Vladimir Gligorov

Fiscal Issues in Financial Crisis

Vladimir Gligorov is Research Economist at the Vienna Institute for International Economic Studies (wiiw).

Vladimir Gligorov

Fiscal Issues in Financial Crisis

Contents

List of Figures

Abstract

Fiscal constraint is potentially lax in catching-up economies, but it has not been abused by most countries considered in this paper. Fiscal risks are significant currently, but sustainability and structural balances are not threatened as a rule, if the return to potential growth rates is to be achieved in the medium run. The risks to countercyclical public financing could be discouraged by a comprehensive EU stabilization policy of some sort. Early euro adoption, absent credible stabilization policy, is not the first best policy option for fiscal policy targets.

i

Summary

I make three points and draw three policy conclusions. They are based on theoretical considerations and empirical observations. I make some related comments that I will omit in this summary.

Sustainability

I take the snowball effect, as defined in the usual way (equation 2), and define a condition for stability of public debt.

No-Ponzi-Game Condition: The primary surplus is not above the one that stabilizes the public debt to GDP ratio at the desired level as determined by the difference between the interest rate on public debt and the growth rate of the GDP.[1]

I can thus classify the strength of the constraint that fiscal policy faces using the snowball effect:

- *Lax constraint: if the interest rate on debt is below the rate of growth of GDP, which makes any public debt to GDP ratio sustainable.*

- *Golden rule: if the interest rate on debt is equal to the growth rate of GDP, public debt development follows the primary balance.*

- *Tight constraint: if the interest rate is above the growth rate, fiscal policy may be constrained to run primary surpluses.*

I look at the evidence for the relationship between the interest rate and the growth rate in developed and converging EU member states and in countries closely integrated with the EU in trade and finances. Developed countries have as a rule faced tight fiscal constraints in the era of 'great moderation', while converging countries have as a rule faced lax fiscal constraints. However, most of the latter (there are exceptions) have either targeted stable public debt to GDP ratios or have experienced declining public debt to GDP ratios. Thus, sustainability of fiscal balances has not been an issue for most catching-up economies considered here.

I also look at sustainability in the sense of the level of public debt that financial markets feel comfortable with, i.e. at the existing interest rate. In most cases, the initial, pre-crisis, public debt to GDP ratio was relatively low and even with rapid build-up of debt during the crisis and in the recovery phase, most countries should continue to comply with the Maastricht criterion on public debt. However, it is not easy to determine what is the desirable and sustainable – from the viewpoint of the financial markets – level of public debt, perhaps due to the changing risk of default.

---

[1]   In stochastic settings and in expectations, the condition depends on the level and distribution of risks. See Blanchard and Weil (2001).

The level of public debt, in principle, depends on intergenerational redistribution, which in turn depends on the public notion of intergenerational justice. The sense of justice determines the level of public debt over the long run, while its short- and medium-term variability is essentially a random walk pushed by the shocks to growth and the interest rate.

Structural balances

Next, I address the issue of structural and cyclical balances. Those have an impact on the ability to service debts and thus on the willingness to lend by the creditors. The issue is whether the crisis has permanently increased the structural primary deficit and thus necessitates structural adjustment of fiscal balances or most of the increase in fiscal deficits and thus public debt is cyclical or comes from realized fiscal risks. If the latter is true, the effect of the crisis in the medium run will be a one-step increase of the public debt to GDP ratio rather than a change of the path of fiscal balances from sustainable to unsustainable.

I argue that large increases in fiscal deficits are mostly cyclical (there are exceptions) and that those could be reversed once growth recovers. With the usual elasticity of public revenues and expenditures,[2] the main risk is a possible decline in the potential growth rate. Otherwise, the ability to tax is quite strong in catching-up economies and the experience is that they have tended to have stable public expenditures and their public debt to GDP ratios have tended to decline after cyclical shoot-ups. This should be enough to reassure the creditors and to provide for public debt sustainability in the sense of the ability to pay, and in the sense of the ability to tax, which should induce the willingness to lend at, e.g., euro or close to euro, interest rates.

Fiscal risks

Finally, I look at fiscal risks in the sense of implicit or contingent fiscal liabilities. I take a very wide view of those because the aim is to gauge the endogenously determined development of fiscal deficits. Theoretically, if current account deficits are narrowing or coming close to being balanced, private sector deleveraging or, in other words, an increase of private savings implies an increase of the fiscal deficit. Countries differ in these respects.

High-risk countries: those are countries (the Baltic States) with low public debts and high private debts.

Moderate-risk countries: those are some of the countries in Central Europe with moderate public and private debts.

Double-risk countries: those are the countries (e.g. Hungary), some in the euro area (e.g. Greece), with high public and private debts.

---

[2]   On some estimates and discussion see Larch and Turrini (2009): the estimated elasticity of revenues is around 0.5 on average while that of expenditures is around 0.

These risks need to be addressed in such a way that they are not mispriced by the financial markets.

Policy conclusions

Given the sustainability and risks arguments and the empirical evidence, three policy recommendations can be drawn.

First, fiscal rules for converging economies need to apply the No-Ponzi-Game condition in such a way as to take into consideration the level of fiscal deficit that is stabilizing.

Second, countercyclical policy should be supported around the stabilizing fiscal deficit and with a view on the targeted level of public debt (which may be different for different countries).

Third, the pricing of fiscal risks should be supported by the EU in a coordinated manner with a view to making countercyclical fiscal policy possible without unnecessary costs to growth.

Vladimir Gligorov

Fiscal issues in financial crisis

Introduction

What are the characteristics and constraints of fiscal policies in transition countries (new member states, NMS, future member states or candidate states in the Balkans, CMS, and neighbourhood policy states, NPS)? And what, if anything, can and should the EU do? First the sustainability issue will be addressed, then the issue of the ability to tax or the stability of revenues will be looked at, and finally fiscal support and rule-based fiscal policies will be discussed. A number of related comments are made along the way.

Crisis and fiscal balances

At the peak of the crisis, some transition countries, e.g. Hungary, faced problems with placing government bonds. Some other countries had to turn to the IMF for financial and policy support though perhaps not primarily for fiscal reasons. This acute fiscal crisis has led some, mostly casual, observers to conclude that there is a fundamental problem of sustainability of fiscal balances in the whole group of CESEE (Central, Eastern and Southeastern European) countries.

These acute fiscal problems have for the most part proved to be short lived, however, but the issue of sustainability has remained – in part because of the fall in public revenues, due to sharp deceleration of growth, and in part because of sharp increases in fiscal risks due to exchange rate movements and the rising problems with the financing of private debts. All of that has prompted a discussion of the urgency of fiscal consolidation and of the need to reform the public sector and improve the system of taxation. The argument for urgency depends in part on the assessment of the sustainability of public finances. The other arguments for urgency depend on the contribution of the public sector reforms and of the taxation system on the sustainability of public finances.

In order to address some of these issues, it makes sense to look at the fiscal record of countries in transition with a view to answering the following questions:

- Have they been unsustainable prior to the crisis?
- How stable are the revenues or how strong is the ability to tax?
- What is the impact of the crisis on structural fiscal balances?

Before answering these questions, it may be useful to compare the fiscal problems of transition countries with those that are emerging in some of the countries in the monetary un-

ion, i.e. in the euro area.[3] This is necessary anyway in order to assess the internal consistency and viability of the institutional and policy framework for monetary and fiscal governance in the European Union and in the euro and euro-dominated area.

A comparison

Let us compare three EU member states: Greece, Bulgaria and Hungary (data on more countries are to be found in the appendix). Admittedly, these countries are outliers, though in different ways, but they illustrate the principles that need to be understood in order to see what sustainability of fiscal balances means in the euro area or in the wider monetary area closely integrated with the euro.

If we start with Greece (Figure 1), it is easy to see in the two figures below the advantage of euro accession.[4] Nominal GDP growth did not change all that much, but the interest rate on public debt (the so-called implicit interest rate, which is the actual interest rate paid divided by public debt) declined in order to converge to the euro area interest rate. That led to the stabilization of the debt to GDP ratio, though Greece did continue to run significant fiscal deficits (check figures in the appendix).[5]

Figure 1

Greece

Interest rate, growth and debt to GDP ratio
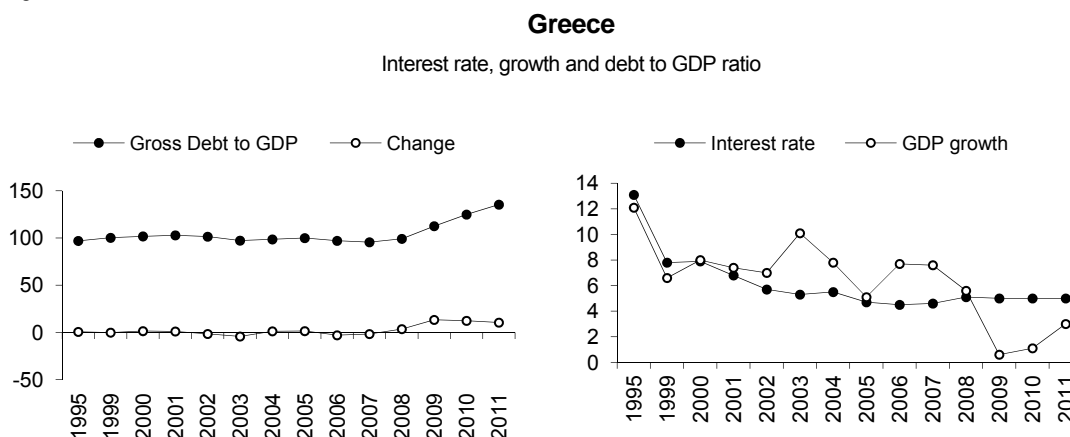
Bulgaria is a different case (Figure 2). After price stabilization and the introduction of a currency board based on the euro, the interest rate on public debt declined to a level similar to that in Greece. However, Bulgaria adopted a policy of fiscal balance which led to a steady decline of its public debt to GDP ratio. Indeed, in the years with exceptionally high growth rates of GDP, Bulgaria ran fiscal surpluses.

---

[3] For a useful treatment see the Autumn Report of the European Commission. Also, see the recent CESifo EEAG 2010 Report.

[4] All data in the graphs in the text are from DGECFIN, General Government Data, Autumn 2009. Updates from Spring 2011 from the same source are in the appendix.

[5] Forecasts here and in the appendix are from DGECFIN.

Figure 2

Bulgaria

Interest rate, growth and debt to GDP ratio
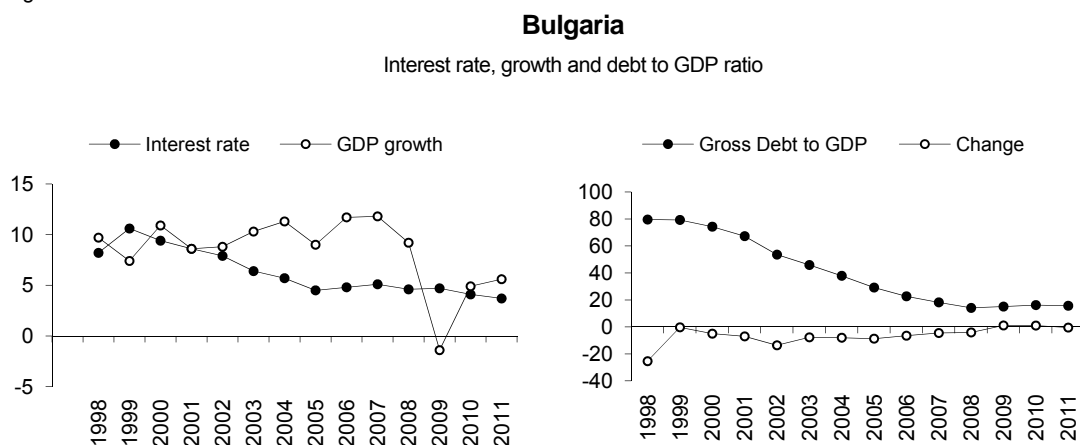
However, there is a temptation to misuse this lax fiscal constraint (i.e. the fact that the interest rate on debt is lower than the growth rate of GDP) either to stabilize public debt at a relatively high level, the Greek case, or even to run high fiscal deficits temporarily because low interest rates ensure the sustainability of public debt at any level of public debt. The latter is probably the case of Hungary (Figure 3) and perhaps Poland at times (check the figures in the appendix).

