

# VU Research Portal

## Changes to Europe's macro-fiscal framework in response to the crisis

Gradus, R.H.J.M.; Beetsma, R.

**published in**  
CESifo Forum  
2012

**document version**  
Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

### **citation for published version (APA)**

Gradus, R. H. J. M., & Beetsma, R. (2012). Changes to Europe's macro-fiscal framework in response to the crisis. *CESifo Forum*, 13, 19-25.  
[http://www.cda.nl/fileadmin/Upload/wi/Gradus\\_en\\_Beetsma\\_in\\_CESifo\\_2012\\_A\\_discussion\\_to\\_the\\_changes\\_to\\_europes\\_macro.pdf](http://www.cda.nl/fileadmin/Upload/wi/Gradus_en_Beetsma_in_CESifo_2012_A_discussion_to_the_changes_to_europes_macro.pdf)

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

**E-mail address:**  
[vuresearchportal.ub@vu.nl](mailto:vuresearchportal.ub@vu.nl)

## A DISCUSSION OF THE CHANGES TO EUROPE'S MACRO-FISCAL FRAMEWORK IN RESPONSE TO THE CRISIS

ROEL BEETSMA\* AND  
RAYMOND GRADUS\*\*

### Introduction

While only few economists foresaw the economic and financial crisis that started with the problems in the sub-prime mortgage market in the United States, even fewer predicted Europe's sovereign debt crisis. Since the start of Europe's Economic and Monetary Union (EMU) interest rate differentials on euro-area sovereign debt have been very small, and they remained small even after many violations of the Stability and Growth Pact (SGP). However, the debt crisis has shown that financial markets and politicians alike have collectively stuck their heads in the sand. Financial markets thought that public debt was riskless, which turned out to be blatantly wrong, despite the fact that other countries provided bail-out funds to countries in trouble. Politicians treated the SGP as a collective enemy, rather than taking ownership of the constraints that it imposes. While the consequences were manageable as long as the rest of the world economy was in good shape, this was no longer the case after the eruption of the financial crisis in the United States. Weaknesses in Europe's macro-fiscal framework were exposed and extreme turmoil took hold of financial markets. The idea that a collective bail-out would eliminate the unrest was a severe miscalculation. The scale of the crisis was too large, while the underlying sources of the problems cannot be addressed through bail outs. The events have also taught us that budgetary discipline in the public sector is not sufficient to rule out a sovereign debt crisis. For example, while the Irish government followed an austere budgetary

policy the country was not immune to the crisis, because its government was forced to bail out its financial sector.

The European Council, the European Parliament and the European Commission have also responded to the crisis with a full package of measures to improve the macro-budgetary governance of the EU. A few years ago it would have been hard to imagine EU governments being prepared to relinquish such a large share of their sovereign powers. It nevertheless remains to be seen whether the measures will be sufficient.

Essentially four sets of measures have been taken. A first set of arrangements was introduced to calm down financial markets. A second set of measures is aimed at avoiding future budgetary crisis, thereby ensuring long-run budgetary discipline in the EU. The third package of measures recognizes the interlinkages between the health of the private sector, and in particular the financial sector, and the public budget, because the government may be forced to bail out private sector institutions during a crisis. Finally, a fourth set of measures is aimed at enhancing the growth potential of European economies through structural economic reforms. In this paper we critically review the various adjustments that have been introduced to the EU macro-fiscal framework. As always, any measures that lack sufficient ownership at the national level are doomed to fail. Hence, the public's and the governments' willingness to adhere to the rules is crucial. Moral hazard remains the Achilles heel of most of the new arrangements. Finally, in some instances Europe's new rules may work out in rather bizarre ways.

The remainder of this paper is as follows. In the second section we summarize the history of events leading up to the current crisis. The third section reviews the measures that have been taken to date, while the fourth section argues that closer budgetary monitoring needs to be introduced, and shown to work, before further steps towards fiscal centralization can be introduced.



