

The creation of macroeconomic stabilisation mechanisms in the eurozone

Policy Brief no. 7

September, 2015

ISSN 2014-7457

The depth and persistence of the great recession in Europe are attributable to various factors. One of the most significant is undoubtedly the flawed design of the monetary union, i.e. it is an incomplete monetary union. The monetary union was launched without fulfilling the conditions required for success, with regard to the integration of markets and the mobility of factors (Mundell I), the integration of financial markets (Mundell II), and fiscal integration.

A monetary union without fiscal union creates many difficulties and is the source of serious instability. Bernoth and Engler (2013a: 3) note that "In historical terms, the European Monetary Union (EMU) is a unique currency area. The member states have committed to a common monetary policy, while fiscal policy remains the responsibility of the individual governments." Experience shows that monetary unions do not usually exist without fiscal union, or fiscal unions without political union. In particular, a monetary union without fiscal union poses an intrinsic difficulty in dealing with two types of imbalances.

On the one hand, those imbalances caused by asymmetric or idiosyncratic shocks (which cause asymmetry in the phases of the economic cycle in different countries), due to the absence of the appropriate stabilisation mechanisms. On the other, those due to differences in competitiveness between different countries, given the impossibility of resolving them by devaluing the currency and the absence of mechanisms that contribute to reduce such differences (such as a federal budget). The redistributive function of a federal budget would help to mitigate this second problem. This *Policy Brief* will not deal with this latter issue, but will focus on the first type of imbalance, caused by the absence of macroeconomic stabilisation mechanisms.

1. The limits of macroeconomic stabilisation mechanisms in the context of monetary integration

A monetary union without a sufficient degree of market integration has two consequences: on the one hand, it favours divergence between the behaviour of the economies of different countries over the economic cycle (asymmetric shocks) (Engler and Voigts, 2013: 2); on the other hand, it causes very significant reductions in the effectiveness of macroeconomic stabilising mechanisms (monetary policy and fiscal policy). Such a monetary union therefore suffers an inherent difficulty with regard to problems of stability (caused by asymmetric shocks) in a recessionary situation. The following considerations are relevant:

- a)** The very nature of a monetary union removes the possibility of using monetary policy at the domestic level, while it also neutralises the effectiveness of fiscal policy to a large extent. Indeed, the effectiveness of a domestic use of fiscal policy in highly integrated markets, as is the case in Europe, was already arguable, even before monetary union. Applying it in a single country would not normally have contributed to the desired stabilising objectives (whether expansionary or contractionary) while, on the other hand, it would have provoked large imbalances in foreign trade, the public sector and in terms of inflation (Drèze and Durré, 2013: 5).
- b)** A further factor is the limitations of monetary policy when interest rates are around the lower zero bound, when this instrument loses much of its effectiveness, even for dealing with symmetrical shocks.

c) The existence of a common currency and a single monetary policy in the eurozone has not only removed the possibility of using the latter to deal with specific problems of stability in a single country, but has exacerbated the divergence in cyclical behaviour in different countries (Bernoth and Engler, 2013a: 3).

d) Monetary union has accentuated the limitations of fiscal policy as a domestic stabilising policy because the restrictions on public deficits and debt become much more significant when the sovereign is unable to control its own currency (De Grauwe, 2011; Engler and Voigts, 2013: 3). Hence, the margin at domestic level for the use of automatic stabilisers is greatly limited by the level of debt, and the external restriction plays a decisive role.

e) Thus, it turns out that monetary union has practically neutralised domestic stabilising instruments, which have either disappeared (e.g. monetary policy) or have lost effectiveness and room to act (fiscal policy), without having been replaced by other mechanisms at European level (Bernoth and Engler, 2013a: 3). Hence, there is a widespread need for the creation of instruments capable of playing the stabilising role at the 'federal' European level (Engler and Voigts, 2013: 2).

f) The need for stabilising is even stronger in the eurozone than in the real monetary unions of which we have knowledge for two reasons: due to the greater decoupling between the phases of the cycle in the different countries and because alternative adjustment mechanisms have serious drawbacks for this role (the labour market has major rigidities and financial markets are much less integrated, and more heavily based on banking, than the United States, for example) (Van Rompuy, 2012: 10).

g) Lastly, there is a further argument in favour of the need for macroeconomic stabilisation instruments of a fiscal nature. In recent years numerous studies have shown that the effect of Keynesian multipliers is highly significant in the recessionary phase of the economic cycle and much greater than that used in the 'standard' models, which maintained that the value of these multipliers was almost imperceptible and similar in both the recessionary and expansionary phases (see especially Auerbach and Gorodnichenko (2011

and 2012), Perotti (2011), Blanchard and Leigh (2012 and 2013), Batini, Callegari and Melina (2012) and Portes (2013); for a general review, see Castells (2014a)).

In short, the Great Recession has revealed, firstly, that fiscal stabilising instruments remain essential and, secondly, that these must be set up at eurozone level, given their limitations at national level (Engler and Voigts, 2013: 3; Drèze and Durré, 2013: 5). One way or another, we can state that the Great Recession has provided practical confirmation of the many warnings issued by academics since the 1990s (see, for example, the numerous references cited by Enderlein et al., 2003: 15), when concrete proposals for monetary union began to be made: the almost insoluble difficulty of consolidating such a union in the absence of a stabilising instrument of a fiscal nature, which could play the same role as the central government budget in the existing real monetary unions.

2. The creation of a European stabilisation instrument

A step towards a fiscal union

In recent years, the evidence of the need for such an instrument has led to numerous initiatives (in academy and sometimes in the field of institutional and regulatory development in the eurozone) for advancing towards a fiscal union.

In general, there is a broad agreement that all fiscal unions are founded on two key pillars: a common government (central or federal), with the corresponding fiscal powers and mechanisms designed to ensure the fiscal discipline of the member states. Until now, in the EU (and the eurozone) the only significant progress has been in the second pillar, the fiscal discipline of the member states (see EuropeG, 2012), and in contrast there has been little headway towards the creation of a European government with the necessary fiscal powers (a significant budget, its own fiscal resources and a treasury).

Nevertheless, in this area there have also been many proposals worthy of consideration. Some have even been produced at the institutional level, though the majority has come from scholars or think tanks. The proposed degree of fiscal integration varies. The most ambitious propose a significant increase in the budget

(normally for a much more politically integrated 'eurozone community'), which should provide certain public goods. This would be funded by its own taxes (the most common proposal is to raise a European corporate tax, alongside the national equivalents). A fairly frequent variant on this proposal consists in making the European institutions responsible for unemployment benefit which, moreover, is considered appropriate as an effective stabilising mechanism.

However, the area in which there is a greatest agreement is the need to endow the eurozone with some type of stabilisation mechanism, allowing it to cope with idiosyncratic or asymmetric shocks between different countries. Indeed, some of the proposals which include a larger budget are clear that their fundamental aim is a stabilising instrument, like the central government budget in federal countries, but without the redistributive function usually associated with them. This *Policy Brief* will essentially focus on an analysis of these stabilising instruments at eurozone level.

A third type of proposals seeks to create mechanisms for the mutualisation of debt, along the lines of eurobonds. Although these are trying above all to deal with the problems of solvency arising from sovereign debt, it seems difficult to make progress in this direction without simultaneously making real progress with regard to the European budget (the 'federal' debt finances the 'federal' budget, not those of the states). On the other hand, aspects of its implementation could be linked to the stabilisation mechanism.

Aims and conceptual framework

In recent years, there have been numerous proposals for the design of an instrument capable of exercising the macroeconomic stabilisation function at the European level. Firstly, we should mention Van Rompuy et al. (2012) and Juncker et al. (2015), as these are initiatives from the EU institutions themselves. With regard to academic proposals, the following should be noted: Cotarelli (2012), Enderlein et al. (2012 and 2013), Wolff (2012), Allard et al. (2013), Bernoth and Engler (2013a and b), Engler and Voigts (2013), Drèze and Durré (2013), Hacker (2013), Pisani-Ferry et al. (2013) and Schwarzer (2013). For an overview, see EuropeG (2012) and Castells (2014b). Some observations about the instrument's objectives and the framework should be outlined.

a) This instrument should be able to cope with shocks which are asymmetric between territories, i.e. it should be capable of discriminating between the different phases of the cycle between regions, with an expansionary effect in those which are in the recessionary phase of the cycle and a contractionary effect in those which are experiencing an expansionary phase.

b) The instrument must be inherently neutral between countries, i.e. countries are net contributors or recipients depending on what phase of the cycle they are in and not on their level of income.

c) In consequence, this instrument should be designed with the aim of acting as an automatic stabiliser mechanism, as the federal budget does. Hence, the creation of a federal budget would be a valid alternative for fulfilling the need for such a stabilising instrument, but it is not the only one. In reality, the budget carries out multiple functions at the same time, and it is impossible to separate the stabilising function from the redistributive function, with regard to which the consensus is much narrower.

d) One basic issue is whether the stabilising instrument should pursue this objective alone, or seek to achieve others (as would be the case with a significant common budget), and also whether this function should be added to an existing mechanism (the ESM, for example). In theory, it seems advisable to focus its function exclusively on the aim of stabilisation, even though it would be necessary to take account of the side effects that could occur in countries receiving funds from both this instrument and the ESM.

e) In principle, this instrument should be designed to deal with asymmetric shocks of demand, while there is a broad consensus that monetary policy is the appropriate stabilising instrument for symmetrical shocks, i.e. those that occur at the same time in all the countries of the eurozone (Enderlein et al., 2013: 13). However, this division of labour is of doubtful relevance when monetary policy has almost reached its limits (when it is at the zero lower bound), a situation in which, as the US has shown, fiscal policy also has a role to play in boosting demand. This means that the design of a

stabilising instrument for the eurozone should not ignore its role in dealing with symmetrical shocks.

