

THE FINANCIAL CYCLE AND THE EUROPEAN BUDGETARY REVERSAL DURING THE CRISIS: CONSEQUENCES FOR SURVEILLANCE

Niels Gilbert* and Jeroen Hessel*

We investigate from a real-time perspective the budgetary problems which emerged in EMU member states during 2008 and 2009. The estimated fiscal starting positions before the crisis were suboptimal, but do not fully explain the current problems. Another factor is the large budgetary reversal, which was sometimes larger than what budgetary rules were designed to deal with – especially in the euro area periphery. This is due to the turn of the financial cycle and the correction of macroeconomic imbalances, which have a much larger budgetary impact than normal business cycles. Financial sector bailouts only play a modest role, more important are the deep downturn and the large decline in public revenue due to weak domestic demand. Real-time estimates of the cyclically-adjusted balance are unusually unreliable during these turns of the financial cycle, due to larger unreliability of potential GDP and the larger sensitivity of public revenues. It is therefore crucial to better incorporate the financial cycle in the budgetary surveillance framework, for instance via more robust government expenditure rules.

1 Introduction

The sovereign debt crisis in the euro area is often attributed to a lack of budgetary discipline. Part of this may be because the initial stage of the debt crisis was dominated by events in Greece, where lack of discipline was indeed a major concern (Lane, 2012). In any case, this diagnosis soon led to calls for a much stricter enforcement of European budgetary rules. According to Sinn (2010), what was needed is “*a new Stability and Growth Pact, one that would be formulated to impose ironclad debt discipline*”. Since then, several improvements have been implemented, like the six-pack, two-pack and the Treaty on Stability, Coordination and Governance. These are important steps forward (De Haan *et al.*, 2012).

But as the debt crisis progressed, it was slowly recognized that lack of budgetary discipline may not have been the only reason for the budgetary problems (see also Gilbert, Hessel and Verkaart, 2013). Looking back, nobody had expected before the financial crisis that public finances would so quickly become a problem. The European Commission (2008) was still very optimistic in its public finance report from July 2008, only two months before the collapse of Lehman Brothers. The report stated: “*structural fiscal deficits are at their lowest levels since the early 1970s*”. Especially Ireland and Spain looked perfectly healthy at the time, with budget surpluses and public debts of only 25 and 36 per cent of GDP. This raises the question whether a strict enforcement of the Stability and Growth Pact (SGP) could have prevented the budgetary problems.

To answer this question, we quantify and decompose the budgetary reversal in individual EMU member states during the financial crisis in 2008 and 2009. Rather than looking at *ex post* data, we take a pragmatic *real-time* perspective. We compare the budgetary outcomes for 2009 to the European Commission forecasts from the Spring of 2008 – just a few months before the global financial crisis erupted. We argue that this real-time perspective is the best way to appreciate the sheer size of the shock. It also illustrates best the problems that policymakers faced, for several

* De Nederlandsche Bank, Economics and Research Division.

Contact details: Niels Gilbert: n.d.gilbert@dnb.nl, +31 20 524 3670; Jeroen Hessel: j.p.c.hessel@dnb.nl, +31 20 524 2828.

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reasons. First, the budgetary process is often relatively lengthy, making it difficult to implement sudden policy changes.

Policymakers therefore usually make spending and tax decisions of a longer horizon. Second, fiscal health is usually assessed over a medium-term horizon, and projections for the budget balance are very important for this. Third, projections also play a crucial role in the European budgetary surveillance process, where the cyclically-adjusted budget balance is a key indicator.

We first establish that budgetary discipline before the crisis indeed was far from ironclad. As a result, several member states did not have the budgetary position to absorb large shocks when the crisis hit. At the same time, the financial crisis caused an unusually large fiscal deterioration, which was in several cases larger than what the budgetary framework in EMU was designed to deal with. In Spring 2008, the European Commission projected a 2009 budget deficit of 1.1 per cent of GDP in the euro area. The actual outcome of the budget deficit for 2009 amounted to 6.3 per cent of GDP, which was 5.2 percentage points higher than foreseen. The deterioration was even larger in the EMU periphery. In Portugal, Ireland, Greece and Spain, the 2009 budget deficit increased by 11.2 per cent of GDP on average. Also countries that had stuck to the rules of the Stability and Growth Pact got into trouble because of this reversal.

We then argue that the unusually large budgetary reversal in some euro area countries is related to the turn of the financial cycle, which corrected the macroeconomic imbalances that had built before the crisis. By decomposing the rapid fiscal deterioration, we establish that stimulus and financial sector bailouts played only a modest role. The deterioration is primarily caused by the deep and prolonged downturn itself. Not only was the economic downturn extremely severe, in multiple countries public finances were also much more sensitive to the slowdown than expected on the basis of the standard elasticities. This effect was concentrated on the revenue side, and amounted up to 3.5 per cent of GDP in Spain and Portugal. We find that the unexpected decline in revenues is strongly correlated with the decline in domestic demand and with the size of imbalances before the crisis.

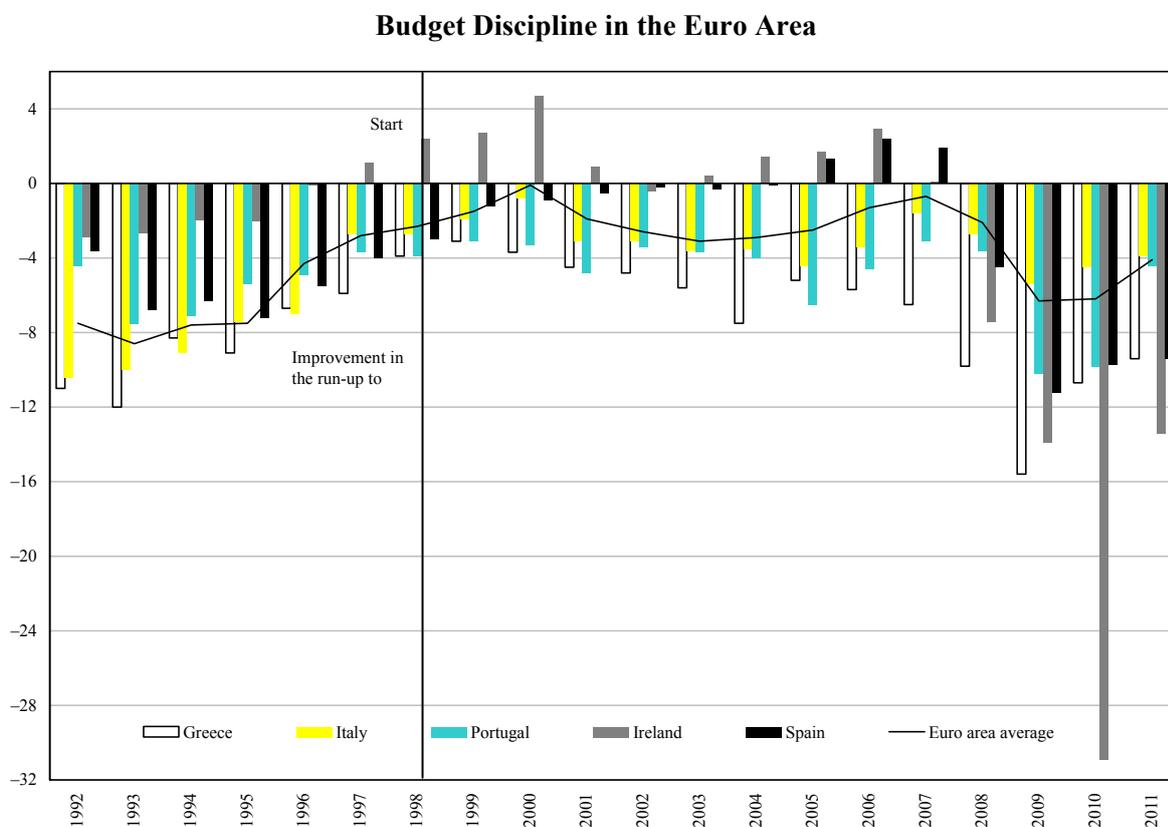
We also establish that the real-time estimates of the cyclically-adjusted balance are even more unreliable than usual during turns of the financial cycle. The real-time cyclically-adjusted balance for 2009 increased by 4.3 per cent of GDP on average, and even by 8.7 per cent on average in Greece, Ireland, Portugal and Spain. This is due to an unusually large unreliability of potential GDP during turns of the financial cycle, as well as due to a larger than normal sensitivity of public revenues. With hindsight, real-time estimates of the structural budget balance before the crisis were a near worthless indicator.