\* University of Amsterdam and Tinbergen Institute.

\*\* VU University Amsterdam and Tinbergen Institute.

### A brief history of events leading up to Europe's debt crisis

Many have been surprised how a relatively manageable problem, Greece's budgetary crisis, could get so out of hand that it threatens the existence of the entire eurozone. In 2004, Greece admitted to having entered the eurozone on the basis of the wrong budgetary figures. About five years later, at an ECOFIN meeting in April 2009, its finance minister refused to clarify the country's financial situation, after which his colleagues asked for further explanation, which they got in July 2009 from Euro commissioner Almunia in a document that foresaw a deficit for that year of around 5 to 6 percent of GDP instead of the 3.7 percent of GDP predicted earlier. The new figure was also based on incomplete data and there were concerns that the eventual figure would be much higher. After its election, the new socialist government led by Papandreou predicted a 12.5 percent deficit in October. The new government's admission ignited a process of slowly increasing unrest in the bond markets that first only affected Greece's public debt, but later spilled over to other countries' public debt. The interest rate on Greece's debt steadily rose, despite repeated announcements of further austerity measures. In May 2010 this culminated in a first 110 billion euro assistance program financed by the European Union and the IMF and to be monitored by the European Commission (EC), the ECB and the IMF. Shortly after, as other countries' sovereign debt yields also started to rise dangerously fast, the European Financial Stability Facility (EFSF) was set up with a lending capacity of 440 billion euros guaranteed by the eurozone. This was complemented by a 60 billion direct guarantee from the EU budget through the new European Financial Stabilisation Mechanism (EFSM) and a 250 billion guarantee from the IMF. Financial markets reacted with sudden and sharp declines in borrowing rates and the crisis was perceived as being over. However, the relief was only short lived and interest rates soon started creeping up further. In particular, the 'Deauville Pact' of October 2010, in which Merkel dropped her demand for automatic sanctions for SGP sinners in return for France's support for 'haircuts' on bondholders, generated substantial financial market turmoil. In July 2011 a second 109 billion official rescue package for Greece was agreed. In the meantime, however, Ireland and Portugal had been forced to accept rescue packages. The July 2011 package for Greece foresaw a contribution by the financial sector, as well as an expansion of the powers of the EFSF. In particular, the EFSF

would be allowed to finance the recapitalization of financial institutions through loans to governments, also in non-program countries, and it would be able to intervene directly in secondary bond markets on the basis of the analysis by the ECB. However, the initial hope that accompanied the July 2011 package faded fast, as it became clear that a quick ratification was not feasible. This gave way to a hot summer in which Italian and Spanish public debt also came under severe pressure from the financial markets.

### Changes in Europe's macro-fiscal arrangements

The failure of EU governments to calm financial markets has led them to introduce substantial adjustments to Europe's macro-economic and budgetary framework. Some changes are intended to deal with crises, while others are aimed at ensuring long-run fiscal sustainability, in the hope of preventing future crises. As far as the latter objective is concerned, a three-pronged or maybe even four-pronged strategy is adopted. Budgetary arrangements are strengthened both at the European level by bolstering their enforcement, and at the national level. Other measures recognize the potential of spill-overs of financial sector imbalances to the public budget. Such spill-overs can be substantial and dangerous, as recent experiences with Spain and Ireland have shown. The last set of measures aims at strengthening the structure of the economies, thereby fostering long-run growth.

