

Fiscal Policy: Lessons from the Global Crisis  
Croatian Economic Survey : Vol. 13 : No. 1 : April 2011 : pp. 5-56

# Fiscal Policy: Lessons from the Global Crisis

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CroEconSur

Vol. 13

No. 1

April 2011

pp. 5-56

Received: December 20, 2010

Accepted: February 06, 2011

Review Article

## Abstract

The global crisis interacted heavily with fiscal policy in the run-up to the crisis, during the crisis and now in the recovery phase. Contrary to the general consensus, the paper argues that in the run-up to the crisis, fiscal policy in the advanced economies and China substantially contributed to the propagation of the global imbalances, while at the same time it reduced the fiscal space that was available to the advanced countries when the crisis occurred. On the policy response during the crisis, the paper suggests that the discretionary relaxation was a mixed blessing at best: appropriate to some extent in countries that entered the crisis with solid fiscal and current account positions, but much less, if at all, in other countries, particularly those that faced problems of public debt sustainability. Even letting the automatic stabilizers operate fully was not an option for countries in a weak fiscal position, particularly in light of the substantial downward

revisions in the potential GDP level and growth rates. Looking ahead, the large deterioration in the public debt ratios resulting from the crisis will slow down output growth in the advanced economies, while also requiring painful fiscal adjustment. Emerging market economies, in general, did better in the crisis than the advanced economies, but in most of the post-transition European economies, the effects of the crisis were amplified by the pronounced external imbalances at the outset of the crisis. A majority of European post-transition countries will, therefore, also face substantial fiscal challenges in the period ahead.

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**Keywords:** fiscal policy, global crisis, structural fiscal balances

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**JEL classification:** E62, E63, H62, H87

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## 1 Introduction<sup>1</sup>

The current global crisis provides important lessons for fiscal policy. In this context, in a broad overview, the paper addresses the following issues: (i) the role of fiscal policy in the run-up to the crisis, (ii) the issue of fiscal space when the crisis occurred, (iii) fiscal policy response during the crisis and (iv) the implications of the deterioration in public debt ratios for fiscal policy in the future.

The paper explores to what extent fiscal policies in countries with external current account deficits and in those with surpluses contributed to the global imbalances, particularly the U.S. and China. Contrary to the consensus that was held at least until the sovereign debt phase of the crisis, the paper argues that fiscal policies in these countries did play a substantial role among the causes of the crisis. Moreover, it offers a somewhat different view from the one that is generally held on the causes of the rising surpluses in China, attributing them primarily

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<sup>1</sup> The author delivered a lecture based on this paper at the conference "Fiscal Policy in the Crisis and Beyond: Short-term Impacts and Long-term Implications", organized by the Institute of Economics, Zagreb on November 25, 2010.

to the public sector. The paper also expands the question about the relationship between the current account imbalances and fiscal policy to the euro area.

The issue of fiscal space available to countries when the crisis occurred is addressed in the next section and particular attention is focused on the public debt dynamics in the advanced economies.

The fiscal policy response to the crisis included both automatic stabilizers and discretionary relaxation. The latter was, surprisingly, initiated by the IMF early in the crisis and later, after the Lehman bankruptcy, accepted by major players. The issue of the marginal contribution of the discretionary stimulus to the recovery, over and above the effects of automatic stabilizers and non-conventional central bank operations, will be a hotly debated academic topic in the years ahead. The paper offers some preliminary assessments, particularly in the context of the third, sovereign debt phase of the crisis.

Regarding the post-transition countries in Central and Eastern Europe (CEE) and Southeast Europe (SEE), the paper explores to what extent their fiscal space was limited when the crisis struck and, particularly, the role of their external imbalances.

Looking forward, the large deterioration in the budget deficits and public debt ratios in the advanced economies will be a defining fact for fiscal policy in the next decade. The secular growth in public debt ratios over the last 40 years suggests that the current fiscal policy frameworks would need to be revised, including the possible expansion of the role of fiscal rules and councils.

On the methodological side, the current crisis has opened the issue of the reliability of the concept of potential output and structural fiscal balances, given the large downward ex-post revisions in both. This issue is addressed in more detail in Appendix 1.

The last section concludes.

## 2 Fiscal Policy in the Run-up to the Crisis: Adding Fuel to the Fire

In the debates about the crisis during 2009, a consensus was reached that the two crucial causes of the crisis were the following: (i) global macroeconomic imbalances, which produced an environment of exceptionally low interest rates and (ii) failures in the regulation and supervision of the financial system.<sup>2</sup> The debate was somewhat inconclusive on whether the Fed's monetary policy was excessively lax as well. The ECB's policy was even spared such questions. In any case, policy interest rates were seen as secondary to the effect of global imbalances on the long-term real interest rates.

The imbalances were seen as a private sector event, not as a fiscal one. They were supposed to reflect the strong saving propensity of households in the surplus countries, such as China, on the one hand, and property, consumption and equity bubbles in the advanced economies on the other.

Fiscal policy was absent from the circle of potential suspects. Even when the sovereign debt phase of the crisis started, it was considered to be more a consequence than a cause.

Was this, however, a fair picture?

### 2.1 Untimely Fiscal Relaxation under the Bush Administration

From today's perspective, it surely looks strange that at the turn of the century economists lively debated the problem of a disappearing U.S. public debt. Under the Clinton administration, the U.S. budget started running surpluses. Extrapolating the trend, many observers concluded that the U.S. public debt, at least its tradable part, would soon disappear. Markets became concerned about this for two reasons. The first one was the loss of the risk-free benchmark, traditionally facilitated by the U.S. securities. Second, in the absence of the

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<sup>2</sup> See, for example, G-20 (2009a).

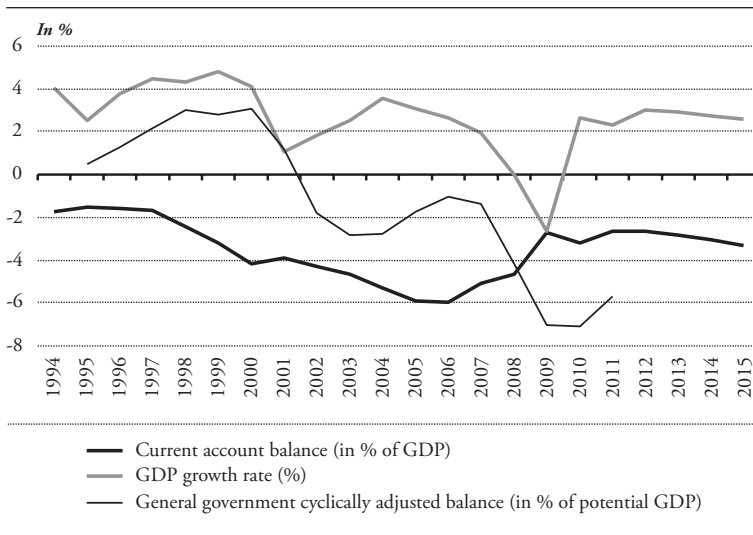
treasury papers that the FED was using for open market operations, markets worried that monetary policy might be inadvertently tightened for purely technical reasons.

Greenspan (2001) shared the view that the privately held stock of Treasuries would, indeed, soon be repaid, although he expected the deficit to later reappear once the post-WW2 baby-boom generation started to retire. For that reason, on several occasions he tried to reassure markets that monetary policy would not be affected, as the FED could easily expand the set of eligible instruments. On the risk-free benchmark, Greenspan assured markets that the financial sector could easily produce synthetic AAA instruments with the same characteristics as the U.S. treasury bonds.

Ten years later, we can see how forecasts by economists sometimes become reality in a surprising way. The FED has, indeed, widely expanded the set of eligible assets, but not because the U.S. public debt has disappeared. In addition, the synthetic AAA debt instruments were created, but instead of being a solution, they have become more of a problem.

Early in his first mandate, George W. Bush's administration enacted large tax cuts that set the U.S. debt back on the rising trend. The relaxation in fiscal policy came at a time of reasonably strong growth and when there was a widening U.S. current account deficit. In fact, the current account position started to deteriorate from about 1998 onwards, reflecting large capital inflows. The standard recommendation under the Washington consensus for such circumstances was to tighten fiscal policy to offset, at least partly, the effects of private capital flows. Fiscal tightening, indeed, happened during the Clinton administration. However, under the Bush administration, fiscal policy went into the opposite direction. As a result, the U.S. structural fiscal balance deteriorated by some 3.6 percentage points relative to GDP between 1997 and 2007, approximately the same as the U.S. current account balance during that period (Figure 1).

**Figure 1:** *The Current Account and the Budget Balance in the U.S.*



Sources: World Economic Outlook Database, October 2010; Eurostat.

Of course, not only the budget steered the dynamics of the U.S. current account. Empirical and modeling research, most of which was conducted before the current crisis, has produced estimates that a change in the budget balance by 1 percentage point affects the current account in industrial countries on average between 0.1 and 0.49 percentage points (Chinn and Ito, 2007).<sup>3</sup> Even if we use the midpoint of that range, it would follow that the U.S. fiscal policy contributed about a third to the widening in the U.S. current account position in that period. The fiscal relaxation under the Bush administration was, therefore, adding fuel to the fire of capital inflows and the private sector consumption boom.

3 Abbas et al. (2010) estimated that a strengthening in the fiscal balance produces an improvement in the current account balance of 0.2-0.3 percentage points of GDP, and the effect is even stronger when output is above the potential. A positive effect of the budget balance on the current account balance has also been documented by Nickel and Vansteenkiste (2008). Estimating the effect is complicated by the reversed causality and the fact that cyclical and structural components work in opposite directions. For example, during booms strong capital inflows and private sector consumption might result, on the one hand, in a large current account deficit, but also in windfall budget revenue that improves the headline fiscal balance. Even structural balance might, wrongly, look better if all effects are not captured by the cyclical adjustment.

## 2.2 China's Fiscal Policy as the Driving Force behind its Current Account Surpluses

Let us now look at the savings side, i.e., at countries with large current account surpluses, and focus on China. Most commentators have claimed that the main factor behind China's external surpluses was the high saving propensity of China's households. This was supported by statistics showing a sharp decline in household consumption relative to GDP over the last decade and a half, coinciding with the increasing current account surpluses.