Basic alternatives

When designing this stabilising instrument of a fiscal nature, various alternatives may be considered (see Table 1). In accordance with Enderlein et al. (2013: 43et seq.), we shall focus on three of these.

a) Strengthening the budget of the eurozone (or the EU's)

As already noted, the central government budget plays an important stabilising role in the regions of a political union (Von Hägen, 2007; Dullien and Schwarzer, 2009; Enderlein et al., 2013; Pisani-Ferry-Ferry et al., 2013); the higher the sensitivity of taxes and public spending to the economic cycle, the more powerful will be this function. It is no surprise, therefore, that numerous proposals consider that the best way of achieving this stabilising function would be to press forward with a strengthening of an EU (or eurozone) budget (Cotarelli, 2012; Wolff, 2012; Allard et al., 2013; Engler and Voigts, 2013; Pisani-Ferry et al., 2013; Glienicker Group, 2013; Eiffel Group, 2014; Manifesto Group, 2014), funded by some European tax.

The majority of these proposals agree that one of the basic functions of this budget (with regard to the eurozone) is stabilisation, and that it should be funded with its own taxes, which would preferably be highly sensitive to the cycle, as in the case of a 'federal' corporate tax. They also agree that this would be possible with a relatively modest budget (between 0.5% and 1% of GDP).

However, the general impression is that the current political situation is not propitious for an agreement that would allow a qualitative leap in a direction (strengthening the budget) that would imply the acceptance of at least three consequences that today do not form part of the consensus in the eurozone (Enderlein et al., 2013: 44).

Firstly, the introduction of an EU tax (such as a corporate tax); secondly, the possibility of this budget falling into deficit and borrowing (inherent in its stabilisation function), with the consequent creation of a common Treasury. Thirdly, and probably least acceptable politically, the generation of flows which are redistributive as well as stabilising, which occur automatically when a budget provides public goods and services, responding to individuals' circumstances and funding them with taxes raised in accordance with its fiscal capacity.

Table 1. Features and properties of four stabilisation options

	Euro-area budget	Automatic transfer scheme	Debt as equity	Guaranteed bonds quota
Principle	Automatic stabilisation role of federal budget.	Transfers based on output gap.	Part of debt issued in the form of GDP-indexed bonds.	Right to issue jointly guaranteed bonds (several tranches with increased withdrawal of sovereignty).
Origin of stabilisation	Income transfer from partners.	Income transfer from partners.	Wealth transfer from (non-resident) bondholders.	Borrowing capacity, mutualisation of default risk.
Advantages	True budget.	Maximises stabilisation power for any given symmetric level of contributions.	Recognises risky character of government debt.	Builds on Maastricht logic that stabilisation is done nationally.
Drawbacks	Difficulty to agree on euro-area public goods. Budget balance prone to volatility. Large variation in societal preferences over proposed federal budget items. Incentive effects.	Relies on technical potential output assumptions. Real-time estimate uncertainty.	Untested instrument, higher cost of borrowing for sovereigns, stabilisation comes from non-resident holdings only.	Requires controversial Eurobonds.

Source: Pisani-Ferry et al. (2013: 6), Table 1.

b) European unemployment insurance

Several authors have examined the alternative of ‘centralising’ a form of spending which is highly sensitive to the economic cycle: unemployment insurance (Wolff, 2012; Allard et al., 2013; Fischer, 2013; Engler and Voigts, 2013; Bernoth and Engler, 2013a and b; Pisani-Ferry et al., 2013), and funding it with a tax which is similarly highly sensitive, such as corporate tax. On the other hand, the purpose of this mechanism should be strictly stabilisation, not redistribution, so it should only fund the unemployment spending generated by the impact of recession, not that arising from structural unemployment (Wolff, 2012: 8; Allard et al., 2013: 19; Bernoth and Engler, 2013b). In consequence, it is not a question so much of replacing national unemployment systems as of complementing them with a uniform European instrument (Enderlein et al., 2013: 44-45; Bernoth and Engler, 2013b).

This alternative would have the advantage of being automatic and reacting quickly in terms of the fiscal stimulus. However, the simulations which have been carried out seem to show that the stabilising impact would be limited and especially that the adoption of a common eurozone unemployment insurance would pose a number of relatively complex problems and require a major harmonisation of labour markets (Wolff, 2012: 8-9; Allard et al., 2013: 19). This harmonisation would take a long time and would be complicated from the political point of view, but without it the central countries would probably be unwilling to share risks.

c) Transfer fund (rainy day fund)

These difficulties cause the majority of proposals to incline rather towards the establishment of a stabilising transfer fund (rainy day fund), intended for countries suffering an asymmetric recessionary shock. The characteristics and design of this instrument will be discussed below.

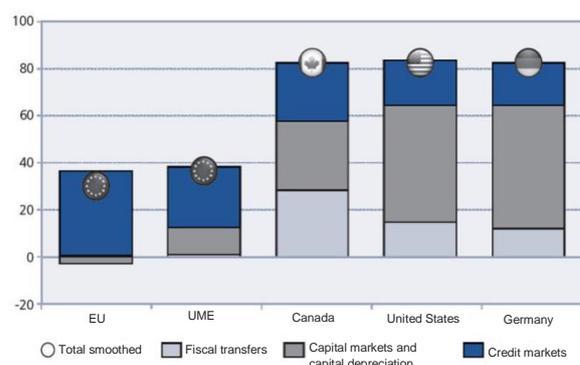
In essence, such is a zero sum fund and neutral between countries and, although the various proposals have a common starting point, the particularities of this fund raise highly critical issues regarding different aspects (how to determine the cyclical position of each country; the degree of conditionality of the resources provided; which countries are to be recipients and contributors;

should the cyclical position of the eurozone as a whole be taken into account). The response to these issues can vary widely, according to the position adopted.

In addition to mechanisms of a fiscal nature, directly linked to the budget of the central government (or common government), various authors have emphasised the importance of the stabilising role of the financial system. An integrated financial system to a large extent reduces the impact of asymmetric shocks, by facilitating access to credit by those regions where an asymmetric (idiosyncratic) recessionary impact causes a temporary contraction in income and saving.

To this end, Allard et al. (2013: 14-15) note that while in federations like the US, Canada and Germany, the role of stabilisers (taken together, including both financial and fiscal mechanisms) tend to offset around 80% of the impact of a contractionary shock, in the EU this effect is only 40%. This means that while a 1% contraction in GDP in a given region of such a federation translates into a reduction in consumption of 0.2%, the impact is 0.6%, three times higher, in an EU country suffering an equivalent asymmetric shock.

Graph 1. Risk-sharing
Insurance against income shocks in EMU remains low (percent of regional income shock smoothed by channel)



Source: Allard et al. (2013: 14), Figure 1.

As we have already noted, this is due to a considerable extent to the federal budget. Less well known, however, is the even more decisive role of the financial system in this absorption of shocks. Indeed, as shown by the figures provided by Allard et al. (Graph 1), the stabilising function in federations corresponds fundamentally to the financial market, particularly the capital markets, while in the EU and the eurozone their role is much less significant and that of fiscal transfers is

almost non-existent (on this point, see also Wolff, 2012: 3).

This also makes it essential, for reasons of stabilisation, to progress towards a genuine financial integration and means that the absence thereof makes other stabilising instruments (such as those of a fiscal nature) all the more necessary.

3. EU proposals for the creation of a stabilising instrument

Both the four presidents' report of December 2012 (Van Rompuy et al., 2012) and the recent five presidents' report of June 2015 (Juncker et al., 2015) pose the need to create a stabilising fiscal instrument at eurozone level. They both adopt this idea, which is clearly set out in the latter, when it indicates that "while the degree to which currency unions have common budgetary instruments differs, all mature Monetary Unions have put in place a common macroeconomic stabilisation function to better deal with shocks that cannot be managed at the national level alone" (Juncker et al., 2015: 14).

These reports have a notable importance, inasmuch as they constitute an explicit statement by EU institutions and because, taken together, they provide a relatively detailed picture of what should be the basic characteristics of this stabilisation instrument, at the same time identifying the other relevant aspects that remain to be specified.

They consider that the instrument should have two basic characteristics:

i) Stabiliser function. The future mechanism (called 'fiscal capacity' in the Van Rompuy report and 'fiscal stabilisation function' in the Juncker report) is intended to absorb the asymmetric shocks that may occur in eurozone countries. In consequence, which countries would be contributors and recipients would be determined by their position in the economic cycle.

The Van Rompuy report (2012: 10) notes that this instrument is particularly needed in the eurozone, because the market adjustment mechanisms are less effective, as both labour and financial markets are insufficiently integrated.

ii) Complementary to and conditional on structural reforms. Both reports emphasise that this macroeconomic fiscal stabilisation mechanism must be complemented by structural reforms, and they are particularly concerned that its implementation should not lead to any relaxation in this respect, which is essential to ensure real convergence between eurozone countries.

The need for a stabilising instrument capable of moderating the strength of cyclical shocks between eurozone countries is thus supported not only by a broad consensus between academics and experts, but also by the recognition and commitment to progress in this direction of the EU institutions themselves. Of the various factors that should allow progress towards a fiscal union, this is undoubtedly the one which has seen the greatest advances.

In practice, however, progress towards this objective is still far from sufficient and achieving it in a reasonable period of time does not appear to figure in the eurozone's immediate priorities. In reality, the 2015 five presidents' report represents more of a step backwards, both in the ambition of the aims and in the timetable for achieving them, compared to the report signed by the four presidents in 2012.

With regard to the timetable, it is significant that while the 2012 report (Van Rompuy, 2012: 9, 18) considered that the third stage (which included the development of the stabiliser instrument) should begin in 2015, the latest report views it as a long-term aim to be achieved before 2026 (Juncker, 2015, 14, 21).