#### *Urgency measures in response to the crisis*

The European Council of 24–25 March 2011 agreed on the European Stability Mechanism (ESM) as the permanent crisis mechanism to replace the EFSF and the EFSM. The ESM is aimed at safeguarding the financial stability of the eurozone and was originally foreseen to come into force by mid-2013. However, under pressure from the crisis, this date is likely to be brought forward to July 2012, while the EFSF and the ESM will continue to co-exist until the loans made under the EFSF have all expired. The basis for the ESM is an addition to Article 136 of the Treaty on the Functioning of the European Union (TFEU): "the Member States whose currency is the euro may establish a stability mechanism to be activated if indispensable to safeguard the stability of the euro area as a whole. The granting of any required financial assistance under the mechanism will be made subject to strict conditionality". Financial assistance is supposed to be provided only under a macro-economic

adjustment programme and a thorough analysis of the sustainability of the public debt, conducted by the Commission together with the IMF and in liaison with the ECB. If a macro-economic adjustment programme cannot realistically restore public debt to a sustainable path, the member state concerned needs to negotiate with its creditors to secure their involvement in restoring debt sustainability before financial assistance is granted.

The question remains as to how credible the 'strict conditionality' clause is. As was the case with the SGP, the main weakness of the ESM is that the Ministers of Finance of the eurozone, who form the Board of Governors, take the decisions on whether to grant financial assistance and regarding the terms and conditions of such assistance. This is also where the SGP failed. Politicians find it difficult to deny help to each other and may succumb to public pressure. Knowing that this may happen, moral hazard may easily take hold of countries with a weak discipline culture. This is more than just an 'academic possibility'. The EU has been rife with moral hazard on the side of both borrowers and lenders. Before the current crisis, heavy borrowers may still have been uncertain about receiving a bail-out if they got into financial trouble.<sup>1</sup> Now, a rescue mechanism has been institutionalised and the aforementioned uncertainty about a bail-out has been reduced even further. Hence, it is realistic to assume that the danger of moral hazard has become even more serious than before the crisis. The first signs of this danger have already become visible. Despite agreements on raising tax collection and privatisation of public enterprises in return for financial help, Greece has made hardly any progress in this direction.

#### *Measures to strengthen fiscal discipline*

The EU has recently introduced a substantial amount of legislation to strengthen fiscal discipline. Part of the new legislation is contained in the European Commission's 'six-pack', which came into force last December. The six-pack aims at strengthening both the preventive and corrective arm of the SGP. Within the preventive arm it imposes a cap on annual expenditure growth linked to the medium growth of the economy and it introduces the possibility of sanctions, which take the form of an interest-bearing deposit. In the corrective arm it introduces the possi-

bility of opening the Excessive Deficit Procedure (EDP) on the basis of the debt criterion. Sanctions will now be imposed *via* 'reverse qualified majority voting'. That is, the Commission recommendation for a sanction will be accepted, unless a qualified majority of the countries votes against it. This change makes it harder for countries to escape sanctions, although the Finance Ministers can still block them. No doubt there will be pressure on them to do so, especially when a large country is lined up for sanctions. The proof of the pudding will be in the eating and, hence, it remains to be seen whether ECOFIN is really prepared to impose sanctions on future fiscal sinners.

The 'fiscal compact', which was recently concluded at the European Summit of 30 January 2012 and has now been signed by 25 EU member states, complements the six-pack. The compact envisages enshrining the European fiscal framework in national law, preferably in the constitution. Doing so would hopefully enhance the credibility of the common fiscal framework. In particular, the compact requires countries to include a limit on their annual structural deficit of 0.5 percent of GDP. It also envisages an automatic correction mechanism in the case of a deviation from the rule. Finally, the compact sets a convergence path for the public debt to its reference level in case it exceeds 60 percent of GDP. While the compact seems to represent a significant step forward in stimulating discipline, the Bundesbank President criticised it (Financial Times Deutschland, 2 February 2012) by saying that: "the guidelines for the national fiscal rules leave considerable room of *manoeuvre* and there is no control on a European level to check if they are really respected". Indeed, the compact does not specify what should happen if the country fails to stay below the structural deficit limit, nor does it specify the precise form of the correction mechanism when a deviation occurs. Presumably, this is left to the choice of the country concerned. Furthermore, imposing a rule on an object that is not directly observable, the structural deficit, may leave some room for countries to wriggle out of the necessary adjustment needed to comply with the rule.