Figure 3

Hungary

interest rate, growth and debt to GDP ratio
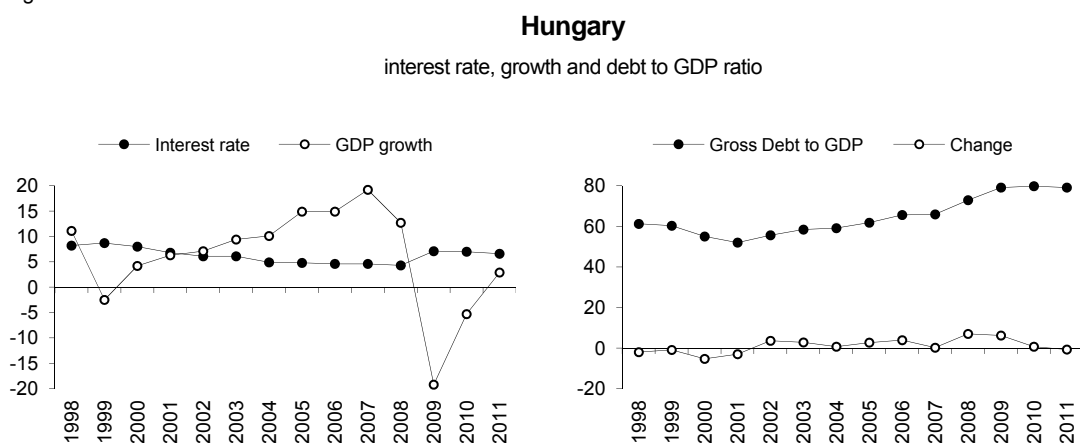
That may prove to be a risky policy in the case of shocks to the growth rate or to the interest rate as is the case now. It is, however, not easy to determine the level of public debt or of the fiscal deficit that can be deemed to be stabilizing in view of the possible growth or financial shocks. The latter is connected with the willingness to lend, which in turn may be connected with the willingness to pay, which may be connected with the ability to tax, i.e. with the level and the stability of public revenues.[6] In general, one could argue that there

---

[6]   On these issues it is still useful to consult Milesi-Ferretti and Razin (1996); see also Blanchard (1990) and Fedelino, Ivanova and Horton (2009).

are two ways to define the sustainability of fiscal balances: (i) the public debt to GDP ratio does not increase without limit, and (ii) the willingness to lend does not change, i.e. interest rates do not rise too much. Both of these issues will be discussed below.

Sustainability, level, and pro-cyclical policies

In general, countries with convergence growth which can borrow at euro area (or world, i.e. dollar) interest rates can (i) stabilize their debt to GDP ratios at any level by not running fiscal deficits that are higher than the difference between growth and interest rates, and (ii) can run down their public debts by running countercyclical fiscal policies, i.e. balancing their budgets over the business cycle. This can be seen in the following way: sustainability of the fiscal balance can be calculated from the following equation used by the European Commission:

$$(D_t/Y_t)-(D_{t-1}/Y_{t-1}) = (PD_t/Y_t)+\{(D_{t-1}/Y_{t-1})*[(i_t-y_t)/(1+y_t)]\}+SF_t \qquad (1)$$

where Y is GDP at current prices, D is general government debt, PD is the primary deficit, i is the implicit interest rate (actual interest paid divided by the stock of debt), y is the nominal GDP growth rate, SF is the stock-flow adjustment and t stands for time. Therefore, the change in the debt to GDP ratio depends on the primary deficit, PD, on the so-called snowball effect, the second term on the right-hand side $(D_{t-1}/Y_{t-1})*[(i_t-y_t)/(1+y_t)]$, and on the stock-flow adjustment, SF, which basically captures the various factors that influence changes in the valuation of the stock of debt. These three factors contribute to the increase or decline of the public debt to GDP ratio – a negative contribution meaning a contribution to a decline, and a positive one a contribution to an increase.[7]

If the stock-flow adjustment is put aside, though it may in some cases be important,[8] the debt to GDP ratio does not change if the primary deficit and snowball effects cancel out.

$$PD_t/Y_t = (D_{t-1}/Y_{t-1})*[(i_t-y_t)/(1+y_t)] \qquad (2)$$

If the interest rate on debt is lower than the growth rate of GDP, that will tend to stabilize the debt to GDP ratio or will pull it downwards depending on the rate of the primary deficit. If the interest rate is higher than the growth rate, a primary surplus will be needed to stabilize the debt to GDP ratio.

Most of the NMS have run budget deficits, but their public debt to GDP ratios have tended to be stable, see Figures A3 and A4. The reason is easy to see. The cost of debt is more than covered by growth, i.e. the snowball effect reduces the fiscal deficit and thus the debt

---

[7]   For more see wiiw and CEPS (2009) also European Economic Forecast Autumn 2009 and Baunsgaard and Symansky (2009).

[8]   For some data on that see EU (2009).

to GDP ratio tends towards zero if there is no fiscal deficit. If, however, the deficit is as high as it is allowed by the difference between the interest rate on debt and the growth rate, the debt to GDP ratio tends to be stable at whatever initial level it has happened to be.

How are we to think about the development of the interest rate and the growth rate within the euro and euro-dominated area? One simple way is to assume that the interest rate on sovereign debt is approximately equal or anchored to the central bank policy rate, which is determined by some version of the Taylor rule. One can compare the growth and interest rate configuration in the more developed euro area member states such as Austria (Figure A3). Clearly, euro monetary policy takes into account potential growth rates of larger and more developed member states and their target inflation rates. In a simple Taylor rule type of representation of this monetary policy, the interest rate will tend to be above the growth rate in order to stabilize inflation.[9]

If in addition we assume that parameters on the inflation target and on the growth target are the same for countries that are not in the euro area but are financially closely integrated with it, which is like assuming that there is risk convergence, then the euro interest rate would be supporting higher growth rates in the converging countries even if they do not use the euro. That should mean an interest rate on sovereign debt that is above the growth rate in developed countries, but lower than it is in less developed countries, e.g. in the CE-SEE countries.

Thus, we should expect that the interest rate should be below the growth rate in transition countries (in the long run or potentially or in some other equilibrating sense). That, of course, is a condition for a bubble (the No-Ponzi-Game condition in the usual sense is violated) and could lead or stimulate these countries to run high fiscal deficits. What do we find that their fiscal policies have in fact been?

Figures A3 and A4 in the appendix exhibit the public debt developments in New Member States and in some other CESEE countries. It is clear that, with few exceptions, these countries have experienced stable public debt to GDP ratios or declining ones. The difference between those two groups and Hungary, which has run an increasing public debt to GDP ratio for some time, has been precisely in their control over fiscal deficits. Most countries have run fiscal deficits even when their growth rates have been quite high and most probably above their potential but those deficits have not been high enough to lead to continuously rising public debts.

---

[9] If target inflation is close but below 2% and the desired real interest rate is about 2% (usual Taylor rule assumptions) and if the potential growth rate is about 2%, clearly an interest rate of 4% will be around or above the growth rate. But it will be below for countries with potential growth rates of 4% in real terms. Nothing changes in principle if more complex monetary policy rules are considered.

From this, it can be concluded that the fiscal experience of most of the countries in Central, East and Southeast Europe (CESEE) has been characterized by stable or declining public debt to GDP ratios, but only in some cases by countercyclical policies in the usual sense, i.e. only few countries ran fiscal surpluses in the periods when they experienced above-potential growth performance. This, however, has not been due only to high growth rates, but also to low interest rates due to risk compression across EU member states and candidate and potential candidate countries. This can be stated differently: most of these countries have not succumbed to the temptation of fiscal irresponsibility in spite of the laxity of the fiscal constraint they have faced.

There is no doubt, however, that the public debt to GDP ratio will increase. That can spook the investors and their willingness to lend may be tested. Yet there is no easy way to ascertain that the public debt to GDP ratio is too high for fiscal policy to be sustainable. One simple way to see this is to look at a country that initially had an acceptable (to the creditors) debt to GDP ratio and then amassed additional debt due to the fall of revenue in a period of recession. It may take some time for the initial level of revenue to be recovered. That period will depend on the speed of the recovery. However, once the initial GDP is recovered and revenues and expenditures revert to their initial ratios to GDP, the remaining consequence is the increased level of public debt to GDP. Then, the need to adjust the primary surplus depends on the relationship between the growth rate and the interest rate. If the interest rate has changed permanently, fiscal adjustment will be necessary. Otherwise, the public debt to GDP ratio will tend to be stable or to decline without any change in either the level of expenditures or of taxation. In other words, with the determining factors at their long-term values, public debt develops as a random walk.[10]


Structural balance: revenues and expenditures

One of the reasons why favourable fiscal conditions have not been abused by these countries can also be seen in Figure 4. Public expenditures are certainly high, but revenues are high too. There is a differentiation across countries to be sure, but most of these countries have been able to collect around 40% of GDP in taxes (and contributions; other revenues tend to be small, except for transfers from EU funds). Also, public revenues have proved to be quite stable, though tax systems can certainly be improved. Even in the cases when there have been quite severe shocks to public revenues due to recessions or to inflation, the tax revenue base has recovered rather quickly due to the recovery of the growth rate. Some examples are given in Figure 4. It can be noticed that Poland and the Czech Republic (and to a lesser extent other countries) ran significant fiscal deficits in times of negative or low growth, but that was reversed in times of faster growth with no obvious implications for structural fiscal balances.

---

[10] See Barro (1979). For qualifications see Chari and Kehoe (1999).

Figure 4

General government budget and gross debt, 2000-2008

in % of GDP

Revenues ◆ Expenditures ◆

Deficit (right scale) ─ Debt ──
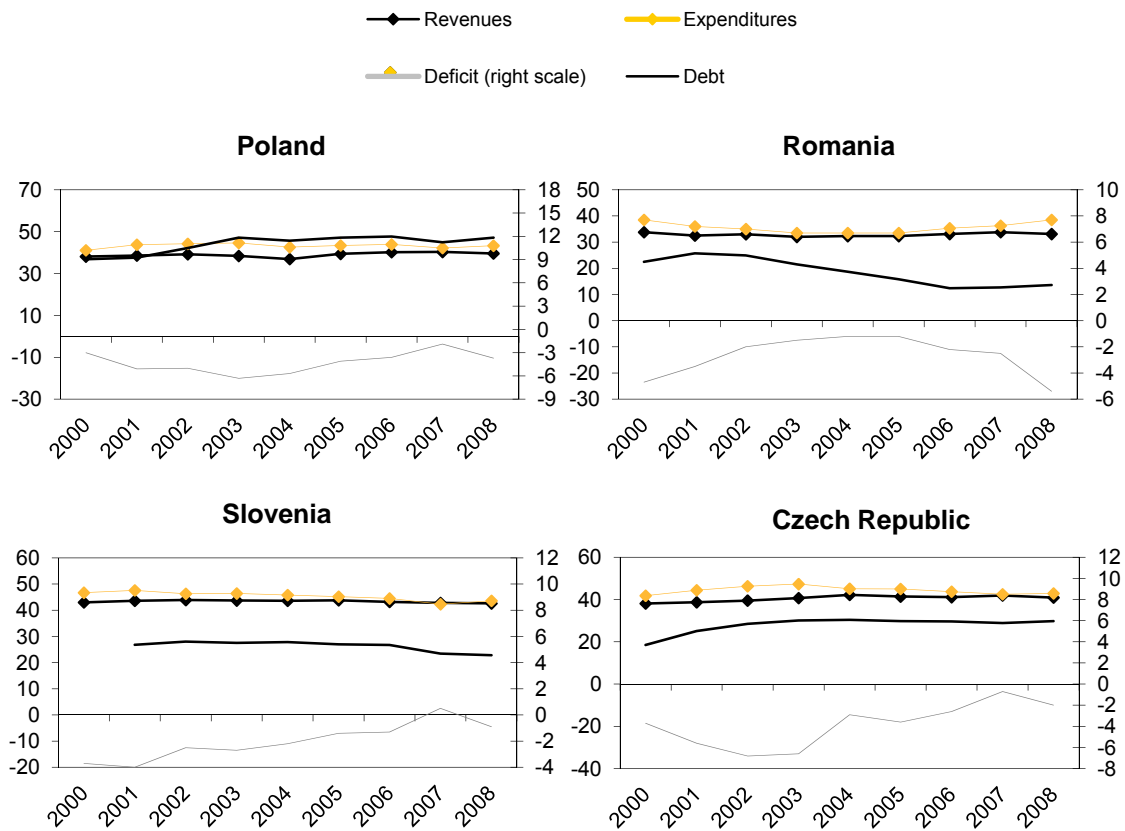
Thus, based on the historical record in any case, there is no reason to believe that sharp decline in public revenues due to a recession will not be reversed once the economy starts to grow again.

Public expenditures also do not seem to show the tendency to grow as a share of GDP. In some cases, they have tended to decline for a variety of reasons. There is an argument to be made from Wagner's Law that these are too high levels of public expenditures given the level of development of these countries. This, however, needs to be controlled for the difference in demography. These countries have the demographic characteristics of much more developed nations, so their social obligations and thus social security systems have to differ from other countries at a similar level of development but with much younger populations.