The 2012 report was also more ambitious with regard to content, as shown by the fact that it went so far as to specify the various alternatives to be considered in the design of the instrument. In particular, it looked at two basic design options (transfers fund between countries, rainy day fund style, and eurozone-level unemployment insurance) (Van Rompuy, 2012: 11), considered the possibility of setting up a eurozone tax to fund it (Van Rompuy, 2012: 12), and introduced the possibility of the 'fiscal capacity' having recourse to borrowing, though this would not constitute a form of debt mutualisation, with the consequent creation of a eurozone Treasury (Van Rompuy, 2012: 12), which was also proposed in the 2015 five presidents' report (Juncker, 2015:18).

However, the fundamental change in emphasis between the two reports is with regard to making any progress towards the creation of a stabilising fiscal

instrument conditional on the previous achievement of a very significant degree of economic convergence. The 2012 four presidents' report considered that progress should be made simultaneously on the reforms to make such convergence possible (Van Rompuy, 2012: 9) and on the creation of the stabilising fiscal instrument, and hence it included the possibility of establishing some form of conditionality, so that to participate in the latter would require the implementation of agreed structural reforms (Van Rompuy, 2012: 10).

In contrast, the recent five presidents' report is full of cautions and warnings about the progress towards the implementation of the fiscal instrument and makes it clearly conditional on the prior achievement of greater economic convergence. Though it does not hesitate to note that "it would be important to create in the longer term a euro area-wide fiscal stabilisation function", it also warns that "such a step should be the culmination of a process that requires, as a pre-condition, a significant degree of economic convergence, financial integration and further coordination and pooling of decision making on national budgets" (Juncker, 2015, 14).

In short, according to these two reports, the guiding principles for the design of this stabilising instrument could be summarised as follows (Van Rompuy, 2012: 12; Juncker, 2015, 15) (Figure 2):

- It should not lead to permanent or unidirectional transfers between countries.
- It should not weaken the incentives to carry out structural reforms.

- It should be capable of implementation within the framework and institutions of the EU (i.e. it should not require Treaty changes).
- It should not be an additional crisis resolution mechanism, but rather it should complement the ESM.

4. Design of a stabilising transfer fund

As noted above, in recent years there have been numerous proposals for the design of this European stabilising mechanism. Meanwhile, the presidents' reports have set the limits of the institutional playing field, i.e. what is possible in practical terms and what is not, even in an extremely ambitious proposal as the first of these reports undoubtedly was.

All this has in practice meant that the creation of a stabilising transfer fund, or 'rainy day fund', has increasingly gained weight as the most realistic of the possible alternatives. That does not mean that there has been any significant progress, even with regard to this alternative. As we have emphasised, the five presidents' report of June 2015 shows that there is still a long way to go before this mechanism becomes a reality. However, it is reasonable to think that the creation of a transfer fund would probably be the most realistic option and this section will focus on that alternative.

Figure 2. Options and guiding principles for a euro area stabilisation function

It will be important to ensure that the design of such a stabilisation function rests on the following guiding principles:

- It should not lead to permanent transfers between countries or to transfers in one direction only, which is why converging towards Economic Union is a precondition for participation. It should also not be conceived as a way to equalise incomes between Member States.
- It should neither undermine the incentives for sound fiscal policy-making at the national level, nor the incentives to address national structural weaknesses. Accordingly, and to prevent moral hazard, it should be tightly linked to compliance with the broad EU governance framework and to progress in converging towards the common standards described in Section 2 [of the Juncker' report].
- It should be developed within the framework of the European Union. This would guarantee that it is consistent with the existing EU fiscal framework and with procedures for the coordination of economic policies. It should be open and transparent vis-à-vis all EU Member States.
- It should not be an instrument for crisis management. The European Stability Mechanism (ESM) already performs that function. Instead, its role should be to improve the overall economic resilience of EMU and individual euro area countries. It would thus help to prevent crises and actually make future interventions by the ESM less likely.

Source: Juncker *et al.* (2015: 15).

Basic characteristics of the fund

Although the idea has a long history [Bernoth and Engler (2013a: 4) trace it back to Kenen (1969) and Delors (1989)], in the current phase it was probably the proposal for a 'Cyclical Stabilisation Insurance Fund', developed by Enderlein et al. (Tomasso Padoa-Schioppa Group) in 2012, which established the guidelines for the design of this instrument. This would essentially be the creation of a stabilising transfer fund aimed at countries suffering an asymmetric recessionary shock. The fund would be financed by the contributions of countries in a favourable position with regard to the cycle. The two fundamental characteristics of this fund are its neutrality between countries and its net financial balance (zero sum).

It would be a zero sum fund because the aggregate positive contributions (by countries in a better cyclical position than the average) would be equal to the aggregate amount received by the recipient countries (those suffering the asymmetric recessionary shock).

It would be neutral between countries because whether they are contributors or recipients would not depend on their absolute per capita GDP, but on their relative position in the economic cycle. In other words, over the whole cycle, all the countries should potentially have the same possibilities of being net contributors or recipients, irrespective of their relative income level with respect to the eurozone average. The idea that this instrument should not give rise to permanent payments between countries is a key element of its design and is found in all the proposals (see, for example, Engler and Voigts, 2013: 29; Bernoth and Engler, 2013a: 4).

The simulations carried out in the different proposals appear to point out, on the other hand, that a fund of this nature, of the order of magnitude indicated above (around 1% of GDP) could play a relatively important role in absorbing demand shocks (see especially Enderlein et al., 2013: 48 et seq.).

Critical aspects of the design of the transfer fund

i) Financial balance, annually or over the cycle

Following the guidelines set out in 2012, Enderlein et al. (2013) develop their proposal for a stabilisation instrument that they call 'Cyclical Shock Insurance' (see Box 1 for a detailed analysis of the proposal). The fund would seek to offset part of the gap between a country's cyclical position and

that of the eurozone as a whole. A country would receive or provide resources to the fund depending on whether the gap between its real and potential GDP was greater or lesser, respectively, than that of the eurozone as a whole. If a country found itself in a recessionary phase (i.e. with real output below potential), but this recession were less than that of the eurozone as a whole, that country should contribute to the fund. If, on the contrary, a country were in an expansionary phase (real output above potential), but proportionately less than that of the eurozone as a whole, that country would receive a contribution from the fund.

This formula takes account of the gap relative to the eurozone average, rather than the absolute output gap, in order to fulfil the condition that the fund should be balanced (zero sum) each year. However, this gives rise to a clear pro-cyclical effect in relation to symmetrical shocks affecting the economy of the eurozone as a whole.

Hence, the condition that the fund should fulfil the zero sum condition each year has two types of relatively important negative effects. On the one hand, it could mean that countries in recession could have to increase their taxes or their borrowing, not to stimulate their economies, but to stimulate those of other countries suffering an even more severe recession. On the other hand, it cannot exercise any stabilising function at the aggregate level to cope with symmetrical shocks affecting all the zone's countries similarly. It could certainly be argued that, at the eurozone level, the appropriate instrument for this function is monetary policy. However, we have already emphasised above the limitations of this instrument at the lower zero bound and, on the other hand, the recent review of the theory of multipliers and the experience of other countries speak of the effectiveness of fiscal policy as a stabilising instrument in the recessionary phase of the economic cycle.

For this reason, it would seem reasonable to reformulate the design of this fund, replacing the requirement for annual balancing with that of balancing over the cycle. This implies determining the transfers in terms of the absolute (rather than relative) gap compared to potential output (see Box 1 for the formula used). With this formula, the stabilising mechanism would also serve to absorb symmetrical shocks and moreover it would be in

Box 1. Financial balance, annually or over the cycle

Following the guidelines set out in 2012, Enderlein et al. (2013) develop the proposal for a stabilisation instrument that they call 'Cyclical Shock Insurance'. With this instrument, the annual transfers (positive or negative) for each country would be calculated using the following formula:

$$[1] T_i = \alpha \times ((y_{EZ} - y_{EZ}^*)/y_{EZ}^* - (y_i - y_i^*)/y_i^*) \times y_i^*$$

Where y is real GDP and y^* is potential GDP; the subscripts i and EZ refer to each country and the eurozone, respectively; α is the reduction or convergence parameter (i.e. the percentage difference between the country's gap between actual GDP and potential GDP and the eurozone's, which should be compensated by the mechanism; in their base scenario, Enderlein et al., 2013: 21 consider that $\alpha = 0.5$) and T is the amount to be received (if the result is positive) or contributed (if it is negative) by each country.

The fund would thus seek to offset part of the gap between a country's cyclical position and that of the eurozone as a whole. A country would receive or provide resources to the fund depending on whether the gap between its actual and potential GDP was greater or lesser, respectively, than that of the eurozone as a whole. If a country found itself in a recessionary phase (i.e. with actual output below potential), but this recession were less than that of the eurozone as a whole, that country should contribute to the fund. If, on the contrary, a country's actual output were above potential, but proportionately less than that of the eurozone as a whole, that country would receive a contribution from the fund.

In reality, a simple transformation allows formula [1] to be expressed as follows:

$$[2] T_i = \alpha \times (y_i^* \times (y_{EZ}/y_{EZ}^*) - y_i)$$

In other words, the amount contributed or received by each country is calculated from the difference between its actual GDP and a figure that we can call its 'normalised' potential GDP ($y_i^* \times (y_{EZ}/y_{EZ}^*)$), which is calculated according to the gap existing between the actual and potential GDP of the eurozone as a whole. If the latter is growing above its potential, then the potential GDPs of all the member countries should be corrected upwards, and vice versa, if the eurozone as a whole is growing below its potential.