We conclude with policy implications. To prevent future budgetary crises countries must create larger buffers in good times. This does not only require iron-clad discipline, but also more robust indicators of the underlying fiscal situation. To this end, it is crucial to better incorporate the financial cycle in the budgetary surveillance framework and in the calculations of the cyclically-adjusted budget balance. It also means that more attention should be given to the growth of government expenditure, which we show to be a solid predictor of budgetary problems during 2009. Paying due attention to the financial cycle in real-time will prove complicated and requires expert judgment. We argue that such discretion is best placed in the hands of a fully independent budgetary authority (De Haan *et al.*, 2013).

2 Compliance with the SGP and the budgetary starting position

The dire fiscal situation in EMU member states is often attributed to a lack of budgetary discipline, and to some extent rightly so. Although many countries had improved their budgetary

Figure 1

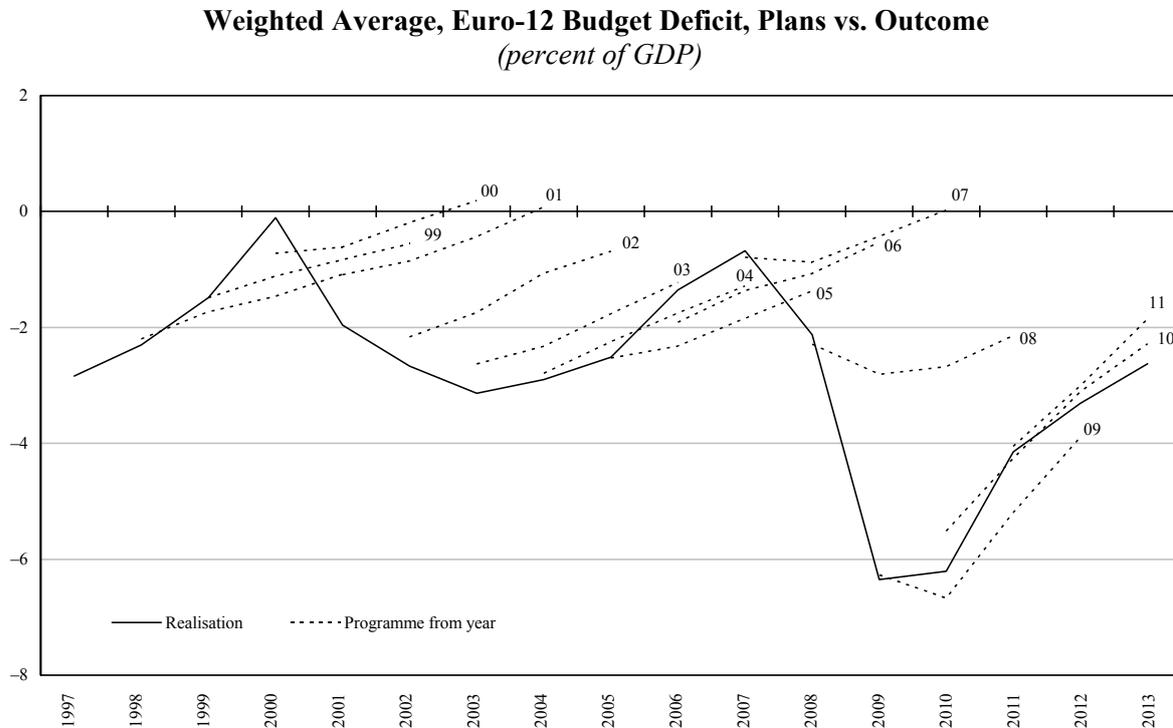


positions in the run-up towards EMU-membership (Figure 1), it is by now well documented that several countries loosened their belt considerably once their place in the monetary union was secured (CPB, 2011). Whereas EMU-accession was a credible carrot, the Stability and Growth Pact (SGP) lacked credible sanctions to enforce discipline thereafter. As is by now well-established, the Ecofin Council proved to be too politicized to provide sufficient peer pressure and to ensure an effective enforcement of EMU's budgetary rules (De Haan *et al.*, 2004). This became most clear in 2005, when the Council failed to impose sanctions when Germany and France were running excessive deficits.

Nevertheless, Figure 1 also illustrates that the 3-per-cent rule was still relatively well adhered to for the euro area as a whole. It however served more as a benchmark for the average deficit than as an upper limit. Only twice was a balanced budget within sight, in 2000 and 2007 (during economic booms), when the average euro area budget deficit dipped below 1 per cent. The preventive arm of the SGP, which stipulates that countries should aim for a balanced budget over the cycle, thus clearly failed.

The failure of the preventive arm of the SGP, and thereby the failure to create buffers in economic good times, is most clearly reflected in Figure 2. Whereas EMU member states submitted Stability Programs to the European Commission in which they outlined how they would reach a balanced (cyclically adjusted) budget balance, the budgetary adjustment that was actually implemented in practice was much less ambitious (Beetsma, Giulliodori and Wierds, 2009). An important reason behind the failure of the preventive budgetary supervision in EMU was the lack of any formal enforcement mechanism in the preventive arm of the Stability and Growth Pact (De Haan *et al.*, 2012).

Figure 2



Source: EC and national stability plans of the respective countries. Figure based on Wierds (2006).

As a result of all this, both budget deficits and government debts were much higher than they could have been if the rules of the SGP had been fully adhered to. Several EMU member states did not have the budgetary starting position that was necessary to absorb large economic shocks when the crisis hit. Only a small subsection of EMU member states had achieved their medium term objective (MTO) for the cyclically-adjusted budget balance in 2007, and some countries still had an actual budget deficit above the threshold of 3 per cent of GDP (Table 1, which is based on numbers from the European Commission Spring Forecast 2008 – with the exception of Greece – and thereby provides a real-time estimate of the budgetary situation). Government debt was also too high in many countries, with an average debt ratio of 66 per cent of GDP for the euro area as a whole (see Table 1).

The bad starting position was most obvious in some of the current problem countries: Greece, Portugal and Italy. But it was completely absent in Spain and Ireland, that had budget surpluses and very low government debts in 2007. Indeed, there turns out to be very little correlation between the budgetary performance before the crisis and the size of sovereign bond spreads now (Pisani-Ferry, 2012). The countries with the most infringements of the SGP before the crisis were Germany and France. Lack of budgetary discipline is therefore not sufficient to explain the budgetary crisis that started during 2009.

3 Major budgetary reversal during the crisis

Another important cause of the current debt crisis is the large and sudden deterioration of the fiscal position that occurred as a result of the global financial crisis (Gilbert and Hessel, 2012). The

Table 1

Budgetary Starting Situation in 2007
(percent of GDP)

	GR*	PT	FRA	ITA	EMU	GER	NL	IRL	SP
Budget balance	-6.4	-3.1	-2.7	-1.5	-0.7	0.3	0.2	0.1	1.9
Cyclically-adjusted budget balance	-7.1	-2.6	-2.6	-1.3	-0.8	-0.1	0.1	0	2.1
Government debt	105	68.3	63.9	104	66.2	64.9	45.3	25	36.1

Source: EC Spring Forecast (2008).

* For Greece, numbers from after the revision of budgetary aggregates in 2009 are reported.

2009 recession was a major one, with an 4.4 per cent decline of euro area GDP in 2009. The average budget deficit increased from 2.1 in 2008 to 6.3 per cent in 2009. Those are big numbers. Yet, the actual shock experienced by policy makers was even bigger. These *ex post* numbers for 2009 do not fully capture this: part of the shock for instance already took place in the second half of 2008.