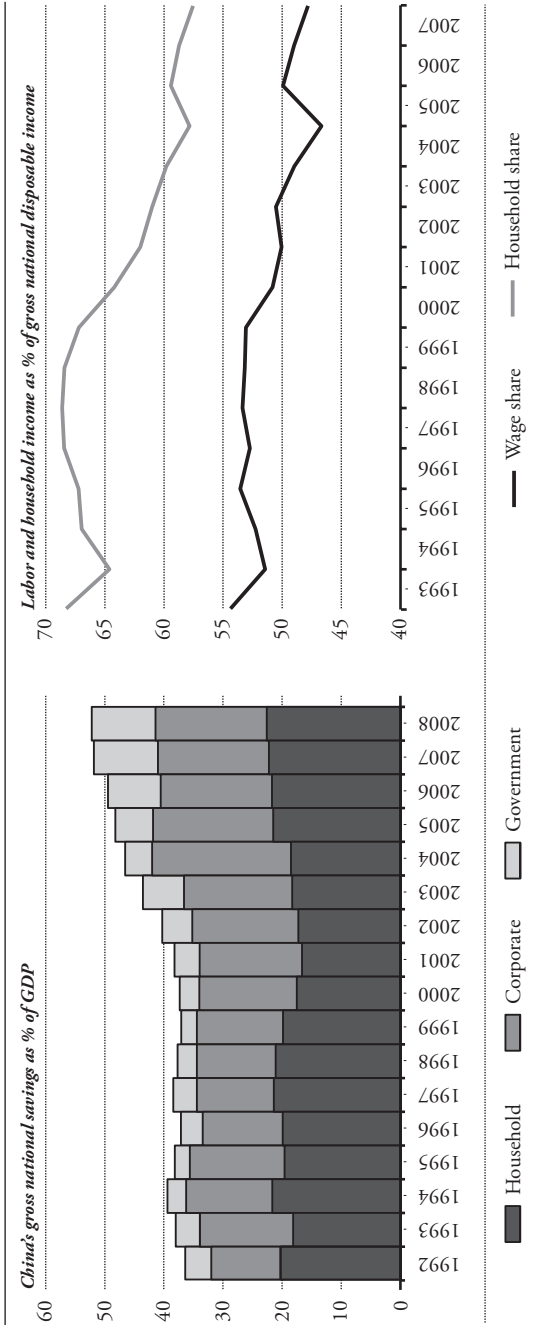
However, households' savings as a share of GDP have been relatively stable since China's current account surplus started to grow. The national savings rate increased by some 15 percentage points of GDP between 1997 and 2008, but most of this came from the government and the corporate sectors (Figure 2). Given that in China the government still controls a dominant part of the corporate sector, one can look into the saving behavior of the corporate sector as a part of, broadly taken, fiscal policy.

It has been noted that China has persistently followed the policy of not transferring dividends of state-owned corporations to the budget, even when the same companies were paying dividends to their private minority shareholders. One can also safely assume that the rising surplus in the state-owned corporate sector reflects China's tight wage policy, as suggested by the declining wage share in GDP. Taken together, the budget in the narrow sense and the dividend and wage policies in state-controlled corporations were, therefore, the main driving forces of growing aggregate savings in China. In fact, in the absence of such a tight overall fiscal stance in China, its exchange rate policy would soon have created unsustainable inflationary pressures.<sup>4</sup>

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<sup>4</sup> IMF (2010a) attributed to corporate savings a critical role in propagating China's current account surpluses.

**Figure 2: Saving Dynamics by Sectors in China**



Source: Ma and Yi (2010).



## 2.3 Fiscal Policy in Periphery Europe: Much Too Lax

Let us now turn to the EU and the euro area. Until recently, the general view has been that the euro area did not contribute to global imbalances, as the aggregate current account deficit of the region was close to zero. Regarding the current account imbalances within the euro area, the EU and the ECB originally discounted them as unimportant.

However, when the Greece crisis hit and then spread to other countries in what is now called the euro area's periphery, it became obvious that the current account balances of individual countries do matter. Moreover, the imbalances within the euro area appeared to be of a similar magnitude as those between the U.S. and Asian countries (Figure 3).

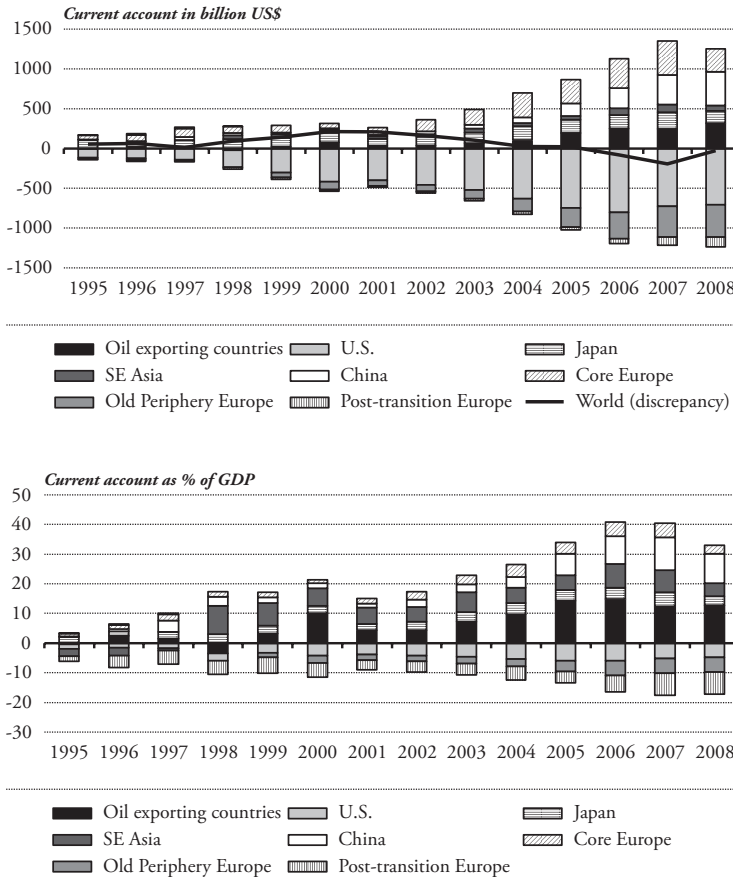
As always, the rapid worsening of the current account imbalances was propagated by a credit boom (Figure 4). In fact, the credit boom in the Old Europe periphery was mind-boggling, surpassing by a large margin everything that was happening in post-transition Europe. Amazingly, this credit boom in the euro area peripheral countries was overlooked until the global crisis turned into the sovereign debt crisis.

Did fiscal policies in the euro area periphery countries contribute to the imbalances, or did they constrain them? While headline fiscal balances somewhat improved after the introduction of the euro, this primarily reflected the transitory effects of the credit boom. Structural balances in most of these countries have continuously deteriorated since the introduction of the euro and have been substantially larger than the Maastricht limit (Figure 5).<sup>5</sup>

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<sup>5</sup> This is based on the latest estimates of the output gap, which substantially differ from the previous estimates and particularly real-time estimates, an issue that we will discuss later in this paper. In addition to overoptimistic estimates of potential output, Regling and Watson (2010) refer to another problem, which is the increased elasticity of tax revenue during financial booms that also result in overestimated structural balances.

**Figure 3: The Global and Intra-euro Area Imbalances**



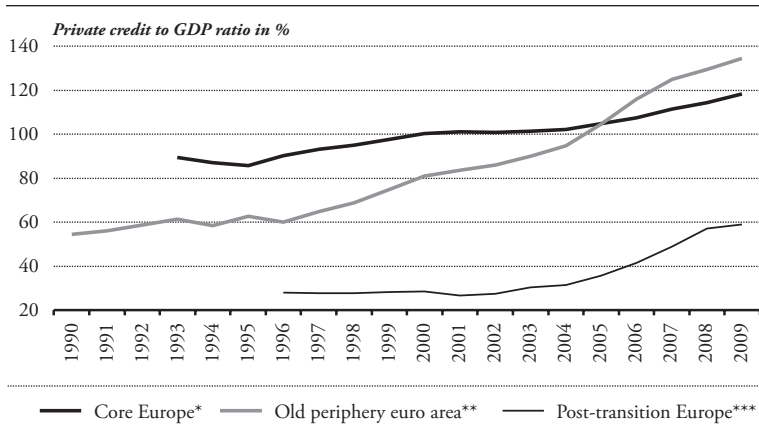
Notes: Core Europe: Austria, Belgium, Denmark, Finland, France, Germany, Luxembourg, the Netherlands, Sweden and Switzerland.

Old Periphery Europe: Greece, Ireland, Italy, Portugal, Spain, Turkey and the U.K.

Post-transition Europe: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia and Ukraine.

Source: World Economic Outlook Database, October 2010.

**Figure 4: Private Sector Credit Growth in Selected Groups of European Countries**



Notes: \* Data for Sweden not available before 2001; data for Austria, Belgium and Luxembourg not available before 1996; \*\* Data for Ireland not available before 1997; \*\*\* Data for Ukraine not available before 2001; data for Latvia not available before 1998.

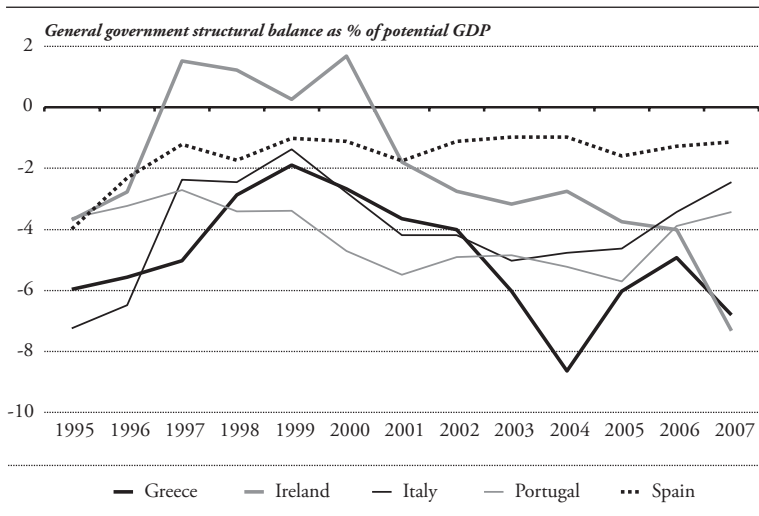
Core Europe: Austria, Belgium, Denmark, Finland, France, Germany, Luxembourg, the Netherlands, Sweden and Switzerland.

Old periphery euro area: Greece, Ireland, Italy, Portugal and Spain.

Post-transition Europe: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia and Ukraine.

Sources: Eurostat; the IFS; central banks' websites.

**Figure 5: Structural Balances in the Euro Area Periphery**



Source: World Economic Outlook Database, November 2010.

Fiscal policies in the periphery euro area countries, therefore, propagated the current account imbalances in a similar manner as the fiscal policies in the U.S. We will see later how by sustaining high public debt ratios, they became a problem on their own in the third phase of the crisis.