Enderlein et al. (2013) are obliged to introduce this formulation to comply with the condition that the fund should be balanced financially (zero sum) each year (indeed, from [2] it follows directly that $\sum T_i = 0$, given that $\sum y_i^* = y_{EZ}^*$ and $\sum y_i = y_{EZ}$). However, as defined, it is clear that this variable has a clear pro-cyclical nature in relation to symmetrical shocks affecting the economy of the eurozone as a whole. When the eurozone GDP is below its potential, the amounts received by recipient countries are automatically reduced and those provided by the contributing countries are increased, compared to what they would have received or provided if the potential GDP had been used instead of this 'normalised' potential GDP. The opposite would occur in growth phases, i.e. when real GDP exceeds the potential of the eurozone as a whole. Moreover, with this formulation, it is perfectly possible that countries in the recessionary phase of the economic cycle (meaning an actual GDP below potential) would have to make contributions to the fund. Specifically, this would happen whenever actual GDP was below potential but higher than 'normalised' GDP (i.e. in the interval defined by $y_i^* > y_i > y_i^* \times (y_{EZ}/y_{EZ}^*)$). In other words, the functioning of the mechanism would have a contractionary impact on its economy, rather than expansionary as it would be desirable.

Hence, the condition that the fund should fulfil the zero sum condition each year has two types of relatively important negative effects. On the one hand, it could mean that countries in recession could have to increase their taxes or their borrowing, not to stimulate their economies, but to stimulate those of other countries suffering an even more severe recession, which hardly seems reasonable. As noted by Pisani-Ferry et al. (2013: 5), "countries in recessions would borrow to provide support to countries in worse recessions". On the other hand, as the fund is balanced annually, whatever the phase of the cycle in which the eurozone as a whole finds itself, it cannot exercise any stabilising function at the aggregate level to cope with symmetrical shocks affecting all the zone's countries similarly.

For this reason, it would seem reasonable to reformulate the design of this fund, replacing the requirement for annual balancing with that of balancing over the cycle. This implies determining the transfers in terms of the absolute (rather than relative) gap compared to potential output. Along the same lines, in the scheme of Pisani-Ferry et al. (2013: 5), "the transfers are based on absolute (not relative) deviations of output from potential". That is, it would be substituted 'normalised' potential output for potential output. Hence, the amounts to be received or contributed would be calculated according to the formula:

$$[3] T_i = a \times (y_i - y_i^*)$$

Each year, the fund would have an aggregate positive or negative value, depending on the phase of the economic cycle. It would be positive when real GDP was below potential GDP and negative when the contrary applies. The total amount would be:

$$[4] Q = \sum T_i = a \times (y_{EZ} - y_{EZ}^*)$$

This amount would therefore depend on two factors: the gap between actual and potential GDP at eurozone level and the value established for the reduction parameter (a). With this formula, the stabilising mechanism would serve to absorb symmetrical shocks and moreover it would be in balance, though over the cycle rather than annually: it should borrow at times of recession (when the net total of transfers would be negative) and would be able to repay the borrowing in the growth phase of the cycle (when it would be positive). Over the cycle ($t = 1 \dots T$), it would indeed be the case that $\sum_{i=1}^T \sum T_{it} = 0$, as, by convention, we assume that $\sum y_{EZ,t}^* = \sum y_{EZ,t}$ (obviously, if this does not occur, it would be necessary to re-estimate potential GDP so that this condition would be met). According to Pisani-Ferry *et al.* (2013), "A natural way to pay the debt incurred in recessions would be to extract payments from countries with output above potential in good times". Thus, it would take account not only of the relative position of each country compared to the average in each moment, but also the overall position of the eurozone economy with regard to the phase of the cycle. Although they do not specify their proposal, Allard et al. (2013: 19) also appear to think along these lines when they note that "a fund would collect revenues from euro area members at all times [in good times and bad] and make transfers to countries when they experience negative shocks".

balance, though over the cycle rather than annually. Thus, it would take account not only of the relative position of each country compared to the average, but also the overall position of the eurozone economy with regard to the phase of the cycle.

ii) Determining the cyclical position

When measuring the effectiveness and sensitivity of the stabilisation mechanism, the issue of how to calculate the cyclical position of each country is of great importance. In short, this is the variable that will determine the direction and amount of the transfers corresponding to each one. Normally, the option chosen, both by the EU and the IMF, and by the majority of studies referred to here, particularly by Enderlein et al. (2013), is the gap between actual and potential GDP.

In reality, however, while this concept may appear evident in economic terms, the calculation is complex and the estimates are unreliable and subject to constant revisions.

Indeed, the estimates of potential output obtained are extremely disappointing. They normally result in a clear underestimate of potential GDP, with the difference increasing with successive ex-post revisions. This not only means that potential GDP forecasts are usually significantly wrong, but also that the ex-post calculations of potential GDP for a given year must be subjected to successive appreciable corrections.

Box 2 provides some striking data on this point. For example, estimates made in October 2014 of the average potential GDP of the eurozone countries for the 2010-2014 period led to a revision of more than half a percentage point in those made only eighteen months before (April 2013). Of course, the longer the time between estimates, the greater the correction required.

In short, the weaknesses in the procedure used to determine potential output are too serious for it to be used as the basis for calculating a variable so decisive in terms of economic policy. Hence, it is advisable to examine other options for establishing the cyclical position of each country, i.e. to isolate

the cyclical component from the trend (or structural) component in the calculation of GDP or other variables (such as the public sector deficit).

These options, which would necessarily have to be based on a statistical approximation, should seek to determine the trend behaviour of GDP in each country over time, and use this to calculate its cyclical position. The formula used should be simple and not liable to manipulation, even at the cost of its analytical sophistication. The data provided in Box 2 indicate a high degree of correlation, on the one hand, between GDP growth in a given year in relation to the average over a long period of time (which is a very basic measure of its trend performance) and, on the other, the same country's output gap. In other words, the GDP growth rate in a given year in relation to its average growth rate during a sufficiently long period (16 years in this

case) is a good predictor of a country's output gap, probably as good as the real time estimate of potential output.

iii) Conditions on the resources received and access to the mechanism

One important point is whether the resources from the stabilising transfer fund should be earmarked for specific spending or the recipient countries should be free to use them as they see fit. Obviously, this issue would not arise if the option chosen were not the rainy day fund, but one of the other alternatives considered in section 2, i.e. the strengthening of the EU budget or the creation of a eurozone unemployment insurance, as in these cases the funds would be used directly by the stabilising mechanism itself.

Box 2. Determining the cyclical position on the basis of potential output

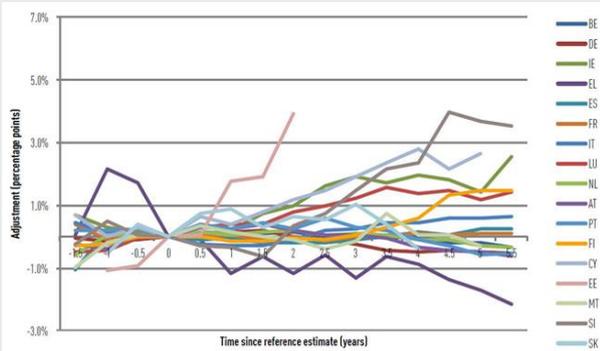
When measuring the effectiveness and sensitivity of the stabilisation mechanism, the question of how to calculate the cyclical position of each country is a decisive point. The measure most commonly used, by both the EU and the IMF, is the gap between potential and actual GDP. This is also the option chosen by the majority of studies referred to here, particularly by Enderlein et al. (2013), although it should be emphasised that the four presidents' report of December 2012 does not contain an explicit recommendation in this regard. Instead, it notes more generically that the transfers "would fluctuate according to each country's position over the economic cycle" (Van Rompuy, 2012: 11).

However, though this is the commonly used measure, in reality the estimation of potential GDP is extremely difficult. Though the concept may seem clear in economic terms, the calculation is complex and estimates are unreliable. Indeed, they are subject to constant revisions, as recognized by many authors (Enderlein et al., 2013: 26; Bernoth and Engler, 2013a: 6; Wolff, 2015: 2). For example, when they try to simulate the effects of their proposal for a transfer fund, Enderlein et al. (2013: 53) admit that the results are particularly vulnerable due to the unreliability of the estimates for potential output.

These authors recall that potential output can be determined by adopting either a statistical approximation or a structural one (Enderlein et al., 2013: 26-28). Using purely statistical methods, time series would be used to calculate the long-term trend path of GDP, which is identified as potential GDP (i.e. the trend GDP over the cycle). However, this is not the procedure adopted by the EU (as decided by Ecofin in 2002), which uses the structural method. In essence, potential GDP is determined on the basis of a Cobb-Douglas production function, which involves making extremely risky estimates of some decisive parameters and variables, such as potential factor productivity (which in turn requires the calculation of potential productivity and the deviations therefrom) and the capital stock. As noted by Enderlein et al. (2013: 27), "Structural methods [...] assume some underlying economic structure, usually a macroeconomic model based on microeconomic foundations".

Since 2013, the EU has calculated the gap with regard to potential output three times a year (it used to do it twice a year). However, if the ex-post estimate is risky, forecasts are even more complex and uncertain. Indeed, the results indicate that the accuracy of these estimates is rather disappointing. In general, the gap with regard to potential GDP is clearly underestimated, with the size of the difference increasing in successive ex-post estimates. In other words, as successive estimates of potential output are made for a given year, increasingly distant in time, the gap with regard to the real GDP for that year increases (Graphs A and B), with percentage variances that, in relative terms, can reach 3%.

Graph A. Average adjustments of relative output gap estimates relative to the autumn estimate in the year preceding the realization of the gap over the period 2002-2012



Source: Enderlein et al. (2013: 66), Figures 7a and 7b.