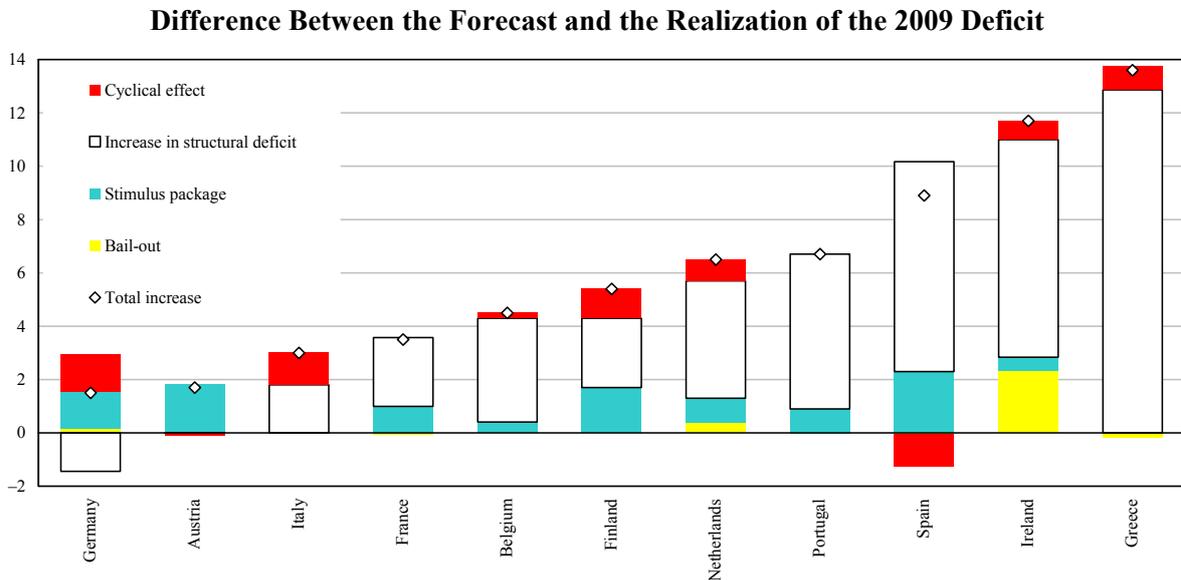
Perhaps the best way to truly capture the severity of a shock is therefore to compare what actually happened to what was expected to happen in the plans and projections of policymakers. The European Commission was still relatively optimistic in the 2008 Spring Forecast, just a few months before the collapse of Lehman Brothers. The Spring Forecasts expected GDP growth of 1.7 in 2008 and 1.5 per cent in 2009. The average budget deficit in 2009 was projected to be only 1.1 per cent of GDP for the euro area, which would have been the third- lowest deficit since the inception of EMU.

Unfortunately, the actual deficits for 2009 were much larger than foreseen just before the crisis. The average budget deficit for the euro area eventually amounted to 6.3 per cent of GDP for 2009, which is 5.2 per cent higher than foreseen. The budgetary effects of the European stimulus package and of financial sector support explain part of the increase in the deficit in almost all countries (Figure 3). But with the exception of Germany and Austria, most countries had an even larger endogenous increase in the budget deficit. As a result of this increase, almost all member states breached the 3-per-cent threshold for the budget deficit in 2009, including the countries that stuck to the rules before the crisis and were expecting to run surpluses. EMU countries would therefore only have been able to stay within the 3-per-cent deficit ceiling if they had originally targeted – on average – a surplus of over 2 per cent of GDP for 2009.

The differences between EMU member states are surprisingly large (Figure 3). The deterioration of public finances was by far the largest in most of the countries that are currently under pressure from financial markets, with the exception of Italy where the increase in the deficit was relatively contained. In Portugal, Ireland, Greece and Spain, the budget deficit for 2009 increased by an enormous 11.2 per cent of GDP on average.¹ In these countries, by far the largest part of the increase in the deficit was endogenous. The budgetary reversal was in some cases much larger than what the budgetary rules were designed to deal with. The higher deficits are also the main factor behind the substantial increase in government debt in the euro area. The average debt in the euro area increased by almost 22 per cent of GDP between 2007 and 2011. In Portugal,

¹ The situation in Greece differs in one important aspect from the situation in the other countries, as the deterioration of the (actual) deficit is partly driven by an upward revision of the deficit figures for previous years.

Figure 3



Sources: EC, Eurostat. Calculated between the projections in the European Commission Spring Forecasts 2008 and the realizations in the Spring Forecast 2012.

Ireland, Greece and Spain the debt ratio increased by 51.2 per cent of GDP on average between 2007 and 2011. Budgetary stimulus packages played a marginal role and the financial sector bailout only had a significant effect on debt in Ireland, but the Irish debt also increased strongly without these costs.² These results are in line with Reinhart and Rogoff (2009a, 2009b), who show that financial crises usually lead to a large increase in government debt, caused primarily not by financial sector bailouts but by the deep and prolonged economic downturn.

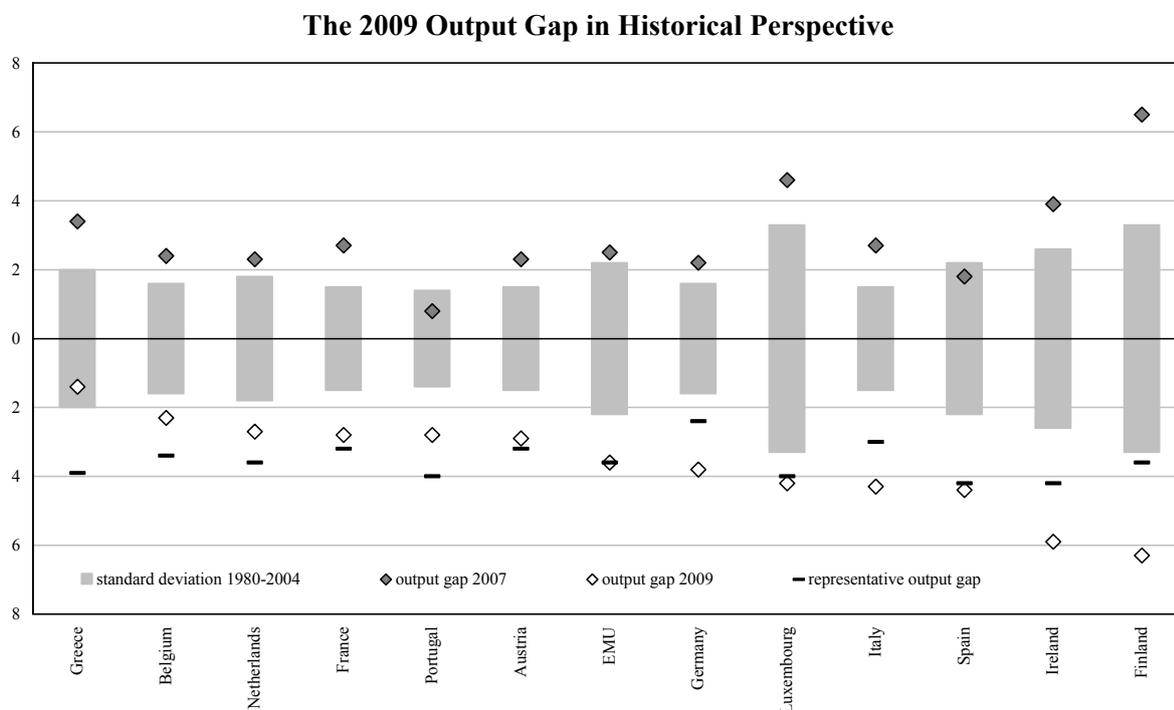
Remarkably, a major share of the deterioration of the budget balance translated into a deterioration of the cyclically-adjusted budget balance (Figure 3) – which should in theory be immune to the cycle. The estimated cyclically-adjusted deficit for 2009 increased by 4.3 per cent of GDP on average, excluding the effects of bank bailouts and stimulation packages. But the increase was an even larger 8.7 per cent of GDP on average in Portugal, Ireland, Greece and Spain. While it is well-known that the cyclically-adjusted deficit can be unreliable in real time, especially around turning points in the business cycle (Hughes Hallet, Kattai and Lewis, 2012), it is not familiar that the uncertainty can be this large. Even the countries that fulfilled all the requirements of the SGP and thought they had an adequate safety margin, must conclude in retrospect that the figures provided a much too rosy picture. Even ironclad enforcement of the requirements of the SGP could therefore not have prevented all problems.