The six-pack also imposes minimum requirements on national budgetary frameworks intended to cover all levels of government. The requirements take the form of a Directive that governments have to implement in national legislation. EU member states have to install numerical fiscal rules to promote compliance with the reference values for public deficits and debt. They also need to establish medium-term budgetary frameworks

<sup>1</sup> Although financial markets hardly discriminated against such borrowers, probably believing that the no-bail-out clause would somehow be circumvented if necessary.

(MTBFs) that allow for a fiscal planning horizon of at least three years. Multi-annual objectives for general government deficit and debt consistent with the numerical fiscal rules and projections of major spending and revenue items of the general government based on unchanged policies should be included in the MTBFs. The MTBF forms the basis for the preparation of the annual budget.

There is a rather substantial body of literature on the effectiveness of self-imposed fiscal rules, and particularly on the balanced-budget rules that virtually all states in the United States have imposed upon themselves. While US fiscal arrangements differ in many respects from Europe's, experience with the sub-national rules in the United States may be instructive for a proper design of fiscal arrangements at the national level in Europe. The performance of the state-level rules differs widely across the US states. Rules are more likely to be binding if they are enshrined in the constitution than in secondary legislation. In their now classic paper, Bohn and Inman (1996) conclude that for self-imposed rules to be effective, they should be enforced by an independent supreme court capable of imposing serious penalties. The national legal status of the numerical rules and MTBFs may differ across countries, yet the Directive does not specify details about monitoring and enforcement of the rules. Hence, there is a danger that these national arrangements will ultimately have less bite than anticipated.

Properly designed national fiscal arrangements can be an effective way of enforcing fiscal discipline. The reason for this is that the countries themselves are responsible for the design and adoption of their own arrangements and, hence, are likely to feel more responsibility for meeting the requirements imposed by these arrangements than for complying with restrictions 'imposed by Europe'. Indeed, several authors have shown that well-designed national budgetary arrangements are conducive to fiscal discipline. Debrun *et al.* (2008) explore the effects of national fiscal rules on fiscal policymaking. They construct a fiscal rule index that increases in its strength and coverage. The strength of a rule is larger if the legal base of

Table 1

## Average errors

|            | Nowcast minus plan<br>(1) | Ex post minus nowcast<br>(2) | Ex post minus plan<br>(3) |
|------------|---------------------------|------------------------------|---------------------------|
| <i>BAL</i> | -0.17*<br>(0.10)          | -0.34***<br>(0.11)           | -0.50***<br>(0.17)        |
| <i>REV</i> | 0.02<br>(0.12)            | -0.60***<br>(0.18)           | -0.59***<br>(0.21)        |
| <i>EXP</i> | 0.19<br>(0.12)            | -0.26<br>(0.16)              | -0.09<br>(0.18)           |

*Notes:* The average errors are all expressed in percent of GDP with standard errors (corrected for heteroskedasticity and serial correlation) reported underneath. Further, \* = significance at the 10% level; \*\* = significance at the 5% level; \*\*\* = significance at the 1% level. Abbreviations: *BAL* = Budget balance/GDP; *REV* = Revenue/GDP and *EXP* = Expenditure/GDP. The sample period is 1999-2008 for columns (1) and (3) and 1998-2008 for column (2).

Source: Beetsma *et al.* (2011).

the rule is stronger, the body in charge of monitoring and enforcement is more independent, the enforcement mechanism is stronger and media visibility is higher. Coverage refers to the share of the general government balance covered. The authors show that a higher value of the fiscal rules index is associated with a lower cyclically-adjusted primary deficit.

Well-designed national fiscal institutions may also lead to more reliable fiscal figures, which, in turn, would be conducive to avoiding turbulence in sovereign bond markets. Table 1, which is extracted from Beetsma *et al.* (2011), reports the average deviations of the budget balance, revenues and expenditures in percent of GDP for 14 EU members over the period 1998–2008 or 1999–2008 in the (1) the 'nowcast', i.e. the current-year forecast for year  $t$  made at the end of year  $t$ , from the plan for year  $t$  made at the end of year  $t-1$ , (2) the eventual 'ex-post' figure for year  $t$  from the nowcast, and (3) the eventual figure from the plan. All data are taken from the Stability and Convergence Programs that countries have to submit to the European Commission. Clearly, planned budget balances are overly optimistic on average in terms of the nowcast figures, which, in turn, tend to be overly optimistic in terms of the *ex-post* figures. Relative to these *ex-post* figures, planned balances fall short by 0.5 percent of GDP on average. While the over optimism of the planning stage relative to the nowcast stage is driven by spending being higher than planned, over optimism at the nowcast stage is driven by an exaggeration of the eventual revenue figures.

Beetsma *et al.* (2009) and Beetsma *et al.* (2011) explore the sources of the over optimism at the planning and the nowcast stage. However, better national fiscal institutions, whether measured through a higher fiscal rule index (defined as in Debrun *et al.*, 2008), a higher MTBF index or a higher transparency index,<sup>2</sup> reduce the optimism bias at both the planning and the nowcast stage. Hence, better fiscal institutions seem to be conducive to making real-time fiscal figures more reliable. In a detailed study of the Netherlands, Beetsma *et al.* (2010) explore what suitable budgeting institutions at the national level might look like. While not perfect, the so-called regime of ‘trend-based budgeting’ since 1994 has worked quite well for the Netherlands. This regime was characterised by expenditure ceilings, cautious budgeting and a strict separation between the expenditure and revenue side of the budget, restricting the use of revenue windfalls for extra expenditure. Unfortunately, the practice of using cautious growth projections was abandoned during the last Balkenende cabinet.

#### *Ruling out (excessive) macro-economic imbalances*

The debt crisis has shown that fiscal constraints alone are not enough to rule out budget deficits. Imbalances in the private sector, such as large debts on the part of households or firms, may lead to instability in the banking sector if outside circumstances or market sentiments change. To prevent a systemic crisis, the government may be forced into a bail-out of a troubled bank. This happened in the case of Ireland, which had a relatively low public debt ratio until the start of the current crisis. However, through the forced bail-out of the Anglo-Irish Bank and support to other banks, Ireland saw its public debt ratio in 2010 shoot up by almost 35 percent to around 100 percent. As a result, Ireland became the first country to receive support from the EFSF and the EFSM.

Recognizing the link between private sector developments and the public budget, the six-pack also contains a regulation to prevent imbalances, as well as a regulation to enforce a reduction of excessive imbalances once they have arisen. Imbalances indicate macro-economic developments with the potential to adversely affect the country concerned or its EU part-

ner countries. The first regulation provides the basis for an early warning system, which consists of an alert system with a scoreboard based on a set of macro-economic and macro-financial indicators. The early warning system envisages preventive action before imbalances become too large. The second regulation referred to as the Excessive Imbalances Procedure (EIP) allows for enforcement through the potential use of financial sanctions.

Obviously, this part of the six-pack can only be an imperfect answer to the emergence of (excessive) imbalances. The aforementioned indicators cannot perfectly determine whether imbalances exist nor whether they are harmful. For example, a substantial current account deficit may be justified if the country under consideration is relatively undeveloped, but has good growth prospects. More importantly, large current account surpluses may also be deemed harmful and require correction. However, it is crucial to consider the source of such surpluses. If they arise because the country has acquired a competitive edge through clever structural policies, a good educational system and wage restraint, then this can hardly be blamed on the country. Forcing countries to give up those policies would go against the principle of following best practices. If we think of Northern Europe as running current account surpluses and Southern Europe as running current account deficits, it is in any case very doubtful that punishing the former group would solve the imbalances problem (see also Gradus and Beetsma 2012). One reason is that both blocks also trade with other countries within the EU and outside the EU. More importantly, it denies the fact that the source of Southern Europe’s current account deficits is its lack of competitiveness (partly) due to poorly-functioning labour and product markets. A first-best policy would be to exert enforcement on countries for following the wrong policies leading to imbalances. Here, one should not only think of reforms of labor and product markets, but also of regulation and supervision of the financial sector as long as this remains a national competence. In addition, a more activating welfare system will reduce public spending and is conducive to labor force participation.

#### *Structural reforms imposed at the EU-level*

Structural reforms are necessary to unleash Southern Europe’s growth potential. This will also make it easier to achieve fiscal sustainability. To bolster the member states’ economic structures, the EU countries

<sup>2</sup> An MTBF in Beetsma *et al.* (2009) and Beetsma *et al.* (2011) is defined as an institutional device to extend the horizon for fiscal policymaking beyond the annual budgetary calendar. The index measures the institutional strength of the framework and is increasing in the connectedness between the multi-annual targets and the annual budgets, the involvement of the parliament, the existence of a coordination mechanism and the degree of monitoring and enforcement. The ‘six-pack’ also requires member states to publish information on contingent liabilities with large impacts on the public budgets.

agreed on the so-called ‘Euro Plus Pact’ at the European Council of 24 and 25 March 2011. Among other things the pact specifically requires member states to undertake all measures that are necessary to foster competitiveness and employment. The former will be assessed on the basis of wage and productivity developments. The needs for adjustment will be explored with particular attention to wage setting arrangements, the degree of centralization in bargaining and wage indexation mechanisms. The latter is assessed on long-term and youth unemployment and labour participation rates, which is arguably the country’s most important statistic in this regard. Unfortunately, the Euro Plus Pact lacks an enforcement mechanism, even though the consequences of a lack of reform may spill across borders if countries need to make use of the EU’s financial rescue mechanisms.

#### How to proceed?

To ensure the long-run existence of Europe’s common currency some form of further fiscal centralization is unavoidable. The current arrangements have proven to be unworkable. In particular, they have proven to be a recipe for moral hazard, while the greatest sinners in budgetary terms have failed to take responsibility for their policies, thereby undermining the functioning of the common currency. However, fiscal centralisation means different things to different people.

One view is that it calls for the introduction of Eurobonds (‘stability bonds’ in European Commission language) or the enlargement of Europe’s emergency funds. As far as stability bonds are concerned, the Commission (2011) has issued a green paper in which it sets out the rationale and conditions for issuing such bonds. Issuance would be pooled across member states and, in its most far-reaching form countries, would share in the revenue flows and debt-servicing costs.

The Commission mentions a number of advantages of stability bonds. In particular, financial market pressure on the countries currently in trouble would be alleviated, while risks of sudden liquidity dry-ups would be reduced. Risks to the banking system would also be reduced because the value of those bonds would fluctuate less than that of individual country sovereign debts and because the home bias in sovereign debt holdings would be reduced (lowering the exposure of banks to domestic assets). Liquidity premiums would fall and the transmission of monetary

policy would be facilitated through the creation of a larger pool of safe and liquid assets. Finally, the larger issuance volumes and higher liquidity of the secondary markets would strengthen the position of the euro as an international reserve currency.

The main drawback of stability bonds, in particular under the assumption of joint and several guarantees, as is also recognized by the Commission, is that they may stimulate moral hazard. The effects of fiscal profligacy at the national level on the common debt yield will be diluted, providing a disincentive to austerity in all countries in the system. Hence, the Commission argues that the introduction of stability bonds would need to be accompanied by reinforced fiscal surveillance and policy coordination. Such coordination must also extend to avoiding and correcting harmful macroeconomic imbalances due to their potential spill-overs to the public finances. However, experience suggests that it will not be easy to avoid additional moral hazard through intensified monitoring. Given that countries that currently pay a low interest rate on their public debt might experience a disadvantage from the introduction of stability bonds, the Commission suggests redistributing some of the net benefit from high-yield countries to low-yield countries. This would also reduce moral hazard according to the Commission. To us it is unclear, however, how such a redistribution of the benefits from stability bonds could ameliorate the problem of moral hazard. Moreover, it creates scope for a largely political discussion about redistribution, which creates new inefficiencies and moral hazard problems too.

In our view, fiscal centralisation should *start* with much closer monitoring by EU institutions, and particularly by the European Commission, of the budgeting processes in the eurozone member states. If the process threatens to derail, the EU should have the option of intervening or taking over the budgeting process. This type of fiscal centralisation will be needed to internalize the growing spill-over effects of fiscal decisions at the national level. In effect, these spill-overs create a ‘soft budget constraint’ at the national level, because the consequences in terms of financial market turbulence of a debt default in a member state are too severe for the ECB and the rest of the EU not to come to the rescue of the state under financial threat. Fiscal centralisation through closer monitoring of budgeting would need to be accompanied by more centralised supervision of the financial sector. The latter is needed to avoid regulatory capture and

the associated excessive risk taking leading to harmful cross-border spill-overs.

Only *once* the hurdle of tighter budgetary monitoring has been taken and shown to work properly for a number of years, does it make sense to consider further centralisation through the introduction of Eurobonds, or an enlargement of Europe's emergency funds. The run-up to the current crisis can teach valuable lessons in this regard that tend to be too easily forgotten during the crisis itself. Further fiscal centralization requires a sincere and strong commitment to fiscal discipline. If countries are unwilling to relinquish some of their sovereign powers to pave the way for tighter fiscal monitoring, one must question their commitment to discipline.

## References

- Beetsma, R.M.W.J., B. Bluhm, M. Giuliadori and P.J. Wierds (2011), *From First-release to Ex-post Fiscal Data: Exploring the Sources of Revision Errors in the EU*, CEPR Discussion Paper 8413.
- Beetsma, R.M.W.J., M. Giuliadori, M. Walschot and P.J. Wierds (2010), *Fifty Years of Fiscal Planning and Implementation in the Netherlands*, CEPR Discussion Paper 7969.
- Beetsma, R.M.W.J., M. Giuliadori and P.J. Wierds (2009), "Planning to Cheat: EU Fiscal Policy in Real Time", *Economic Policy* 24, 753–804.
- Bohn, H. and R.P. Inman (1996), "Balanced-budget Rules and Public Deficits: Evidence from the U.S. States", *Carnegie-Rochester Conference Series on Public Policy* 45, 13–76.
- Debrun, X., L. Moulin, A. Turrini, J. Ayuso-Calsals and M. Kumar (2008), "Tied to the Mast? The Role of National Fiscal Rules in the European Union", *Economic Policy* 23, 298–362.
- European Commission (2011), *Green Paper on the Feasibility of Introducing Stability Bonds*, 23 November, [http://ec.europa.eu/commission\\_2010-2014/president/news/documents/pdf/green\\_en.pdf](http://ec.europa.eu/commission_2010-2014/president/news/documents/pdf/green_en.pdf).
- European Council (2011), *European Council 24/25 March 2011 Conclusions*, 20 April, [http://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/ec/120296.pdf](http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/120296.pdf).
- Gradus, R. and R. Beetsma (2012), *Loonstijging geen panacee*, Het Financieele Dagblad, 16 February.
- Whelan, K. (2011), "Ireland's Sovereign Debt Crisis", in: Allen, F., E. Carletti and G. Corsetti (eds.), *Life in the Eurozone with or without Sovereign Default?*, Philadelphia: FIC Press, 41–58, <http://www.eui.eu/Personal/Carletti/Life%20in%20the%20Eurozone%20ebook.pdf>.