Graph B. Average adjustments of relative output gap estimates relative to the spring estimate in the year of the realization of the gap over the period 2002-2012

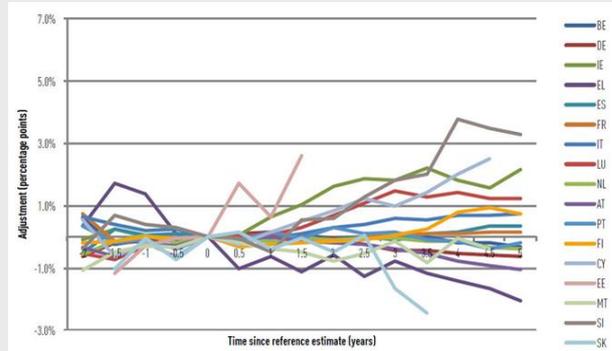


Table A illustrates this extremely well. In only eighteen months, (between the estimates of April 2013 and those of October 2014), the ex-post adjustments to the estimates of the output gap for the years 2010 to 2014 modified the eurozone average by more than half a percentage point of GDP (0.582). That for 2013 was amended by 0.663 points and that for 2014 by over 0.8 points (though in this case the calculation was partly a forecast). In France, the average annual deviation during this period was almost 1.5 points on the upside, i.e. as the potential output estimates were revised ex-post, in only eighteen months (from April 2013 to October 2014), annual GDP growth was revised up by 1.5 points.

Table A. Successive adjustments to the output gap (difference between the October 2014 estimate and the April 2013 estimate, in p.p.)

Country	2010	2011	2012	2013	2014	Mean ¹
Austria	0.086	0.306	0.457	0.023	-0.561	0.287
Belgium	0.013	-0.233	-0.323	-0.465	-0.799	0.367
Estonia	-1.270	-1.327	0.421	0.267	-1.036	0.864
Finland	0.015	0.519	0.117	-0.895	-1.451	0.599
France	1.718	1.740	1.623	1.591	0.768	1.488
Germany	-0.312	0.049	0.178	-0.030	-0.287	0.171
Greece	-0.064	-0.075	-0.672	0.124	0.125	0.212
Ireland	-0.555	0.018	-1.672	-2.760	-1.474	1.296
Italy	0.304	0.500	0.586	0.299	-0.340	0.406
Luxembourg	-0.349	-0.821	-1.886	-0.439	0.369	0.773
Malta	0.461	-0.190	-0.344	0.745	0.760	0.500
Netherlands	-0.242	0.391	-0.326	-0.710	-1.104	0.555
Portugal	-0.230	0.034	-0.163	0.273	0.920	0.324
Slovak Republic	0.990	0.276	-0.115	-0.364	-0.842	0.517
Slovenia	-0.156	-0.061	-0.091	1.101	1.364	0.555
Spain	-0.017	-0.252	-0.423	-0.523	-0.789	0.401
Mean¹	0.424	0.425	0.587	0.663	0.812	0.582

(¹) Mean of unweighted absolute values.

Source: FMI, World Economic Outlook Database (April 2013 and October 2014).

Table B. GDP growth and output gap^{a,b}

Dependent variable	Regression coefficient					R ²	n
	Constant term	X1	X2	X3			
Y1	-0.4853 (-0.9866)	1.1182 (7.4086) **				0.8862	17
Y2	-1.1443 (-1.8381)		0.5715 (2.8539) *			0.6065	16
Y3	-0.0507 (-0.2944)			0.5137 (9.4422) **		0.5003	269
Y4	-0.0049 (-0.0292)			0.5137 (9.6709) **		0.5093	269

(a) Figures in brackets are the value of the t-statistic corresponding to the parameter estimated.
 (*) 95% confidence level. (**) 99% confidence level.
 (b) Description of the variables used:
 Y1 Standard deviation of the output gap - country average (17) X1 Standard deviation of the % ΔGDP - country average (17)
 Y2 Average EZ output gap (16) X2 Average EZ % ΔGDP (16)
 Y3 Output gap (269) X3 % ΔGDP - country average (269)
 Y4 Output gap - country average (269)

Enderlein et al. (2013: 29) themselves admit that the findings "challenge the usefulness of the output gap as a policy indicator", though they nevertheless consider that it would be a mistake to discard it as the most appropriate method for determining a country's cyclical position, and in fact this is the method they use in their proposal.

However, the number and importance of this indicator's weak points, with regard to both its analytical foundations and its empirical results, are too great to rule out the need to examine other options. The fact is that the theoretical and experimental progress in the calculation of potential output and the output gap is still at too early a stage to be depended on in decisions which have an impact of the first order. There can be no doubt that it is a promising line of analysis, which in the future may help us to improve the design of the targets and instruments of economic policy, but at the present time it is not sufficiently mature.

Hence, we should examine other options for determining each country's cyclical position, which must be based on a statistical approximation. The formula used should be simple (i.e. easily understandable) and not liable to manipulation, even at the cost of a certain analytical sophistication. One elementary possibility which fulfils these conditions would be to calculate the trend growth path of each country over the cycle and analyse its situation in relation to this at any given moment. Thus, the annual transfers (positive or negative) of each country would be calculated by the following formula:

$$T_i = a \times (y'_i - y_i)$$

Where y' is the GDP calculated according to its trend behaviour. This approximation would adjust the cyclical position of each country to the trend performance of its GDP, which assumes that it would be sensitive to the shifts which might occur over the medium and long term. It would also ensure the condition of neutrality between countries and of financial balance over the cycle. In other words, over the cycle, each country i would fulfil the condition $\sum_1^T T_{it} = 0$, given that $\sum_1^T \sum y'_{it} = \sum_1^T \sum y_{it}$. An elementary case would consist in considering that potential GDP is that which corresponds to a constant annual growth rate over the cycle, i.e. $y'_{it} = y'_{i0} (1 + g')^t$, where $g' = (\prod_1^T (1 + g_t))^{1/T}$.

In any case, it seems preferable to use an alternative variable, less problematic than the output gap in its current state of development, which would not entail altering too much the cyclical positions of each country. Table B shows the high level of correlation between the two variables to which we refer: the GDP growth rate of a country in relation to its average rate over the cycle and its output gap. In particular, the table shows the results of four types of adjustment between these two variables during the 1999-2014 period. Firstly, between the standard deviations of GDP growth and of the output gap of the various countries relative to the country's average; secondly, between average GDP growth and the average output gap of the eurozone; third and fourth, between GDP growth compared to the country's average (as the independent variable) and the country's output gap and the output gap in relation to the country's average respectively as independent variables. All these adjustments show a positive and highly significant relationship between the two variables. In other words, the GDP growth rate in a given year in relation to its average growth rate during a sufficiently long period (16 years in this case) is a good predictor of a country's output gap, probably better than the real time estimate of potential output.

This issue is linked to several others. The fundamental question is, of course, which alternative is most coherent with the stabilising nature of the fund, i.e. which provides the best guarantee that the resources will be used for the purposes with the strongest multiplier effect. The crucial point is whether this can best be decided by the European institutions (in this case, those responsible for the transfer fund) or by the authorities of the recipient country. There are moral hazard arguments against this second option (the country could use the resources to benefit political interests, even if they would not then have the greatest anti-cyclical impact), and also by the fact that, in all fiscal unions, the central government has powerful stabilising instruments that it controls directly.

If this alternative is chosen, it would be necessary to decide for what ends the resources should be earmarked, bearing in mind that the purpose of this instrument is stabilising and not structural. This is why the proposal of Enderlein et al. (2013: 36-37) is worthy of consideration. This is to use the transfers

to reduce social security contributions (of both employers and workers). Although, as the authors recognise, it is true that the multiplier effect is greater for increases in spending than for reductions in taxes, in this case the immediacy of the effects on the economy and the strong sensitivity to the cycle could make this option especially attractive.

On the other hand, as noted above, this stabilising instrument should not be confused with those that seek to promote structural reforms and hence economic convergence between EU member states. The aim of the transfer fund is not to promote convergence in terms of per capita income and standard of living, rather its purpose is stabilisation (Bernoth and Engler (2013a: 4), as the European Commission itself has emphasised (EC, 2012 and 2013). Moreover, if conditionality is established in these terms, either countries without convergence problems should be excluded or different conditions should be defined for each of these two groups of countries, which does not seem very reasonable.

Of course, this does not mean that the complementary nature of these two types of policies should not be emphasised (as was underlined in section 3), which could be manifested in two types of measures. Firstly, as the presidents' reports themselves point out, it could be agreed that access to the stabilising mechanism would be conditional on the completion of structural reform programs (Van Rompuy et al., 2012: 10; Juncker et al.: 2015: 14). Secondly, it could be determined that the transfers received for stabilisation purposes should preferably be spent on investment projects that would be especially effective in structural terms, as long as they also had a strong expansionary impact.

iv) Application of the 'golden rule'

It is well known that the 'golden rule' admits the possibility of running a deficit, if this is used for public investment. Indeed, this norm is adopted in the majority of countries which have budget stability rules and it also seems to be the meaning it had in the Maastricht Treaty, when this one established the first rules in the EU in this regard.

However, the strict regulations approved as a result of the Great Recession (most notably the 2012 Treaty on Stability, Coordination and Governance) appear to opt for a very restrictive interpretation, in which the balanced budget rule must be applied to public spending as a whole, including investment, with only a few exceptions (see EuropeG, 2012). Nevertheless, we should add that the introduction of the structural deficit concept, as a cornerstone of these regulations, leaves plenty of room for interpretation and for other alternatives, as has been seen since 2013 in the application of the excessive deficit procedures.