4 Financial cycle affected the size of the shock

An important question is *why* the economic downturn could cause such a large swing in the budgetary position of member states. This seems to be because the crisis was not a turn in the

² Fears of bigger financial sector losses could of course have contributed to rising bond yields in various countries; in addition their might also still be an unpaid bill in several countries.

Figure 4

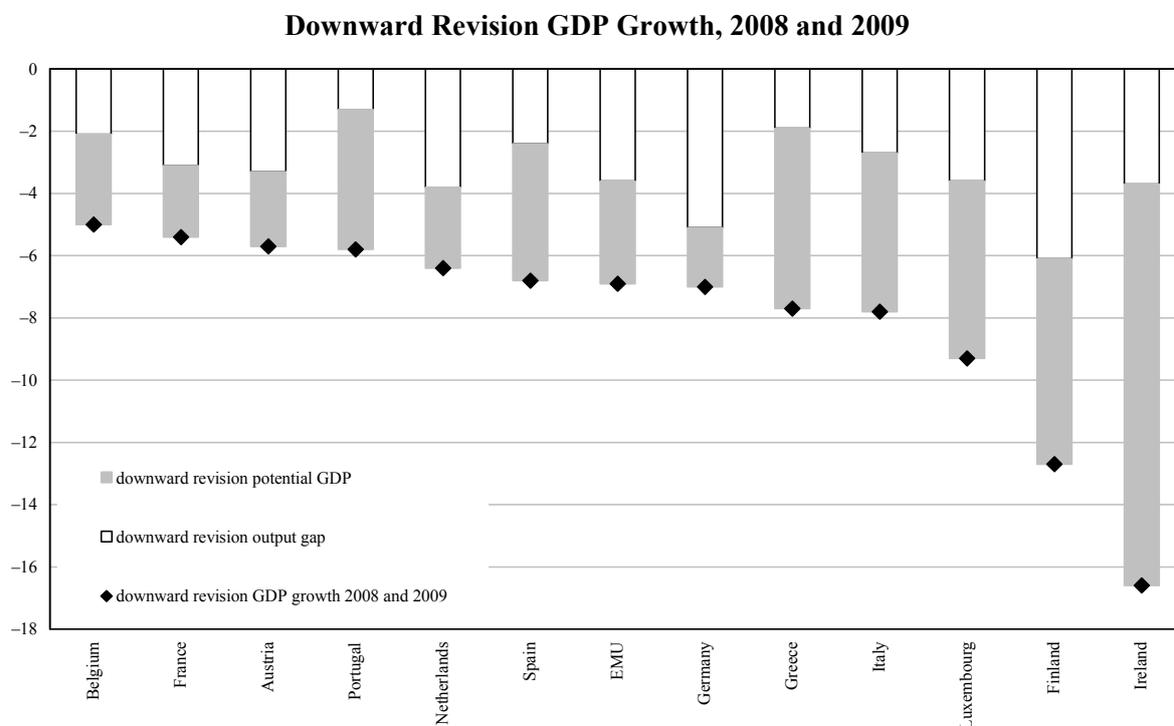


Source: The standard deviation and the representative output gap come from European Commission (2006), *Public Finances in EMU 2006*. The output gaps from 2007 and 2009 come from the Spring Forecasts (2012).

normal business cycle, but a turn in the financial cycle. This turn led globally to a correction of the macroeconomic and financial imbalances that had been building over much of the decade before the crisis. In the euro area, this correction was largest in the countries in the periphery, that had large current account deficits, driven by strong and persistent growth in credit, house prices and unit labour costs. Recent research into the characteristic of the financial cycle show that i) it is driven by growth in credit and house prices, ii) it has a much longer duration and a wider amplitude than normal business cycles, and iii) the correction of the financial cycle is often accompanied by a financial crisis (Drehmann, Borio and Tsatsaronis, 2012; Borio, 2012a,b). Recent research also underlines that a turn of the financial cycle has a much larger negative impact on public finances than a turn of the normal business cycle (Borio, 2012b; Bénétrix and Lane, 2012). As the normal methods of cyclical adjustment do not correct properly for the budgetary effects of the financial cycle, the real-time estimates of the cyclically-adjusted balance are even more unreliable around a turn of the financial cycle than usual.

The fiscal effects of the financial cycle run through two channels. This paragraph describes the first channel, which is GDP growth. The financial crisis was an unusually large negative shock. One may wonder whether the medium-term objectives for the cyclically-adjusted budget balance under the SGP provide an adequate safety margin for such big shocks. After all, they were calculated over the period 1980-2005 (European Commission, 2006), when growth was relatively stable due to the so-called Great Moderation. A comparison of *ex post* realizations of the output gap indeed underlines that the cyclical swing surrounding the financial crisis was larger than usual (Figure 4). In most countries, the output gap *before* the crisis – in 2007 – was more positive than the historical standard deviation between 1980 and 2004. Meanwhile, the output gap *during* the crisis – in 2009 – was much more negative than usual. Nevertheless, and surprisingly, the negative

Figure 5



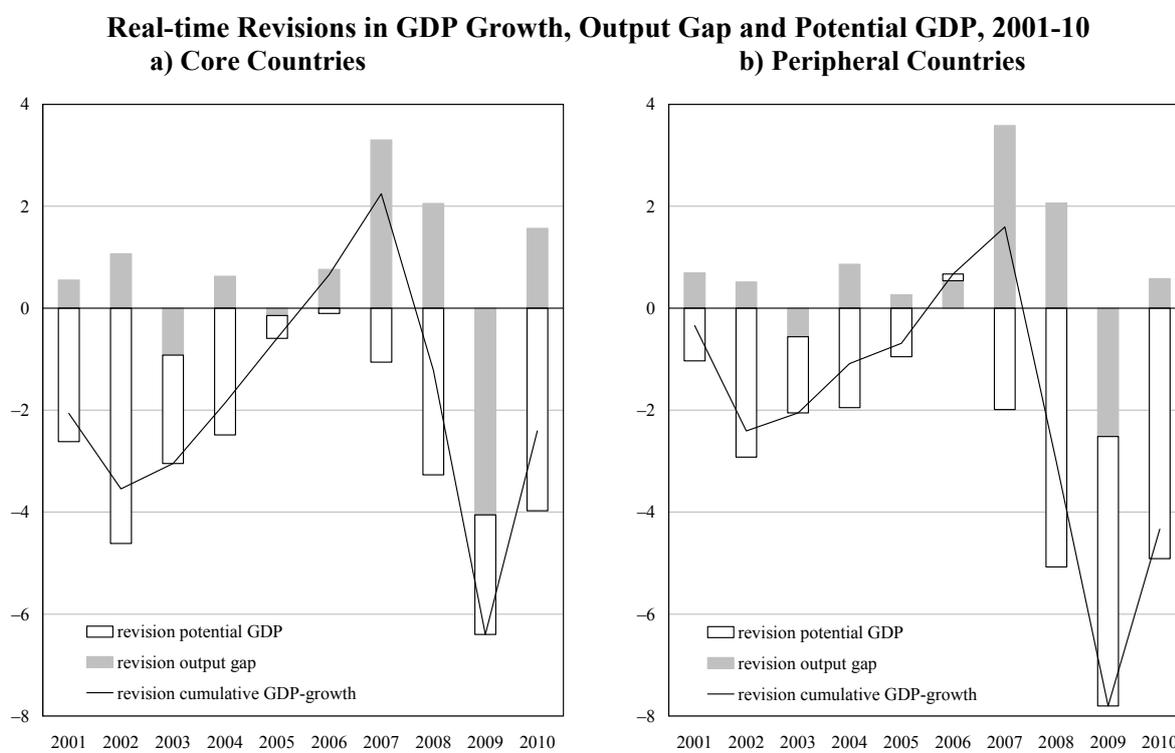
Difference between projections in the Spring Forecasts 2008 and the outcome in the Spring Forecast 2012. The output gap and potential GDP are measured in levels, while GDP growth is measured as the cumulative growth in 2008 and 2009.

output gap in 2009 was for most countries more or less comparable with the so-called *representative* output gap that the European Commission uses to calculate the individual benchmarks (Medium Term Objectives, or MTOs) for the cyclically-adjusted budget balance.³ In theory, the MTOs should therefore have provided an adequate safety margin for most countries.

