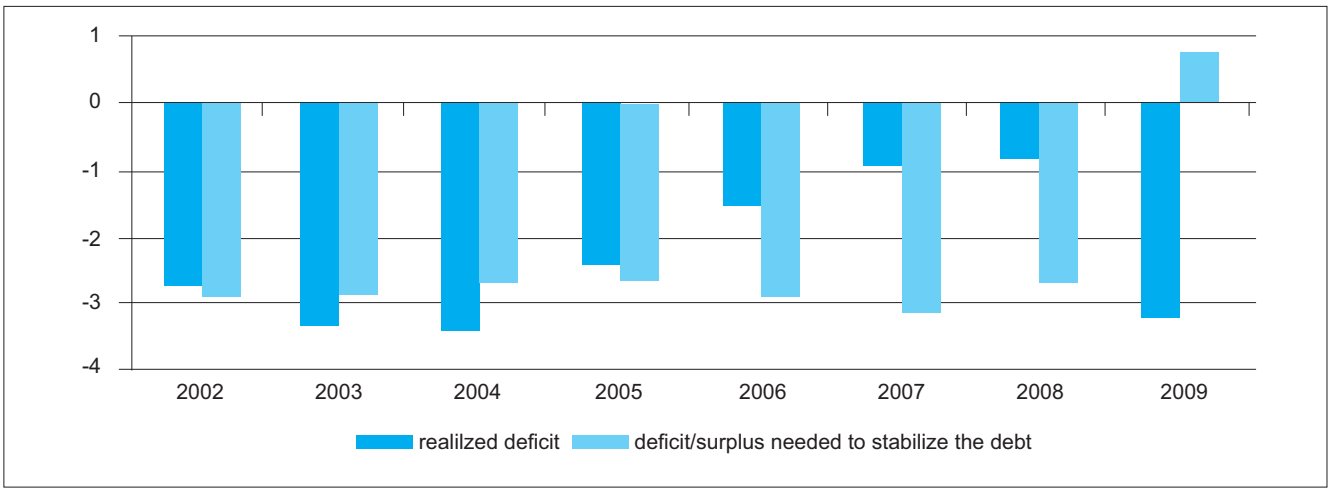
where g_t^n represents the nominal GDP growth rate, g_t is the real GDP growth rate, i_t is the interest rate on outstanding public debt in year t and d_{t-1} is the public debt-to-GDP ratio at the end of year $t-1$.

It is necessary to emphasize that the afore-mentioned analytical measures are established on a net debt concept, while all the calculations are based on total (gross) debt amounts. The advantages of the discussed indicators are that they can be relatively easily and quickly calculated and that their interpretation is clear. The main disadvantage of such an analysis is that it is too static and backward-looking, i.e. the above mentioned indicators point to a deficit, primary deficit and real interest rate needed to stabilize the debt at the last year's level, with macroeconomic and fiscal variables from the current year (Mihaljek, 2003).

Figures 5 and 6 show the realised deficit and primary deficit, and the deficit and primary deficit needed to stabilize public debt at a previous year's level in the period from 2002 to 2009. Table A2 in the Appendix shows all the necessary macroeconomic variables that were used to calculate fiscal positions for each year. Calculated data for 2008 exclude the Croatian Motorways (HAC) from the general government, which implied a decrease in all the indicators except the nominal GDP growth rate. A minor inconsistency in the calculation occurs only when calculating the average nominal interest rate on public debt for 2008, because we divide expenses for interest payments in 2008 (excluding HAC) by outstanding debt at the end of 2007 (including HAC).

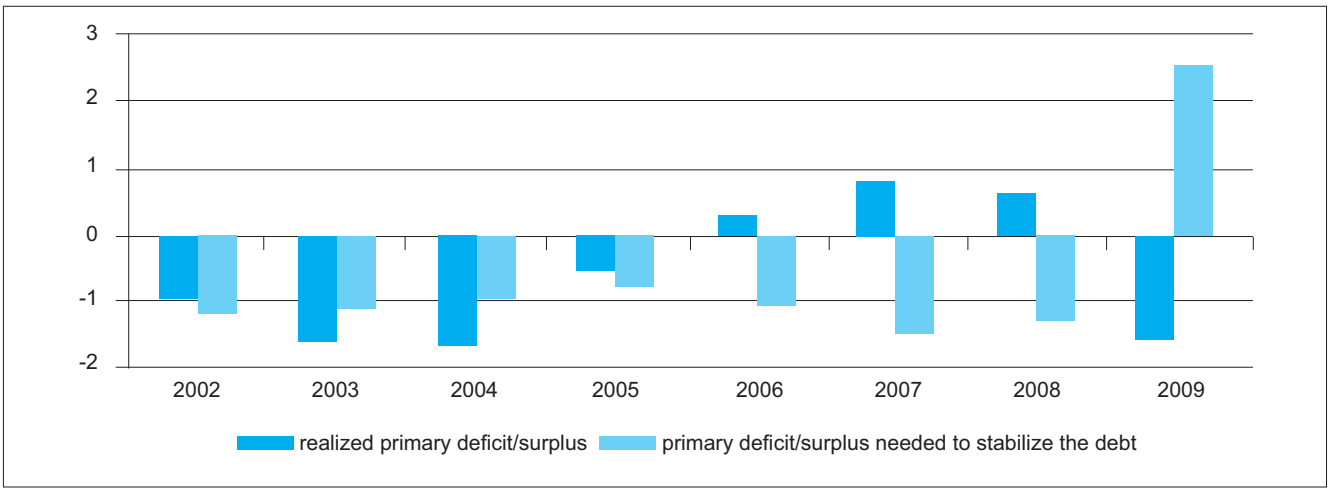
In 2003 and 2004, the realised budget deficit was above the limit prescribed by the Maastricht Treaty (up to 3%), while public debt was significantly below the convergence criterion of 60% in the entire observed period from 2002 to 2009. On the other hand, the realised deficit (and primary deficit) in these years was higher than needed to stabilize public debt. After the beginning of fiscal consolidation and until 2009, the realised deficit was below the deficit needed to stabilize debt. The largest gap between them, as measured by fiscal effort was perceived in 2007, amounting to 2.2% of GDP. This me-

Figure 5 Deficit/surplus needed to stabilize public debt (% GDP), 2002-2009



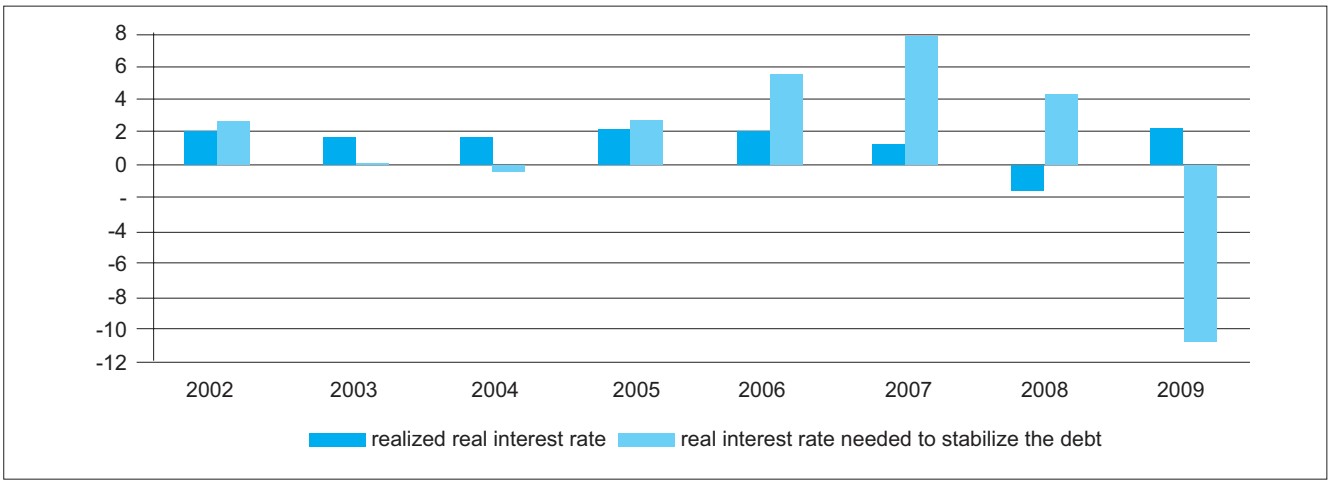
Source: Author's calculation based on Table A2 in the Appendix.

Figure 6 Primary deficit/surplus needed to stabilize public debt (% GDP), 2002-2009



Source: Author's calculation based on Table A2 in the Appendix.

Figure 7 Real interest rate needed to stabilize public debt (% GDP), 2002-2009



Source: Author's calculation based on Table A2 in the Appendix.

ans that in 2007, the government could borrow an additional 2.2% of GDP, leaving the public debt-to-GDP ratio unchanged from the previous year. In 2009, the realised budget deficit stood at 3.2% of GDP, while, to stabilize the debt at the level of end-2008 (29.3% of GDP), a budget surplus of 0.8% of GDP was needed. In other words, the needed fiscal effort amounted to 4% of GDP.

Figure 7 shows the realised real interest rate and real interest rate needed to stabilize the debt at a previous year's level in the period 2002-2009.

As in the case of deficit and primary deficit, in 2003 and 2004, the realised real interest rate was also below the real interest rate needed to stabilize public debt. The biggest positive difference between the realised real interest rate and the real interest rate needed to stabilize public debt was recorded in 2007, and amounted to 6.5%. The year 2008 was also very interesting because a negative real interest rate was realised for the first and only time in that year and it amounted to -1.5%. As a result of reducing the scope of the general government, the nominal interest rate amounted to 4.8% in 2008 (relative to the 2002-2007 period average of 5.5%), and the effect of inflation measured by the GDP deflator change (6.4%) was significantly stronger than the 2002-2007 period average (3.7%), which, taken together, drastically reduced the real interest rate value. In 2009, the real interest rate realised was 2.2%, while a real interest rate needed to stabilize debt was -10.8% was needed. Moreover, that year saw the largest gap between the real interest rate realised and the one needed to stabilize debt.

Parallel analysis

The aim of this analysis is to compare the fiscal outturns for Croatia with those in for other countries in the period from 2007 to 2009. The observed countries are the European Union Member States that are similar to Croatia in the GDP per capita in Purchasing Power Standards (Eurostat, 2010a). Included transition countries are Hungary, Slovakia, Poland, Estonia, Latvia and Lithuania. Besides them, the analysis also includes the neighbouring Slovenia and the average of all EU and euro area[3] countries.

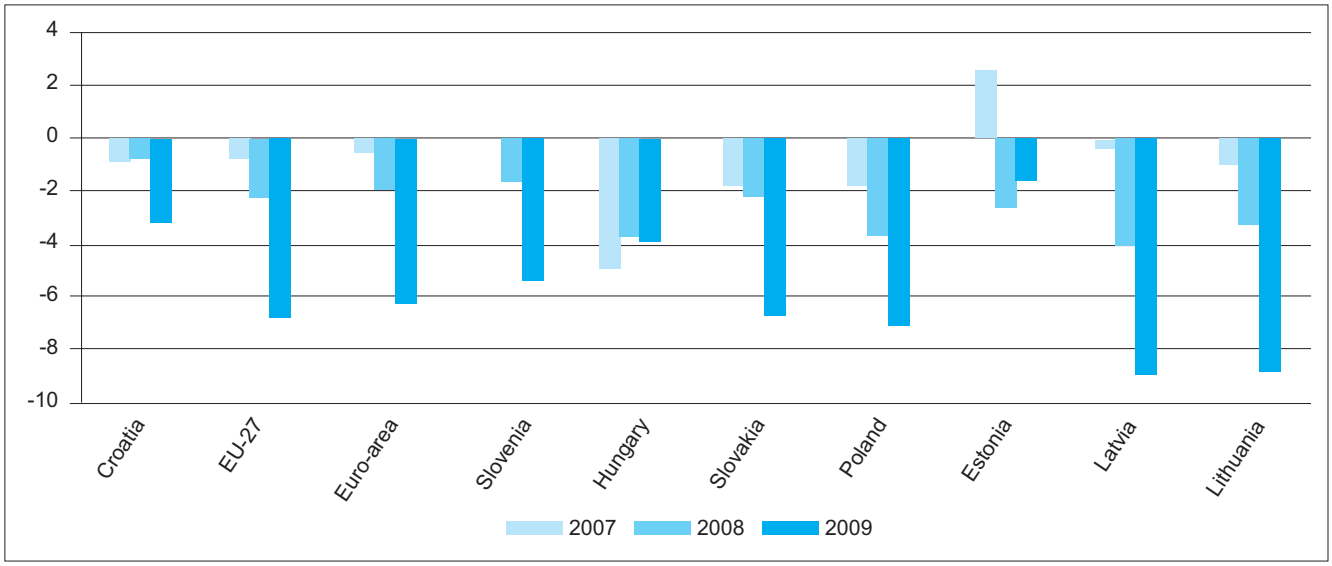
Figure 8 shows the general government budget balance as a percentage of GDP for Croatia and the above mentioned countries.

In the period 2007-2009, Croatia's realised budget deficit averaged 1.7% of GDP, which is the second lowest average, after that of Estonia (0.6%). The highest increase for almost all the countries can be seen in 2009, as the result of the global financial crisis expansion. Such an increase in budget deficit reflected also on the public debt increase, which is shown on Figure 9.

The total public debt-to-GDP ratio in Croatia is two times lower than the EU and euro area average. At first sight, Croatia seems to be in an enviable position regarding the debt level compared to the EU Member States. Besides that, the EMU convergence criteria prescribe the public debt-to-GDP ratio up to 60%, which is far above the level of the Croatian debt-to- GDP ratio in the period 2007-2009. However, account should also be taken of the degree of development of the observed economy. For that reason, a too high debt-to-GDP ratio in, for example, Germany, Italy or Belgium is not as worrying as its even two times lower level in Croatia. Emerging markets have much smaller chances to borrow on international financial markets, and, due to their generally lowest credit ratings, their terms of borrowing are far less favourable than those offered to developed countries. This can potentially cause huge problems, since the budget deficit in Croatia is mainly financed with new borrowings.

Besides that, the burden of debt that will be left to future generations is also an important issue when considering the optimal public debt level. Croatian citizens whose standards of living, according to Eurostat data (2010a), are 40% lower on average than the average for EU-27 countries, and they could hardly sustain a new potential attack on the standards of living. Future generations will be additionally burdened with a reform of the pension system and, almost certainly, of the health care system. Therefore, the unnecessary public debt accumulation needs to be avoided. According to Smilaj (2004), the public debt burden will be equitably shared between the present and future generations only if it is used for investment in development programmes which will be for the benefit of the future generations, too. Otherwise, future generations should be exempted from public debt burden.

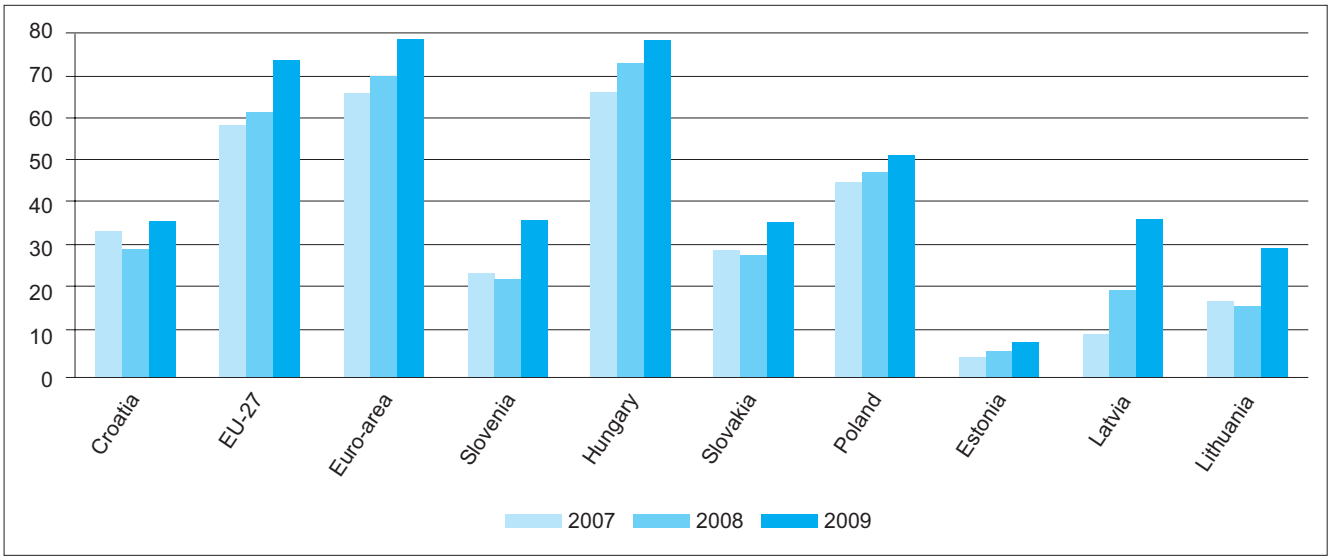
Figure 8 Budget balance (% GDP)



Source: Eurostat (2010b); author's calculation.

[3] The euro area is constituted of the EU Member States that adopted the euro as their official currency. This analysis observes the average of 16 euro area members at the end of 2009: Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, Malta, Netherlands, Portugal, Slovakia, Slovenia and Spain.

Figure 9 General government public debt (% GDP)



Source: Eurostat (2010c); author's calculation.

Above mentioned are just some of the reasons why even the public debt-to-GDP ratio of 35% is too high for Croatia. In 2008, transition countries like Estonia, Latvia or Lithuania, which were similar to Croatia according to the standards, had far lower public debt-to-GDP ratios. However, in 2009 the Latvian and Lithuanian public debts increased sharply and almost equalled the Croatian public debt.

Since the whole public debt stock has to be paid out from budget revenue, it is interesting to look at the share of public debt in total revenue, which stood at 73% in 2008, but increased to 92% in 2009. According to that indicator, Croatia could pay out the whole amount of its public debt in only one year if there were no expenditures. However, an increase in public debt paralleled with a decrease in budget revenue could seriously threaten the stability of public finance in the future.

Conclusion

The Croatian fiscal position constantly improved over the period 2004-2008, along with a decline in the public debt-to-GDP ratio. This was mainly due to the fiscal consolidation process, because of the primary budget surpluses realised over the period 2006-2008. This period was also marked by high economic growth which finally led to a decrease in the public debt-to-GDP ratio. From the beginning of the year 2009, when Croatian economy was seriously hit by the global financial crisis, budget revenue started to decrease, paralleled with an increase in expenditures and a realised deficit of 3.2% of GDP.

Given the relatively high tax burden of Croatian citizens, it is obvious that improvements in the tax administration efficiency and reduced underground economy could lead to better results in revenue collection, even without imposing an additional burden on citizens. Moreover, cuts in public expenditure may reduce the deficit and, gradually, public debt.

Compared with the EU-27 average, Croatia seems to be in a relatively favourable position. Moreover, public debt at the end of 2009 was two times lower than the EU-27 average. However, this conclusion must be taken with caution, because Croatia is much less developed than the EU-27 average, which is confirmed by the GDP per capita in Purchasing Power Standards.

Especially worrying is the potential debt stock, which amounted to about 15% of GDP or 50 billion kuna at the end of 2009. Therefore, a more reasonable approach to the issuance of financial guarantees should be followed in the future, because the activation of the existing ones may seriously disturb public finance, but also drastically increase public debt.

A major threat to the public debt growth is the currency structure of the debt. Although the Croatian Government has mainly borrowed on the domestic financial market since 2004, at the end of 2009 as much as 77% of public debt was denominated in foreign currencies, which means that the largest portion of debt is exposed to foreign currency risk. The Government should definitely maintain its strategy of borrowing in the domestic currency, or at least try to reduce the exposure to currency risk by implementing different financial instruments.

Appendix

Table A1 Public debt, 2005-2009

General government debt stock at end-period in million HRK	2005	2006	2007	2008	2009
1. General government domestic debt	56,121.2	60,852.4	64,812.6	69,859.3	80,236.6
1.1 Central government domestic debt	50,840.7	54,490.4	56,883.1	64,961.8	74,375.6
1.2 Domestic debt of extra-budgetary users	3,953.5	5,198.0	6,357.8	3,035.0	3,794.4
1.3 Local government domestic debt	1,327.1	1,164.1	1,571.7	1,862.5	2,066.6
2. General government foreign debt	45,363.6	41,660.5	39,658.2	30,286.8	37,697.7
2.1 Central government foreign debt	36,414.5	32,556.6	29,424.0	28,459.4	35,971.4
2.2 Foreign debt of extra-budgetary users	8,749.8	8,938.2	10,186.7	1,800.3	1,717.2
2.3 Local government foreign debt	199.2	165.7	47.5	27.1	9.0
3. General government public debt (1+2)	**101,484.8**	**102,512.9**	**104,470.8**	**100,146.2**	**117,934.3**
3.1 Central government total debt	87,255.2	87,047.0	86,307.1	93,421.2	110,347.0
3.2 Total debt of extra-budgetary users	12,703.2	14,136.1	16,544.5	4,835.4	5,511.7
3.3 Local government total debt	1,526.3	1,329.8	1,619.3	1,889.6	2,075.6
4. Total guarantees of the Republic of Croatia	12,455.1	14,188.2	17,399.0	33,835.5	37,479.9
4.1. Domestic guarantees	5,268.5	7,252.3	7,867.8	12,447.2	14,880.8
4.2. Foreign guarantees	7,186.7	6,935.9	9,531.2	21,388.3	22,599.1
5. Total debt of HBOR	7,139.4	7,686.3	9,662.3	10,813.0	12,442.0
5.1. Domestic debt of HBOR	534.2	347.5	190.7	807.9	41.4
5.2. Foreign debt of HBOR	6,605.1	7,338.8	9,471.5	10,005.1	12,400.6
6. Total potential debt (4+5)	19,594.5	21,874.5	27,061.3	44,648.5	49,921.9
Total public and potential debt (3+6)	**121,079.3**	**124,387.4**	**131,532.1**	**144,794.7**	**167,856.2**
Public debt (% of GDP)	**38.39**	**35.80**	**33.25**	**29.27**	**35.41**
Total public and potential debt (% of GDP)	45.80	43.44	41.86	42.32	50.40
Domestic debt (% of GDP)	21.23	21.25	20.63	20.42	24.09
Foreign debt (% of GDP)	17.16	14.55	12.62	8.85	11.32
Potential debt (% of GDP)	7.41	7.64	8.61	13.05	14.99
Domestic debt denominated in foreign currencies	25,553.1	22,834.4	21,489.0	26,974.0	39,985.3
Public debt denominated in foreign currencies	70,916.7	64,494.9	61,147.2	57,260.8	77,683.0
Public debt denominated in foreign currencies (% of GDP)	**26.83**	**22.52**	**19.46**	**16.74**	**23.32**

Source: Ministry of Finance (2006a; 2006b; 2007; 2008; 2009; 2010); CBS (2009); author's calculation.

Table A2 Deficit, primary deficit and real interest rate needed to stabilize the debt, 2002-2009

	2002	2003	2004	2005	2006	2007	2008	2009
Total public debt (% of GDP)	34.9	35.8	37.9	38.4	35.8	33.2	29.3	35.4
Nominal annual GDP growth (%)	9.1	9.0	8.2	7.7	8.3	9.7	8.9	-2.7
Real annual GDP growth (%)	5.4	5.0	4.2	4.2	4.7	5.5	2.4	-5.8
GDP deflator annual growth (%)	3.5	3.9	3.8	3.3	3.4	4.0	6.4	3.3
Expenses for interest payments (% of GDP)	1.8	1.8	1.8	1.9	1.9	1.8	1.5	1.7
Nominal interest rate (%)	5.6	5.6	5.4	5.5	5.4	5.4	4.8	5.6
Realised general government budget deficit (% of GDP)	-2.7	-3.4	-3.4	-2.4	-1.6	-1.0	-0.8	-3.2
Deficit needed to stabilize the debt (% of GDP)	-2.9	-2.9	-2.7	-2.7	-2.9	-3.2	-2.7	0.8
Realised general government primary budget deficit (% of GDP)	-0.9	-1.6	-1.6	-0.5	0.3	0.8	0.6	-1.5
Primary deficit needed to stabilize the debt (% of GDP)	-1.1	-1.1	-0.9	-0.8	-1.0	-1.4	-1.2	2.5
Needed fiscal effort (% of GDP)	**-0.2**	**0.5**	**0.7**	**-0.2**	**-1.4**	**-2.2**	**-1.9**	**4.0**
Realised real interest rate (%)	2.0	1.6	1.6	2.1	1.9	1.3	-1.5	2.2
Real interest rate needed to stabilize the debt (%)	2.7	0.2	-0.4	2.8	5.7	7.8	4.3	-10.8
Difference between real interest rate needed to stabilize the debt and realised real interest rate	0.6	-1.4	-2.0	0.7	3.7	6.5	5.8	-12.9

Source: Ministry of Finance (2009; 2010); CBS (2009); author's calculation.

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Institut za javne financije
Katančićeva 5
Zagreb, Hrvatska
p.p. 320

INSTITUT ZA JAVNE FINANCIJE

Institute of Public Finance
Katančićeva 5
Zagreb, Croatia
PO Box 320

**Poštarina plaćena
u poštanskom uredu
10000 ZAGREB**

TISKANICA