The exclusion of the golden rule from the European budgetary discipline scheme poses familiar problems, in terms of both equity and efficiency (EuropeG, 2012: 6; Castells, 2012: 160-164). This is why it is necessary to examine carefully the door that the four presidents' report appears to open, when it notes that the application of the golden rule should be explored, in the context of the creation of the stabilising instrument (or 'fiscal capacity') (Van Rompuy et al., 2012: 12), though the literal wording used to redeem the rule seems somewhat confusing. For example, it could be understood that the report arguably considers that

borrowing would only be acceptable when it is linked to stabilisation policies. However, that is not the case, if we understand that the golden rule applies to a general problem concerning the criteria to be adopted for the funding of public investment, which is not restricted to the cyclical situation.

In reality, when we examine the possibility of running a deficit and borrowing to fund it, we should distinguish between two different situations. One is that arising from the application of stabilisation policies, when the positive and negative amounts should cancel out over the cycle. A different situation is that which arises from the application of the golden rule, according to which the deficit, and the consequent borrowing, would be acceptable if they serve to finance public investment. Even in this case, however, it would seem reasonable to establish limits. Firstly, the recourse to borrowing should serve to finance only a part of the public investment, rather than all of it, given that though the benefits thereof accrue over time, it is the present generation which decides in what and how much to invest. Secondly, such investment should have a clear impact in terms of productivity, i.e. over the long term it should generate sufficient GDP growth to ensure the sustainability of public finances.

5. Simulation of the effects of a stabilising transfer fund

Enderlein et al. (2013) carried out a simulation of the effects that the implementation of a stabilising transfer fund, such as that proposed and discussed in the previous section, would have had. The instrument's impact is assessed by calculating the reduction in the standard deviation of the output gap of the different countries relative to the eurozone average before and after the implementation of the transfer fund.

The main conclusions of the simulation exercise for the 1999-2014 period are as follows:

- i) If the estimates of the output gap were correct, the stabilising impact of the transfer fund would reach a notable 40% (i.e. the standard deviation would reduce by 40% due to the impact of the instrument).
- ii) However, as noted in the previous section, the estimates of the output gap are very deficient, and

have to be modified repeatedly in successive years. This means that when implementing the fund, the figures used will have to be adjusted a posteriori, with a significant reduction in the actual stabilising impact of the instrument to around 15%, much less than the theoretically possible 40%.

iii) The total sum of the positive transfers (equal to that of the negative transfers) would be around 0.2% annually of the eurozone GDP.

The results obtained are described in detail in Box 3. Assuming that the calculation of potential output is correct from the beginning (i.e. when the transfer for

each country is calculated), the reduction in the unweighted average standard deviation for the 1999-2014 period is, as noted, 40%. In some years the reduction is close to 50% or higher. The total sum of the transfers paid/received is equivalent to 0.194% of eurozone GDP, based on the average of the period.

Greece would have received the largest positive contributions. The only other countries which would have received transfers of more than 1% of GDP some years are Finland, Spain and Ireland. Contributions to the fund (negative transfers) are in no case superior to 2% of GDP.

Box 3. Simulation of the effects of a stabilising transfer fund

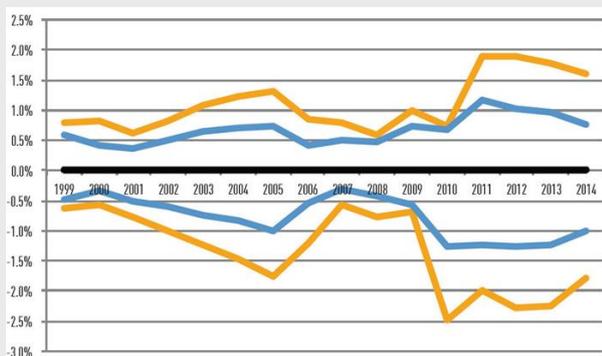
Enderlein et al. (2013) carried out a simulation of the effects that the implementation of a stabilising transfer fund would have had. As we have seen, the cyclical position of each country is determined in function of the relationship of its output gap to that of the eurozone as a whole, and this indicator is calculated using the estimates made during the current year, which are subject to corrections in the following years. We should also remember that the proposal of these authors assumes a zero sum fund, in which the positive and negative transfers offset each other every year.

The simulation exercise seeks to calculate the impact of the instrument in terms of absorbing the differences in the cyclical fluctuations experienced in the different countries, and the variable selected is the standard deviation of the countries' output gaps. Thus the effectiveness of the instrument is calibrated based on the reduction of this standard deviation before and after applying the transfer fund. It should be borne in mind that the mechanism proposed by Enderlein et al. (2013) seeks to correct the asymmetry of the fluctuations, not to eliminate them, meaning that this mechanism would not be activated if all the countries were experiencing a serious recession, of identical gravity in each of them. In selecting the convergence parameter α (which indicates the percentage difference between the output gap of each country and that of the eurozone, which will be reduced by the fund, see Box 1) different hypotheses are considered, though in the scenario a value of 0.5 is used. The two most important issues that the simulation exercise seeks to determine are thus the degree of reduction of the fluctuations and the size of the fund in absolute terms (i.e. the total amount of the transfers paid and received). This is obviously a relevant figure, even though the fund is zero sum. Bernoth and Engler, 2013a: 8) also consider that "One challenge for the political debate is therefore to strike an optimal balance between the stabilizing effect and the size of the transfers".

Graph A shows the reduction in the standard deviation of the output gap of the different countries compared to the mean, before and after applying the stabilisation mechanism, assuming that potential output is correctly calculated from the start (i.e. when the transfer corresponding to each country is determined). In such a scenario, the standard deviation of the unweighted average of the 1999-2014 period is reduced by 40%: it falls from 1.20% to 0.72%, as a result of applying the stabilisation mechanism (Table A); in some years (2000, 2012, 2013 and 2014) the reduction is close to 50% and in 2006 even higher. The total sum of the transfers paid/received is equivalent to 0.194% of eurozone GDP, based on the average of the period, with maxima of close to 0.3% in 2005, 2011 and 2012, and minima of around 0.1% in 2000 and 2008.

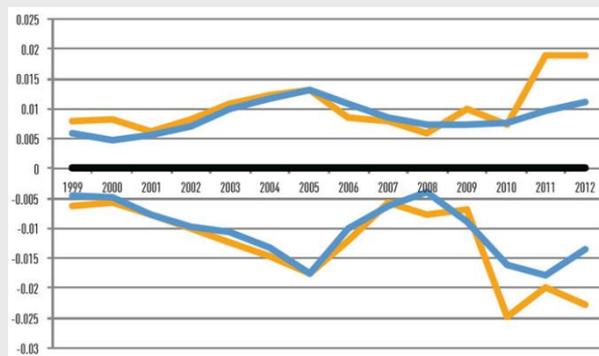
Enderlein *et al.* (2013: 69-70, Tables 2a and 2b) also estimate the transfers received or contributed by countries, in absolute terms and as a percentage of GDP. It can be seen that Greece would have received the largest positive contributions: over or around 4% of GDP in 2011, 2012 and 2013, over 2% in 2014 and 1% in 2010. The only other countries which would have received transfers of more than 1% of GDP are Finland in 2009, Spain in 2010 and 2011 and Ireland in 2010. Contributions to the fund (negative transfers) are in no case superior to 2% of GDP. The only cases which exceed 1.5% are Cyprus in 2009, Slovenia in 2007 and 2008 and Estonia in 2012 and 2013. Apart from these countries, others would have had to make contributions of more than 1% of GDP: Ireland (in 1999, 2000 and 2013), Luxembourg (2000) Greece (2009) and Finland (2007).

Graph A. Standard deviations above and below EZ output gap pre- (yellow) and post-transfers (blue)



Source: Enderlein et al. (2013: 51 and 78), Figures 8 and 11.

Graph B. Standard deviations above and below EZ output gap pre- (yellow) and post-transfers (blue)



Lastly, it is interesting to note the total balances by country in the period in question. Although the mechanism is neutral between countries in principle, this neutrality would only be seen asymptotically, under the hypothesis that over a sufficiently long period of time no country would maintain a trend position above or below the eurozone mean (i.e. the deviations of its real GDP relative to potential GDP would not be persistently higher or lower than those of the eurozone). However, this is not so in the period under consideration (presumably because either it is not long enough or the adjustments made for the calculation of potential GDP are unsatisfactory). Hence, the simulation indicates that four countries (Greece, Spain, the Netherlands and Portugal) would have a positive balance over the period as a whole; this would be over 1% in the case of Greece and around 0.2% for the rest, with all the other countries having a negative balance. Estonia would have the largest negative balance at 1.21%, followed by Slovakia and Cyprus with more than 0.5%. Germany and Italy would be almost in balance and France would make a net contribution of close to 0.2% of GDP.

The fund's effectiveness declines drastically when real output gap data are used in the simulation, bearing in mind the successive ex-post adjustments to these figures. Now (Graph B) the reduction in the standard deviation of the output gaps of the different countries relative to the average, before and after the implementation of the stabilisation mechanism, is much more modest than when we assume that the calculation of potential output is correct from the beginning (Graph A). In the unweighted average of the 1999-2014 period, it is only 16.1% (compared to 40%), falling from 1.11% to 0.94% due to the implementation of the stabilisation mechanism (Table B). The total sum of the transfers paid/received each year is equivalent to 0.161% of eurozone GDP, based on the average for the period, with a maximum of almost 0.4% in 2011.

