

Proposal for a Stabilisation Fund for the EMU

Bernard Delbecque

No. 385 / October 2013

Abstract

This paper argues that it should be possible to complement Europe's Economic and Monetary Union with an insurance-type shock absorption mechanism to increase the resilience of member countries to economic shocks and reduce output volatility. Such a mechanism would neither require the establishment of a central authority, nor would it lead to permanent transfers between countries. For this mechanism to become a reality, however, it would be necessary to overcome certain technical problems linked to the difficulty of anticipating correctly the position of an economy in the business cycle.

CEPS Working Documents are intended to give an indication of work being conducted within CEPS' research programmes and to stimulate reactions from other experts in the field. The views expressed in this paper are those of the author and do not necessarily represent any institution with which he is affiliated.

ISBN 978-94-6138-360-0

Available for free downloading from the CEPS website (<http://www.ceps.eu>)

© CEPS 2013

Contents

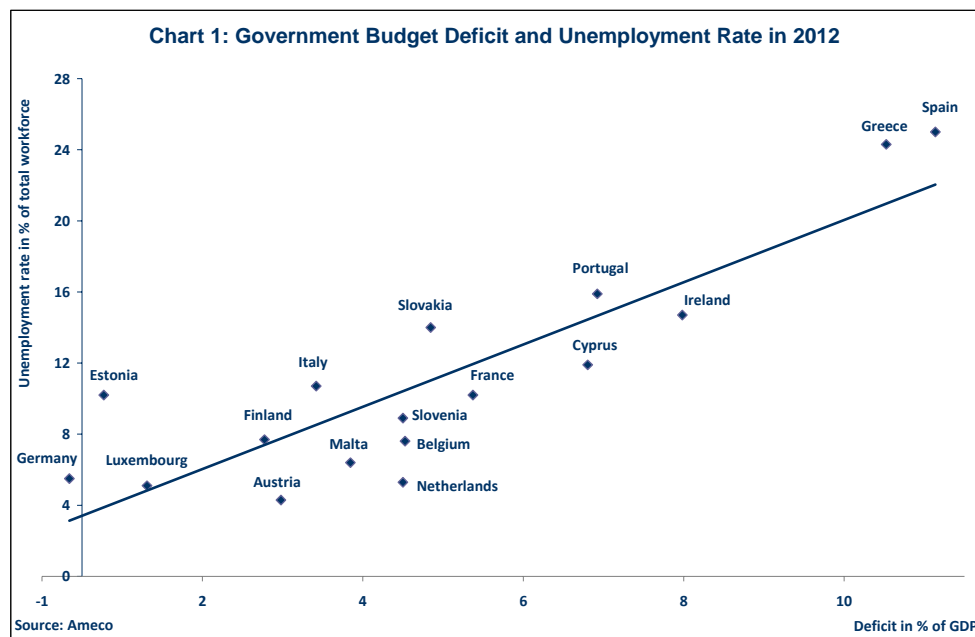
Risk-Sharing Mechanisms in a Monetary Union	2
An EMU Stabilisation Fund	3
Illustrative Scenario.....	5
Implementation Issues.....	8
Conclusion.....	9
References.....	10
Annex 1. Average Potential Real Growth.....	11
Annex 2. Net Contributions to the ESF per Euro-Area Country	11
Annex 3. ESF Macroeconomic Stabilisation Impact	12
Annex 4. Total Net Contributions to the ESF Calculated on Output Gap Data	13

Proposal for a Stabilisation Fund for the EMU

Bernard Delbecque^{1*}

CEPS Working Document No. 385 / October 2013

The current economic downturn in the euro area reveals the cost of creating Europe's Economic and Monetary Union (EMU) without a central fiscal capacity. This is a major weakness of the EMU architecture. In particular, in the absence of a central fiscal capacity, the lack of fiscal space associated with current fiscal positions limits the ability of automatic stabilisers to mitigate the social and economic costs of the recession. This is evident from Chart 1, which shows that the member countries with high levels of unemployment (i.e. Spain, Greece and Portugal) are also those countries that have little margin of manoeuvre to implement a counter-cyclical budgetary policy. Thanks to relatively low unemployment rates and budget deficits, northern euro-area countries are in a very different situation. One could argue that these countries should mitigate the impact of the adjustment efforts undertaken in southern Europe. This is not self-evident, however, because the operating rules of EMU do not foresee this level of solidarity between member countries.



It does not seem realistic at this point that euro area countries would be willing to create a kind of United States of Europe. However, the President of the European Council and the Presidents of the European Commission, Eurogroup and European Central Bank (ECB) have

* Bernard Delbecque is Director of Economics and Research at the European Fund and Asset Management Association (EFAMA) and Professor of Economics at the Université Catholique de Louvain. The author is grateful to Olivier Blanchard, Henri Bogaert, Alain Durré, Davide Furceri and Daniel Gros for useful comments.

recognised that a fiscal capacity would facilitate adjustment to economic shocks and help prevent some countries from plunging into a bad equilibrium (see Van Rompuy, 2012). This proposal received a lukewarm welcome from the European Council, reflecting the fact that there is very limited appetite among member countries to accept greater pooling of fiscal competences and further integration of policy-making. Whilst this may be the political reality today, the level of federalism required to develop a shock-absorption capacity for EMU may be much smaller than is commonly believed. The proposal developed in this paper aims to demonstrate this point.

Risk-Sharing Mechanisms in a Monetary Union

Before EMU came into being, many studies were undertaken on how its members would adjust to asymmetric macroeconomic shocks after the adoption of the euro. Based on the conclusions of the traditional theory of optimal currency areas and the empirical analysis of existing currency unions, most studies drew the same main conclusion: because of low labour mobility and relative price adjustment, in the absence of interregional fiscal transfers or alternative adjustment mechanisms, asymmetric shocks within EMU were likely to lead to regional recessions and persistent differences in regional unemployment rates.² The current crisis has highlighted the relevance of this conclusion and stimulated new research on adjustment mechanisms that could be embedded in the EMU architecture to improve its functioning. Without claiming to be exhaustive, this section provides an overview of recent studies in this area.

Bordo et al. (2011) discuss the characteristics of a common fiscal policy framework that could have alleviated the consequences of the current crisis for EMU members. In light of the experience of five federal states (Argentina, Brazil, Canada, Germany and the United States), the authors found that the fiscal capacity of the central government and the system of transfers and equalisation of incomes across regions in those countries have tended to be strengthened in response to deep economic crises. This process was part of the stabilisation process to improve the conditions of the most damaged regions. This pattern suggests that the recent global crisis might play a part in convincing European leaders of the need to equip EMU with an adjustment mechanism similar to those driving regional adjustment within existing monetary unions.

Wolff (2012) discusses four options for stabilisation of asymmetric shocks within EMU: unemployment insurance, payments related to large deviations of potential output, the narrowing of large spreads and discretionary temporary transfer payments. Wolff recognises the need to progress in this direction within a framework that provides for adequate democratic legitimacy and control. He also agrees that a more ambitious European fiscal union is desirable to improve the functioning of EMU.

Drèze & Durré's (2013) proposal for coping with regional shocks consists of the adoption of an insurance mechanism under which each EMU member would issue long-term bonds indexed on its real national income. To ensure meaningful international risk-sharing, the stock of bonds issued should be sufficiently large, in the order of 36% of national incomes – a percentage close to that of public budgets in national income. The bonds would be pooled, and each country would receive a share of the pool with the present value equal to the present value of its own bonds.³ The impact of the mechanism is illustrated in various

² See, for instance, the study done by Obstfeld & Peri (1998) on the eve of the introduction of the euro.

³ The scheme is a variant of a suggestion made by Obstfeld & Peri (1998) who proposed that governments issue bonds indexed to domestic nominal per-capita GDP growth and invest the proceeds in an internationally diversified portfolio of assets to lower some of their GDP risk.

simulations, which provide an overview of the transfers that EMU members would have received if the mechanism had been implemented since the start of EMU. De Grauwe (2013) suggests a simplified version of the mechanism under which each member country would i) issue bonds that would pay an interest rate equal to the national growth rate of GDP and be deposited into a common debt agency and ii) hold bonds issued by the agency that would pay an interest rate equal to the average growth rate of the euro area.

Finally, Furceri & Zdzienicka (2013) analyse the properties and the effectiveness of a supranational fiscal stabilisation mechanism that would collect contributions as a share of each member state's GNP and pay transfers to countries negatively hit by output shocks. The transfers would be proportional to the size of the shock, the relative size of the economy and the resources available in the fund. The stabilisation properties of the mechanism are studied for different measures of shocks: estimated serially uncorrelated shocks, output gaps and growth deviations from historical averages. The authors find that a gross contribution of about 1.5 to 2.5% of GNP could provide stabilisation on a par with the fiscal risk-sharing observed in Germany and other federally organised countries.

An EMU Stabilisation Fund

This section presents an alternative stabilisation mechanism to help EMU member countries and the euro area as a whole to adjust to economic shocks. The mechanism is based on the following arrangement:

- When the projected real GDP growth forecast is below the estimated long-term real GDP growth, euro-area countries would benefit from a disbursement from an EMU Stabilisation Fund (ESF). When the growth forecast is above the long-term real growth estimates, they would make a contribution to the ESF. The net contributions would be based on the country's position in the economic cycle and the relative size of the economy. Conceptually, the following equation could serve as the basis for calculating the net contribution to the ESF: $d = \alpha (y^e - y^*)$, where d is the net contribution expressed as a percentage of GDP, y^e is the projected real GDP growth rate and y^* is the projected long-term real GDP growth rate.
- Depending on the economic situation prevailing at the time of its creation, the ESF would start accumulating reserves if the contributions received from high-growth countries exceed the payments to be made to low-growth countries, or it would have to borrow from financial markets to be able to transfer resources to member countries if their total net contributions were negative, reflecting difficult economic circumstances. Overall, it can be expected that the ESF would reduce its debt or accumulate reserves during times of economic boom, and would use its reserves or issue bonds during an economic slowdown or recession.
- At the institutional level, the ESF could be managed by the European Stability Mechanism (ESM), which could be given responsibility for investment and debt management, and by the European Commission, which could be entrusted with the task of assessing the member countries' position in the economic cycle and the calculation of the net contributions to the ESF.

As in the case of the mechanisms presented above, the ESF is an insurance-type system designed to act as a union-wide automatic stabiliser amidst macroeconomic shocks. Thanks to payments received from the ESF, a country could take fewer austerity measures in the face of a negative economic shock in order to achieve a given budget deficit. This would dampen movements in aggregate demand and stabilise regional unemployment. These goals could be reached without requiring the creation of a central budget or any transfer of sovereignty in

budgetary and fiscal policy. In order to benefit from this kind of risk-sharing mechanism, member countries would agree to pay an 'insurance premium' to the ESF when growth exceeds long-term growth. These contributions would help cushion positive shocks by limiting the possibility of increasing public spending in good times when revenues turn out to be temporary.

Rather than being based on the issuance of GDP-linked bonds, the ESF is grounded in a simpler approach that links the payments into and from the ESF to a measure of the countries' business cycle. This would avoid the problem of getting governments to agree on an increase of their gross debts, and resolve issues concerning bonds indexed on national incomes. Whilst being close to the proposal of Furceri & Zdzienicka (2013), the ESF differentiates itself in different important ways:

- The ESF allows smoothing both negative and positive shocks. Treating both types of shocks symmetrically can be justified by the fact that periods of very rapid growth can create large imbalances, which can be the root cause of crises.
- The ESF addresses euro-area-wide shocks, i.e. shocks occurring simultaneously in all EMU member countries. With this feature, it exhibits the attributes of a federal budget by providing a stimulus during recessions by making transfers to all countries, and contributing to a more restrictive fiscal policy during booms by collecting 'taxes' from member states. Whilst monetary policy has an important role to play in addressing common shocks, the current crisis shows that the transmission of monetary policy in the EMU is not always as straightforward as one would hope, even when shocks affect all member countries, particularly when the lower zero bound is reached. The ESF would therefore contribute to reduce the pressure on the ECB and facilitate its mission as guardian of price stability. Furthermore, disbursements from the ESF during severe economic downturns would reduce the borrowing requirements of member countries and therefore the risk of tensions in capital markets caused by rising sovereign risk premia.
- The size of the transfers to countries in recession is not limited by the amount of contributions collected in periods of buoyant economic activity. This is made possible by the fact that the ESF would borrow in the market in bad times.⁴ The simulations presented below show that the ESF could only take on a limited amount of debt. Indeed, as real economic growth should converge towards its long-term level, member countries' net contributions to the ESF should also converge towards zero. Therefore, the level of assets/debt accumulated by the ESF should fluctuate in a relatively narrow band around zero.

A potential criticism of the ESF is that it could reduce incentives to undertake sound economic policies given that it would compensate governments for low economic growth. The perceived safety created by insurance can indeed create a moral hazard problem. This problem tends to affect all the different risk-sharing mechanisms discussed above. Whilst warranting further consideration, the following arguments can be used to counter the criticism:

- The ESF would not cause permanent and unidirectional transfers from some countries to others. This is an essential difference with risk-sharing mechanisms that link the transfers to deviations of national economic growth from the EMU average. Under such mechanisms, the countries which have structurally lower growth rates than

⁴ Wolff (2012) stresses this point and notes that federal stabilisation requires a federal borrowing capacity.

others would tend to receive positive transfers much of the time. The ESF does not exhibit this feature, as its unique role is to cushion short-term cyclical fluctuations rather than promote economic convergence between euro-area member countries. From this point of view, the ESF could be seen as complementary to those mechanisms designed to promote the gradual convergence of the euro member countries' economic situation, such that proposed by Drèze & Durré (2013).

- The ESF assistance would be temporary, as low economic growth would also reduce long-term real economic growth and thus the level of potential future disbursements from the ESF.
- Euro-area member countries would have to continue to fully respect the requirements of the Stability and Growth Pact (SGP), which would be more difficult to do if they pursue unsound economic and fiscal policies. Along the lines suggested by Van Rompuy (2012), consideration could be given to developing the ESF within a framework that would modulate the transfers from the ESF to on-going compliance with mutually-agreed commitments. Should this approach be applied, it would be important to build on clear and transparent rules to preserve the automatic nature of the ESF-based mechanism and avoid political bargaining over the amount of net contributions. For instance, one could consider increasing the amount of net contributions when the member country is sanctioned under the SGP procedure.

Illustrative Scenario

To illustrate the potential impact of the ESF, this section shows how such a mechanism would have worked since the start of EMU, using the above equation to calculate each member country's annual net contributions to the ESF, in accordance with the following assumptions: $\alpha = 0.5$, y^e = the real GDP growth rate observed in the given year and y^* is the average potential real GDP growth rate observed in 1999-2013.⁵ The significance of these assumptions is discussed in the next section.

Chart 2 shows the annual total net contributions to the ESF. It can be noted that the ESF would have accumulated net assets totalling €230 billion up to and including 2008, whereas euro area countries would have benefitted from ESF disbursements totalling €431 billion in 2009-2013, or 4.7% of euro area GDP. This would have led the ESF to borrow a total of €201 billion since the creation of the euro, or 2.1% of the euro area GDP in 2012.

⁵ Annex 1 shows the data used for y^* . In principle, the size of α should be determined to achieve a given level of stabilisation against normal fluctuations and severe downturns. Furceri & Zdzienicka (2013) focus on this aspect of the design of a supranational fiscal stabilisation mechanism.

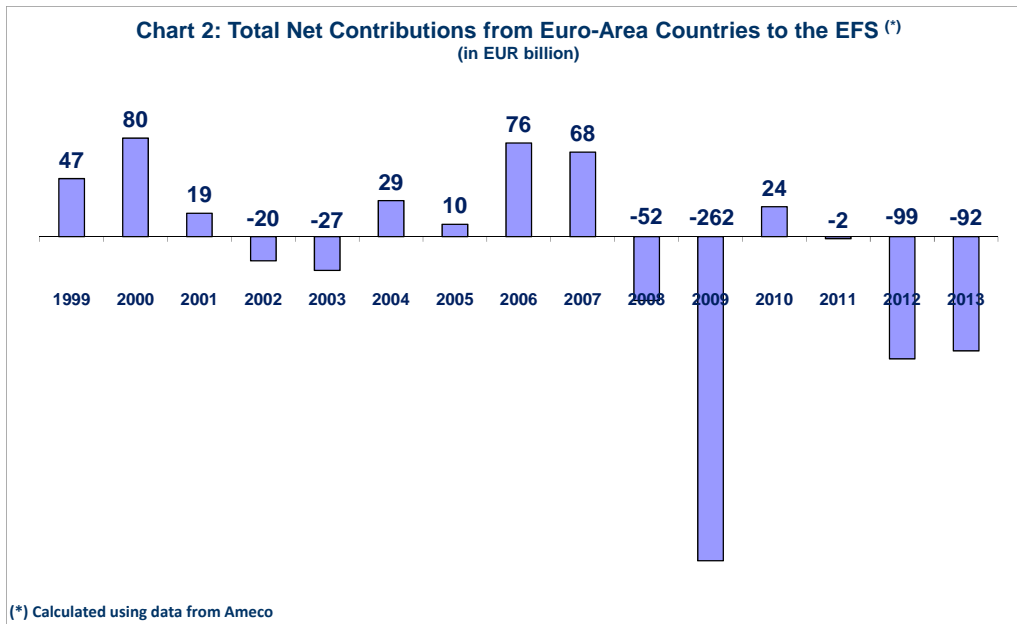
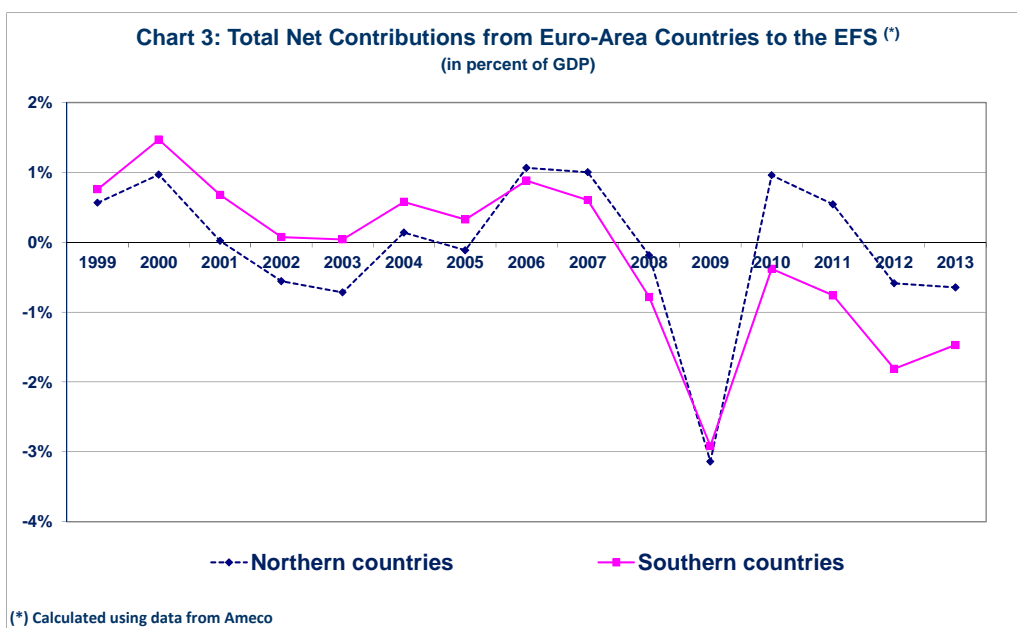


Chart 3 shows that southern European countries would have been net contributors to the ESF up to and including 2007, whereas northern European countries would have benefitted from ESF disbursements in 2002, 2003 and 2005.⁶ The trend would have reversed in 2008. The economic rebound in 2010 and 2011 would not have been strong enough to prevent southern countries from benefitting from ESF disbursements. By contrast, northern countries would have contributed to the ESF during these two years.⁷



⁶ Southern countries include Cyprus, Greece, Italy, Malta, Portugal and Spain, whereas northern countries include Austria, Belgium, Estonia, Finland, Germany, Luxembourg and the Netherlands.

⁷ The estimated net contributions per country are shown in Annex 2. Among other things, it can be seen that all countries would have received ESF payments during some years and made net contributions to the ESF during other years. In 2009, the ESF disbursements would have averaged 3.5% of GDP.

Chart 4 illustrates the potential macroeconomic stabilisation impact of the ESF by comparing the real GDP growth rates observed in the euro area (y) with the growth rates of real GDP corrected by the level of net contributions to the ESF (y - d). It is apparent that the ESF would have had a strong smoothing effect on economic growth, particularly in periods of strong growth and economic downturn. Annex 3 illustrates the growth smoothing effect of the ESF for eight member countries.

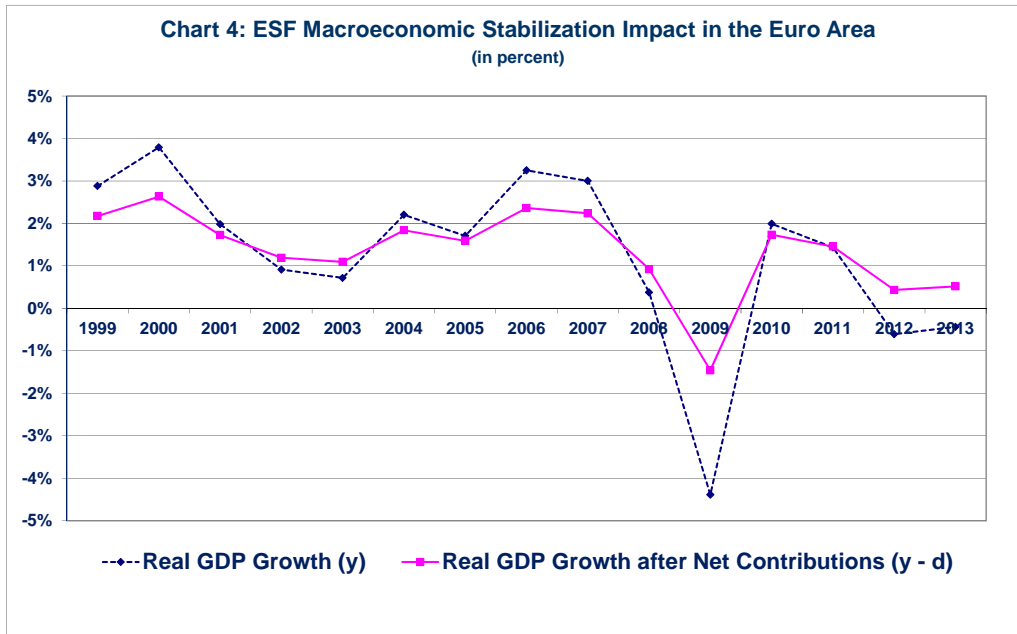
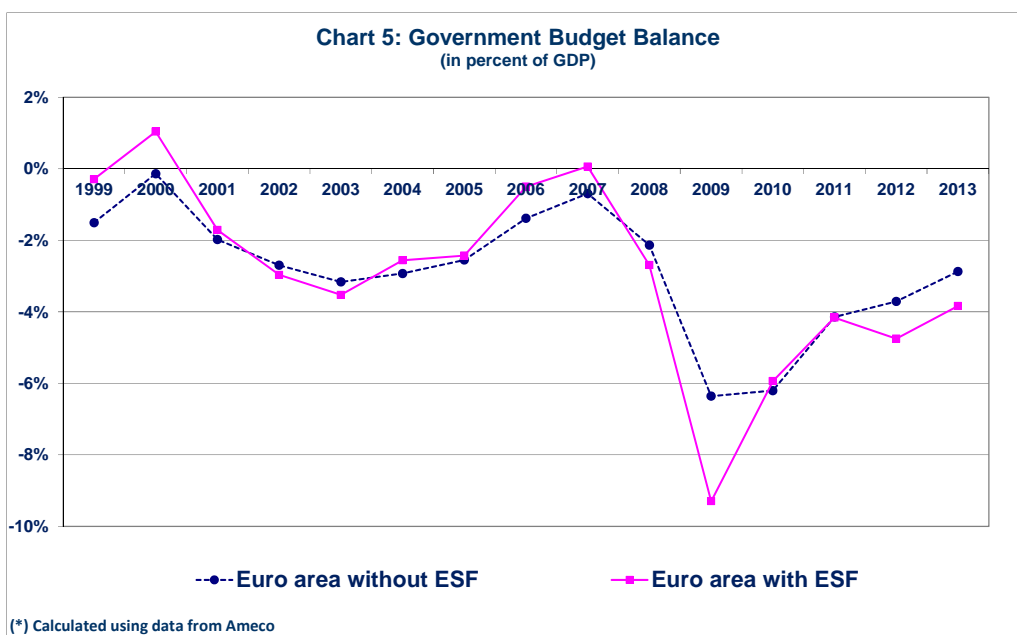


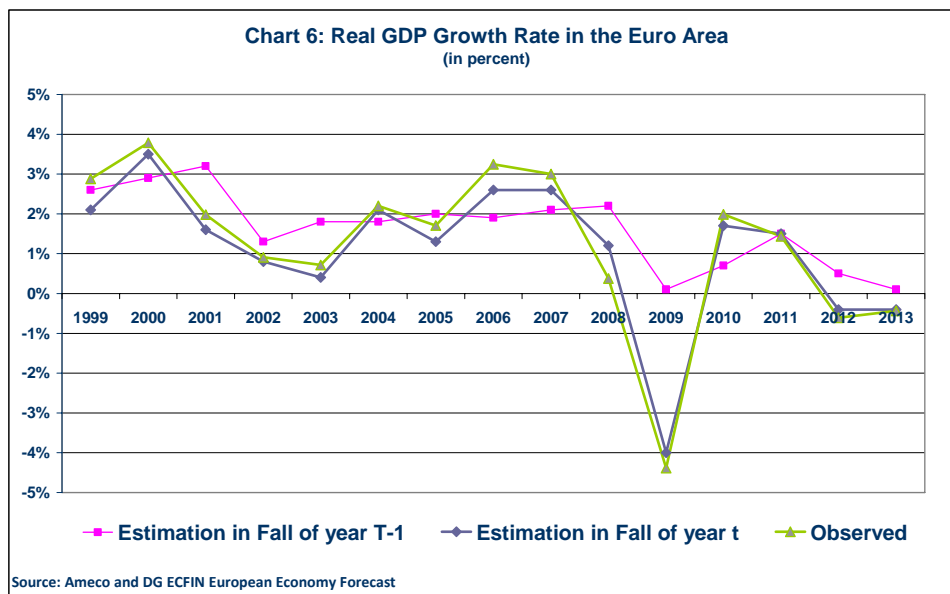
Chart 5 illustrates the effectiveness of the ESF as a macroeconomic stabilisation mechanism by showing its impact on the euro area budget deficit, assuming that the budget deficits after net contributions to the ESF would have been the observed deficits. This implies that during an economic downturn, the ESF payments would have allowed member countries to reduce their austerity effort by an amount equivalent to the ESF payments. Conversely, member countries would have reduced their fiscal stimuli by an amount equivalent to their contributions to the ESF in good years.



Implementation Issues

The above results show how the ESF would have worked if real GDP growth had been estimated correctly each year as part of the annual budget process and if an agreement had been reached to use the long-term real GDP growth rates shown in Annex 1. These are simplifying assumptions that would need to be adapted for the ESF to work effectively.

The first simplification, i.e. when economic forecast errors are ignored, has a smaller impact than one might think. Chart 6 compares the observed real GDP growth rate in the euro area in year T with the estimations made by the European Commission in the fall of year T-1 and year T.⁸ Whereas the discrepancies between the observed growth rates and the growth rates estimated one year in advance tend to be significant, the growth rates estimated in the fall of year T are very close to the observed rates.



Implementing the ESF would also require estimating long-term real GDP growth rates. Such estimates are difficult to calculate. Being unobservable, long-term real GDP growth can only be derived from a purely statistical approach or a full econometric analysis, and in both cases, some arbitrary assumptions must be made to generate the estimations. Given the major uncertainty surrounding these assumptions, significant historical revisions can take place. If there is no agreement to use historical averages as in the above illustrative scenario,⁹ an analytical framework for estimating long-term real GDP would need to be developed in line with recent OECD research on long-term economic growth in individual countries (see in particular Johansson, 2013).

An alternative approach would be to replace $(y^e - y^*)$ by the expected output gap in the equation used to calculate the net contributions to the ESF.¹⁰ The advantage of this approach is that the output gap is being used as an essential ingredient of the surveillance process

⁸ The estimations made in the fall of year T and T-1 can be found on the Commission's website at the following address:

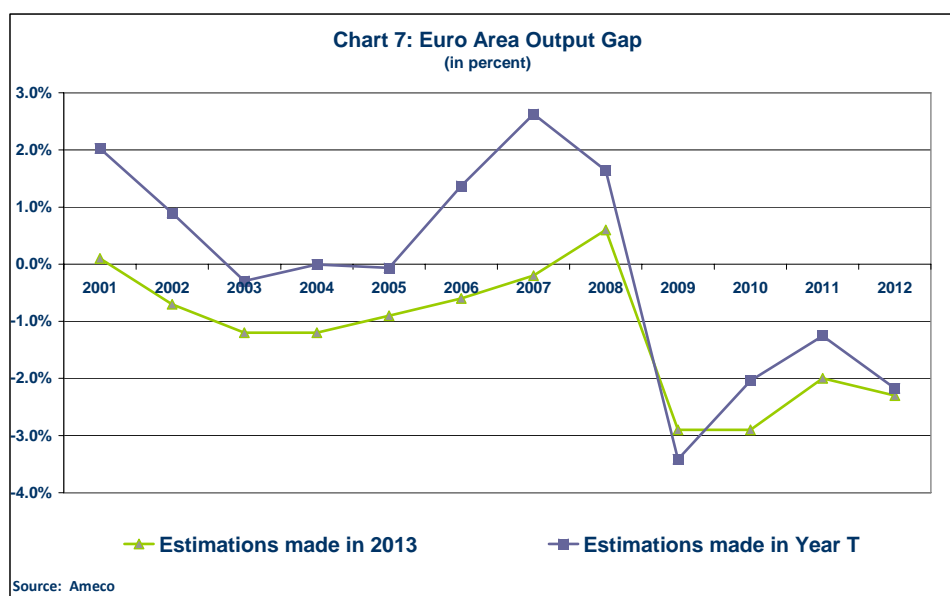
http://ec.europa.eu/economy_finance/publications/european_economy/forecasts_en.htm.

⁹ Furceri & Zdzienicka (2013) use growth deviations from historical averages to assess a supranational fiscal stabilisation mechanism.

¹⁰ Annex 4 shows the total net contributions to the ESF calculated on the basis of the current estimations of the output data for 1999-2013.

supporting the SGP. For this reason, the EU's Economic Policy Committee has a dedicated working group (the Output Gaps Working Group) that is mandated to ensure that technically robust and transparent potential output and output gap indicators are used in the context of the SGP. The group's work in this area led to the adoption of a new methodology for measuring potential output in 2009 (see D'Auria, 2010).

The main drawback of using output gap estimates is that they are subject to historical revisions. This is illustrated in the Chart 7, which compares the output gap data for the euro area that were originally estimated in the fall of year T with the most recent output gap data. It can be observed that the output gaps originally estimated in 2001-08 were significantly underestimated, reflecting an overly-optimistic view of the potential growth rates of euro-area countries. Hence, if the net contributions to the ESF had been calculated on the basis of these output gap estimates, they would have been underestimated.



In order for the ESF to become reality, it will also be necessary to agree on a procedure to calculate the net contributions as accurately as possible and to deal with forecast errors. Concretely, the procedure could operate as follows. A first estimation of the net contributions would be made in year T-1, at the time of the preparation of the following year's budget, on the basis of the growth forecast for year T. The net contributions would be updated in the course of year T on the basis of the revisions of the economic growth forecasts during the budget control exercises. In general, this procedure should allow the calculation of the net contributions to be based on realistic estimates of real GDP growth rates. If errors are detected in year T+1, it could be agreed that the amount of net contributions for year T+1 could be adjusted in order to take the errors into account. The same principle could apply if the estimated long-term real GDP growth rates are revised in year T+1. For growth estimates revised after more than one year, it could be agreed that the net contributions are not recalculated, so as to avoid moving towards a situation in which the amount of net contributions could be more influenced by corrections of past forecast errors than by the countries' cyclical positions.

Conclusion

EMU is the first monetary union where monetary policy is decided at the central level and fiscal policy is carried out at the member state level. The current economic downturn

confirms that this type of monetary union is not optimal. Given that the creation of a fully-fledged fiscal union is not politically feasible at present, a more modest approach to help EMU members mitigate the impact of economic shocks is proposed.

The proposal outlined in this paper aims at equipping the euro area with a rules-based mechanism that would increase the resilience of member countries to economic shocks, without requiring the establishment of a central authority. All countries could benefit from this mechanism sooner or later, and no country could expect permanent and unidirectional transfers in its favour.

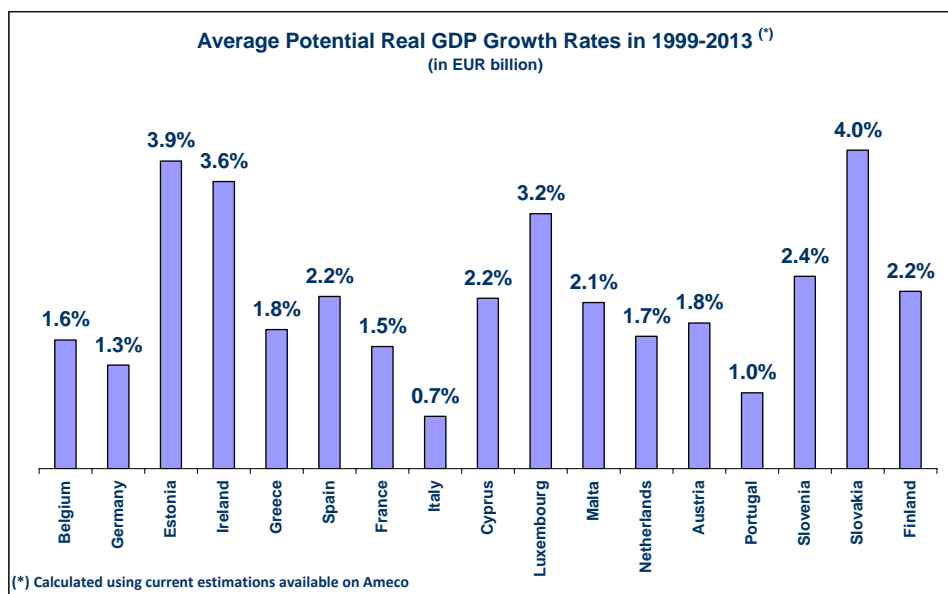
To move forward with this proposal, euro-area member countries would need to accept the principle of paying an 'insurance premium' in periods of strong growth if they are to benefit from financial transfers in tough economic times. They should also agree that the ESF may borrow on the financial markets when needed. Agreement of these points would confirm member countries' sense of responsibility – they would accept the need to finance the ESF themselves rather than hoping to receive assistance if they run into difficulties – and pragmatism – the debt that the ESF could potentially accumulate would remain extremely limited in relation to the euro area's GDP. Finally, it will be necessary to decide what would be the best indicator of euro-area countries' position in the business cycle. To address this problem, the European Council could ask the Output Gaps Working Group to compare the pros and cons of different indicators of cyclical positions.

References

- Bordo, Michael, Lars Jonung and Agnieszka Markiewicz (2011), "A Fiscal Union for the Euro: Some Lessons from History", NBER Working Paper 17380, National Bureau of Economic Research, Cambridge, MA, September.
- De Grauwe, Paul (2013), "Design Failures in the Eurozone: Can They Be Fixed?", Euroforum KU Leuven, Policy Paper, April.
- D'Auria, Francesca et al. (2010), "The production function methodology for calculating potential growth rates and output gaps", Economic Papers 420, Economic and Financial Affairs Directorate-General, European Commission, Brussels, July.
- Drèze, Jacques H. and Alain Durré (2013), "Fiscal integration and growth simulation in Europe", Core Discussion Paper 2013/13, Center for Operations Research and Econometrics, Université catholique de Louvain, February.
- Furceri, Davide and Aleksandra Zdzienicka (2013), "The Euro Area Crisis: Need for a Supranational Fiscal Risk Sharing Mechanism", Working Paper WP/13/198, IMF, Washington, D.C., September.
- Johansson, Asa et al. (2013), "Long-Term Growth Scenarios", OECD Economics Department Working Papers, No. 1000, OECD Publishing, Paris.
- Obstfeld, Maurice and Giovanni Peri (1998), "Regional non-adjustment and fiscal policy", *Economic Policy*, 26, 205-247.
- Van Rompuy, Herman (2012), "Towards a genuine economic and monetary union", Report to the European Council, 5 December.
- Wolff, Guntram B. (2012), "A Budget for Europe's Monetary Union", Bruegel Policy contribution, Issue 2012/22, Bruegel, Brussels, December.

Annex 1. Average Potential Real Growth

The chart below shows the long-term real GDP growth rates used in the illustrative scenario.



Annex 2. Net Contributions to the ESF per Euro-Area Country

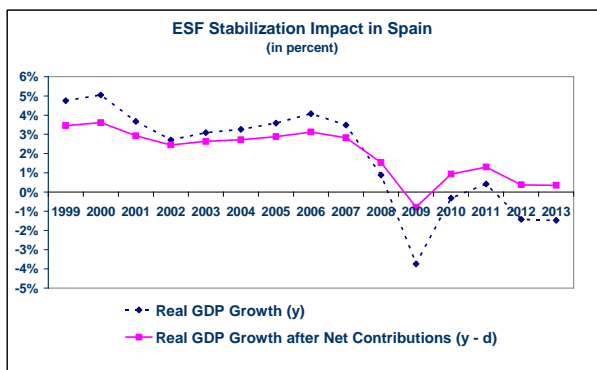
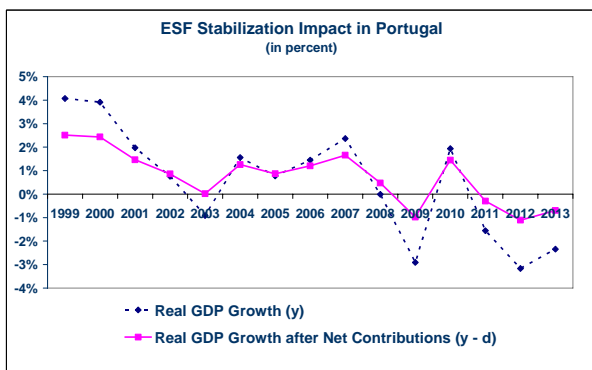
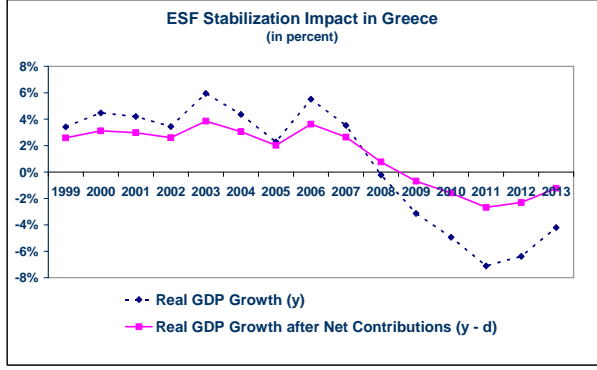
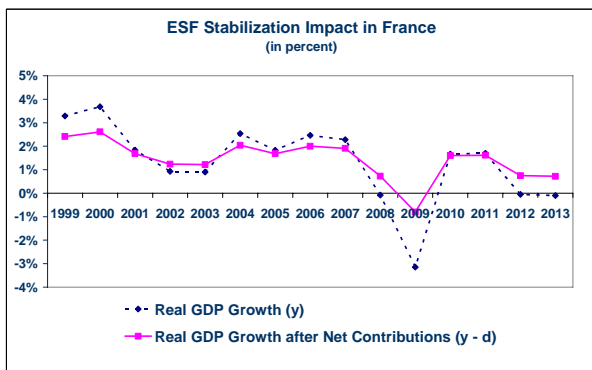
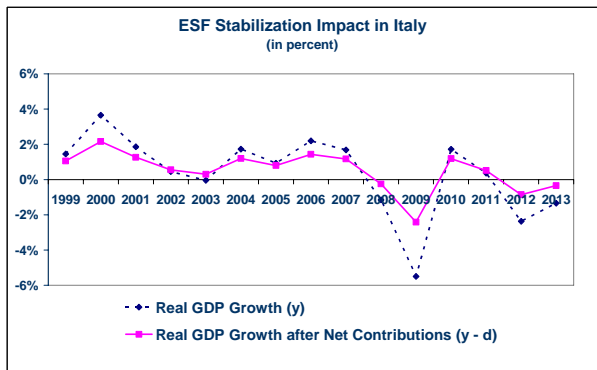
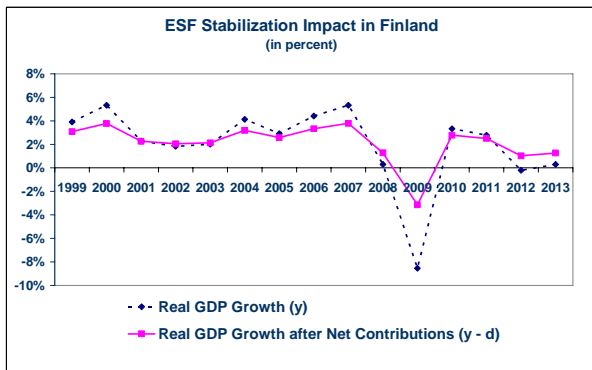
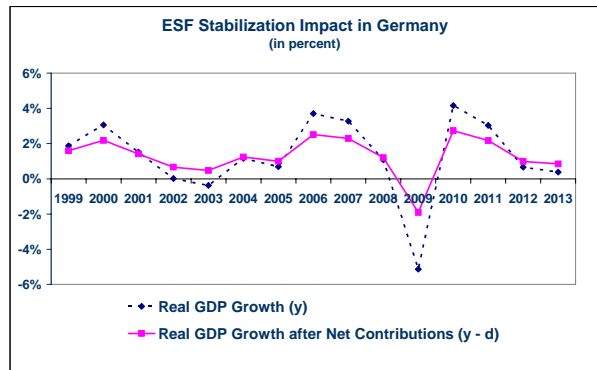
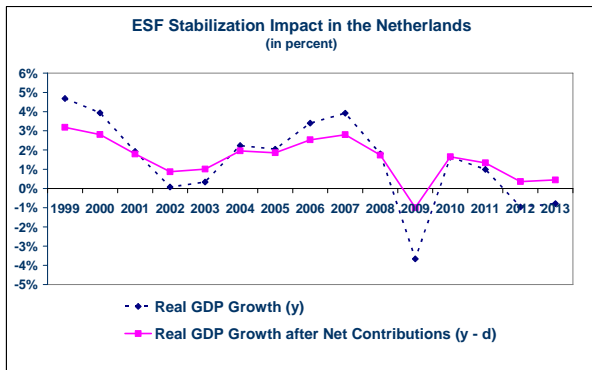
Net Contributions to the ESF ^(*)
(in percent of GDP)

	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13
Belgium	1.0	1.0	-0.4	-0.1	-0.4	0.8	0.1	0.5	0.6	-0.3	-2.2	0.4	0.1	-0.9	-0.8
Germany	0.3	0.9	0.1	-0.6	-0.8	-0.1	-0.3	1.2	1.0	-0.1	-3.2	1.4	0.9	-0.3	-0.5
Estonia	-2.1	2.9	1.2	1.3	1.9	1.2	2.5	3.1	1.8	-4.0	-9.0	-0.3	2.2	-0.3	-0.4
Ireland	3.7	3.6	0.8	1.0	0.1	0.4	1.1	0.9	0.9	-2.9	-4.5	-2.2	-1.1	-1.3	-1.3
Greece	0.8	1.4	1.2	0.8	2.1	1.3	0.3	1.9	0.9	-1.0	-2.4	-3.4	-4.4	-4.1	-3.0
Spain	1.3	1.4	0.7	0.3	0.5	0.5	0.7	0.9	0.7	-0.6	-3.0	-1.2	-0.9	-1.8	-1.8
France	0.9	1.1	0.1	-0.3	-0.3	0.5	0.1	0.5	0.4	-0.8	-2.3	0.1	0.1	-0.8	-0.8
Italy	0.4	1.5	0.6	-0.1	-0.4	0.5	0.1	0.8	0.5	-0.9	-3.1	0.5	-0.1	-1.5	-1.0
Cyprus	1.3	1.4	0.9	0.0	-0.1	1.0	0.9	1.0	1.5	0.7	-2.0	-0.4	-0.8	-2.3	-5.4
Luxembourg	2.6	2.6	-0.4	0.4	-0.8	0.6	1.0	0.9	1.7	-2.0	-3.7	-0.2	-0.8	-1.5	-1.2
Malta	1.0	2.2	-1.1	0.2	-0.7	-1.2	0.7	0.2	1.0	0.9	-2.4	0.4	-0.2	-0.6	-0.4
Netherlands	1.5	1.1	0.1	-0.8	-0.7	0.3	0.2	0.9	1.1	0.1	-2.7	0.0	-0.3	-1.3	-1.2
Austria	0.8	0.9	-0.5	-0.1	-0.5	0.4	0.3	0.9	0.9	-0.2	-2.8	0.1	0.4	-0.5	-0.6
Portugal	1.6	1.5	0.5	-0.1	-0.9	0.3	-0.1	0.2	0.7	-0.5	-1.9	0.5	-1.3	-2.1	-1.7
Slovenia	1.4	0.9	0.3	0.7	0.2	1.0	0.8	1.7	2.3	0.5	-5.1	-0.6	-0.9	-2.4	-2.2
Slovakia	-2.0	-1.3	-0.3	0.3	0.4	0.5	1.3	2.2	3.2	0.9	-4.5	0.2	-0.4	-1.0	-1.5
Finland	0.8	1.5	0.0	-0.2	-0.1	0.9	0.3	1.1	1.5	-1.0	-5.4	0.5	0.3	-1.2	-1.0
Average	0.9	1.4	0.2	0.2	0.0	0.5	0.6	1.1	1.2	-0.7	-3.5	-0.2	-0.4	-1.4	-1.5

(*) Estimations underlying the results presented in the illustrative scenario

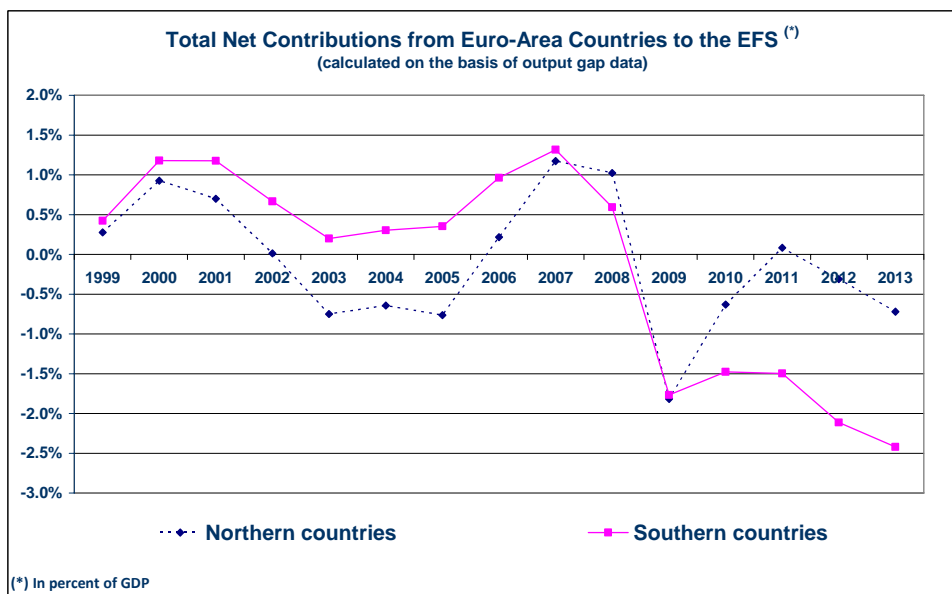
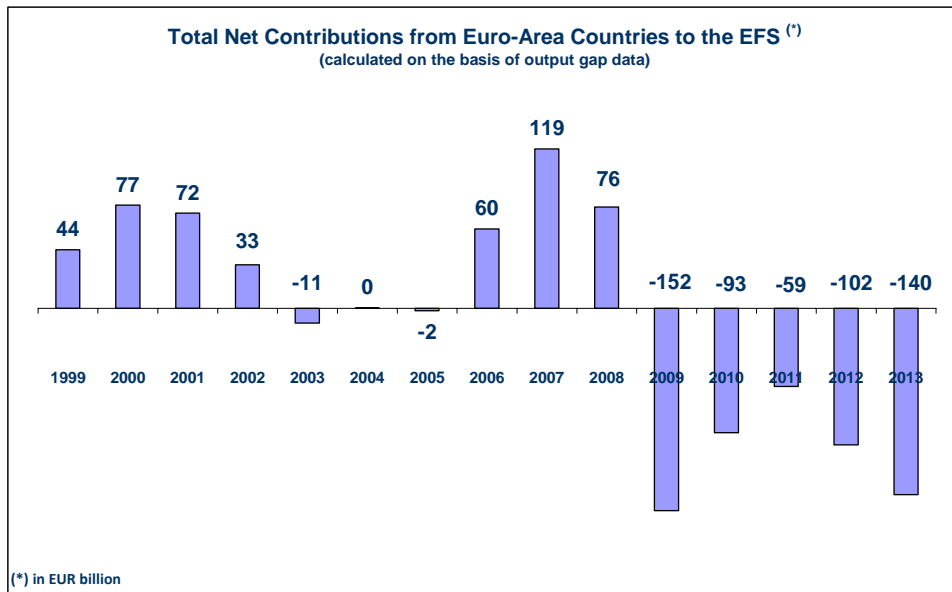
Annex 3. ESF Macroeconomic Stabilisation Impact

The charts below highlight the macroeconomic impact that the ESF could have had in a selected group of euro area member countries.



Annex 4. Total Net Contributions to the ESF Calculated on Output Gap Data

The charts below show the total net contributions to the ESF calculated on the basis of the current estimations of the output data for 1999-2013.¹¹ Whilst the evolution of the contributions is similar to that presented in Charts 2 and 3, there are differences that reflect the fact that the output gap tends to adjust to changes in real GDP growth rates more slowly than growth deviations from historical averages. Indeed, after a negative (positive) shock, the real GDP growth rate needs to increase above (below) its long-term level to eliminate the output gap. The southern countries would have been the main beneficiaries from the increase in total net contributions.



¹¹ $d = 0.5$ (output gap), where d is the net contribution expressed as a percentage of GDP and the output gap data are taken from the European Commission’s database (Ameco).