The key question is, how is the structural fiscal deficit to develop? The structural deficit is defined as the one that is cyclically adjusted, i.e. a fiscal deficit without the discretionary and spending on automatic stabilizers. Those obviously depend primarily on revenue commitments and on the efficiency of the taxation system.

7

Without going into detailed calculations, because these calculations are by necessity based on too many assumptions anyway, it seems reasonable to expect that shocks to the revenues as well as to the expenditures due to sharp recession or growth deceleration should not be expected to induce permanent structural changes.[11] There is no reason to believe that the ability to tax will be permanently diminished, thus, the elasticity of public revenues can be taken to be 1, as is usual. There is also no reason to believe that there will be a structural increase in expenditures as a consequence of the crisis, so one can assume, as is usual, that the elasticity of expenditures is 0 (estimated values are around 0.5 however). Thus, the current increase in fiscal deficits could be seen as part of mostly automatic countercyclical fiscal policies rather than as a permanent shock to either revenues or expenditures. Of course, if growth disappoints or if risks remain persistently high, structural balances will deteriorate.

Figure 5

GDP growth and debt to GDP
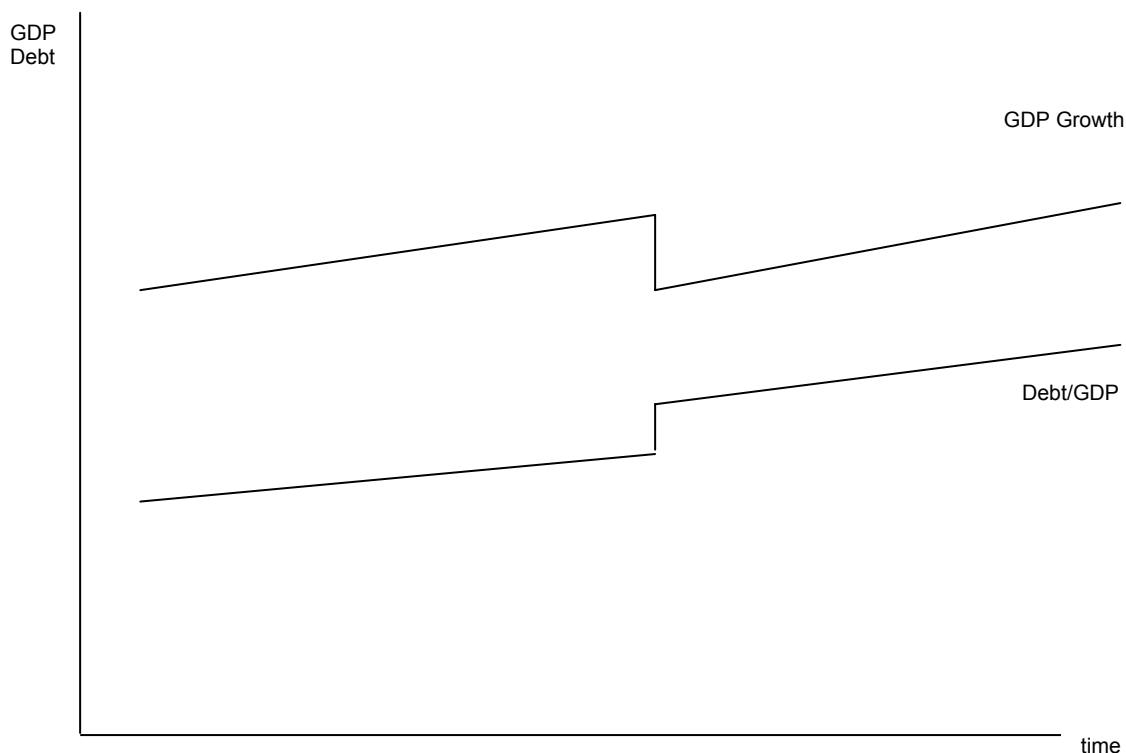
Figure 5 illustrates. Recession lowers the level of GDP, but if the potential growth rate is not affected or is not affected dramatically, and if there are no permanent changes to the ratios of public expenditures and public revenues to GDP, public debt to GDP jumps as a consequence of higher fiscal deficit. This does not have to happen as sharply as drawn

---

[11]   Some forecasts can be found in EU (2009). See also Cecchetti et al. (2010).

here. Recession or slow recovery may take some time and public debt can continue to increase over an extended period of time, e.g. as long as the initial level of GDP is not fully recovered. After that, the public debt to GDP ratio should be as stable as it was before the recessionary shock. Obviously, if there is a positive shock to GDP growth, the reverse development occurs. If these shocks are not biased to one or the other direction, the debt to GDP ratio follows a random walk as long as there are no significant changes to public revenues and expenditures.

In any case, on historical record it can be argued that these countries have been able to raise sufficient public revenues and to cap growth of public expenditures even after severe shocks to both the tax base and the demand for expenditures primarily because of the stability in the tax base and due to the recovery of the convergence growth rate.

Private and public debt

Probably the key issue to consider before the urgency of the need for fiscal consolidation is assessed is the relationship between public and private debt developments. Large increases in fiscal deficits are not just the consequence of low or negative growth, but occur primarily because of problems with the refinancing of private debts. There is a stark difference between the growth of public and private debts before the crisis. The data, presented in Figure 6, show strong growth of private debt to GDP ratios. Whatever has caused the crisis, there is no doubt that the private debt overhang will prove to be a problem and will be a drag on growth, and thus on public finances, if not dealt with. Let us look at a few examples in Figure 6.

Slovakia had a declining public debt to GDP ratio and a relatively low private debt to GDP ratio (the Czech Republic is even a better example, but the available data on private debt are not up to date). Latvia, on the other hand, ran quite low public debt, but also fast rising private debt. Greece was an example of a country with stable, but high public debt and growing private debt. Finally, Spain's private debt to GDP ratio was comparatively quite high, but public debt was low and if anything declining. Clearly, Slovakia did not have a debt problem of any kind, while Latvia and Spain had a runaway private debt growth. Greece is a country that arguably (though that still needs to be argued) had both private and public debt problems.

Growth of private debt has been fuelled by the same dynamics that underlies the development of public debt. Once risks decline, less developed countries provide higher returns to investments. As a consequence, capital flows from more developed to less developed countries especially if there is market integration. Differently put: productivity growth and thus profits in converging countries are above the costs of debt financing. Unlike public

debt, however, private debt has increased in many countries in an unsustainable manner as bubbles have developed alongside the more productive investments.[12]

Figure 6

Public and private debt in % of GDP

——— Public debt, EU-def., in % of GDP
——□—— Private debt
——■—— Non-financial corporations
——◇—— Other monetary financial institutions
——✳—— Households; non-profit institutions serving households
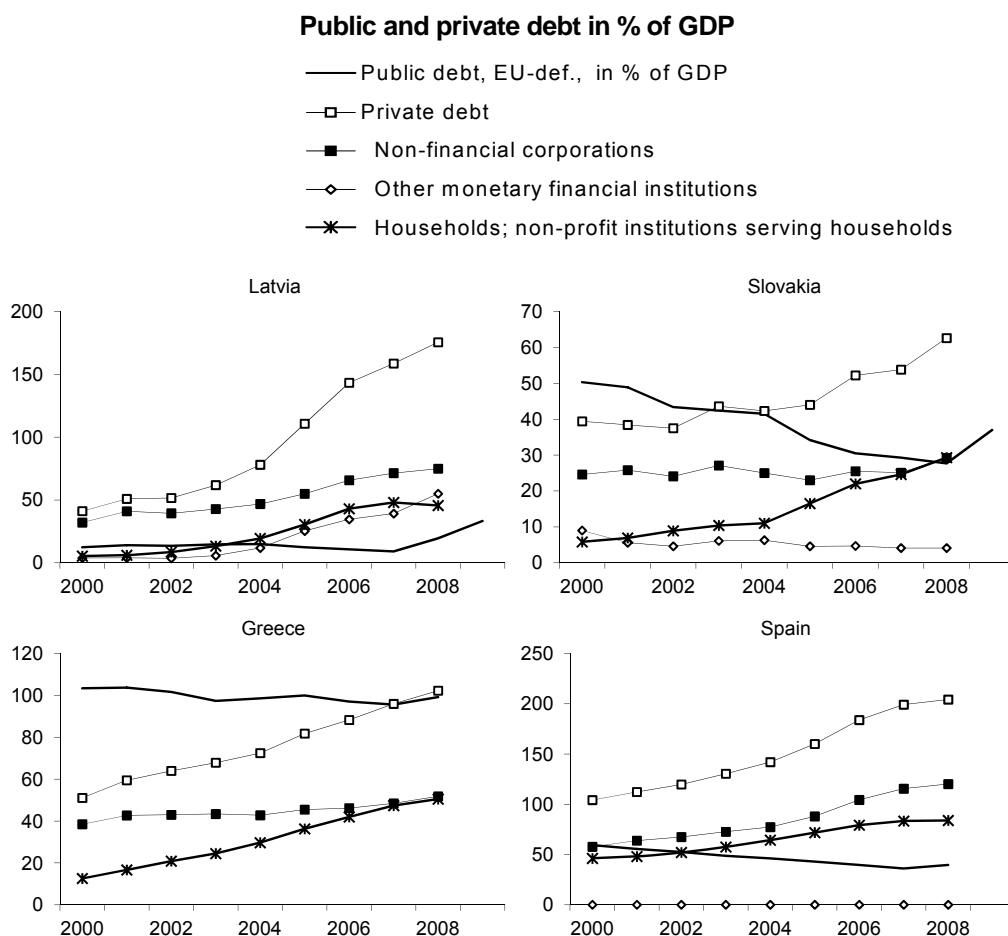
This symmetry between fiscal and asset bubbles may be useful to highlight. Fiscal sustainability can be defined via the valuation equation for public debt, which is that it equals the present value of future primary surpluses. If the interest rate on public debt is below the growth rate, the valuation equation may be violated and fiscal bubbles are possible. Similarly, private sector assets have a present value of future dividends. However, if interest rates are low, the value of the assets may be above their fundamental value (that is, the value determined by the valuation equation), which means that there will be a bubble in the market for assets.[13] In the current crisis, it does not seem that the cause was the fiscal, but rather the asset bubble.

---

[12] On investments in bubbles there is growing literature. A sample can be found in the references.

[13] On this see Cochrane (2005) and Abreu and Brunnermeier (2003).

As a consequence, it is the collapse in private investment (and consumption in general) that has been characteristic of this crisis. That has led to the collapse of public revenues and to the widening of the fiscal imbalances. From this it can be inferred that higher fiscal deficits and growing public debts are endogenous, i.e. it is only to a limited extent a policy choice. Indeed, in most countries primary deficits are rather small. To a large extent, public debt is growing because the private sector needs to go through a process of deleveraging. This process cannot be gone through in a more orderly manner if public finances were to allow for a Fisher type of debt deflation *circulus vitiosus*.[14] Even with that, most of the increases in public deficits come from automatic stabilizers and not from additional fiscal stimuli.[15]

These considerations are important also in view of the worries that public borrowing will crowd out private borrowing. Crowding out of private credits happens if the demand for credit is above the supply due to growing public financing needs. In most cases considered here, private demand for credit has plummeted. That crowds in public borrowing.[16] Once private credit demand recovers, public revenues will recover too and then the issue of optimal fiscal deficit can be addressed so that public borrowing requirements are not crowding out private credit by pushing the interest rate higher. This is hardly the case at the moment.

Fiscal risks

This relationship between public and private debt can be seen as implying the existence of a significant fiscal risk. As a consequence, it is important to see how these two debts, public and private, are connected. A look at Figures A3, A4 and A5 reveals that the growth of private debt has been especially strong in countries that have had high current account deficits and often have not experienced an increase in public debts. Thus, it is hard to argue that these countries have as a rule run twin deficits in the sense that fiscal deficits were responsible for the current account deficits.[17] In any case, the opposite is the case now. To see this, the relationship of savings, investments, and the current account is useful. If CA is the current account, Ps, Pi, Gs, Gi are private savings and investments and public savings and investments respectively, then:

$$CA = (Ps-Pi) + (Gs-Gi) \tag{3}$$

---

[14] See Fischer (1933) This is similar to what Keynes called "the paradox of thrift".

[15] See the recent discussion and evidence in CESifo (2010).

[16] " Crowding in" is not altogether different from "crowding out" if it goes together with the decline of interest rates on public debt and a shoot up of interest rates on private debt.

[17] On their relationship in the case of open economy see Mankiw and Elmendorf (1999).

If the current account deficit is narrowing or has turned into a surplus and private savings are growing as private investments are falling, government savings have to lag behind government investments and that means that the fiscal deficit will be increasing. In other words, private savings will be put into government borrowings. Of course, if the current account surplus increases quite sharply, both private and public savings will increase with capital flowing out of the country. This is a sudden-stop type of crisis, which has not, as a rule, developed in CESEE countries so far (there may be some exceptions).

Private debt deleveraging is also pushing up fiscal deficits both through lower revenues and through increased expenditures. As a consequence, the key problem will be the financial stability of the households and the corporations. If credit flows to households and corporations do not recover, growth will not be sustainable and thus public finances will not be sustainable either. There is not much evidence that public debt deleveraging would help the consolidation of the private sector before financial flows recover, though foreign debt developments may be helped.

For policy purposes, it is useful to distinguish three types of countries. For example, Balkan and Baltic economies, though otherwise different, did increase their private debts even though their public debts, for the most part, either stagnated or declined or were close to zero even. These private debts, however, just mirrored current account deficits and thus the overall foreign debts. This also supported the relatively benign inflation record due to stable import prices and often fixed exchange rates. The process of private debt deleveraging is connected with the real exchange rate adjustment and that may take some time. In the case of Central European economies, the debt levels are not necessarily all that high and significant and the deleveraging process may not present the same challenges. It still remains the case that the resumption of financial flows is the key to both private and public debt management. Finally, in the case of countries further to the East, debt issues are connected with weaknesses in the banking sectors, in the revenue base, and in declines in export revenues from either oil or metals. These countries present specific problems due to the fact that their financial and trade integration with the EU is much more limited.

Fiscal reforms

There is no doubt that the fiscal sector could be improved and that reforms to the public sector are needed. Detailed analysis of these issues is beyond the scope of this piece. Only few general comments are in order.

The basic observation is that the level of public debt depends on the preferences of the public over the type and level of intergenerational transfers.[18] Those cannot be taken to be

---

[18]   One interesting recent study is by Birkeland and Prescott (2007).

the same for every country. Thus, just looking at the level of public debt is not very informative of either its sustainability or its vulnerability. This is an issue that should be treated separately and has more to do with the choice of social set-up that is to be sustained than with either the model of growth or with fiscal sustainability.

When it comes to revenues, changes in the tax base are to be expected even if the overall tax rate does not change. In some cases, e.g. in Central European countries, a noticeable decline in the openness of these economies (in terms of imports to GDP ratios) should not be expected and therefore that tax base should not be permanently lost. There is a need, however, to improve the coverage of the informal economy and to increase the contribution of direct taxes.

In the case of the Baltic and Balkan countries, tax reforms may have to be more sweeping due to probable slower growth of imports in the medium run. In the case of countries that rely on export taxes, everything will depend on the recovery in the prices for natural resources and metals.

Crucial reforms of the public expenditures will have to be undertaken. The problems are well known and have primarily to do with intergenerational justice. Here as in other cases for reforms, the issue is not so much sustainability, but the principles on which the reforms should be based. Indeed, some countries have low public debt to GDP ratios and that may be due to the collapse of social and public institutions rather than the reflection of the quality of public finances. In some cases, an increase of public debt may be needed from the point of view of intergenerational and even intra-generational justice and thus the ability to run fiscal deficits provided by the process of catching-up growth may be supportive of that.

Moral hazard

There is no doubt, however, that the amount of private obligations that have to be substituted by public ones has to be a measured one. There is clearly a moral hazard issue to be addressed. The moral hazard issue is also important in the discussions of fiscal sharing within the EU and when it comes to the issue of the euro area and generally when the role of the euro as a regional and perhaps global currency is assessed. Perhaps the most general point to be made is that the standard of acceptable public insurance is not that of zero moral hazard.[19] Theoretically, optimal allocation of risks should be coupled with the rule that everybody should bear the costs of his or her decision. It is not easy to devise such a model economy and society even in principle while additional problems emerge once externalities, public goods and especially systemic risks are to be considered. As soon as there are institutions and polities, there is moral hazard. Indeed, a certain level of moral hazard is optimal.

---

[19] For a thorough discussion on this and other related points see Arnott and Stiglitz (1988).

13

The reason is one of political economy. It may be true that in pure and perfect market anarchy the risks are distributed appropriately, i.e. risk takers are also the risk bearers, but the overall level of risk may be too high. For example, privatizing security as in the Hobbesian state of nature may be efficient, but the level of overall risk may be lower if the use of violence and coercion is legalized and legitimized. The latter will reduce the overall level of risk, though the distribution of risk may be in part due to the creation of moral hazard.

This applies to fiscal policies in the EU as well. Clearly, there is low or no support for an increased fiscal integration. It is not to be expected that the EU budget will be significantly increased and significant EU taxes introduced. However, as long as fiscal nationalism is the rule, it is hard to see that fiscal rules can be designed at the EU level and implemented by EU policies. That will lead to problems for policies of stabilization, that is for short-term crisis management. As can be seen currently, the risk to the system increases, i.e. the level of moral hazard is high, though the distribution of costs may be attributed to particular countries, i.e., the distribution of costs avoids some moral hazard problems.

This problem will have to be addressed so that the EU develops an ability to react to short-term crises with appropriate instruments. Those cannot be totally fiscally neutral, so some consideration to fiscal sharing should be given in order to increase the overall stability and thus decrease the level of moral hazard in the EU and in the euro area.

Rules and policies

The argument so far can be summarized thus: (i) fiscal sustainability in the usual sense, i.e. that the public debt to GDP ratio is increasing without limit, is not the problem that transition countries are facing if they can manage to grow at their potential rate and if they face financial risks that are not in excess of those in the EU or in the euro area (those may be in fact lower for a number of new member states and Balkan countries in transition; the situation may be different in the Baltic states and in some neighbourhood countries such as Ukraine); (ii) structural balances should not deteriorate all that much due to strong ability to tax and the cyclical rather than structural character of increased fiscal deficits; (iii) the key to public debt consolidation is in fact the consolidation of the private debt (with partial exceptions such as Hungary, Croatia, Greece and perhaps some other countries); (iv) fiscal sustainability in the sense of willingness to lend and to pay may indeed be an issue in some cases due to uncertainties and the moral hazard problems.

What are the policy implications? There is a risk to exaggerate the urgency of fiscal consolidation and to add public deleveraging to the ongoing private one. That could have significant negative consequences for economic recovery and may not lead to improvements in either the public or the private debt positions. Indeed, if growth remains depressed due not only to low private but also public demand, these countries may face problems similar

to those that Latin American countries went through in the 1990s. Then, interest rates shot up and growth remained depressed for years as governments ran high primary surpluses in order to repay their accumulated debt obligations.

In the case of CESEE countries, public debts are expected to increase for the most part, but debt to GDP ratios will still be lower than in most advanced EU and euro countries (see EU, 2009). Even in the long run, public debts are at moderate levels in most NMS even without any consolidation. With modest consolidation, e.g. in accordance with the Stability and Growth Pact rules, they tend to stabilize and in some cases to decline. Given these long-term projections, it does not seem that the EU should hesitate to support these countries to manage their fiscal challenges.

The support should come in three parts: (i) direct and indirect fiscal support in the short run, (ii) requirement of fiscal policy to satisfy a suitably adjusted sustainability (No-Ponzi-Game) condition, (iii) rule-based countercyclical fiscal policy.

Ad (i)   In view of the fact that it is the financial integration that is fuelling at least some of the fiscal excesses, the EU should take the responsibility to reassure the financial markets that temporary problems should not lead to excessive risks. The aim would be to stabilize the interest rate on sovereign debts. These could preferably be done through a guarantee that member states and candidate countries and possibly others that have trade and financial agreements with the EU could procure. This could work as an IMF fast credit line or something to that effect. There are plenty of ways to ensure that countries could be supported if they faced an adverse reception when they tried to place their sovereign bonds in the financial market.

Ad (ii)   As argued here, convergence growth in financially integrated regions tends to weaken the fiscal constraint. That creates moral hazard which cannot be eliminated altogether, but can be managed with the adoption of fiscal rules. A balanced budget rule would in these circumstances lead to an elimination of public debt, which is not desirable. The obvious rule would be that fiscal policy should satisfy the No-Ponzi-Game condition, i.e. the fiscal deficit should not be above the difference between the convergent growth rate and the interest rate over the business cycle.

Ad (iii)   Given that sustainability depends on interest and growth rates (adjusted for the convergence growth process), countries should be required to run countercyclical policies: running low fiscal deficits or even surpluses when growth is above potential and running larger deficits when growth is below potential or there is a recession.

These recommendations deal with the development of fiscal deficits, but not with levels of public debt. The latter cannot be easily capped or mandated. Most fiscal rules have implications for public debt development that are hard to justify. For instance, balance budget

rules may lead to sustainable or unsustainable public debt developments. Also, the so-called Golden Rule (that current expenditures should be paid from taxes and capital expenditures from credits) does not have clear public debt implications (Buiter, 1999).

Finally, while the sustainability of fiscal deficits can be defined, the sustainability of public debt is not easy to define. Some studies tend to show that high public debts are connected with a slowdown of growth (Reinhart and Rogoff, 2010), but similar arguments can be made about the effects of taxes. Finally, it is not all that clear that private debt increases may not have the same negative effects on growth. So, rules for public debt levels are not easy to design and probably are not invariant to the social and overall development.

Euro adoption

There is some support in the policy community for early euro adoption in order to support more relaxed fiscal policies. This is not the first best policy for fiscal policy management. As can be seen in countries such as Greece and a number of others, this may actually be problematic in terms of fiscal responsibility. The reason seems to be as follows. Once the exchange rate risk is taken out, the laxity of the fiscal constraint is increased because there is no residual threat of exchange rate collapse.

A political economy argument can be made for the euro in the sense that the median voter may be more prone to accept nominal wage cuts in monetary unions than if there is the alternative of devaluation. In the latter case, the median voter may opt for eventual default on public debts through inflation (along the lines of Unpleasant Monetarist Arithmetic). But, in general, one would not want to get into the situation of Greece or the Baltic States in order to face the euro constraint.

Conclusions

The key problems are in the banking and the corporate sectors, not in the fiscal one. That does not mean that the public sector does not need reforms. Indeed, those are probably crucial from efficiency and fairness points of view. The EU should support countercyclical fiscal rules and policies and make better use of the transfers from the EU budget.

References

Arnott, R. J. and J. E. Stiglitz (1988), 'The Basic Analytics of Moral Hazard', *Scandinavian Journal of Economics*, Vol. 90, pp. 383-413.

Abreu, D. and M. Brunnermeier (2003), 'Bubbles and Crashes', *Econometrica*, Vol. 71, pp. 173-204.

Ball, L., D. W. Elmendorf and N. Gregory Mankiw (1998), 'The Deficit Gamble', *Journal of Money, Credit, and Banking*, Vol. 30, pp. 699-720.

Barro, R. (1974), 'Are Government Bonds Net Wealth?', *Journal of Political Economy*, Vol. 82, pp. 1095-1117.

Barro, R. (1979), 'On the Determination of the Public Debt', *Journal of Political Economy*, Vol. 87, pp. 949-970.

Barro, R. (1990), 'Government Spending in a Simple Model of Endogenous Growth', *Journal of Political Economy*, Vol. 98, pp. 193-125.

Balassone, F., J. Cuhna, G. Langenus, B. Manzke, J. Pavot, D. Prammer and P. Tommasino (1999), 'Fiscal Sustainability and Policy Implications for the Euro Area', Working Paper Research, National Bank of Belgium.

Baunsgaard, T. and S. Symansky (2009), 'Automatic Fiscal Stabilizers', *IMF Staff Position Note* SPN/09/23.

Birkeland, K. and E. C. Prescott (2007), 'On the Needed Quantity of Government Debt', *Federal Reserve Bank of Minneapolis Quarterly Review*, Vol. 31, pp. 2-15.

Blanchard, O. (1985), 'Debt, Deficits, and Finite Horizons', *Journal of Political Economy*, Vol. 93, pp. 223-247.

Blanchard, O. (1990), 'Suggestions for a New Set of Fiscal Indicators', *Working Paper* 79, OECD Department of Economics and Statistics.

Blanchard, O. et al. (1990), 'The Sustainability of Fiscal Policy: New Answers to and Old Questions', *OECD Economic Studies* No. 15.

Blanchard, O. and S. Fischer (1993), *Lectures on Macroeconomics*, The MIT Press.

Blanchard, O. and Ph. Weil (2001), 'Dynamic Efficiency, the Riskless Rate, and Debt Ponzi Games under Uncertainty', *Advances in Macroeconomics*, Vol. 1 (article 3).

Blanchard, O. and F. Gavazzi (2002), 'Current Account Deficits in the Euro Area: The End of the Feldstein-Horioka Puzzle?', *Brookings Papers on Economic Activity*, Vol. 2, pp. 147-209.

Blanchard, O., G. Dell'Ariccia and P. Mauro (2009), 'Rethinking Macroeconomic Policy', *IMF Staff Position Note*, SPN/10/03.

Buiter, W. (1985), 'A Guide to Public Sector Debt and Deficits', *Economic Policy*, Vol. 1, pp. 13-79.

Buiter, W. (1999), 'Notes on "A Code for Fiscal Stability"', webpage at NBER.

Buiter, W. (2009), 'The Limits to Fiscal Stimulus', *CEPR Discussion Paper* No. 7607.

Buiter, W., G. Corsetti and N. Roubini (1993), 'Excessive Deficits: Sense and Nonsense in the Treaty of Maastricht', *Economic Policy*, Vol. 13, pp. 58-100.

Cecchetti, S. G., M. S. Mohanty and F. Zampolli (2010), 'The Future of Public Debt: Prospects and Implications', Conference Draft.

CESifo (2010), *EEAG Report on the European Economy*, CESifo.

Chari, V. V. and P. J. Kehoe (1999), 'Optimal Fiscal and Monetary Policy' in J. B. Taylor and M. Woodford (eds), *Handbook of Macroeconomics*, Edition 1, Vol. 1, Ch. 26, pp. 1671-1745.

Cochrane, J. (2004), 'Money as Stock', *Journal of Monetary Economics*, Vol. 52, pp. 501-528.

Escolano, J. (2010), 'A Practical Guide to Public Debt Dynamics, Fiscal Sustainability, and Cyclical Adjustment of Budgetary Aggregates', *Technical Notes and Manuals*, IMF

EU (2009), *European Economic Forecast Autumn 2009*.

Fedelino, A., A. Ivanova and M. Horton (2009), 'Computing Cyclically Adjusted Balances and Automatic Stabilizers', *Technical Notes and Manuals*, IMF.

Fischer, I. (1933), 'Debt-Deflation Theory of Great Depression', *Econometrica*, Vol. 1, pp. 337-357.

Larch, M. and A. Turrini (2009), 'The Cyclically-Adjusted Budget Balance in the EU Fiscal Policy Making: A Love at First Sight Turned into a Mature Relationship', *European Economy Economic Papers*, Vol. 374.

Mankiw, N. G. and D. W. Elmendorf (1999), 'Government Debt' in J. Taylor and M. Woodford (eds), *Handbook of Macroeconomics*, Vol. 1, Part 3, Ch. 25, pp. 1615-1669.

Milesi-Ferretti, G. M. and A. Razin (1996), 'Current Account Sustainability', *Princeton Studies in International Finance*.

Reinhart, C. M., K. S. Rogoff and M. A. Savastano (2003), 'Debt Intolerance', *Brookings Papers on Economic Activity*, Vol. 1, pp. 1-74.

Reinhart, C. and K. S. Rogoff (2008), 'The Forgotten History of Domestic Debt', *NBER Working Paper* No. 13946.

Reinhart, C. M. and K. S. Rogoff (2010), 'Growth in Time of Debt', forthcoming in *American Review Papers and Proceedings*.

Saint-Paul, G. (1990), 'Fiscal Policy in an Endogenous Growth Model', *Quarterly Journal of Economics*, Vol. 107, pp. 1243-1259.

Tirole, J. (1985), 'Asset Bubbles and Overlapping Generations', *Econometrica*, Vol. 53, pp. 1499-1528.

Weil, P. (1989), 'Overlapping Families and Infinitely-Lived Agents', *Journal of Public Economics*, Vol. 38, pp. 183-198.

wiiw, CEPS (2009), Final Report on Financial Risks in Candidate and Potential Candidate Countries.

Statistical Appendix

Figure A1

Interest, growth and debt to GDP ratio

Implicit interest rate and nominal GDP growth rate (sustainability); gross public debt and change in debt

(perhaps some measure of revealed fiscal risk)

Ireland

Greece

Austria

19
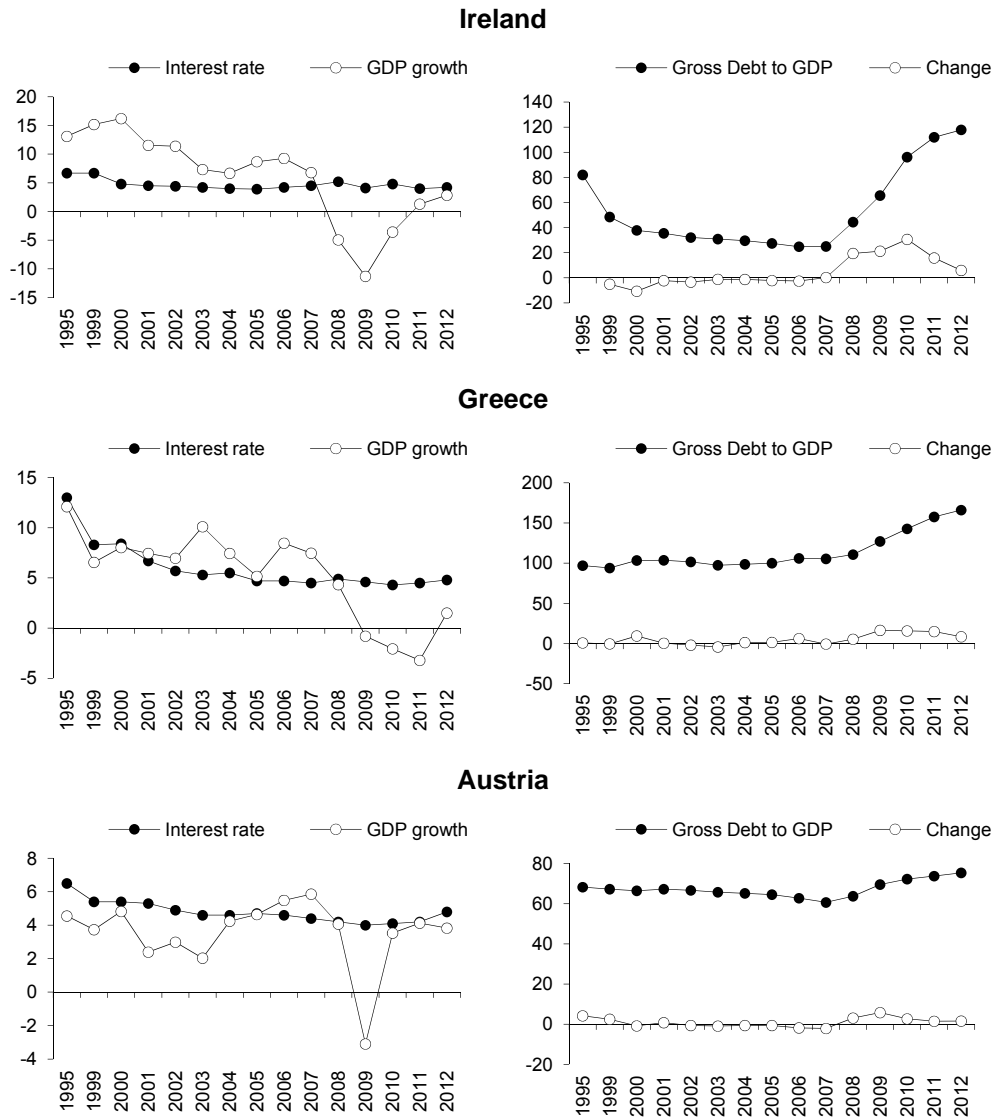
Germany
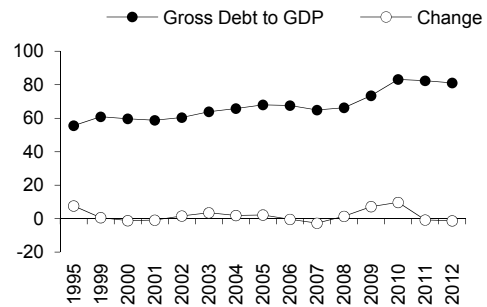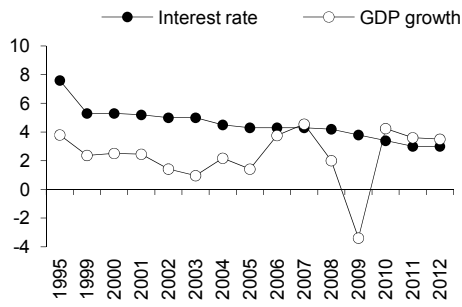
Bulgaria

Czech Republic

Estonia

20
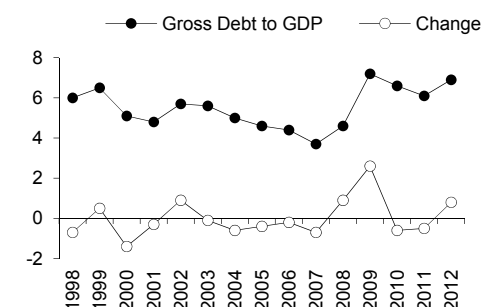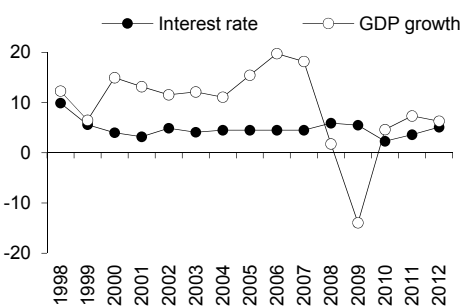
Latvia
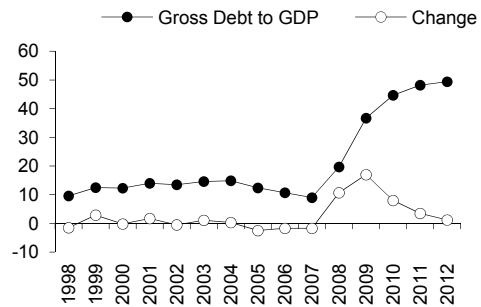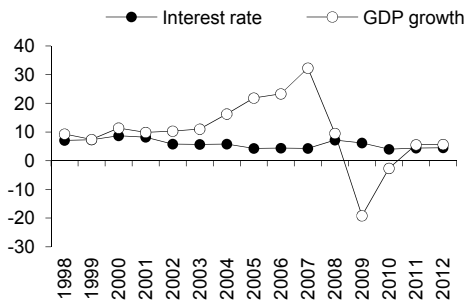
Lithuania

Hungary

Poland

Romania

Slovenia
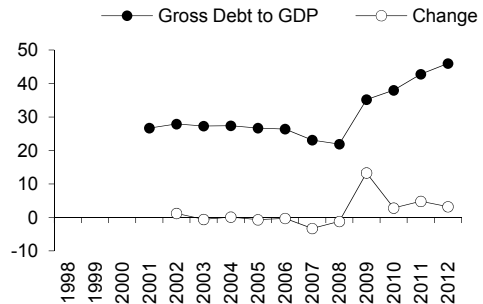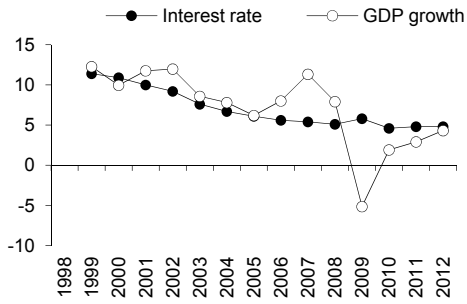
Slovakia
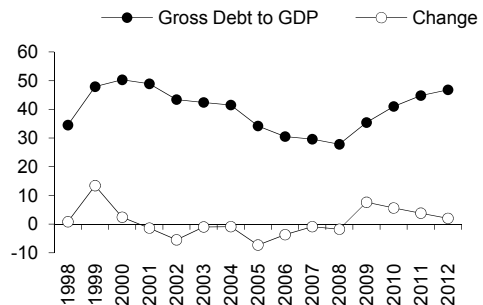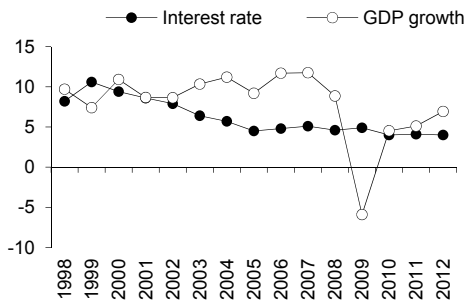
Source: Eurostat, forecast according to Spring Report 2011.

Public debt in % GDP

─●─ Croatia ─○─ Macedonia ─■─ Turkey

Turkey

─●─ Interest rate ─○─ GDP growth

Croatia

─●─ Interest rate ─○─ GDP growth

Macedonia

─●─ Interest rate ─○─ GDP growth
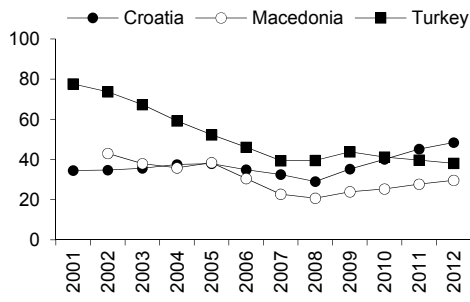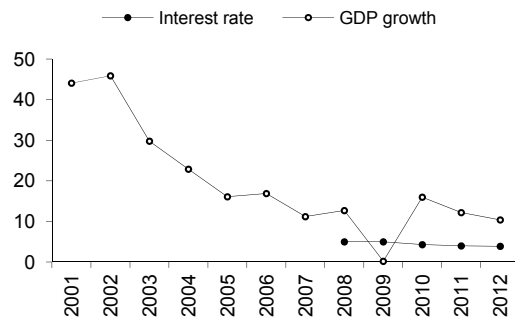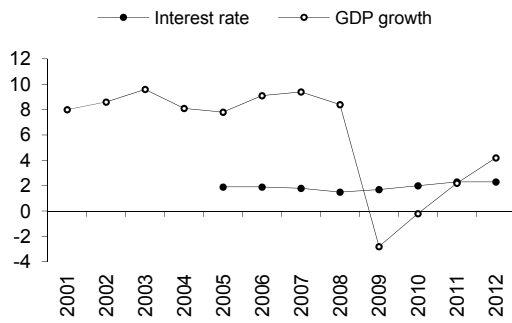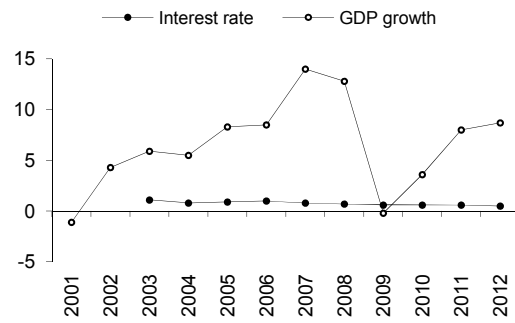
Remark: Interest rate: EU-member states : Implicit interest rate, Candidate countries: Interest in % of GDP.
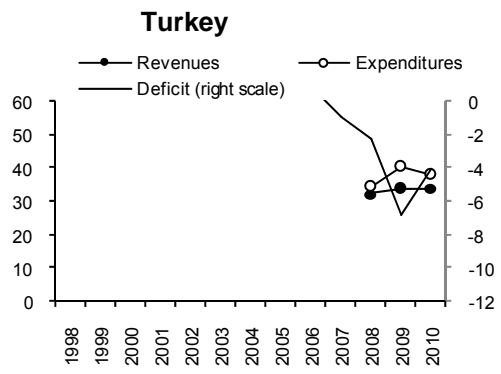
Source: Eurostat, forecast according to Spring Report 2011

Figure A2

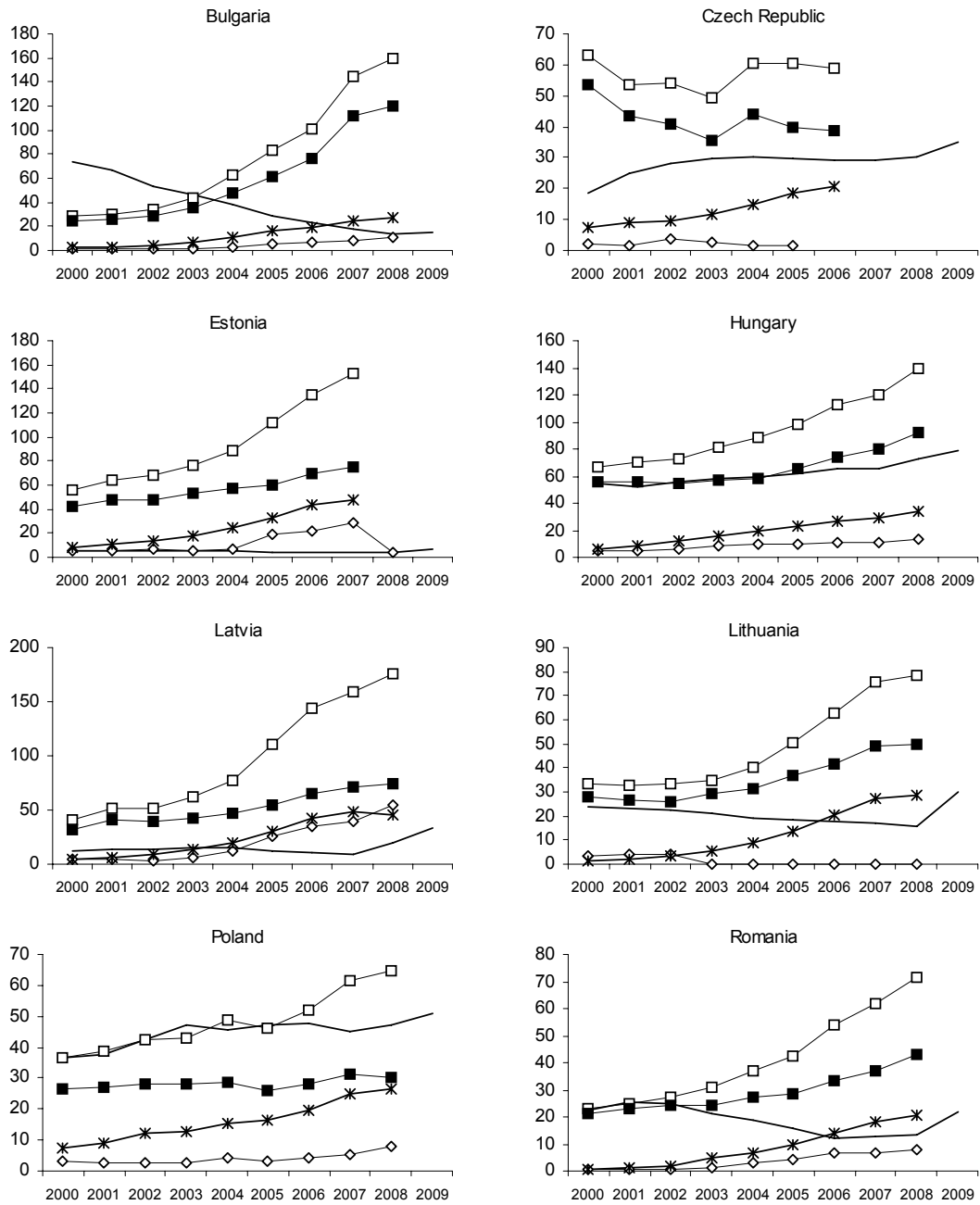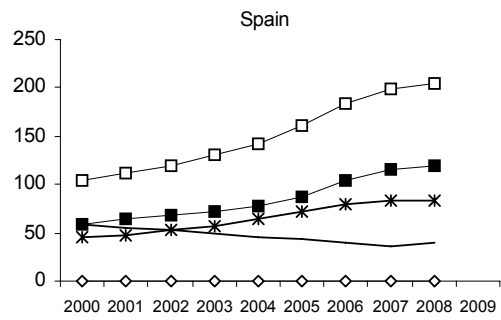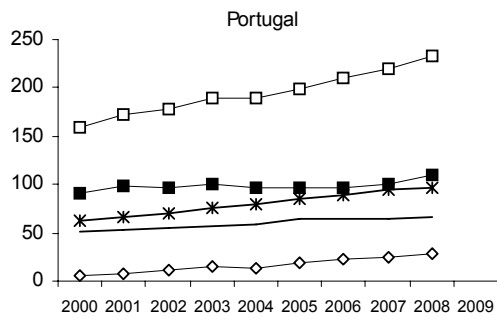## Revenues, expenditures and fiscal deficit

in % of GDP

Ireland

Greece

Austria

Germany

Slovenia

Slovakia

Bulgaria

Czech Republic

24

Estonia

Latvia

Lithuania

Hungary

Poland

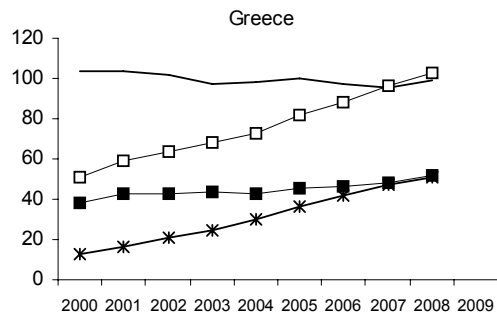## Romania

Croatia

Macedonia
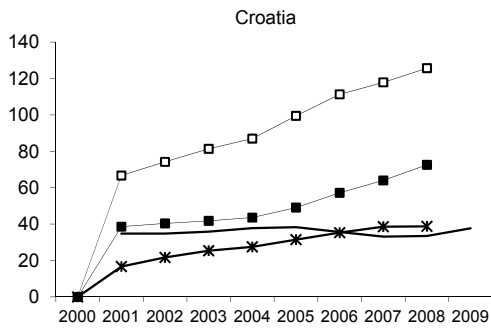

25

Turkey
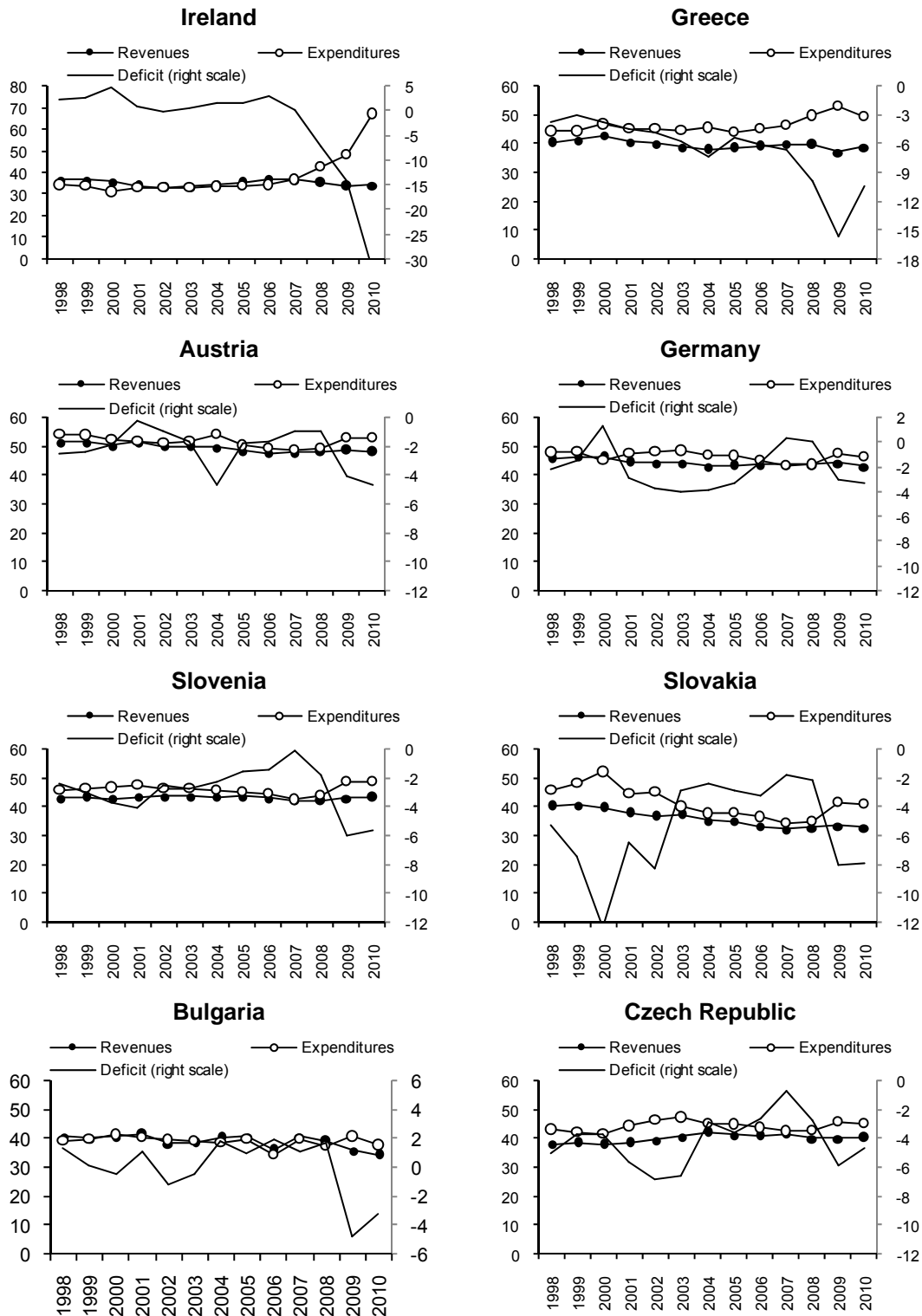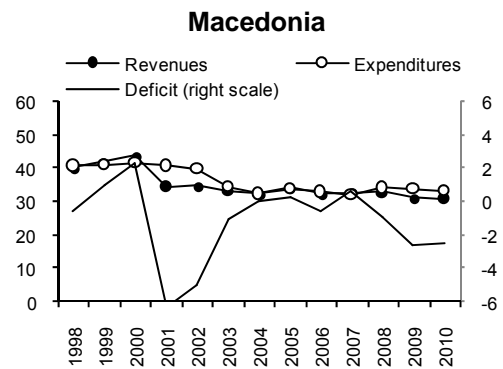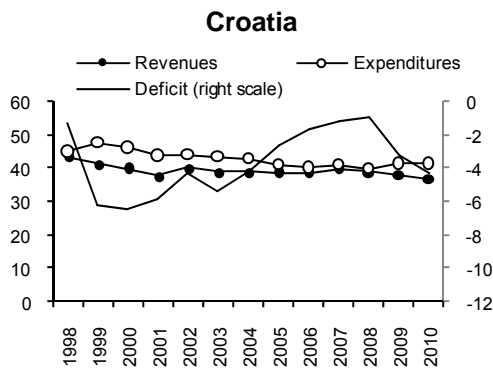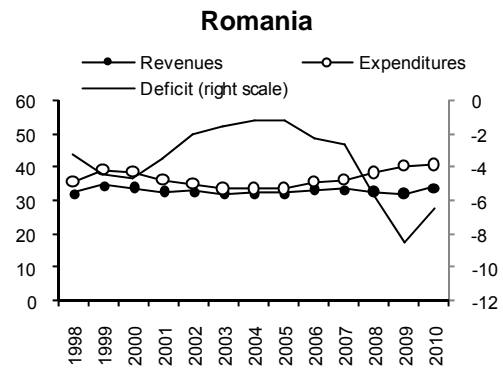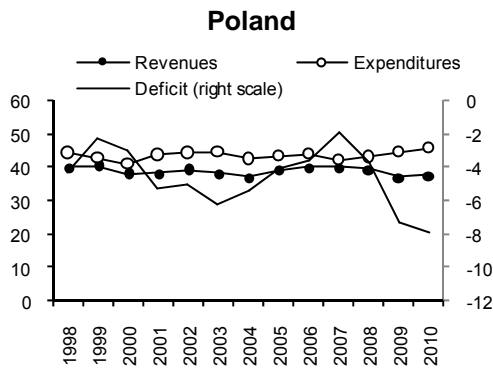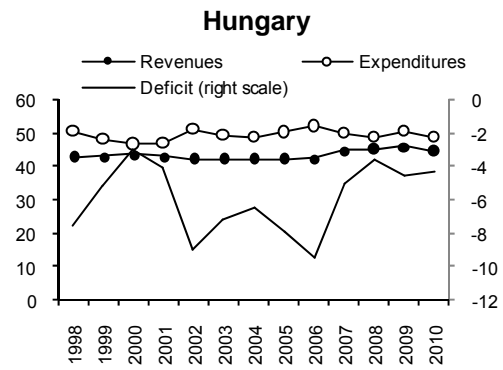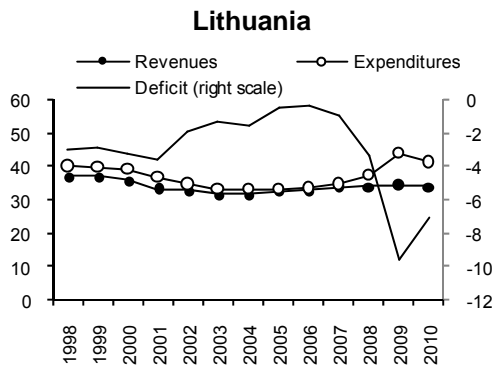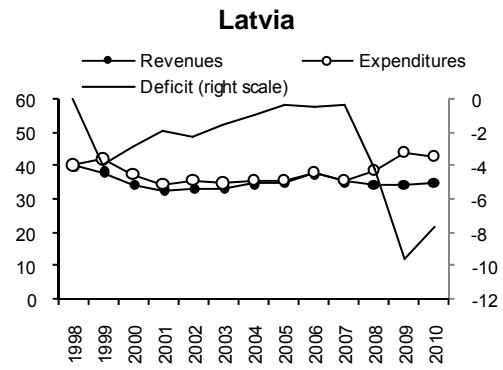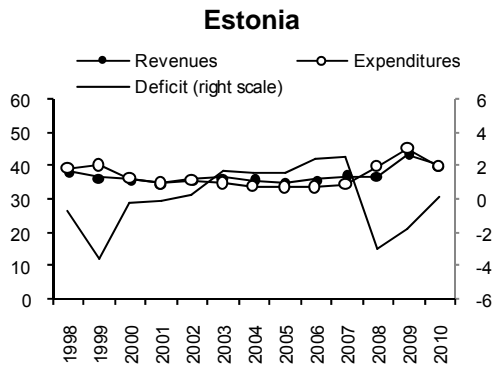
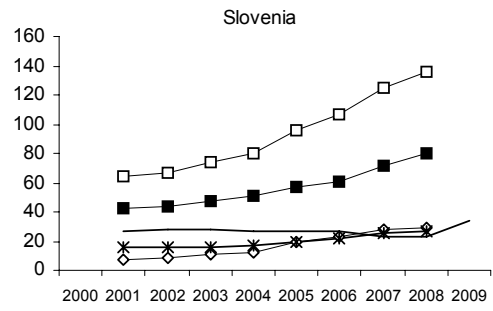*Source:* wiiw Database incorporating national and Eurostat statistics.

Figure A3

Public and private debt

in % of GDP

———— Public debt, EU-def., in % of GDP

—□— Private debt

—■— Non-financial corporations

—◇— Other monetary financial institutions

—✳— Households; non-profit institutions serving households

Slovakia

Slovenia

Croatia

Greece

Ireland

Portugal

Spain

Source: Eurostat.

28

Figure A4

Debt in % of GDP

— Gross external debt —□— Public debt —■— Private debt

29

Slovakia

Slovenia

Croatia
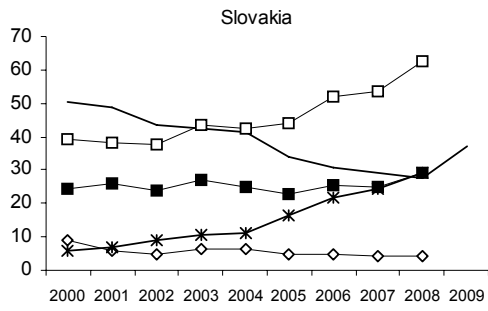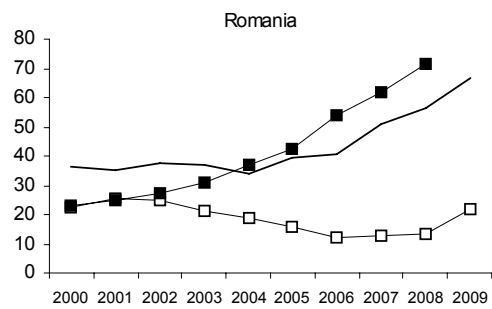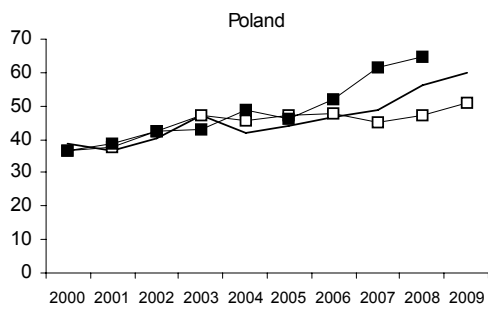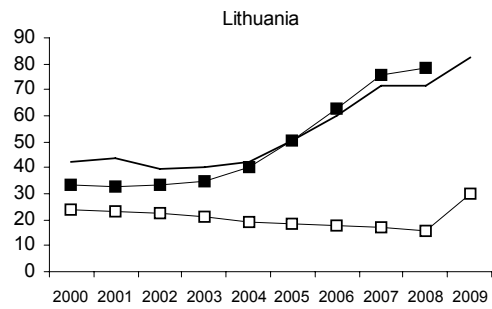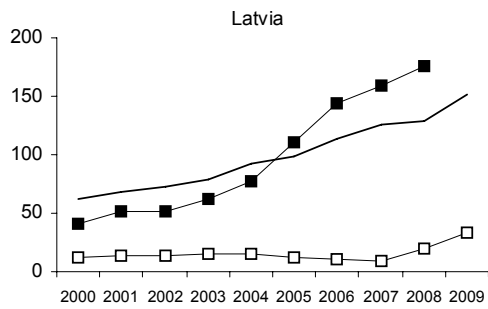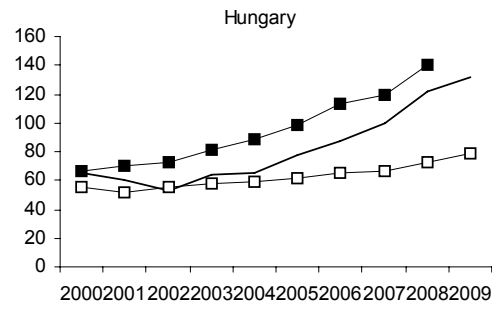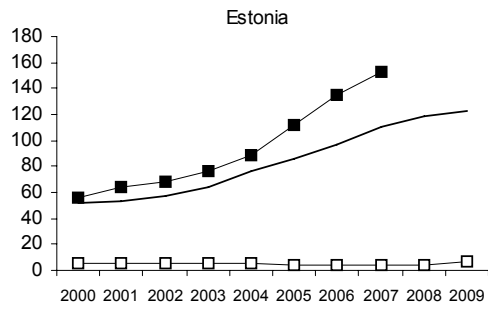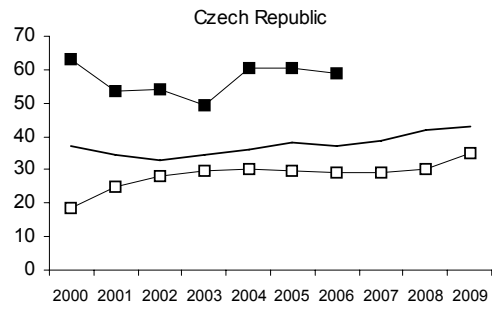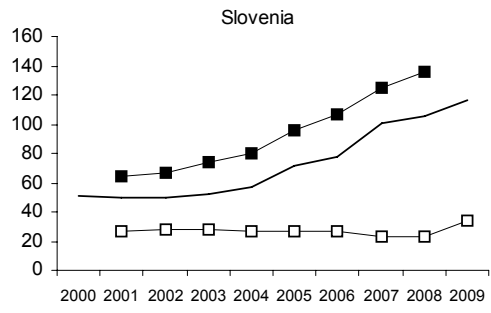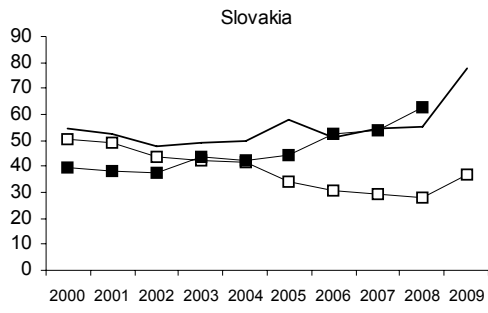
Source: Eurostat.

Figure A5

Debt in % of GDP in SEE

—— Gross external debt   —□— Public debt
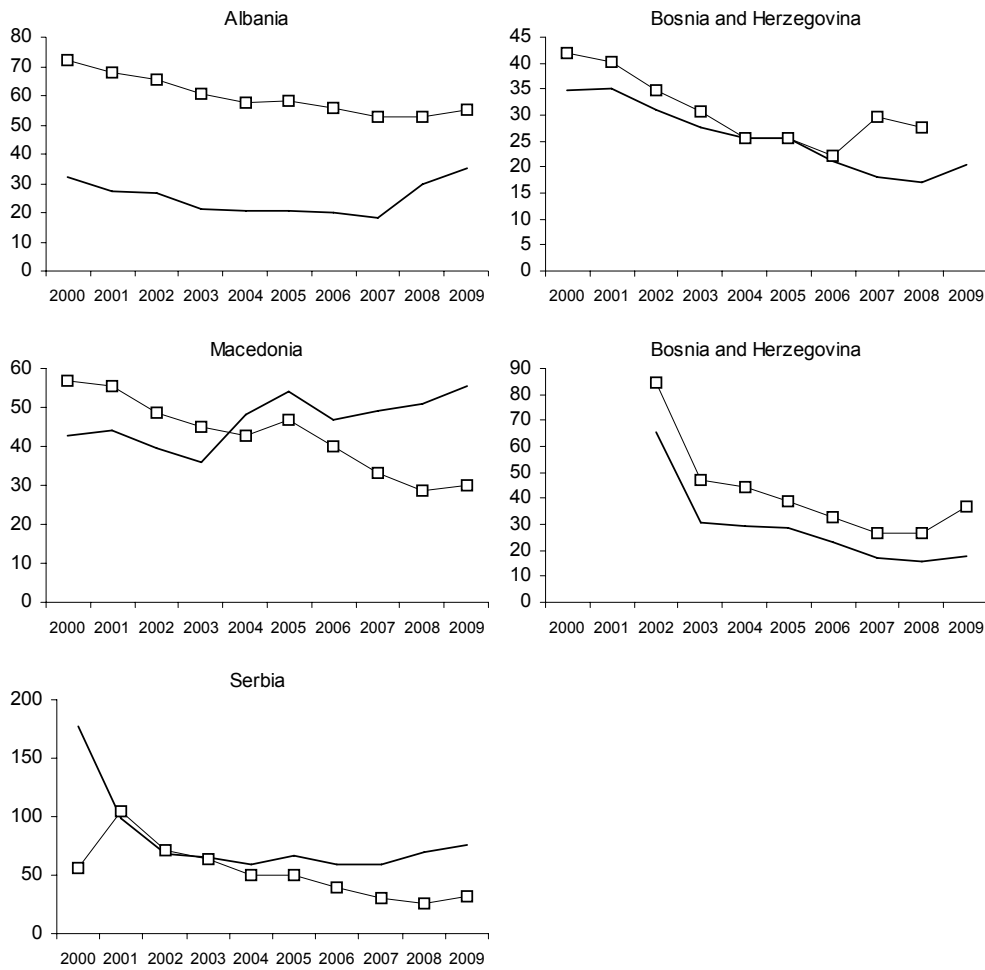
Note: BA; MK, ME, RS public debt according to national definition.

Source: wiiw Database, national statistics and Eurostat.

Short list of the most recent wiiw publications (as of September 2011)

For current updates and summaries see also
wiiw's website at www.wiiw.ac.at

Fiscal Issues in Financial Crisis

by **Vladimir Gligorov**

wiiw Research Reports, No. 373, September 2011
35 pages including 11 Figures
hardcopy: EUR 24.00 (PDF: EUR 15.00)

wiiw Monthly Report 8-9/11

edited by **Leon Podkaminer**

- Import intensities of production in the New EU Member States in 1995 and 2006
- A note on social indicators for MENA and transition countries
- Three crises
- Statistical Annex: Selected data on FDI in Central, East and Southeast Europe

wiiw, August-September 2011
22 pages including 13 Tables
(exclusively for subscribers to the wiiw Service Package)

The Impact of Customs Procedures on Business Performance: Evidence from Kosovo.

by **Mario Holzner and Florin Peci**

wiiw Working Papers, No. 76, August 2011
17 pages including 4 Tables
hardcopy: EUR 8.00 (PDF: free download from wiiw's website)

Revival of the Visegrad Countries' Mutual Trade after their EU Accession: a Search for Explanation

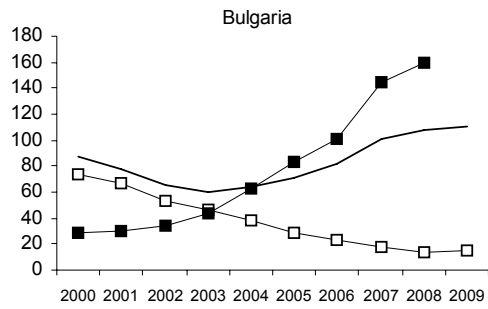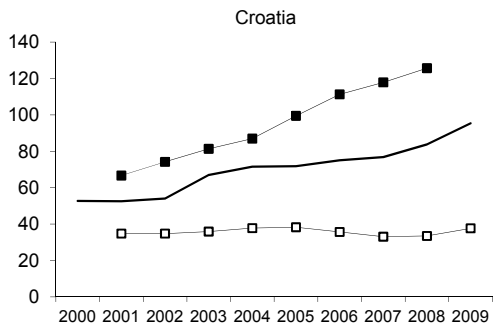by **Neil Foster, Gábor Hunya, Olga Pindyuk and Sándor Richter**

wiiw Research Reports, No. 372, July 2011
50 pages including 15 Tables and 23 Figures
hardcopy: EUR 8.00 (PDF: free download from wiiw's website)

Recovery: Limp and Battered

by **Leon Podkaminer, Vladimir Gligorov, Mario Holzner, Michael Landesmann, Roman Römisch et al.**

wiiw Current Analyses and Forecasts. Economic Prospects for Central, East and Southeast Europe, No. 8, July 2011
143 pages including 38 Tables and 19 Figures
hardcopy: EUR 80.00 (PDF: EUR 65.00)

wiiw Monthly Report 7/11

edited by **Leon Podkaminer**

- MENA in transition: any lessons from CESEE?
- The EU and Russia: both important for Ukraine
- What price nationalism? Economic consequences of the break-up of Yugoslavia

- Statistical Annex: Selected monthly data on the economic situation in Central, East and Southeast Europe

wiiw, July 2011

26 pages including 13 Tables

(exclusively for subscribers to the wiiw Service Package)

Stabilisierung des verhaltenen Aufschwungs in den MOEL

by **Vasily Astrov, Mario Holzner and Sebastian Leitner**

wiiw Research Papers in German language, June 2011

(reprinted from: WIFO-Monatsberichte, Vol. 84, No. 5, May 2011)

14 pages including 5 Tables and 9 Figures

hardcopy: EUR 8.00 (PDF: free download from wiiw's website)

---

wiiw Monthly Report 6/11

edited by **Leon Podkaminer**

- Patterns of new member states' international trade in intermediate products
- Productivity of imports in the transition countries: evidence from the 2000s
- The central bank as hedge fund: the new political economy of central banking
- Statistical Annex: Selected monthly data on the economic situation in Central, East and Southeast Europe

wiiw, June 2011

28 pages including 22 Tables

(exclusively for subscribers to the wiiw Service Package)

Assessment of the Labour Market in Serbia

by Vladimir Gligorov, Kosovka Ognjenović and Hermine Vidovic

wiiw Research Reports, No. 371, May 2011

97 pages including 45 Tables and 11 Figures

hardcopy: EUR 8.00 (PDF: free download from wiiw's website)

---

wiiw Monthly Report 5/11

edited by **Leon Podkaminer**

- Unstable Balkans
- Not a very Greek tragedy
- Keynes for the 21st century
- Statistical Annex: Selected monthly data on the economic situation in Central, East and Southeast Europe

wiiw, May 2011

26 pages including 8 Tables

(exclusively for subscribers to the wiiw Service Package)

Need for Speed: Is Faster Trade in the EU Trade-Creating?

by **Cecília Hornok**

wiiw Working Papers, No. 75, April 2011

38 pages including 20 Tables and 6 Figures

hardcopy: EUR 8.00 (PDF: free download from wiiw's website)

wiiw Monthly Report 4/11

edited by **Leon Podkaminer**

- Supply-demand imbalances drive food prices
- The gas and electricity sectors of the Western Balkan countries
- Recent problems with private pension funds in Poland
- Statistical Annex: Selected monthly data on the economic situation in Central, East and Southeast Europe

wiiw, April 2011

30 pages including 14 Tables and 4 Figures

(exclusively for subscribers to the wiiw Service Package)

Western Balkans: Employment in the Gas and Electricity Sectors

by **Hermine Vidovic, Vasily Astrov, Edward Christie, Doris Hanzl-Weiss, Mario Holzner, Sebastian Leitner and Waltraut Urban**

wiiw Research Reports, No. 370, March 2011
150 pages including 24 Tables and 27 Figures
hardcopy: EUR 8.00 (PDF: free download from wiiw's website)

Subgroup and Shapley Value Decompositions of Multidimensional Inequality – An Application to Southeast European Countries

by **Sebastian Leitner and Robert Stehrer**

wiiw Working Papers, No. 74, March 2011
37 pages including 19 Tables and 1 Figure
hardcopy: EUR 8.00 (PDF: free download from wiiw's website)

---

wiiw Monthly Report 3/11

edited by **Leon Podkaminer**

- Patterns of transition
- Recent trends in the quality of traded goods: NMS are closing the gaps
- Animal spirits
- Statistical Annex: Selected monthly data on the economic situation in Central, East and Southeast Europe

wiiw, March 2011

34 pages including 9 Tables and 8 Figures

(exclusively for subscribers to the wiiw Service Package)

Trade in Intermediate Products and EU Manufacturing Supply Chains

by **Robert Stehrer, Jyrki Ali-Yrkkö, Doris Hanzl-Weiss, Neil Foster, Petri Rouvinen, Timo Seppälä, Roman Stöllinger and Pekka Ylä-Anttila**

wiiw Research Reports, No. 369, February 2011
174 pages including 57 Tables and 69 Figures
hardcopy: EUR 8.00 (PDF: free download from wiiw's website)

Recovery – in Low Gear across Tough Terrain

by **Peter Havlik et al.**

wiiw Current Analyses and Forecasts. Economic Prospects for Central, East and Southeast Europe, No. 7, February 2011
129 pages including 30 Tables and 23 Figures
hardcopy: EUR 80.00 (PDF: EUR 65.00)

wiiw Service Package

The Vienna Institute offers to firms and institutions interested in unbiased and up-to-date information on Central, East and Southeast European markets a package of exclusive services and preferential access to its publications and research findings, on the basis of a subscription at an annual fee of EUR 2,000.

This subscription fee entitles to the following package of **Special Services**:

– A free invitation to the Vienna Institute's **Spring Seminar**, a whole-day event at the end of March, devoted to compelling topics in the economic transformation of the Central and East European region (for subscribers to the wiiw Service Package only).

– Copies of, or online access to, *The Vienna Institute Monthly Report*, a periodical consisting of timely articles summarizing and interpreting the latest economic developments in Central and Eastern Europe and the former Soviet Union. The statistical annex to each *Monthly Report* contains, alternately, country-specific tables or graphs with monthly key economic indicators, economic forecasts, the latest data from the wiiw Industrial Database and excerpts from the wiiw FDI Database. This periodical is not for sale, it can only be obtained in the framework of the wiiw Service Package.

– Free copies of the Institute's *Current Analyses and Forecasts*, *Research Reports* (including *Reprints*), *Country Profiles* and *Statistical Reports*.

– A free copy of the *wiiw Handbook of Statistics* (published in October/November each year and containing more than 400 tables and graphs on the economies of Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia, Montenegro, Poland, Romania, Russia, Serbia, the Slovak Republic, Slovenia and Ukraine)

– Free online access to the **wiiw Monthly Database**, containing more than 1200 leading indicators monitoring the latest key economic developments in ten Central and East European countries.

– **Consulting**. The Vienna Institute is pleased to advise subscribers on questions concerning the East European economies or East-West economic relations if the required background research has already been undertaken by the Institute. We regret we have to charge extra for *ad hoc* research.

– Free access to the Institute's specialized economics library and documentation facilities.

Subscribers who wish to purchase wiiw data sets **on CD-ROM** or special publications not included in the wiiw Service Package are granted considerable **price reductions**.

**For detailed information about the wiiw Service Package
please visit wiiw's website at www.wiiw.ac.at**

To
The Vienna Institute
for International Economic Studies
Rahlgasse 3
A-1060 Vienna

○   Please forward more detailed information about the Vienna Institute's Service Package
○   Please forward a complete list of the Vienna Institute's publications to the following address

Please enter me for

○   1 yearly subscription of *Current Analyses and Forecasts* a price of EUR 150.00 (hardcopy, Austria),
    EUR 155.00 (hardcopy, Europe), EUR 170.00 (hardcopy, overseas) and EUR 120.00 (PDF download with password)
    respectively
○   1 yearly subscription of *Research Reports* (including *Reprints*) at a price of EUR 120.00 (harcopy, Austria),
    EUR 135.00 (hardcopy, Europe), EUR 155.00 (hardcopy, overseas) and EUR 48.00 (PDF download with password)
    respectively
○   Combination of both subscriptions, at a price of EUR 225.00 (hardcopy, Austria), EUR 250.00 (hardcopy, Europe),
    EUR 265.00 (hardcopy, overseas) and EUR 140.00 (PDF download with password), respectively

Please forward

○   the following issue of *Research Reports* ....
○   the following issue of *Current Analyses and Forecasts* ....
○   the following issue of *Working Papers* ....
○   the following issue of *Research Papers in German language* ....
○   the following issue of *wiiw Database on Foreign Direct Investment* ....
○   the following issue of *wiiw Handbook of Statistics* ....
○   (other) ....

....
Name

....
Address

....
Telephone   Fax   E-mail

....
Date   Signature