Table A. Effect of proposed stabilisation scheme on output gaps over time

	Output gap standard deviation from eurozone average (percentage points)		Relative change in output gap standard deviation	Total paid/received (relative to actual eurozone GDP in year)
	Absent of intervention (historic data/current forecast)	Simulated results for the proposed stabilisation scheme		
1999	0.72%	0.54%	-25.0%	0.154%
2000	0.70%	0.38%	-45.2%	0.092%
2001	0.68%	0.44%	-35.9%	0.125%
2002	0.91%	0.55%	-39.1%	0.171%
2003	1.15%	0.70%	-39.5%	0.224%
2004	1.32%	0.77%	-42.0%	0.242%
2005	1.51%	0.87%	-42.4%	0.279%
2006	1.00%	0.48%	-52.6%	0.149%
2007	0.68%	0.40%	-41.2%	0.086%
2008	0.65%	0.44%	-32.4%	0.111%
2009	0.83%	0.64%	-22.5%	0.183%
2010	1.25%	0.95%	-24.0%	0.235%
2011	1.95%	1.21%	-38.0%	0.291%
2012	2.12%	1.17%	-44.8%	0.282%
2013	2.07%	1.13%	-45.6%	0.270%
2014	1.70%	0.88%	-48.1%	0.187%
Average over period (unweighted)	1.20%	0.72%	-40.0% (change in averages)	0.194%

Source: Enderlein et al. (2013: 71), Table 3.

Table B. Effect of proposed stabilisation scheme on output gaps over time

	Output gap standard deviation from eurozone average (percentage points)		Relative change in output gap standard deviation	Total paid/received (relative to actual eurozone GDP in year)
	Absent of intervention (historic data/current forecast)	Simulated results for the proposed stabilisation scheme		
1999	0.72%	0.54%	-25.5%	0.123%
2000	0.70%	0.48%	-31.9%	0.138%
2001	0.68%	0.67%	-2.2%	0.103%
2002	0.91%	0.83%	-8.2%	0.096%
2003	1.15%	1.02%	-11.2%	0.090%
2004	1.32%	1.24%	-6.7%	0.118%
2005	1.51%	1.53%	1.4%	0.134%
2006	1.00%	1.05%	4.3%	0.184%
2007	0.68%	0.73%	8.2%	0.131%
2008	0.65%	0.51%	-21.3%	0.100%
2009	0.83%	0.81%	-2.1%	0.134%
2010	1.25%	1.16%	-7.1%	0.150%
2011	1.95%	1.37%	-29.8%	0.389%
2012	2.12%	1.25%	-40.8%	0.332%
2013	2.07%	1.13%	-45.6%	0.270%
2014	1.70%	0.88%	-48.1%	0.187%
Average over period (unweighted)	1.11%	0.94%	-14.8% (change in averages)	0.161%

Source: Enderlein et al. (2013: 82), Table 6.

Also, the effects of the stabilisation mechanism appear rather more moderate if we look at the transfers received or contributed by countries, in absolute terms or percentage of GDP (Enderlein *et al.*, 2013: 80-81, Tables 5a and 5b). Greece is again the biggest beneficiary (the only country receiving transfers equivalent to more than 3% of GDP, in 2011 and 2012). Ireland, Portugal, Finland, Spain and Slovenia also receive transfers of over 1% in some years. With regard to contributions to the fund (negative transfers), unlike the previous simulation, no country exceeds 1.5% of GDP. The highest (1% or more) would have corresponded to Luxembourg (2000), Slovakia (2009 and 2011), Ireland (1999 and 2000), Malta (2011), Greece (2004 y 2005), Cyprus (2009) and Germany (2011).

With regard to the total balances by country over the period in question, there are also appreciable differences. The number of countries benefiting rises from four to seven. Greece, Spain and Portugal remain, though Greece's positive balance of 1.13% disappears and its position is almost balanced. Spain becomes the country which benefits most from the transfer fund's operations, with 0.27%. The Netherlands leaves this group and Italy, Slovenia, Ireland and Luxembourg enter it. The other ten countries have negative balances, but also more modest than previously. Slovakia and Malta would contribute over 0.6% of GDP, Germany 0.12% and France would be practically in balance.

Lastly, the simulations carried out by Enderlein *et al.* provide an interesting conclusion with respect to the value of the convergence parameter α (see Box 1, formula [1]). Remember that this parameter indicates the percentage by which the difference between the output gap of the individual country and the eurozone reduces due to the implementation of the transfer fund. In theory, as the value of the parameter increases, so will the size of the reduction, but the total amount of the payments contributed and received by the different countries will also rise (Enderlein *et al.*, 2013: 52 and 68). However, when the output gap data used is adjusted as the years pass, the results also show serious differences with those expected and it can be seen that successive increases in the convergence parameter have clearly decreasing effect in terms of stabilisation (Enderlein *et al.*, 2013: 79, Figure 12 and Table 4). A convergence parameter of one (1.0) has a smaller stabilising effect than one of 0.7, while requiring an additional 40% of resources to be mobilised. The convergence parameter of 0.5 used by the authors in the base scenario, with barely half the resources, produces a stabilising effect equivalent to almost 90% of a parameter of 1.

As already noted, the fund's effectiveness declines drastically when real output gap data are used in the simulation, bearing in mind the successive ex-post adjustments to these figures. The reduction in the standard deviation of the output gaps of the different countries relative to the average, before and after the implementation of the stabilisation mechanism, is much more modest than when we assume that the calculation of potential output is correct from the beginning. In the unweighted average of the 1999-2014 period, it is only 16.1% (compared to 40%), falling from 1.11% to 0.94% due to the implementation of the stabilisation mechanism. The total sum of the transfers paid/received each year is equivalent to 0.161% of eurozone GDP, based on the average for the period, with a maximum of almost 0.4% in 2011.

Greece is again the biggest beneficiary (the only country receiving transfers equivalent to more than 3% of GDP, in 2011 and 2012). Ireland, Portugal, Finland, Spain and Slovenia also receive transfers of over 1% in some years. With regard to contributions to the fund (negative transfers), unlike the previous simulation, no country exceeds 1.5% of GDP.

To summarise, the simulations provided by Enderlein *et al.* lead to extremely interesting conclusions in two

respects. On the one hand, they confirm the effectiveness and validity of the proposed stabilising instrument. On the other, they confirm the serious doubts expressed above about the use of the output gap as the most appropriate measure for determining the cyclical position of each country.

6. Concluding remarks

A monetary union which lacks an appreciable degree of fiscal and political integration poses major problems, which the Great Recession has brought to the fore. One of these is that the traditional stabilising instruments (monetary and fiscal policy) have become much less effective for dealing with recessionary shocks affecting any particular member state.

On the one hand, monetary union rules out the possibility of using monetary policy at the national level. Moreover, the application of a single monetary policy throughout the eurozone has a pro-cyclical effect in all the member states: it is too restrictive for those passing through a contractionary phase and too expansionary for those in the opposite situation.

On the other hand, the effectiveness of a domestic use of fiscal policy in highly integrated markets, as is the case in Europe, was already arguable, even before monetary union. However, this has exacerbated its limitations, because the crisis has shown that governments cannot manage their sovereign debts autonomously when the sovereign does not control its own currency.

In short, the Great Recession has revealed, firstly, that fiscal stabilising instruments remain essential and, secondly, that these must be set up at eurozone level, given their limitations at national level. It is the absence of such stabilising instruments that accounts in part for the severity of the austerity policies applied in some countries.

In recent years, this situation has led to the appearance of a number of proposals supporting the creation of instruments of this kind. While it is true that the crisis has put the need for decisive progress towards fiscal union on the eurozone's agenda, it is even more the case that the point on which there is most consensus and the most developed proposals is the creation of a fiscal stabilising instrument.

Of the various alternatives proposed (which range from the expansion and strengthening of the EU budget, with the consequent creation of an EU tax, to the establishment of unemployment insurance at eurozone level), the most realistic, and the one that appears to command greatest recognition, is the creation of a stabilising fund for transfers between countries, adapted to the phases of the cycle (rainy day fund).

Such a fund should mitigate the cyclical situation of all eurozone countries, receiving negative transfers from countries going through a relatively expansionary phase, and allocating transfers to those suffering a relatively recessionary phase. There is broad agreement on the two essential characteristics of this fund. On the one hand, it would have to be balanced in financial terms, i.e. it should be zero sum over time. On the other hand, it should be neutral between countries, meaning that they would all have to have a result of zero over time, as they would all pass through recessionary and expansionary phase in relation to the eurozone average. The fund would not serve to channel transfers from richer countries to poorer ones, but from countries in an expansionary phase (though poor) to those in a recessionary phase (though rich), in relative terms.

Starting from this basic proposal, there are relevant questions to be resolved, on which this *Policy Brief* focuses. Firstly, should the fund be balanced each year or over the cycle? The first option is more conservative and realistic but, as we conclude in this *Policy Brief*, it gives the fund a pro-cyclical character and does not allow it to be used to restore stability in the case of symmetrical shocks affecting the entire eurozone. Secondly, there is the crucial point of determining the cyclical position of each country. The indicator usually employed, the output gap, has very significant drawbacks, meaning that it would be necessary to explore alternatives based on rigorous statistical approaches. Thirdly, there is the issue of the conditionality to be placed on the resources received, related partly to the linking of this instrument, of a strictly stabilising nature, to structural convergence policies. Fourth and last, the possible development of this stabilising instrument leads to discussions of the 'golden rule', i.e. the possibility of reinterpreting the limits on deficits and borrowing established in EU legislation.

The creation of this European stabilising instrument is a priority issue, after the experience to the Great Recession, and its implementation could be a very significant first step towards a genuine fiscal union, which would not be based exclusively on the budget discipline of the member states, as occurs today. The stance adopted by the EU institutions themselves, in the four and five presidents' reports (Van Rompuy et al. (2012) and Juncker et al. (2015) respectively), testifies to the widespread awareness of this need.