Crucially however, the change in the *ex post* calculations of the output gap during the crisis do not capture the entirety of the recession. They may therefore underestimate the potential budgetary impact. In *real time*, the slowdown in growth *vis-à-vis* the projections was much larger than can be derived from the (*ex post*) output gap alone. Total GDP-growth over 2008 and 2009 for the euro area was for instance almost 7 percentage points lower than projected before the crisis (Figure 5). These slowdowns also lead to a downward revision of the real-time structural balance, because the real-time estimate of potential growth declines (European Commission, 2007). Potential growth is overestimated during upswings, for instance because high growth is projected to continue. The slowdown leads to the realization that growth was more temporary than previously thought. This has also played an important role during the financial crisis (Figure 5). In addition to the decline in the output gap, the level of potential GDP was also revised downward. In most countries, the downward revision of potential GDP was even larger than the revision of the output gap. The downward revision of potential GDP is one of the explanations why the budgetary safety margins that were estimated as adequate in real time, turned out to be inadequate *ex post*.

³ The representative output gap for each member state is calculated as the average of the highest and the lowest value of three alternatives: i) the largest negative output gap in the period 1980-2004, ii) the unweighted average of the largest negative output gaps in the period 1980-2004 or iii) two times the country-specific standard deviation of the output gap taken with minus sign. See European Commission (2006).

Figure 6

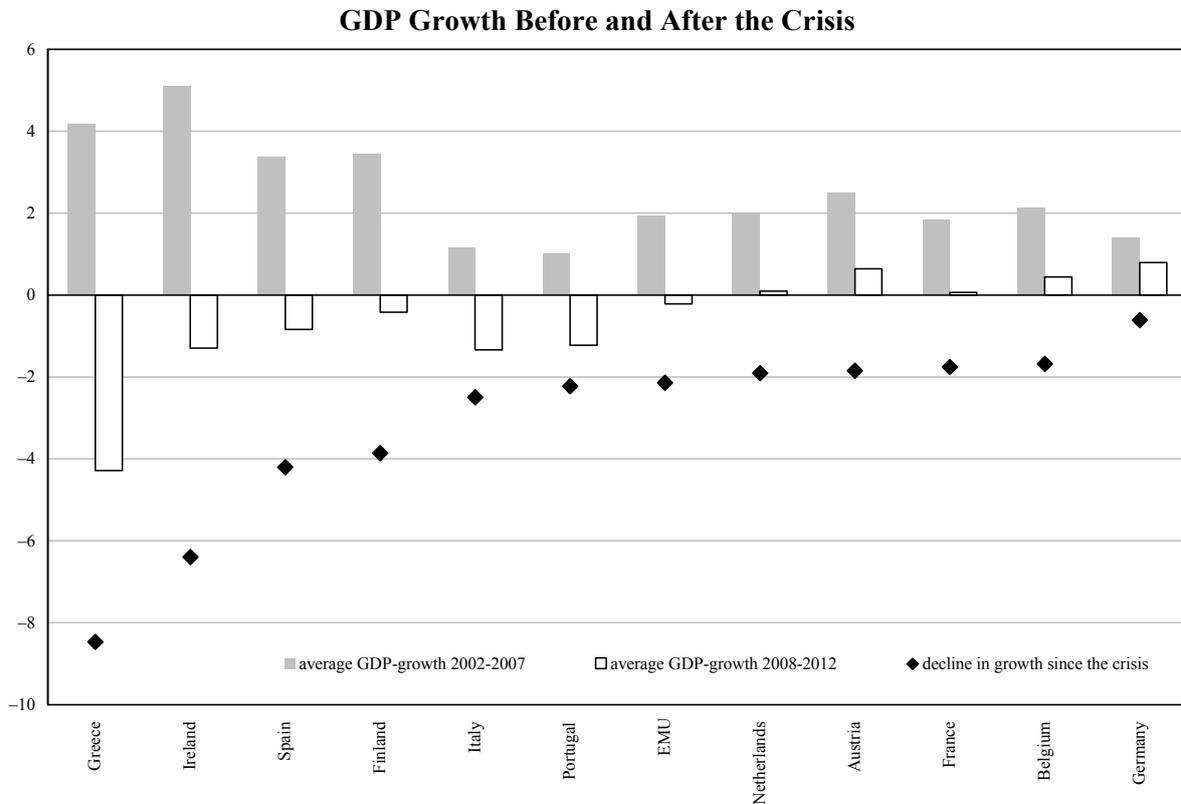


Explanation: Calculated is the difference between i) the projection in the Spring Forecast in the year preceding the relevant year ($t-1$) and ii) the outcomes in the Spring Forecast two years after the relevant year ($t+2$). The output gap and potential GDP are measured in levels, while GDP-growth is measured as the cumulative growth in the relevant year and in the year before. The core countries are Austria, Belgium, Germany, the Netherlands, Finland, France and Luxembourg. The peripheral countries are Greece, Ireland, Italy, Portugal and Spain.

The unreliability of the cyclically-adjusted budget balance is by now a well-known phenomenon, that also played an important role during the European recession in 2002. However, the unreliability of potential GDP in real time may be larger than usual during a major economic shock like the financial crisis. Indeed, recent research suggest that normal calculations of potential GDP do not adequately take into account the effects of the financial cycle (Borio, Disyatat and Juselius, 2013). The conventional methods to calculate potential GDP are suitable for fluctuations at the frequency of the business cycle, which is thought to be up to 8 years. By contrast, the frequency of the financial cycle is thought to be roughly between 16 and 20 years. These longer-term fluctuations in the financial cycle therefore appear to be of a structural nature in the conventional methods of cyclical adjustment.

A comparison of the real-time revisions of potential GDP since the start of EMU indeed provides some indications that potential GDP – and hence the structural budget balance – is more unreliable around turning points for the financial cycle (Figure 6). We repeat our calculations on the downward revisions in growth for 2009 above for all years since the start of EMU. Calculated is the difference between i) the projection in the Spring Forecast in the year preceding the relevant year ($t-1$) and ii) the outcomes in the Spring Forecast two years after the relevant year ($t+2$). As expected, the downward revisions of potential GDP can be substantial, especially around turning points in the business cycle. For the *core* countries in the euro area, the downward revision of potential GDP in 2009 was not particularly large (Figure 6a). It was smaller than the downward

Figure 7

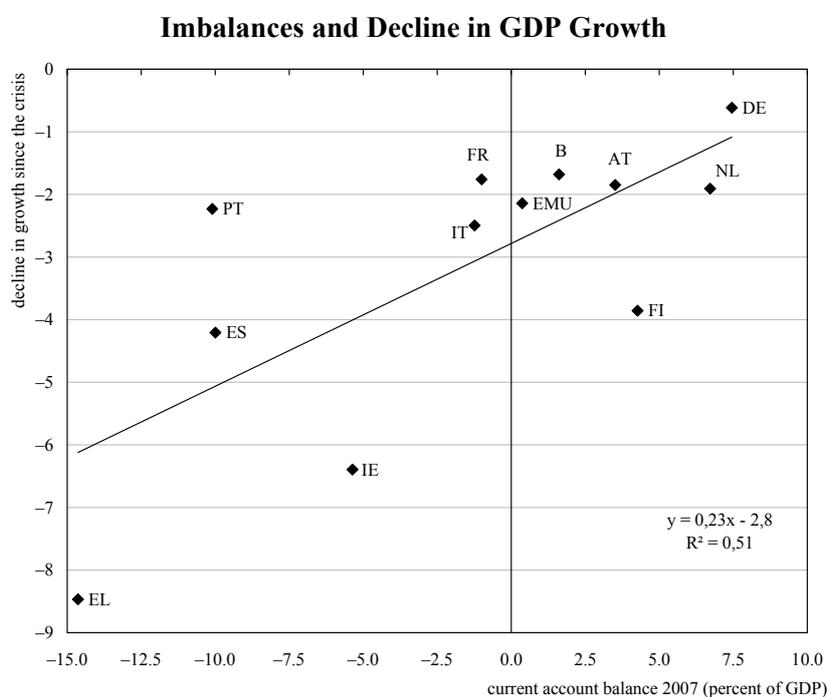


revision in 2002, when projections turned out to be overly optimistic after the bursting of the dotcom-bubble. As the macroeconomic and financial imbalances in these core countries were relatively small, the financial cycle was also relatively mild. The downward revision of growth for 2009 was therefore mainly of a cyclical nature.

By contrast, it is striking that the downward revision of potential GDP in 2009 was – on average – far larger in the countries in the periphery of the euro area (Figure 6b). For these countries, the downward revision is larger than in 2002, when several of these countries experienced only mild recessions on the back of strong growth in house prices, credit and domestic demand. But as these countries had accumulated large macroeconomic and financial imbalances before the crisis, the turn of the financial cycle was especially severe. While the total downward revision in growth was – on average – only somewhat higher than in the core countries, the downward revision of potential GDP is much larger (Figure 6b). The slowdown in the periphery is more of a structural nature than of a cyclical nature.

Indeed, several of the countries in the periphery have experienced a much larger and much longer lasting slowdown in GDP growth, due to the turn of the financial cycle and the correction of macroeconomic imbalances (Figure 7). While several peripheral countries were growing rapidly in the five years before the crisis (2002-07), all of them have experienced negative GDP-growth on average in the five years since the crisis (2008-12). By contrast, Germany has experienced only a very gradual decline in average GDP-growth, notwithstanding the large decline in 2009 itself. There is indeed a relatively clear relationship between this decline in average GDP growth and the size of the macroeconomic imbalances before the crisis – proxied by the current account balance in 2007 (Figure 8). Part of the downward revisions in potential GDP can thus be traced back to the financial cycle.

Figure 8



How has this affected the change in the budget deficit for 2009? The downward revision of potential growth explains an important part of the increase in the structural budget balances in many member states (Figure 9). The effect amount to around 2.5 per cent of GDP on average. However, it is far from the only explanation for the budgetary reversal during the crisis, as the downward revision of potential GDP explains only part of the structural budgetary deterioration. Especially in the countries in the periphery of the euro area, other factors have been more important. This brings us to the

second channel through which the financial cycle affects public finances.

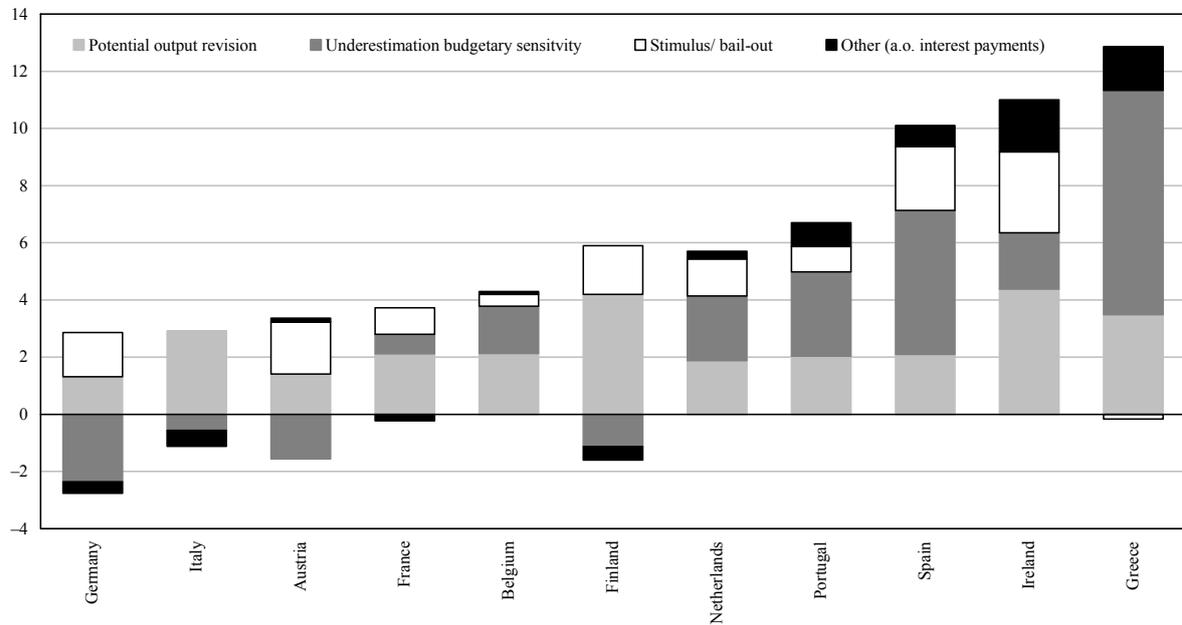
The second reason for the large swing in the budget balances is that public finances were much more sensitive to the slowdown than expected. In many countries, the increase in the budget deficit was larger than could be foreseen on the basis of the decrease in GDP growth and the standard budgetary sensitivities that had been estimated over a longer period. This underestimation of the budgetary sensitivity amounted to around 1.5 per cent of GDP on average in the euro area, but the effects differ widely between euro area countries (Figure 9). There was almost no underestimation in France and Italy, while the budgetary sensitivity was even overestimated in Germany, Austria and Finland. By contrast, the underestimation was especially severe in the peripheral countries Portugal, Spain and Greece. Together with the decline of potential GDP, this underestimation explains why the budgetary reversal in these countries was so large, and why the estimated structural deficit increased so much.

This higher sensitivity was concentrated on the revenue side, with the exception of Greece, where expenditure increased due to data revisions, and Belgium (Figure 10).⁴ This confirms that the underestimation is not related to lack of budgetary discipline, as this would primarily lead to higher government spending. The effect was most pronounced in the countries that are currently under pressure from financial markets, and amounted up to a massive 3.5 per cent of GDP in Spain and Portugal.

⁴ The budgetary sensitivity tells us how much the primary EMU-balance changes when growth (or formally, the output gap) changes 1 percentage point and is built up by combining estimates of revenue and expenditure sensitivities. Sensitivities are calculated by computing the respective elasticities and then weighing them by their share in GDP (EC, 2006). We compute the *ex post* elasticity of expenditure as follows: $((2009 \text{ primary expenditures} - \text{stimulus} - \text{bail-out}) - \text{forecasted } 2009 \text{ primary expenditures}) / \text{forecasted } 2009 \text{ primary expenditures}$. The weight used to translate this into a sensitivity is the average share of primary expenditure (minus stimulus and bail-out costs) in GDP in the forecast for 2009 and its realization. Revenue sensitivity is calculated similarly.

Figure 9

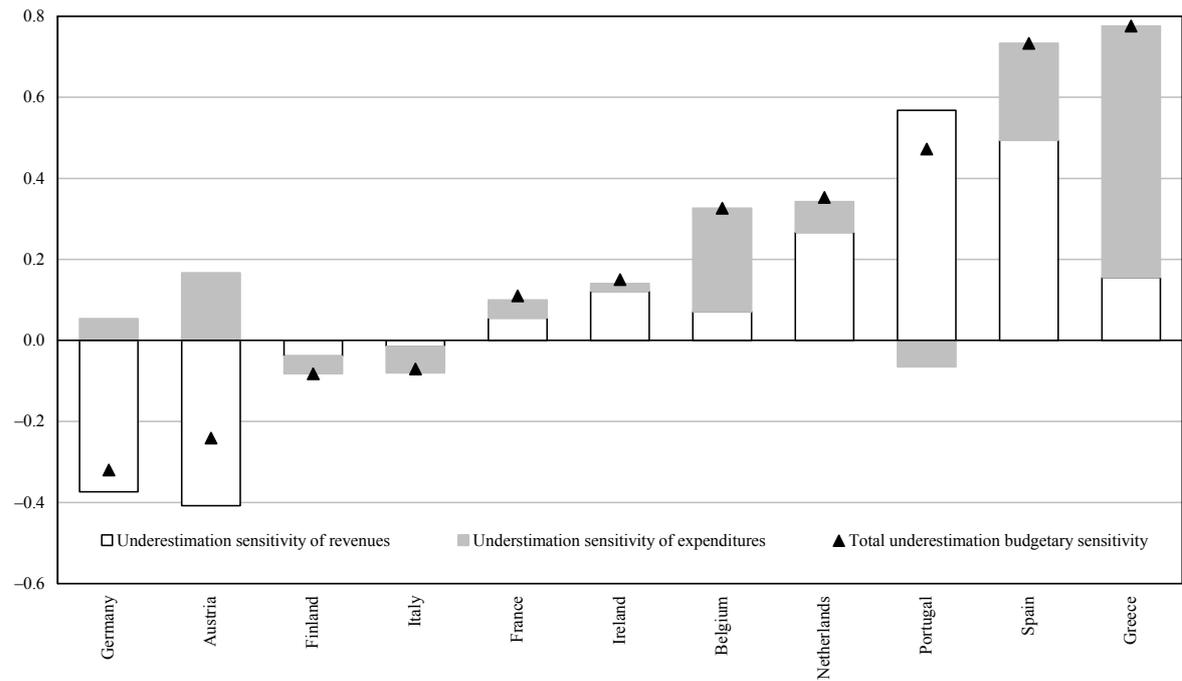
Deterioration of Structural Budget Balance, 2009



Sources: EC, Eurostat, own calculations. Calculated between the projections in the European Commission Spring Forecasts 2008 and the realizations in the Spring Forecasts 2012.

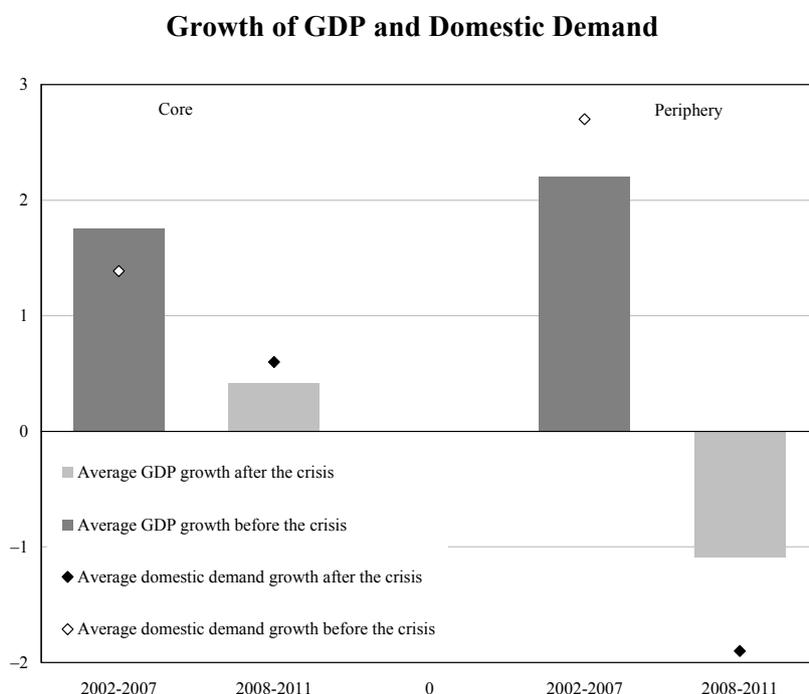
Figure 10

Underestimation of Budgetary Sensitivities, 2009



Source: EC, own calculations.

Figure 11 5 **Financial cycle affected government revenue**



The explanation for the unusual decline in revenue is again that the recession in 2009 coincided with a severe turn of the financial cycle, especially in Greece, Ireland, Italy, Portugal and Spain. Recent research shows that such financial cycles have large effects on government revenues that go beyond the effects of GDP growth described above (Bénétrix and Lane, 2011; Borio, 2012b). Booms lead to a large temporary increase in government revenues.

Rising asset prices increase revenues in capital gains and transaction taxes, while wealth effects drive up the share of domestic demand in the economy and thereby the revenues from indirect taxes (Eschenbach and Schuknecht, 2004; Dobrescu and Salman, 2011; Lendvai, Moulin and Turrini, 2011). These temporary revenues are usually mistaken for structural improvements. The current methods of cyclical adjustment do not only overestimate potential GDP during the upswing in the financial cycle (as mentioned above), they do not correct properly for the variation in the sensitivity of government revenue either. The temporary tax windfalls therefore usually lead to procyclical government spending, until the turn in the financial cycle causes an unusually strong decline in revenue.

The periphery of the Eurozone indeed experienced a much stronger swing in domestic demand than other member states, due to the correction of macroeconomic imbalances (Figure 11). For core countries of the euro area, the average decline in domestic demand growth since the financial crisis is somewhat smaller than the decline in GDP growth. By contrast, for the periphery of the Eurozone the decline in domestic demand growth is much larger than the – already sizeable – decline in GDP growth. Domestic absorption was unusually strong in the periode 2002-07, but this has reversed dramatically in the period 2008-11. This is a major factor behind the unexpected decline in revenues. The size of this unexpected decline in revenues in 2009 is strongly correlated with the size of imbalances before the crisis – again proxied by the current account balance in 2007 (Figure 12).

6 Conclusion and policy implications

Our analysis implies that the improvements in budgetary discipline that have been implemented since the start of the debt crisis are very necessary, but may not be sufficient to

prevent the type of budgetary problems that we currently face.⁵ The preventive arm of the Stability and Growth Pact has been strengthened, but continues to rely strongly on estimates of the cyclically-adjusted balance (CAB). The budgetary effects of the financial cycle have not yet been incorporated in the framework.

While reliance on the CAB makes perfect sense in theory,⁶ the CAB proves very unreliable in real time, especially around turns in the financial cycle. The implications hereof are illustrated in Figure 13. The real-time estimate of the 2008

CAB is only slightly correlated with the actual deficit during 2009. Countries that were thought to have a solid structural fiscal position on average did not do much better during the crisis than the countries without such a solid position. The practical usefulness of (unadjusted) real-time estimates of the CAB therefore seems limited under the current circumstances. Financial cycles worsen the unreliability of the cyclically-adjusted budget balance considerably, especially in real time. This is not only due to a larger unreliability of potential growth around turning points of the financial cycle, but also because the larger sensitivity of public revenues.

European budgetary surveillance should therefore pay much more attention to the effects of the financial cycle on public finances. This could eventually prevent that temporary revenues are spent, and contribute to higher buffers in good times. One potential avenue to strengthen surveillance is to better assess the effects of the financial cycle on potential growth, public revenue and on estimates of the CAB. For example Bénétrix and Lane (2011), Dobrescu and Salman (2011) and Lendvai, Moulin and Turrini (2011) already try to improve the estimation of the structural budget balance by including indicators for the financial cycle, such as credit growth, current account balances or domestic absorption gaps. This improves the *ex post* estimation of the structural position, sometimes by up to several percentage points. However, there is no evidence yet on how such estimates behave *in real time*. The unreliability may still be relatively high, because it remains difficult to measure the exact size of financial imbalances in real time. This is an important question for further research.

⁵ The new rules are included in the so-called sixpack, two-pack and fiscal compact.

⁶ As one might expect, the *ex post* estimate of the 2008 CAB (the underlying budgetary “starting position” before the crisis) is strongly correlated with the actual deficit during 2009 (correlation of 0.93). Countries with better starting positions thus also fared better during the crisis.

Figure 12

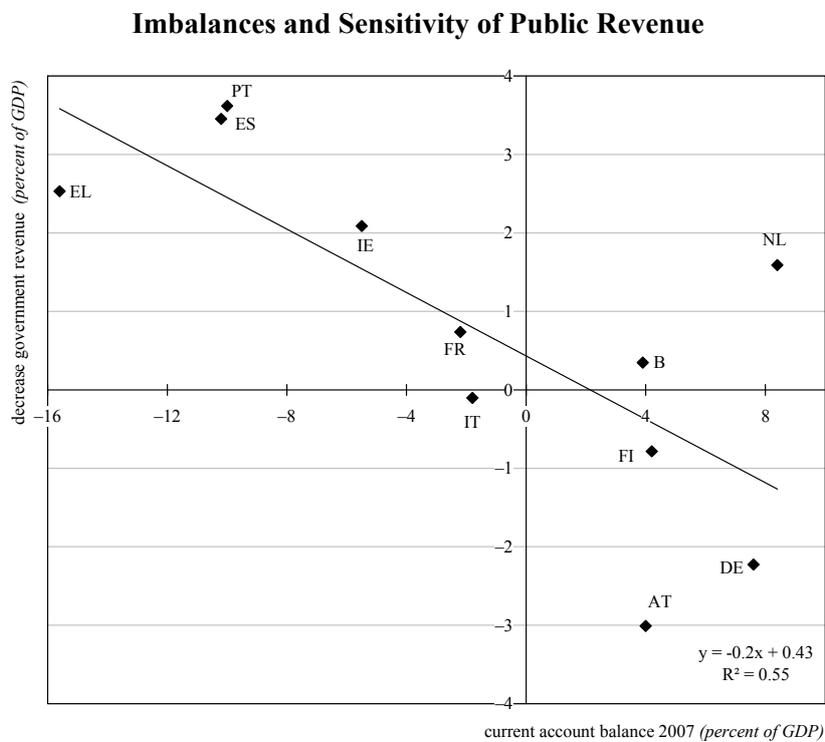
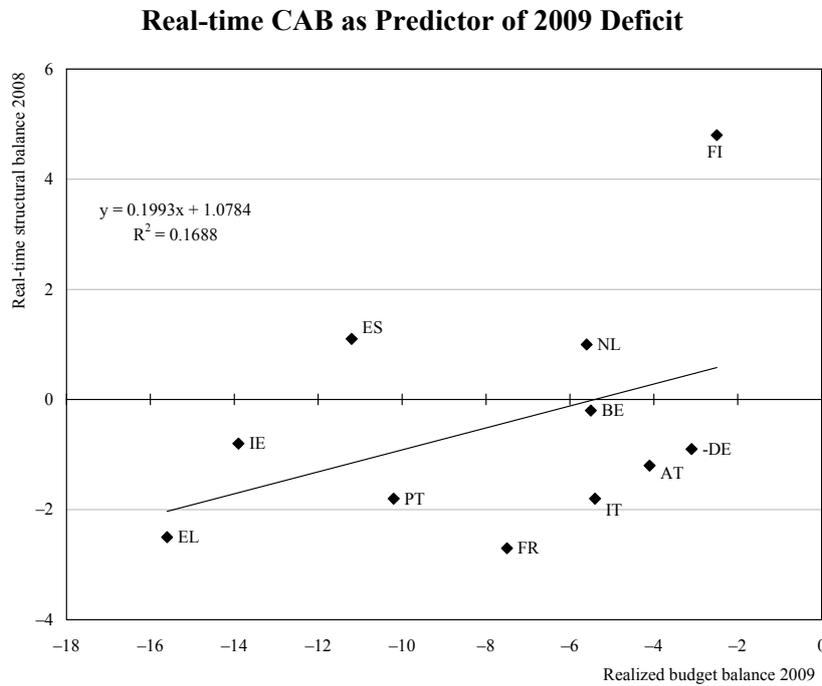
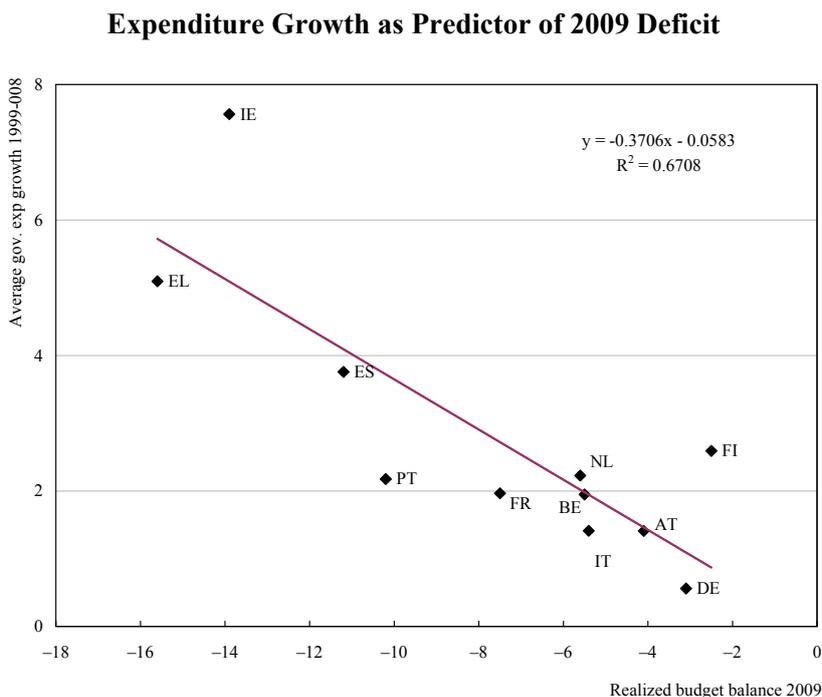


Figure 13



Source: EC Spring Forecast 2008, Eurostat.

Figure 14



Another possible avenue is to develop complementary, more robust indicators of the health of public finances. It seems particularly worthwhile to keep an eye on real public expenditure growth. While the faults of the CAB mainly lie on the revenue side, the expenditure side of the budget is less dependent on cyclical developments and offers a wider range of possibilities for discretionary policies (CESifo, 2004). As shown in Figure 14, the annual growth of government expenditures in the years before the crisis (1999-2008) is a surprisingly good predictor of fiscal developments during the crisis. Countries with high expenditure growth before the crisis fared badly, as this expenditure growth proved unsustainable and backfired when revenues decline during the crisis.

From this perspective, it is a major improvement that the Stability and Growth Pact now also contains an expenditure benchmark. This stipulates that annual expenditure growth net of discretionary revenue measures cannot exceed a reference rate of potential GDP growth (Pench, 2012). Although this still makes the rule dependent on (some sort of average of) real-time

estimates of potential GDP, it is not dependent on budgetary sensitivities. In this way, one major source of uncertainty is removed. As shown by Hauptmeier *et al.* (2010) a real-time expenditure rule would have performed decently in the first decade of EMU. It is however a missed opportunity that the expenditure benchmark will be used only to evaluate progress towards the MTO. The monitoring of expenditures will therefore still only play a secondary role in the current SGP (Schuknecht *et al.*, 2011).

A better implementation of budgetary rules and a better assessment of the budgetary effects of the financial cycle would create a larger safety cushion against major shocks. However, it requires unrealistically high budget surpluses to cushion a budgetary reversal as large as the euro area periphery experienced during the crisis. It therefore is at least as important to reduce the risks of macroeconomic and financial imbalances themselves. To some extent, stricter fiscal discipline might help prevent busts, as booms will no longer be fuelled by excessive government expenditures. But additional improvements in the governance of the Eurozone is necessary. In this respect, especially the macroeconomic imbalances procedure (MIP) offer clear steps in the right direction. The MIP provides a starting point to recognize persistent divergences. At the same time, member states should become much better equipped to contain financial cycles within the euro area. Especially strong macro prudential policy frameworks are very important instruments to counteract financial cycles.

Finally, a thorough assessment of the budgetary effects of the financial cycle – such as the *real-time* assessment of potential growth and financial imbalances – will not be easy and will most likely require discretionary expert judgment. Any procedure with room for discretion also creates room for political games. This risk only increases further due to the long duration of financial cycle, which makes it tempting for policymakers and politicians to “decide” that the unusually high growth of GDP and of government revenues is structural. As argued by Lane (2010) and De Haan *et al.* (2012, 2013), responsibility for this assessment should therefore preferably be placed in the hands of a budgetary authority with both the required expertise and some kind of formal independence.

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