### **3 Limited Fiscal Space When the Crisis Struck**

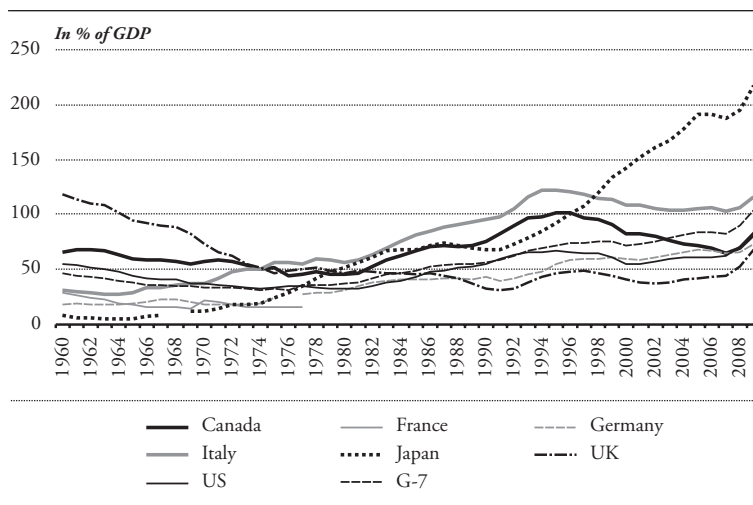
Let us now turn to the question of how much fiscal space the policy-makers had when the crisis struck.

The concept of fiscal space has yet to be precisely defined, but it is supposed to summarize the capability of fiscal policy to respond to negative shocks. Its main components are the level of budget deficit and public debt at the beginning of the crisis. The larger they are the less fiscal space the country has to use fiscal policy for ameliorating the shock.

However, the concept is broader than just numbers. It includes institutional factors, like the capacity for adjusting the budget to changing circumstances. It also includes governments' fiscal credibility. If investors and households have confidence in the government, they will accept temporary fiscal relaxation without taking offsetting actions, either by asking for higher risk premiums or by changing their saving behavior.

Let us, however, focus on the public debt as the most comprehensive single indicator of fiscal prudence. Once the crisis emerged, it became clear that the advanced economies had entered the crisis in a much worse fiscal shape than one would want. In fact, only then did everybody realize that the public debt to GDP ratio of the G-7 economies had been on a permanently increasing path since the early 1970s (Figure 6).

**Figure 6:** General Government Gross Debt in G-7 Countries



Source: World Economic Outlook Database, November 2010.

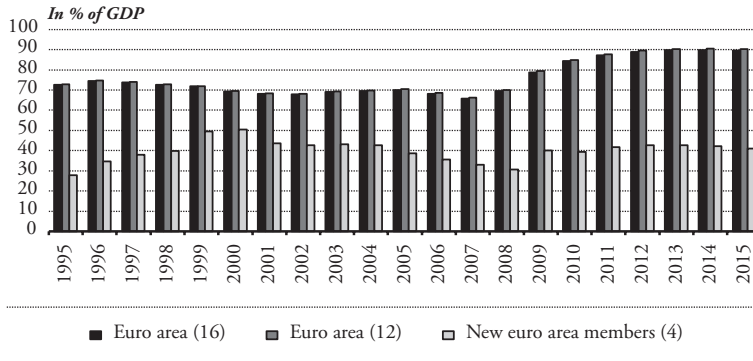
And this was a period of strong global growth, characterized by the absence of large wars, which in the past were the main factors driving the public debt ratios up. The persistent growth in debt ratios remains to be explained, although its mechanics were simple. In recessions, the debt ratios went up, but in the upturns they did not decline much, if at all.

And what is worse, the rising deficits and debt did not reflect the reduction in taxes, which could have had the beneficial effect of strengthening the supply response, but they reflected primary growth in expenditure (Cottarelli and Schaechter, 2010).

In the euro area, the average public debt to GDP ratio has been well above the 60 percent Maastricht ceiling ever since the introduction of the euro; and it declined only slowly from 72 percent of GDP in 1999 to 66 percent at the end of 2007, the last pre-crisis year (Figure 7). However, if the statutory ceiling was supposed to be 60 percent, then the average should have been around 40-50 percent. Also, if

the monetary union takes its fiscal rule seriously, one would expect some visible effort to bring the average down to that level. This did not happen.

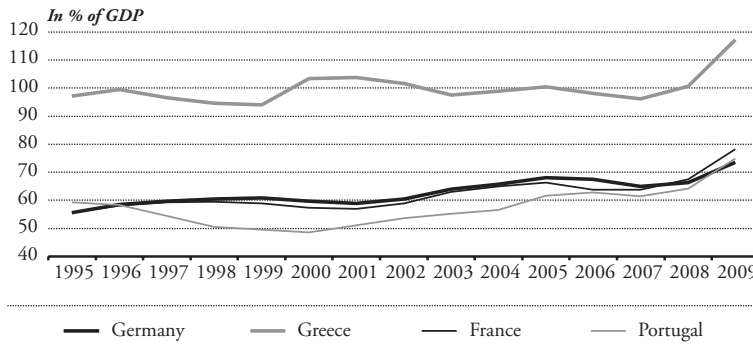
**Figure 7: Public Debt in the Euro Area Countries**



Source: Eurostat.

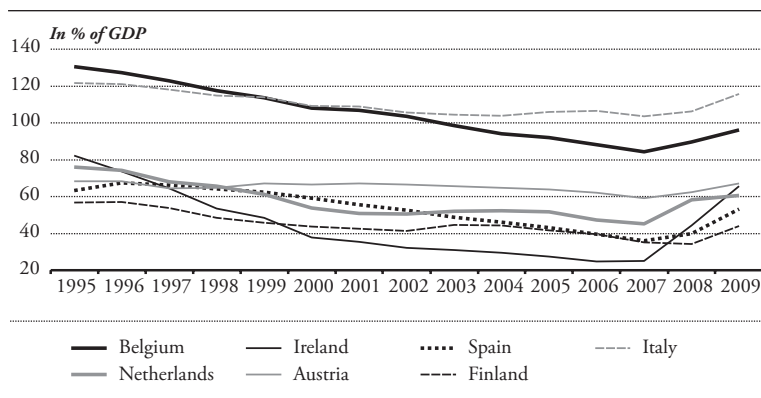
Moreover, the two largest and most influential economies of the zone, Germany and France, have continuously increased their debt ratios, breaching the Maastricht ceiling early in the first decade of the 2000s (Figures 8 and 9).

**Figure 8: Euro Area Countries with Rising Public Debt Ratios**



Source: Eurostat.

**Figure 9: Euro Area Countries with Declining Public Debt Ratios**



Source: Eurostat.

Furthermore, as mentioned above, the fiscal space is not about numbers. It is also about credibility and institutions. A massive reaction to the large budget deficit in Greece was triggered when markets realized the scale of fiscal misreporting. Later, the public realized that the misreporting had continued for several years and had been known and tolerated by the EU institutions. Moreover, fiscal gimmickry in the EU was not limited to Greece. As Koen and Van den Noord (2005) documented, such practices were more widespread. All these factors have unfavorably affected the fiscal credibility of the EU institutions.

Fiscal space available to advanced countries and particularly the euro area was, therefore, limited when the crisis struck. This reduced their options not only for implementing discretionary fiscal stimulus, but also for using the policy of automatic stabilizers.

In Central and Southeast Europe, or the post-transition countries, public debt ratios at the onset of the crisis were on the safe levels of about 30 percent of GDP or less, with the exception of Hungary (66 percent) and Poland (45 percent). In the Baltics, the ratios were even below 15 percent. Headline budget deficits did not look particularly bad either, except in Hungary. However, a majority of the

countries in the region entered the crisis with high current account deficits. Being small open economies, this reduced their fiscal space as we will see below.

## **4 Fiscal Policy Responses During Three Different Phases of the Crisis and the IMF Policy Recommendations**

### **4.1 The Initial Stage of the Crisis**

During the initial stage of the crisis until the Lehman Brothers bankruptcy, policy-makers in the advanced economies focused primarily on relaxing monetary policy, recapitalizing the financial system and preventing surge in trade protectionism.

With regard to fiscal policy, the general line was to let automatic fiscal stabilizers work as long as fiscal sustainability permits. There was no appetite for discretionary fiscal relaxation.

This line of thinking was consistent with the traditional IMF doctrine that discretionary fiscal measures are ineffective in fighting recessions for the following reasons:

- the effects usually come late, when the economy is already recovering;
- discretionary fiscal relaxation, therefore, often leads to a permanent fiscal deterioration as it is difficult to find expenditure that can be increased only temporarily;
- there are usually no shovel-ready investment projects, which would satisfy speed and temporary criteria;
- tax reduction, particularly if perceived as temporary, usually does not result in increased private spending;
- the quality of ad-hoc spending measures is on average weak.



The empirical research conducted by the Fund persistently supported this doctrine. Except for the U.S., as a large and relatively closed economy, and to a lesser extent the EU, the estimates of multipliers for budget spending were generally low. For medium-sized economies, for budget expenditure they were about 0.5 and for small countries about 0.3, and even lower for revenue measures and transfers (Spilimbergo, Symansky and Schindler, 2009). Empirical research also suggests that the multipliers could be negative if the country faces fiscal sustainability issues. The low values of estimated budget multipliers are explained by the leaks of additional spending into the external current account and by offsetting increases in private sector savings.

In line with such thinking, the discretionary fiscal policy response in the first phase of the crisis was modest, as mentioned above. Among large economies, only the U.S. implemented a modest tax rebate in 2008. The fiscal policy stance in the U.K. remained neutral throughout most of 2008. The euro area countries opposed the relaxation. Later, the total discretionary relaxation by the G-20 countries in 2008 was estimated at some 0.4 percent of GDP on average.

## **4.2 The New Management of the IMF Called for a Policy of Fiscal Stimulus Early in 2008**

Much to everybody's surprise, the IMF started to change its position on discretionary fiscal relaxation in early 2008. Namely, Strauss-Kahn (2008) suggested that countries with fiscal space need to consider discretionary fiscal relaxation as an instrument to fight recession.<sup>6</sup>

However, the response to Strauss-Kahn's initiative remained weak throughout most of 2008. The main decision-makers of the G-8/G-20 at their meetings in Hokkaido, Sao Paulo and Washington in that year either did not mention fiscal

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<sup>6</sup> "Timely and targeted fiscal stimulus can add to aggregate demand in a way that supports private consumption during a critical phase. [...] In a sense, medium-term fiscal policy is all about saving for a rainy day. It is now raining." [...] "Countries that have fiscal and monetary space should consider now what it would take to line up a temporary fiscal stimulus that can be deployed quickly if needed as events unfold in 2008" (Strauss-Kahn, 2008).

policy or took a highly cautious and non-committal line, stressing, instead, the considerations of fiscal sustainability.

Moreover, the IMF continued to produce technical papers pointing to the limited efficiency of discretionary measures. This particularly came to the surface in the October 2008 World Economic Outlook and its update in November 2008, both of which were published after the bankruptcy of Lehman Brothers. On that occasion, the new Chief Economist of the Fund, Blanchard, having just assumed this position, wrote that “[t]he findings are not very encouraging for proponents of fiscal activism: fiscal multipliers – the impact of discretionary fiscal stimulus on output – are generally found to be quite low, and sometimes even to operate in the wrong direction, especially in economies with high debt levels where a turn to expansionary fiscal policy may raise doubts about long-term debt sustainability” (IMF, 2008: XIII).

### **4.3 Discretionary Fiscal Relaxation After the Lehman Brothers**

The situation changed after the Lehman Brothers bankruptcy. As Manuel Barroso argued at the time, “exceptional times call for exceptional measures”. Following this thinking, the EU Commission approved a plan to boost demand on November 26, 2008, suggesting its members implement a temporary fiscal stimulus of about 1.5 percent of GDP. The stimulus was supposed to remain within the limits set by the Stability and Growth Pact (SGP), although by that time it was no longer quite clear what this actually meant (European Commission, 2008).

In the U.S., after the new administration took over, Congress approved a large stimulus package in the amount of US\$ 787 billion in February 2009.

At the G-20 London Summit in April 2009, the “unprecedented and concerted fiscal expansion” became the official line of the international community. With fiscal expansion amounting to US\$ 5 trillion by the end of the next year, this

policy was expected to “save or create millions of jobs, which would otherwise have been destroyed”, “raise output by 4 percent, and accelerate the transition to a green economy” (G-20, 2009b).<sup>7</sup> The agreed fiscal stimulus among the G-20 countries was supposed to reach 2 percent of GDP in 2009 and 1.6 percent in 2010.

#### **4.4 The IMF Support of Expansionary Policies**

A few days after the London Summit, Strauss-Kahn (2009) pointed out that the G-20 group had accepted the proposal by the IMF (which he had promoted already in January 2008) on the global fiscal stimulus. Moreover, he expressed satisfaction that the Fund got a new role to monitor the implementation of the agreed stimulus. Finally, he praised the G-20 decision to triple the IMF’s lending capacity, pointing out that the IMF had already implemented reforms of its lending facilities and announced additional reforms.

The reforms of the IMF lending operations were indeed far-reaching. They included:

- two new, the largest ever, allocations of SDRs to provide member countries with unconditional liquidity in the amount of SDR 180 billion;
- the introduction of the Flexible Credit Line (FCL), which would offer liquidity to countries with so-called “strong fundamentals” without imposing ex-post conditionality on them;
- reform of the Stand-By Arrangements (SBAs), the workhorse among the IMF lending instruments, which drastically increased the size of loans (“the access”), accelerated the approval process and softened conditionality, including eliminating structural performance criteria;

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<sup>7</sup> “We are undertaking an unprecedented and concerted fiscal expansion, which will save or create millions of jobs which would otherwise have been destroyed, and that will, by the end of next year, amount to US\$5 trillion, raise output by 4 percent, and accelerate the transition to a green economy. We are committed to deliver the scale of sustained fiscal effort necessary to restore growth.” (G-20, 2009b).

- a similar reform of the Fund's facility for low-income countries;
- an effective cut in the borrowing costs under all facilities by reducing high-access surcharges.

Most importantly, the reform widely opened the possibility of using the Fund's resources to finance budget deficits, which was a very rare practice in the past. Previously known as a fiscally conservative institution, the IMF suddenly became a proponent of discretionary fiscal relaxation. This was not left unnoticed by policy-makers in many countries even if they did not enter into program arrangements with the Fund. It encouraged those that were in favor of softening fiscal policy and discouraged those that were against.

#### **4.5 Confidence in the Success of Coordinated Fiscal Relaxation Evaporated**

However, when the crisis moved into its third phase, the appropriateness of the discretionary relaxation appeared in a different light.

First, when Greece lost access to capital markets, the issue of a possible sovereign default came to the forefront. The status of "an advanced economy" in the past implied a zero probability of default. Now this has suddenly changed.

Second, the deterioration in sovereign spreads did not remain limited to Greece, as it soon spread to Ireland, Portugal and Spain. These three countries implemented sizable stimulus packages in 2009 and early 2010: Ireland 1 percent, Spain 2.9 percent and Portugal 1 percent of GDP (European Central Bank, 2010).<sup>8</sup> However, under market pressures, they had to quickly reverse the course.

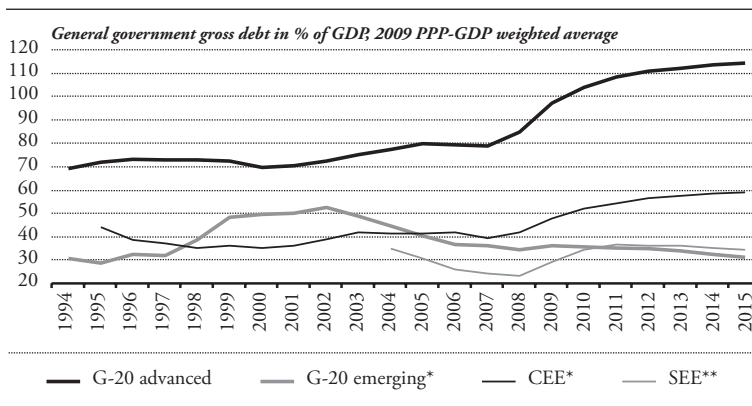
Third, analytical work in several institutions produced estimates about the astonishing size of deterioration in public debt ratios in the advanced economies. The IMF staff estimated that between 2007 and 2015, public debt to GDP ratio

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<sup>8</sup> According to the IMF (2010b), Portugal's fiscal stimulus amounted to 1.5 percent of GDP.

in these countries would deteriorate by some 39 percentage points, raising the debt level to 110 percent of GDP (Figure 10). The contribution of fiscal stimulus to this increase was estimated at 4.5 percentage points, the contribution of financial sector support at 3.2 percentage points and of below-the-line lending at 4 percentage points. The major part, however, almost three quarters of the deterioration, would come from the adverse effects of the lower GDP growth path (including its effect on revenue) and the interest rates (IMF, 2010c).

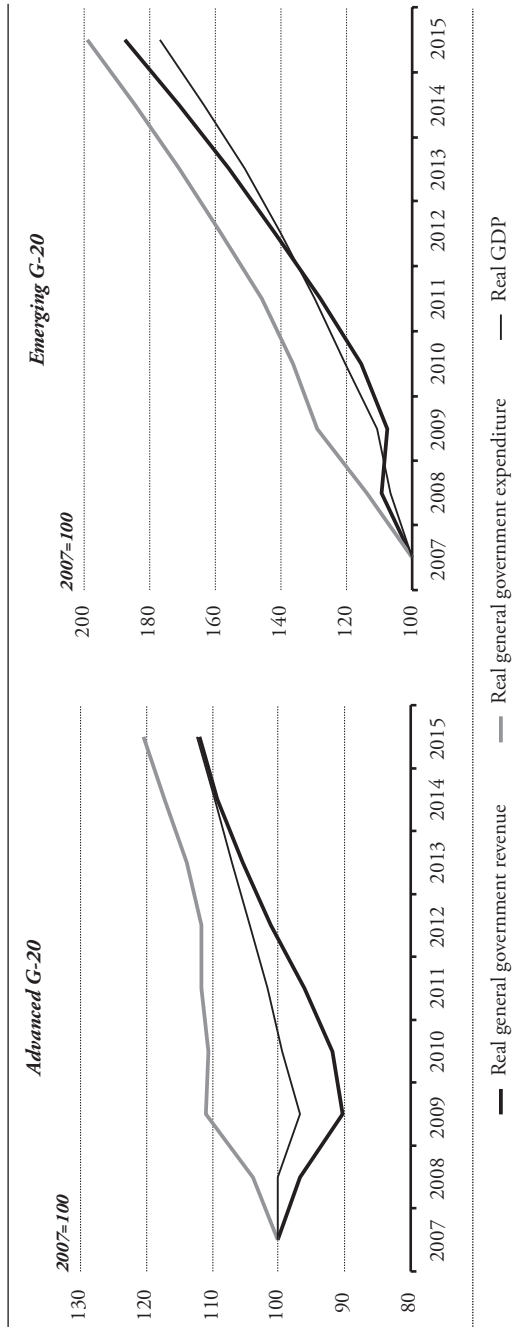
**Figure 10:** Debt Dynamics after the Crisis



Notes: \* Incomplete data before 2000; \*\* Incomplete data before 2004.  
 Source: World Economic Outlook Database, October 2010.

The mechanics behind the debt explosion in the advanced G-20 countries are easily seen from the developments in revenue and expenditure – the former falling by about 10 percent in real terms between 2007 and 2009 and the latter increasing by 11 percent (Figure 11). Even assuming some decline in real spending between 2012 and 2015 and a recovery of revenue in line with the GDP path, these developments will inevitably lead to a huge deterioration in the debt ratios.

**Figure 11:** Government Revenue and Expenditure in Real Terms



Note: Nominal revenue and expenditure deflated by CPI.  
 Source: World Economic Outlook Database, October 2010.

The IMF also estimated the adjustments in primary balances that the G-20 countries would need to implement so as to reverse the debt ratio back to 60 percent of GDP by 2030, or to the pre-crisis level if lower. The adjustment in the primary balances would need to be achieved by 2020, and then the primary balances would remain constant. The adjustment needs estimated in this way for most G-20 advanced economies are huge, some 9.5 percentage points of GDP on average, measured relative to the projected primary balances in 2010.<sup>9</sup>

Similar results were obtained by Cecchetti, Mohanty and Zampolli (2010), who provided longer projections for selected advanced economies. By assuming that the revenue ratio and non-age-related spending would remain constant relative to GDP and taking the EU and the U.S. Congressional Budget Office (CBO) projections for age-related spending, the baseline projection shows a dramatic deterioration in the debt ratios over the next 30 years, bringing them for most countries above 300 percent of GDP. Even assuming that age-related spending is kept constant, which would require radical reforms, and assuming some modest adjustments in other spending, several countries will still face explosive debt dynamics, including the U.S., the U.K., Japan and to a lesser extent Spain, Portugal, Ireland and France.

Finally, nothing describes better the change in attitude toward fiscal relaxation than the point made by Trichet (2010) that “[w]ith hindsight, we see how unfortunate was the oversimplified message of fiscal stimulus given to all industrial economies under the motto: ‘stimulate’, ‘activate’, ‘spend!’”.

Once the prospective deterioration in public debt and the implied risks of sovereign defaults became evident to policy-makers, investors and the general public, it undermined their confidence. As a result, the public debt became a drag on recovery.

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<sup>9</sup> Interestingly enough, Italy, despite its high starting level of debt, would have to adjust the primary balance by only half, some 4 percentage points, owing to its low starting primary deficit and the fact that it did not implement any fiscal stimulus during the crisis.

## 4.6 Fiscal Policy Response in the CEE-SEE Region

So far we have focused on the advanced economies. Emerging market economies, in general, did much better during the crisis. However, this was not the case with the post-transition European economies. Most of them entered the crisis with large external vulnerabilities.

In terms of output growth, the SEE and CEE regions were hit by the crisis more than other groups of countries (Table 1). Within that region, the Baltics were affected the most, followed by the SEE countries. The factors behind such unfavorable performance were manifold. One of them was the high degree of integration in global trade and another was that the crisis triggered a long-overdue adjustment in their external current account positions.

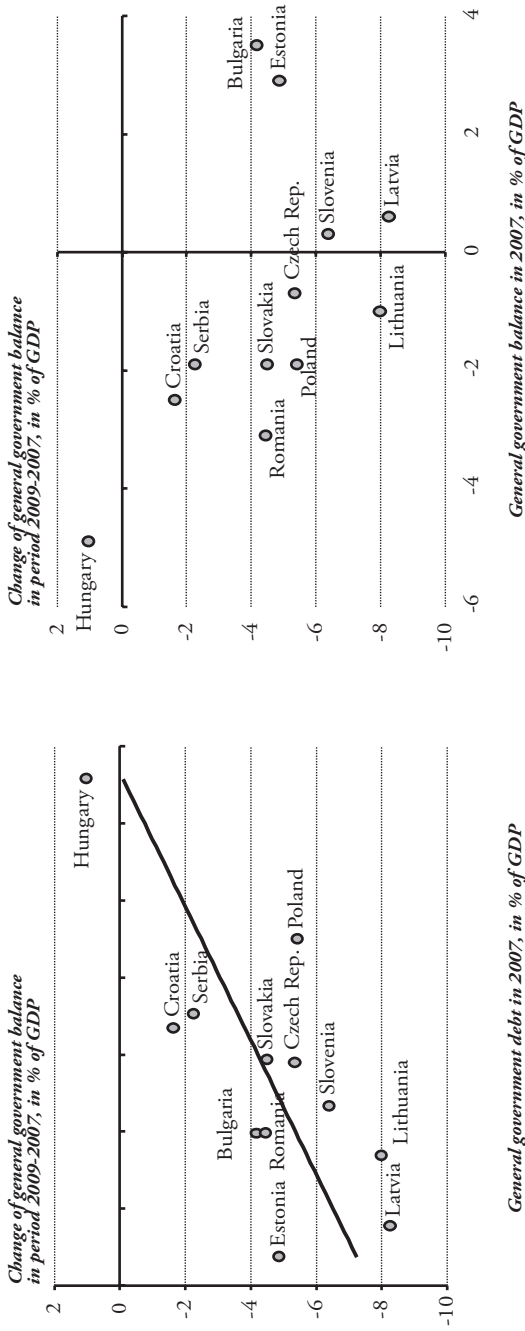
**Table 1:** Growth Shock in the CEE-SEE Countries (GDP Growth Rate)

	2007	2009	2009/2007
G-20 advanced	2.3	-3.2	-5.4
G-20 emerging	9.7	3.5	-5.7
CEE	6.4	-2.7	-8.5
SEE	6.2	-5.9	-11.4
Czech Republic	6.1	-4.1	-9.7
Slovakia	10.6	-4.7	-13.8
Slovenia	6.8	-7.8	-13.7
Poland	6.8	1.7	-4.8
Estonia	6.9	-13.9	-19.5
Latvia	10.0	-18.0	-25.4
Lithuania	9.8	-14.8	-22.4
Hungary	1.0	-6.3	-7.2
Bulgaria	6.2	-5.0	-10.5
Croatia	5.5	-5.8	-10.7
Romania	6.3	-7.1	-12.7
Serbia	6.9	-30	-9.3

Source: World Economic Outlook Database, October 2010.



**Figure 12:** Fiscal Expansion in CEE and SEE Countries 2007-2009 and the Starting Conditions



Source: World Economic Outlook Database, October 2010.

Exposed to such a shock, how did fiscal policy in these countries react?

The picture that arises is that the actual scale of fiscal expansion heavily depended on the initial fiscal conditions, i.e., the budget deficit and the public debt ratio (Figure 12). The better they were at the start, the more fiscal expansion the countries have allowed.

However, only the best performers managed to finance the fiscal expansion without triggering an adverse market reaction. The relevant performance indicators at the onset of the crisis appear to be a low public debt ratio (below 30 percent of GDP), a low budget deficit (less than 2 percent of GDP) and a low current account deficit (below 6 percent) (Table 2). Countries satisfying these criteria were able to let their deficits expand and could even implement additional stimulus without seeing their sovereign spreads substantially deteriorate relative to the pre-crisis time. This was the case with the Czech Republic, Slovakia and Slovenia. Between 2007 and 2009, their headline deficits expanded between 4.4 percentage points and 6.4 percentage points, of which about one third came from discretionary stimulus. Nevertheless, their sovereign and Credit Default Swap (CDS) spreads remained quite low, recently below 100 basis points.

Poland has been a kind of a border case, as it entered the crisis with a higher public debt and a larger budget deficit compared to the previously mentioned three countries. It relaxed its fiscal policy by more than 5 percentage points of GDP between 2007 and 2009, of which a large part was discretionary; but as a result, it experienced an increase in its sovereign spreads substantially above the level of the best performers. Poland also had to seek assurance for investors by arranging a Flexible Credit Line with the IMF.

**Table 2:** *Macroeconomic Indicators for CEE/SEE Countries in Percent of GDP, Unless Otherwise Indicated*

	<b>CDS 5Y (US\$)</b>		<b>General Government</b>			<b>Current Account Balance</b>	<b>Public Debt</b>
	<b>2009</b>	<b>Q3/2010</b>	<b>2007</b>	<b>Change 2009/2007</b>	<b>2010p</b>	<b>2007</b>	<b>2007</b>
Czech Republic	135.9	93.1	-0.7	-5.3	-5.4	-3.3	29.0
Slovakia	106.6	83.1	-1.9	-5.0	-8.0	-5.3	29.3
Slovenia	96.6	76.6	0.3	-5.8	-5.7	-4.8	23.3
Poland	190.3	140.1	-1.9	-5.3	-7.4	-4.8	45.0
Estonia	381.8	100.8	2.9	-4.8	-1.1	-17.2	3.7
Latvia	711.0	337.1	0.6	-8.4	-11.9	-22.3	7.8
Lithuania	499.1	262.7	-1.0	-8.0	-7.7	-14.6	16.9
Hungary	336.8	335.9	-5.0	1.0	-4.2	-6.5	65.8
Bulgaria	352.3	302.4	3.5	-4.2	-4.9	-26.9	19.8
Croatia	303.5	272.0	-2.5	-1.6	-6.2	-7.6	33.4
Romania	392.1	364.9	-3.1	-4.4	-6.8	-13.4	19.8
Serbia	455.8	347.5	-1.9	-2.2	-4.8	-16.0	35.2

Note: p - projection.

Sources: World Economic Outlook Database, October 2010; Bloomberg.

The majority of the countries in the region, however, entered the crisis with large fiscal and external imbalances. The current account deficits proved decisive for the Baltics and Bulgaria, overpowering their remarkably low public debt ratios and modest budget deficits or even surpluses at the onset of the crisis. Markets realized correctly that the unsustainable booms were hiding underlying weak fiscal positions, while the current account and the real effective exchange rate (REER) disequilibria would adversely affect their growth prospects. Therefore, their borrowing costs increased sharply and markets would have probably completely closed for them had their governments tried to borrow larger amounts. As a result, Latvia had to finance its fiscal expansion by relying on a generous IMF-EU support package. Estonia financed it primarily with a budget

cash reserve, stemming from previous surpluses.<sup>10</sup> Only Lithuania reportedly managed to finance the deficit from external and domestic non-official sources, but its sovereign spread, nevertheless, increased to high levels. Bulgaria had to keep its deficit below 1 percent of GDP in 2009.

The SEE countries and Hungary entered the crisis with a combination of cyclically high budget deficits, higher debt ratios and large current account imbalances. As a result, they could not entertain the option of letting automatic stabilizers operate, not to mention discretionary stimulus, without running into financing risks. Some of them had to rely on IMF assistance (Hungary, Romania, Serbia and Bosnia and Herzegovina).<sup>11</sup>

#### **4.7 How to Judge Fiscal Policy Reaction on the Global Level?**

Was the policy of discretionary stimulus and even of letting the automatic stabilizers operate fully the best response? To what extent did it help in smoothing the output variability as opposed to the adverse effects on fiscal sustainability and possibly macroeconomic imbalances?<sup>12</sup> While policy-makers were obviously under strong pressure to act during the peak of the crisis, the question is whether discretionary fiscal relaxation in some countries did more harm than good. After all, the mainstream of economic theory pointed toward the weak effects of

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10 Estonia's fiscal balance worsened by close to 5 percent of GDP in 2007-2009, but it remained within the Maastricht limit; this despite a cumulative GDP drop of close to 20 percent in that period. Surprisingly, expenditure at the same time went up in nominal and real terms. This was achieved by a plethora of one-time revenue measures, amounting to 3.2 percent of GDP and by redirecting mandatory pension contributions to the budget, yielding another 0.6 percent of GDP. (Lithuania and Latvia implemented such a measure, which is surprisingly in line with the EU budget rules.) The EU at the same time accelerated disbursement of its assistance to Estonia, which then reached 6.7 percent of GDP in 2009 and further increased to 8.3 percent of GDP in 2010, compared with 3 percent of GDP before the crisis. All these factors raise the issue of sustainability. See Purfield and Rosenberg (2010).

11 Hungary is the only country that actually improved its headline fiscal balance during the crisis, in line with the tough program agreed with the IMF before the crisis struck (and before the IMF became soft). It is set to have one of the highest primary balances in 2010.

12 Throughout this paper, we do not include the discretionary fiscal adjustment government measures that were used to shore up the banking system. Most countries, in any case, kept these interventions outside of the budget. Discretionary stimulus is understood only as measures aimed at increasing government spending or cutting taxes.

fiscal expansion in circumstances when public debt is high. These questions will obviously be hot topics among economists in the years to come.

If judged by the views expressed at the G-20 Summit in Pittsburg in September 2009, fiscal relaxation was an unqualified success.<sup>13</sup> The triumphant tone of the new policy was best manifested in a statement by the then new British PM Gordon Brown, who wrote on the occasion of the Summit that the total fiscal response (this included both the automatic and discretionary stimulus) was 5 percentage points both in 2008 and 2009. On that occasion, he also claimed that the multiplier for discretionary spending might have been as high as 2 (G-20, 2009d).

The above estimates suggest that the contribution of fiscal relaxation was large, but they apply to total fiscal expansion and not only to the discretionary part. The latter amounted to about a third of the total fiscal expansion in the G-20 countries during these two years (Table 3). Whether the marginal contribution of the discretionary measures over and above the effects of the automatic stabilizers has made a material difference in output dynamics will surely remain a popular academic subject in the years to come.

**Table 3:** G-20 General Government Balance 2007-2009 (In Percent of GDP)

	2007	2008	2009	2007-2009
G-20	-0.9	-2.7	-7.5	
Advanced	-1.7	-4.3	-9.4	
Emerging	0.3	-0.4	-4.8	
Fiscal expansion				
G-20		1.8	4.8	6.6
Advanced		2.6	5.1	7.7
Emerging		0.7	4.4	5.1
G-20 discretionary adjustment		0.4	2	2.4
In percent of total		22	42	36

Source: IMF (2010c).

13 "Our national commitments to restore growth resulted in the largest and most coordinated fiscal and monetary stimulus ever undertaken. We acted together to increase dramatically the resources necessary to stop the crisis from spreading around the world." (G-20, 2009c).

Most observers, however, consider that the discretionary stimulus was much less important than the combined effect of automatic stabilizers and central banks' measures that led to huge expansions in their balance sheets, which were never experienced in the past (Rogoff, 2010). Moreover, we know that the discretionary stimulus added to the sovereign debt problem, directly and indirectly via the credibility channel. When implemented by countries with the current account problem, it preserved and possibly exacerbated the global imbalances and postponed the inevitable adjustment in their real effective exchange rates.

Based on the above considerations, a following preliminary assessment might be suggested.

Discretionary fiscal relaxation was a mixed blessing at best. It was the most appropriate response in countries with sound starting fiscal and external current account positions, like China and oil-producing countries and perhaps Germany. In such countries, automatic and discretionary fiscal expansion compensated for the weak private demand while at the same time correcting the underlying imbalances.

In the U.S., the case is less clear, given its entrenched current account and fiscal problem. On balance, perhaps the case could still be made for the stimulus given the high risk of deep recession as was perceived at the time and the fact that the U.S. automatic stabilizers are weak. This reflects the low share of federal government spending in GDP and the balanced budget rules in most states. At the same time, the run for safety prevented the US\$ from adjusting to a more realistic level, which would facilitate correction in net exports, which left fiscal policy as the only available instrument. On the negative side, the stimulus contributed to a postponement in the adjustment of the real effective exchange rate. Moreover, once the prospective large deterioration in the public debt ratio became known, this probably strengthened the Ricardian effect in the behavior of households. They realized that large fiscal correction is unavoidable down the road.

Then there were countries in which the discretionary relaxation was clearly wrong. Providing fiscal stimulus while already being in a precarious fiscal position is a policy of asking for trouble. Some examples are Portugal, Spain and Ireland, the countries that soon had to reverse their course under market pressures. The U.K., although not facing immediate market pressures, also had to take measures to calm markets in the context of the threatening public debt dynamics. On the other hand, the EU countries that did not provide stimulus, like Italy, clearly benefited from abstaining.

The IMF's willingness to readily finance budget deficits of the countries that entered the crisis with weak fiscal and current account positions (like Latvia, Romania and Serbia) without requiring a substantial adjustment already in 2009 was also questionable. Was this an optimal strategy for these countries? Postponing fiscal adjustment in such countries had the unfortunate effect of delaying the adjustment in the real effective exchange rate and the current account position. The purpose of such programs seemed to be more to support global demand via so-called coordinated fiscal relaxation than meeting the particular needs of these countries. The weaknesses of such an approach became visible in 2010 when the programs had to be substantially tightened, but by then credibility suffered. The same applies to the Fund's encouragement to Poland to implement fiscal stimulus by using the FCL, which ended with Poland now facing a substantial fiscal problem.<sup>14</sup>

Finally, there were countries that entered the crisis in a strong position and implemented stimulus while avoiding a worsening in their financing costs. Being in most cases small and open economies, fiscal expansion did not help them much in terms of lowering the output variability. Moreover, for those among them that operate in a flexible exchange rate framework, it is not clear that fiscal versus monetary relaxation was a better choice. But looking forward, as a result of the fiscal relaxation, these countries will face a more difficult adjustment. The previously mentioned best performers in the CEE region belong to this group.

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<sup>14</sup> Despite completely avoiding a recession, Poland's deficit hit 7.5 percent of GDP in 2010 and the economy is on the path to breach its legislated public debt limits (IMF, 2010c).

Let us now address the issue of automatic stabilizers. Did the countries that did not let them operate fully make a mistake, assuming they did not face financing constraints?

To answer this question, the following is of importance. The concept of automatic stabilizers operates well in situations when output oscillates around a more or less stable potential growth path. Assuming that the starting expenditure path is consistent with a prudent debt deficit target over a cycle, in the case of a negative demand shock, governments can leave the expenditure path unchanged despite the cyclical drop in revenue. By doing this, they avoid disruptive spending cuts and even somewhat smooth the output path. As the output returns to the potential path and temporarily surpasses it, the higher deficit during the recession is offset and the debt target achieved.

However, the concept falls apart when the crisis causes not only a temporary deviation of output from the potential output path, but also results in a permanent loss of level and growth in the potential output. Keeping the expenditure path unchanged in such circumstances would result in a public debt explosion and automatic stabilizers might become automatic destabilizers. In such circumstances, the previously set expenditure path needs to be revised down. Moreover, the usual methods for estimating structural balances in such a situation become highly unstable, as demonstrated by large ex-post corrections of the output gap (see Appendix 1).

Given that the current crisis will have such a profound effect on potential output, countries that immediately started to contain spending did not make a mistake. In fact, they positioned themselves better for the recovery.

## **5 The Challenge of Fiscal Adjustment**

The effects of the crisis, superimposed on the already existing fiscal pressures stemming from population aging, has pushed budgets in advanced economies on



a path that will raise public debt ratios to unprecedented levels. Even in the best of circumstances, growth will slow down, as the high level of debt will affect interest rates over the next 20 years. For advanced economies, the IMF estimates suggest the effect of higher interest rates on the GDP growth rate might be somewhere in the range of 0.5-0.8 percentage points.<sup>15</sup> Reinhart and Rogoff (2010) suggest a drop in the potential growth rate of 1 percentage point or more. However, as the fiscal retrenchment will be accomplished not only by expenditure cuts, but also by increased taxation, this will create an additional drag on growth. Needless to say, lower growth in the advanced economies, particularly in Europe, will affect growth prospects in the CEE/SEE region.

## **5.1 Could a High Level of Public Debt Be Tolerated?**

Let us here reply to arguments that high debt levels might perhaps be a less worrisome issue.

The fact that similar debt ratios were reached in the past, usually during wars, should not be seen as providing much comfort. First, their wartime character provided *prima facie* evidence of exceptional circumstances and not of weak fiscal discipline. Second, the wartime deficits were often supported by forced savings via rationing of consumer goods and by patriotic campaigns. Third, such debt levels were achieved at a time when global capital mobility was much weaker than today. Fourth, they were achieved mainly by countries that were important financial centers and whose currencies played a reserve currency role at the time, like the U.S. and the U.K.

Japan's public debt which is often reported as amounting to 200 percent of GDP should not provide comfort either. First, there is a statistical peculiarity that Japan reports gross public debt, which includes central government securities held by its various agencies and local governments. Adjusted for this, i.e., calculating only

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<sup>15</sup> The lower side of the range is taken from Cottarelli and Schaechter (2010). The higher side follows from the estimated effect of debt on growth in Kumar and Woo (2010).

debt held by the private sector, its debt ratio is actually almost half this amount. Second, the stability of Japan's debt is supported by a high domestic savings rate and a strong preference of households for domestic financial instruments. These characteristics are not shared by other countries.

Regarding the reserve currency argument, the U.S. now has an even stronger monopoly, as concerns about the euro will not disappear soon. In the absence of a credible alternative, large movements out of the dollar are difficult to imagine. This could, indeed, facilitate continuing large budget deficits in the U.S. However, this cannot be said for other financial-center countries; which explains why the U.K., which still enjoys very low long-term interest rates, has, nevertheless, undertaken an early and painful fiscal adjustment.

Most importantly, with public debt reaching exceptional levels, sovereign defaults will be seen as much more likely than in the last several decades. Markets now perceive the possibility that even an advanced economy might default. Such concerns are amplified in the situation in which high deficit and debt are combined with weak growth prospects, particularly in countries facing competitiveness issues while being members of a monetary union or operating in a fixed-exchange-rate framework.

And finally, the possibility of global recession and crisis in the future cannot be excluded. If the next one happens with public debts at elevated levels, the risk of instability will be enormous. Fiscal consolidation in advanced economies is, therefore, a necessity.

## **5.2 Reform of Institutional Frameworks for Conducting Fiscal Policy**

Achieving such large consolidation will be a difficult task. Political tensions will increase compared to the period of the generally prosperous last decades. These pressures will arise not only in individual countries, but also in monetary unions,

and will put their institutions to the test. In several EU countries, debt to private investors, both resident and non-resident, is now being rapidly replaced by debt to official creditors, including the ECB. While this reduces the risk of default toward the private sector, it increases the risk of conflict within the union if such debt eventually has to be restructured.

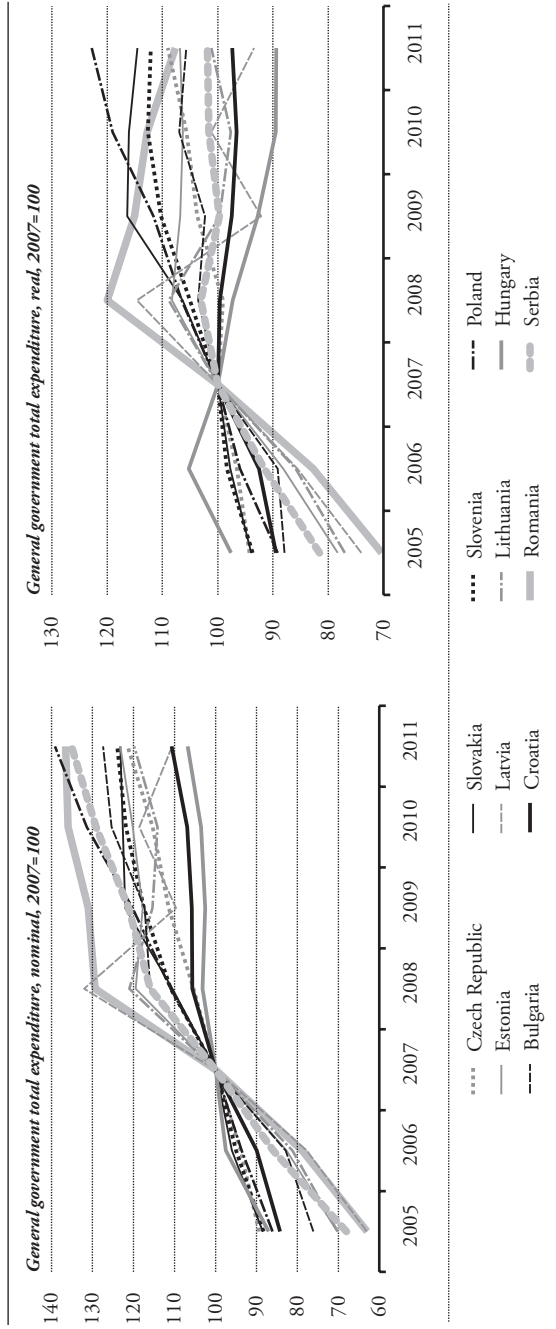
Therefore, the current frameworks for decision making on fiscal policy will have to be revised, both at national levels and in monetary unions. Without going into details here, we can safely say that fiscal rules and special fiscal institutions, like fiscal councils and boards, will become more important.

### **5.3 The Implications for the CEE and SEE Region**

The fiscal prospects of the majority of the CEE and SEE countries are also challenging, despite lower levels of debt ratios. In the Baltics, projected fiscal deficits for 2010 are high and the underlying deficits might be even higher owing to the temporary nature of many measures implemented over the last two years. Despite large output drops, these countries have not succeeded in reducing budget expenditure in real terms, except in Latvia; but even there they remained substantially above the pre-crisis 2007 level (Figure 13). In fact, the only country in the CEE/SEE region that managed to reduce real government spending for four years in a row was Hungary. The prospects for the Baltics remain, therefore, quite difficult.

Regarding the best performers in the CEE/SEE region (the Czech Republic, Slovakia and Slovenia), they will see only a moderate increase in their public debt ratios. Still, to reverse those back to the pre-crisis level would require a midsize fiscal adjustment in primary balances of some 4 percentage points of GDP. Poland's adjustment will, however, be more challenging, requiring measures of about 7 percentage points of GDP (Table 4).

**Figure 13:** Nominal and Real Budget Expenditure in CEE and SEE Countries



Source: World Economic Outlook Database, October 2010.

**Table 4:** *Starting Primary Balance and Necessary Adjustment in Post-transition Countries (In Percent of GDP)*

	Cyclically adjusted primary balance 2010	Adjustment to achieve prudent debt limit in 2030
Czech Republic	-2.3	3.7
Slovakia	-3.1	4.1
Slovenia	-3.2	4.0
Poland	-4.5	7.2
Estonia	1.1	-0.1
Latvia	-7.1	8.8
Lithuania	-4.6	8.0
Hungary	3.2	-1.3
Bulgaria	0.7	-0.8
Croatia	-0.8	-
Romania	-1.4	2.1
Serbia	-4.6	-

Sources: Bloomberg; World Economic Outlook Database, October 2010; IMF (2010c).

In SEE, the projected debt ratios of some 30 percent of GDP are around or lower than the reasonably safe level for emerging market economies, except in Croatia. However, the SEE region still faces high current account deficits, despite the sharp drop in domestic demand. Estimating an underlying current account position is difficult in the current circumstances, but it is likely that further adjustment will be needed. This suggests that the recovery will be slow, as moving resources to tradable sectors takes time. The main risk is that some countries in the region find themselves in a vicious circle of high sovereign spreads causing high borrowing costs for both the budget and the private sector, which then translates into low growth and then further deterioration in the fiscal position. For these countries, developing credible medium-term fiscal frameworks, improving transparency and addressing structural issues will play a crucial role in reducing such risks.

## 6 Conclusions

Contrary to the generally established view that prevailed until the sovereign debt phase of the crisis, fiscal policy in the major economies since the early 2000s directly contributed to the global imbalances, which were one of the two main causes of the global crisis. Moreover, as a result of the secular growth in public debt ratios in advanced economies, which started in the 1970s, the available fiscal space was limited when the crisis occurred.

During the crisis, the discretionary fiscal relaxation, initiated to a large extent by the IMF, was a mixed blessing at best. It made sense in countries with strong initial fiscal and current account positions, but much less, if at all, in others. In some countries, it directly contributed to the sovereign debt pressures that appeared in 2010. In others, particularly small and open economies, it had a modest effect on output while making future fiscal consolidation more difficult.

Regarding the post-transition countries in Central and Eastern Europe (CEE) and Southeast Europe (SEE), most of them entered the crisis with large external vulnerabilities. For them, the discretionary stimulus and even keeping spending on the pre-crisis path in line with the doctrine of automatic stabilizers were risky options.

Looking forward, owing to the large deterioration in the budget deficits and public debt ratios, advanced economies will face unprecedented challenges in achieving sizable fiscal consolidation at a time of lower GDP growth and aging pressures. The current fiscal policy frameworks will need to be revised, and fiscal rules and fiscal councils will become more important. On the methodological side, the concept of structural fiscal balance will have to be used much more carefully than in the past. Deep crises lead to large downward revisions in both the level and growth rates of potential output. The estimates of structural fiscal balances should not rely just on the recent trend in output, even if it is achieved with low inflation.

Finally, the main lesson from the crisis is that during the times of reasonably high growth, fiscal policies should aim at rapidly reducing public debt to safe levels, so as to have fiscal space when a crisis occurs. As demonstrated during this crisis, the safe debt levels are lower than previously thought. Moreover, the risk of new crises in an environment of large and volatile capital flows is high. Prudent policy, therefore, requires that public debt ratios be reached sooner rather than later.

While the CEE and SEE countries currently show better basic fiscal indicators than the advanced countries, their comfort-thresholds are also lower. The main risk, particularly for the SEE countries and the Baltics is a vicious circle of high sovereign spreads, high real interest rates and low GDP growth, which then translates into a worsening of fiscal indicators.

## Appendix 1

### **How Can Potential Output Fall Sharply and What Are the Implications for Fiscal Policy?**

The structural fiscal balance is intended to provide information about an underlying fiscal position after adjusting for cyclical factors. Basically, revenue and expenditure are recalculated as if the output were at the point of potential output, instead of its actual level.

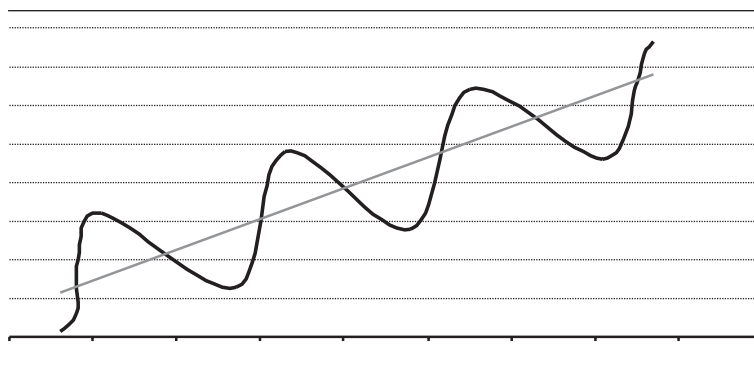
The implicit assumption is that the potential output is a slowly and smoothly moving variable. In some models, it is estimated by aggregate production function or by using capacity utilization indices. More often, it is estimated as an unobservable variable, constructed to explain the actual dynamics of inflation and employment.

The concept of structural balance then assumes that the actual output and fiscal balance more or less regularly oscillate around this stable trend. This suggests that as long as the structural balance is sustainable before the crisis, policy-makers can ignore a cyclical deterioration in the deficit. Instead, as the saying goes, they can let the automatic stabilizers work. The temporary worsening of the budget balance will reduce variability of the output and it will help in avoiding painful expenditure cuts. However, it will not change the medium-term debt dynamics. This can be illustrated by a simple illustration (Figure 14).

However, these models break down if the potential output is not a smooth function. If, for example, its level suddenly falls and then reverts to a new trend with a lower slope, the situation is fundamentally different (Figure 15). Letting the automatic stabilizers work, which means letting the budget expenditure follow the previously determined path, might actually destabilize fiscal position. Automatic fiscal stabilizers might turn into automatic fiscal destabilizers.

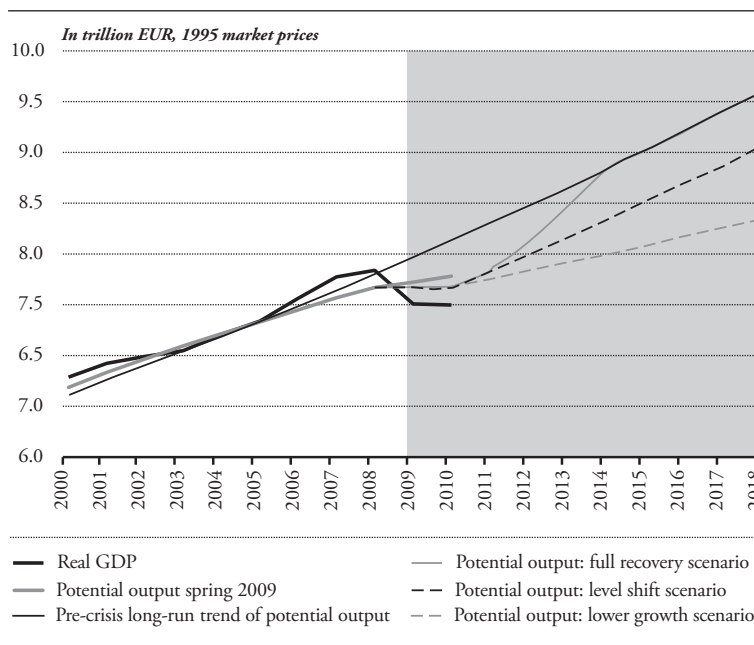


**Figure 14:** GDP Growth Oscillating around the Potential Growth Path



Source: Author's calculation.

**Figure 15:** ECB Illustration of Various Potential Growth Paths



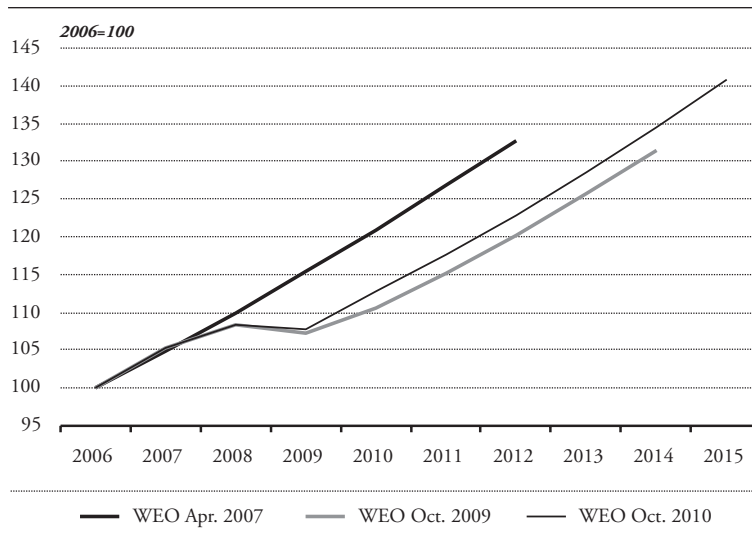
Source: ECB (2009).

But why would the potential output path suddenly fall in terms of level and growth rate? In a closed economy, this could happen only as a result of some huge supply shock, like a natural catastrophe, war, or something similar. Less dramatic factors could be a loss of skills of unemployed workers or a decline in investment following an increase in the level and volatility of interest rates. These two factors were recently mentioned as explaining the drop in potential output during the current crisis (Oeberg, 2010). However, it does not look as if these two factors could explain any large drop in potential output: both the skill loss and the interest rate effect take place only gradually.

The concept of potential output is based, however, in most cases on a single sector model. As long as we are in a closed economy, this might be a reasonable approximation. The structure of demand in such an economy changes only slowly, so that supply can gradually adjust to changes in the structure of demand. Changes in consumer preferences will, therefore, never render large parts of productive capacities superfluous.

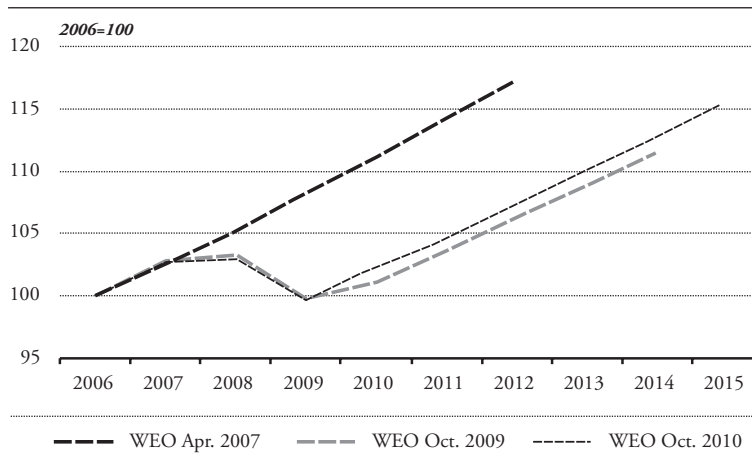
However, in an open economy, the structure of demand might suddenly change: demand for non-tradables can drop sharply, which may or may not be offset by demand for tradables. Before the current crisis, for example, several countries had experienced a construction boom. Once this growth model comes to an end, all the spare capacity in construction becomes irrelevant. Potential output not only slows, but, in fact, sharply drops. This is roughly what has happened to many countries with the onset of the crisis (Figures 16-17).

**Figure 16:** Global GDP Projections in Various Editions of the WEO - World



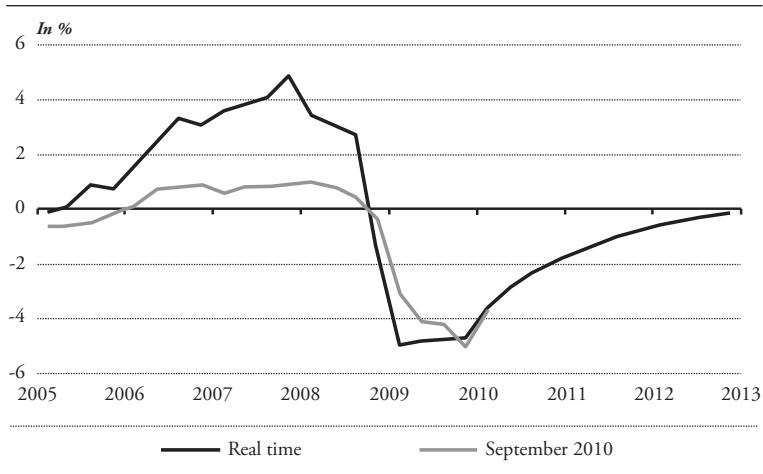
Source: World Economic Outlook Database, various editions.

**Figure 17:** Global GDP Projections in Various Editions of the WEO - Advanced Economies



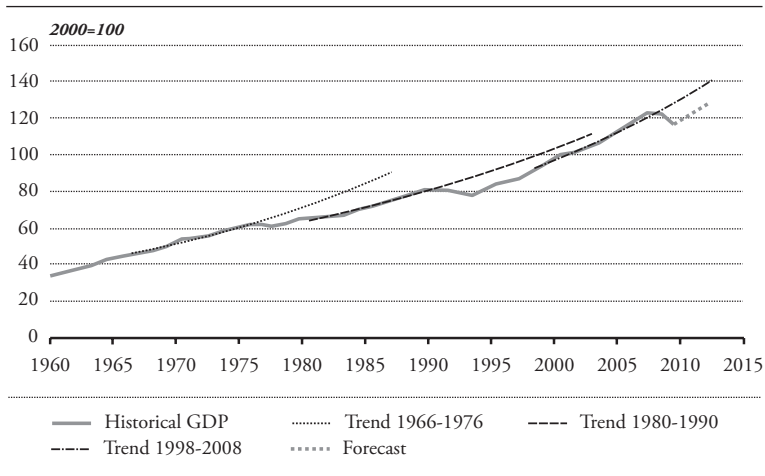
Source: World Economic Outlook Database, various editions.

**Figure 18:** Estimates of Potential Output and Gap in Sweden



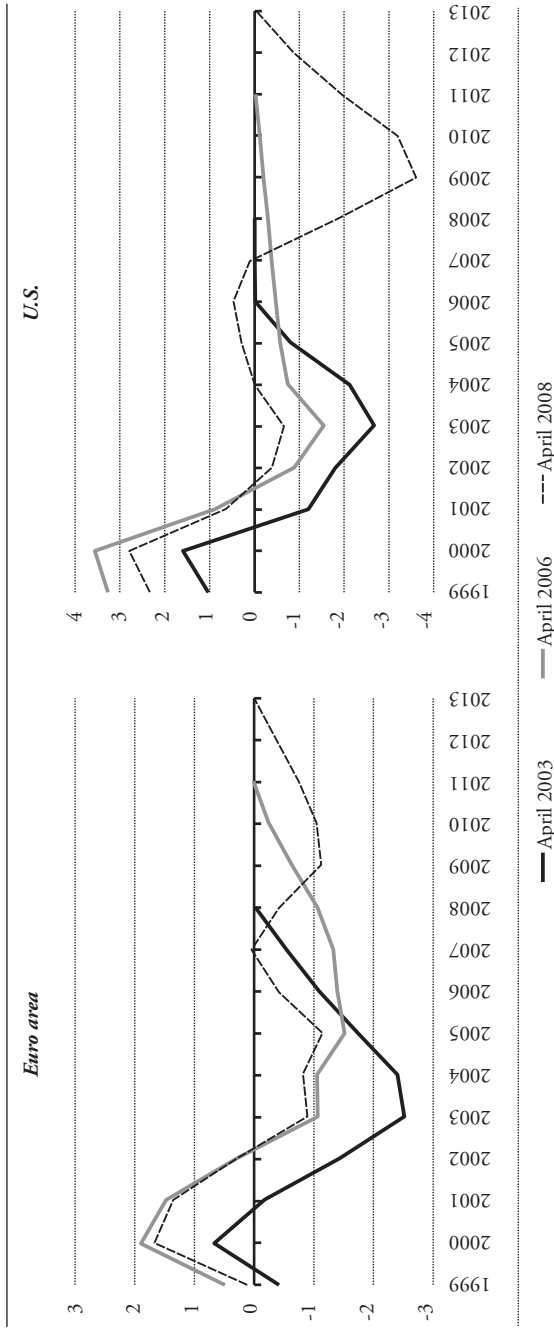
Source: Oeberg (2010).

**Figure 19:** Sweden: Estimates of Potential Output and Outcomes



Source: Oeberg (2010).

**Figure 20: Spring Editions of Output Gap Estimates by the IMF**



Note: Output gaps are defined as the percentage deviation of actual output from potential output.  
 Source: Bini Smaghi (2010).

Two conclusions follow. *Ex-ante*, meaning before the crisis occurs, a prudent estimate of structural balance should not rely just on the recent trend in output even if it was achieved with low inflation. This might be misleading, particularly if the current account is in large deficit and is worsening or the country experiences terms-of-trade gains. Low inflation might, in fact, reflect imported deflation or a real effective currency appreciation.

When calculating the underlying or structural balance, the simplest solution is to take a substantially lower growth rate than recorded at peaceful times. At least one big crisis needs to be included in the calculation of the average growth rates. One should also be aware that *ex-post* estimates of potential output and, therefore, structural balances are often substantially revised (Figures 18-20).

Another option is to correct the headline fiscal balance not only for short-term output deviations, but also for excessive current account deficits and other factors like exceptional construction and equity booms. The IMF used such an approach in its Article IV reports on Serbia and Bulgaria, in which it tried to estimate structural fiscal balance on the basis of an absorption gap that takes into account the current account position (IMF, 2010d). However, this has not yet found a wider application.

The third solution would be to use more complex models that would differentiate between potential output in the tradable and non-tradable sectors. Such models will most likely be developed in the future.

*Ex-post*, once the economy has been struck by a severe crisis, one should understand that the structural balance can change not only because of discretionary measures or predetermined adjustment of some benefits, but also because the level and the growth rate of potential output have permanently dropped. In such circumstances, the expenditure path can only temporarily be left on the previous course, but it should be clear that the accumulation of debt during that period will not automatically be offset in the future. Instead, sooner or later, the expenditure path will have to be revised down or taxes increased if

the debt is not to explode. How long automatic stabilizers could be left to work depends on the initial fiscal position. The trade-off here is between the risk of the economy going into a free-fall and the risk of it accumulating excessive debt, which could lead to another crisis.

Finally, the main lesson from this crisis is that during the times of reasonably strong growth, fiscal policies should aim at rapidly reducing public debt to safe levels. The last crisis gives an indication that these levels are much lower than previously thought. As the risk of future crisis in an environment of large capital flows is not negligible (the great moderation turned out to be a great delusion), prudent policy requires that such debt levels be reached soon and not in a distant future.

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