Nevertheless, a simple comparison of these two reports is revealing. The Van Rompuy report's proposal in 2012 for the creation of a 'fiscal capacity' was ambitious in both its content and the proposed timetable. By contrast, the recent proposal in the Juncker' report (June 2015) is timid, riddled with caveats and preconditions. It dashes cold water on the expectations created by its predecessor. This could give the impression that, now that the worst of the crisis is past, the measures then considered essential are now viewed as less urgent and necessary. However, these measures remain indispensable. Only the creation of a stabilising instrument like that discussed in this *Policy Brief* will better prepare us to confront recessions of the severity and characteristics of that which we have recently suffered.

References

- ALLARD, C.; BROOKS, P. K.; BLUEDORN, J. C.; BORNHORST, F.; CHISTOPHERSON, K.; OHNSORGE, F.; POGHOSYAN, T. and IMF Staff Team (2013).- [“Toward a Fiscal Union for the Euro Area”](#). *IMF Staff Discussion Note*, September 2013.
- AUERBACH, A.; GORODNICHENKO, Y. (2011).- [“Measuring the Output Responses to Fiscal Policy”](#), junio 2011 (published in *American Journal-Economic Policy*, vol. 4, 2012, p. 1-27).
- BATINI, N.; CALLEGARI, G.; MELINA, G. (2012).- [“Successful Austerity in the United States, Europe and Japan”](#). *IMF Working Paper*, WP/12/190, International Monetary Fund, July 2012.
- BERNETH, K.; ENGLER, P. (2013a).- [“A Transfer Mechanism as a Stabilization Tool in the EMU”](#), *DIW Economic Bulletin*, 1.2013, p. 3-8.
- BERNETH, K.; ENGLER, P. (2013b).- [“A Cyclical Transfer Mechanism as a Stabilization Tool in the EMU”](#). *Minsky Conference on “The Eurozone Crisis, Greece, and the Experience of Austerity”*, Berlin, 9 November 2013.
- BLANCHARD, O.; LEIGH, D. (2012).- [“Are We Underestimating Short-Term Fiscal Multipliers?”](#). *World Economic Outlook: Coping with High Debt and Sluggish Growth*, p. 41-43, International Monetary Fund, Washington, October, 2012.
- BLANCHARD, O.; LEIGH, D. (2013).- [“Growth Forecast Errors and Fiscal Multipliers”](#). *NBER Working Paper* 18779. National Bureau of Economic Research, Cambridge (Massachusetts), July 1987.
- BOADWAY, R.; SHAH, A. (eds.) (2007).- [“Intergovernmental Fiscal Transfers”](#). Public Sector Governance and Accountability Series, World Bank, Washington.
- CASTELLS, A. (2012).- *El desafío de la política. Europa y la gran recesión*. RBA, Barcelona.
- CASTELLS, A. (2014a).- [“La economía política de la austeridad: reflexiones a propósito de la gran recesión”](#). Admission speech at the Real Academia de Ciencias Económicas y Financieras, Barcelona, 20 February 2014.
- CASTELLS, A. (2014b).- [“¿Es posible una unión monetaria sin unión fiscal y una unión fiscal sin unión política?”](#). *Papeles de Economía Española*. N. 141, p. 141-169.
- COMISIÓN EUROPEA (2012).- [“A blueprint for a deep and genuine economic and monetary union. Launching a European Debate”](#). COM (2012) 777 final/2, Brussels, 30.11.2012.
- COMISIÓN EUROPEA (2013).- [“Towards a Deep and Genuine Economic and Monetary Union. The introduction of a Convergence and Competitiveness Instrument”](#). COM (2013) 165 final, Brussels, 20.3.2013.
- COTARELLI, C. (2012).- [“European Fiscal Union: A Vision for the Long Run”](#). Gerzensee Conference, December 1-2, 2012.
- DE GRAUWE, P. (2011).- [“The Governance of a Fragile Eurozone”](#). *CEPS Working Document*, n. 346, May 2011.
- DELORS, J. (1989).- [“Regional Implications of Economic and Monetary Integration”](#). *Report on Economic and Monetary Union in the European Community*. Luxembourg.
- DRÈZE, J.; WYPLOSZ, C.; BEAN, C.; GIAVAZZI, F.; GIERSCH, H. (1988).- [“The Two-handed Growth Strategy for Europe: Autonomy through Flexible Cooperation”](#). *Recherches Economiques de Louvain*, 54, 1, p. 5-52.
- DRÈZE, J.; DURRÉ, A. (2013).- [“Fiscal Integration and Growth Stimulation in Europe”](#), Discussion Paper 2013/13, Center for Operations Research and Econometrics, February 2013.
- DULLIEN, S.; SCHWARZER, D. (2009).- [“Bringing Macroeconomics into the EU Budget Debate: Why and How?”](#). *Journal of Common Market Studies*, 47 (1), p. 153-174.
- ENDERLEIN *et al.* (2012).- [“Completing the Euro \(A roadmap towards fiscal union in Europe\)”](#). *Notre Europe* (Tommaso Padoa-Schioppa Group, comprised of H. Enderlein, P. Bofinger, L. Boone, P. de Grauwe, J.C. Piris, J. Pisani-Ferry, M.J. Rodrigues, A. Sapir and A. Vitorino).
- ENDERLEIN, H.; GUTTENBERG, L.; SPIESS, J. (2013).- [“Blueprint for a Cyclical shock insurance in the Euro area”](#). *Notre Europe (Studies&Reports)*, September 2013.

- ENGLER, P.; VOIGTS, S. (2013).- [“A Transfer Mechanism for a Monetary Union”](#). *SFB 649 Discussion Paper 2013-013*, Humboldt Universität, Berlin.
- EUROPEG (2012).- [“Is the European Union really moving toward a Fiscal Union?”](#). *Policy Brief 3*, December 2012.
- GROUPE EIFFEL EUROPE (2014).- [“For a Euro Community”](#), 14 February 2014 (comprised of A. Bénassy-Quéré, Y. Bertoncini, J-L. Bianco, L. Boone, B. Dumont, S. Goulard, A. Loesekrug-Pietri, R. Medí, E. Pflimlin, D. Simonneau, C. Ulmer and S. Vallée).
- GRUPO GLIENICKER (2013).- [“Towards a Euro Union”](#), 18 October 2013 (comprised of A. von Bogdandy, Ch. Calliess, H. Enderlein, M. Fratzscher, C. Fuest, F. Mayer, D. Schwarzer, M. Steinbeis, C. Stelzenmüller, J. von Weizsäcker and G. Wolff).
- GRUPO MANIFIESTO (2014).- [“Manifesto for a euro political union”](#), February 2014 (the first signatories of the Manifesto are F. Autrey, A. Bozio, J. Cagé, D. Cohen, A-L. Delatte, B. Dormont, G. Duval, Ph. Frémeaux, B. Palier, T. Pech, T. Piketty, J. Quatremer, P. Rosanvallon, X. Timbeau and L. Tubiana).
- HACKER, B. (2013).- [“On the Way to a Fiscal or a Stability Union?”](#). Workshop “On the Road to a European Fiscal Federalism”, FES, Berlin, 11 November 2013.
- JUNCKER, J.-C.; TUSK, D.; DIJSSELBLOEM, J.; DRAGHI, M.; SCHULZ, M. (2015).- [“Completing Europe’s Economic and Monetary Union”](#), June 2015.
- KENEN, P. (1969).- “The Theory of Optimal Currency Areas: An Eclectic View”. Mundell, R.; Swoboda, A. (eds.). *Monetary Problems of the International Economy*. University of Chicago Press.
- MUNDELL, R.; SWOBODA, A. (eds.) (1969). *Monetary Problems of the International Economy*. University of Chicago Press.
- PEROTTI, R. (2011).- [“The ‘Austerity Myth’: Gain Without Pain?”](#). *BIS Working Papers*. N. 362, Bank for International Settlements, November 2011.
- PISANI-FERRY-FERRY, J.; VIHRIÄLÄ, E.; WOLFF, G. B. (2013).- [“Options for a Euro-area Fiscal Capacity”](#). *Bruegel Policy Brief*, Issue 2013/01, January 2013.
- PORTES, J. (2013).- [“Believing in ‘miracles’: Self-defeating austerity and self-financing stimulus”](#). *National Institute of Economic and Social Research* (blog), 10 March 2013.
- SCHWARZER, D. (2013).- “A solidarity instrument as a nucleus for a fiscal capacity”. Workshop “On the Road to a European Fiscal Federalism”, FES, Berlin, 11 November 2013.
- VAN ROMPUY, H.; BARROSO, J. M.; JUNCKER, J.-C.; DRAGUI, M. (2012).- [“Towards a Genuine Economic and Monetary Union”](#), 5 December 2012.
- VON HÄGEN, J. (2007).- “Achieving Economic Stabilization by Sharing Risk within Countries”. Boadway, R.; Shah, A. (eds.). [“Intergovernmental Fiscal Transfers”](#). Public Sector Governance and Accountability Series, World Bank, Washington, p. 107-132.
- VON HÄGEN, J.; WYPLOSZ, CH. (2008). [“EMU’s Decentralized System of Fiscal Policy”](#). *Economic Papers*. N. 306, February, European Commission.
- WOLFF, G. B. (2012).- [“A Budget for Europe’s Monetary Union”](#). *Bruegel Policy Brief*, Issue 2012/22, December 2012.
- WOLFF, G. B. (2015).- [“Euro area governance: an assessment of the ‘five presidents’ report”](#), Bruegel Institute, (blog), 25 June 2015.

EuropeG is composed of Antoni Castells (director), Manuel Castells, Josep Oliver, Emilio Ontiveros, Martí Parellada and Gemma García (coordinator).

This Policy Brief reflects the group's position, and the contributions of its members, on the basis of a first draft prepared by Antoni Castells.

EuropeG

Parc Científic de Barcelona
Baldri i Reixac, 4
08028 Barcelona
Tel. 934 033 723
www.europeg.com



With the support of:

