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A BUDGET FOR EUROPE'S MONETARY UNION

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Highlights

- In a monetary union, national fiscal deficits are of limited help to counteract deep recessions; union-wide support is needed. A common euro-area budget (1) should provide a temporary but significant transfer of resources in case of large regional shocks, (2) would be an instrument to counteract severe recessions in the area as a whole, and (3) would ensure financial stability.
- The four main options for stabilisation of regional shocks to the euro area are: unemployment insurance, payments related to deviations of output from potential, the narrowing of large spreads, and discretionary spending. The common resource would need to be well-designed to be distributionally neutral, avoid free-riding behaviour and foster structural change while be of sufficient size to have an impact. Linking budget support to large deviations of output from potential appears to be the best option.
- A borrowing capacity equipped with a structural balanced budget rule could address area-wide shocks. It could serve as the fiscal backstop to the bank resolution authority.
- Resources amounting to 2 percent of euro-area GDP would be needed for stabilisation policy and financial stability.

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A BUDGET CAPACITY FOR EUROPE'S MONETARY UNION

GUNTRAM B. WOLFF, DECEMBER 2012

1 WHY IS A EURO-AREA BUDGET NEEDED?

Federations typically have sizeable federal budgets and exercise important functions at the federal level. In the US, federal spending accounts for 68 percent of total government spending, in Switzerland it is 32 percent, though Switzerland is an outlier in terms of sub-national level expenditure. Typically, central governments in federations control more than 50 percent of the total expenditure size (Table 1).

The largest part of federal budgets typically goes to social welfare (Figure 1). But other functions are also assigned to the federal level. Banking policy, for example, is typically organised at the federal level[1]. A central element of a well-designed banking union is clear organisation of the fiscal resources that may need to be called on (Pisani-Ferry and Wolff, 2012).

The European Union is different of course. It has a small budget relative to the size of the EU economy, and creditor countries are unwilling to increase it. The EU is not a federation, but it does have common fiscal rules[2] that have arisen because of monetary union, and there have been calls for a more integrated budgetary framework to facilitate the absorption of country specific shocks by providing for some absorption at the central level. The president of the European Council has sketched out some proposals in a paper jointly prepared with the president of the European Commission, the European Central Bank and the Eurogroup[3]. Moreover, the currently discussed fiscal capacity should promote structural reforms and improve competitiveness, though it should not lead to permanent transfers nor undermine incentives to address structural weaknesses and stick to fiscal discipline. Moreover, it would have the possibility to borrow based on a balanced budget rule.

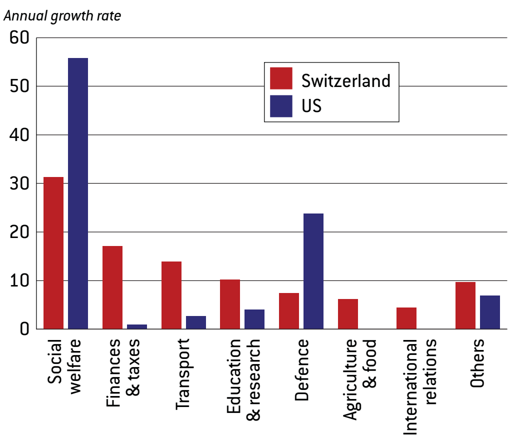
So what would a euro-area budget look like? The theory of fiscal federalism provides a starting point. Stabilisation policy essentially needs to be exercised at the federal level (Oates, 1968) because it cannot be exercised effectively at the

1. See Box 1 of Pisani-Ferry *et al* (2012).

2. The so-called six-pack and two-pack; see http://ec.europa.eu/economy_finance/articles/governance/2012-03-14_six_pack_en.htm.

3. See the interim report Towards a Genuine Economic and Monetary Union by the President of the European Council, which identifies the need for a *"fiscal capacity for the EMU"*, which would have to go beyond the EU budget. The interim report is available at http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/132809.pdf.

Figure 1: Federal spending by task



Source: Bruegel based on Swiss Confederation Federal Department of Finance and US Office of Management and Budget.

Table 1: Features of fiscal federations

	No-bailout rule*	Expenditure decentralisation**	Fiscal autonomy†	Borrowing autonomy††
Argentina	No	46.2	18	4
USA	Yes, enforced	45.2	34.4	3
Germany	Yes, but weak	43.7	29.2	2.5
Brazil	No	42.8	28	4.5
Switzerland	Yes, enforced	63.5	40.8	3
Canada	Yes	72.7	44	2.7
Australia	No	45.3	30.8	2.5
India	No	49	33	2.5

Sources and notes: * Bordo and Markiewicz (2012); ** IMF, GMS, expenditure decentralisation: sub-national expenditures/total expenditures; † OECD, Blöchliger, H. and J. Rabesona (2009), Rodden (2004), state local tax rev/total rev. †† Borrowing autonomy: the index of borrowing autonomy has been constructed by the Inter-American Development Bank. It considers debt authorisation requirements and limits on the use of debt imposed by the central government. This variable ranges from 1 to 5. See Rodden (2006) for details.

sub-federal level. In fact, deficit-financed sub-federal government spending will require regional government to be willing and able to place debt externally. Regional governments have to treat deficit financing with much greater care than central governments because the eventual repayment of local debt and interest will represent a transfer of income to outsiders. The transfer has to be paid in a currency that is not controlled by the regional government. External payments are compounded by the well known transfer problem identified by Keynes[4]: to be able to repay external debt, the prices of export goods need to adjust in order to generate a trade surplus. This price adjustment represents a negative terms-of-trade shock, making external payments much more difficult.

Federal budgets are therefore used for stabilisation. Yet, capital and credit markets may play an even more important role in stabilisation of regional shocks. Capital markets and more specifically equity markets, stabilise regional shocks if the ownership of equity is not regionally concentrated. A negative shock to a region would thus lead to losses in the entire federation, reducing the impact on income and consumption in the region. Credit markets can also play an important stabilisation function if households, corporations and governments can borrow outside of the region. The limits to this function are set by the degree of integration of the credit market and the limits on borrowing given expected regional income. Empirical studies find that almost 40 percent of shocks are absorbed by capital markets, about 25 percent by credit markets and only 10-20 percent by the federal budget (see Box 1).

Stabilisation in the euro area

It is worth pondering how the different channels of risk sharing might work at euro-area level. The credit channel can only be effective if there is no

BOX 1: STABILISATION OF REGIONAL SHOCKS

Various studies that have estimated the scope of income smoothing in response to regional shocks in other monetary unions. The seminal contribution to this literature is Asdrubali *et al* (1996), who studied risk sharing among US states, 1963-1990. The authors identify three channels of risk sharing: (i) cross-ownership of capital assets, which allows states to smooth income through factor income flows; (ii) smoothing by federal government via taxes and transfers vis-à-vis individuals and regions; (iii) smoothing via borrowing from credit markets. They find that in the US 39 percent of shocks are smoothed by capital markets, 13 percent by the federal government and 23 percent by credit markets. This leaves 25 percent of the shocks that are unabsorbed by insurance mechanisms. Hepp and Von Hagen (2010) conducted a similar exercise for Germany and found a greater contribution of fiscal policy, even though significant parts of it have distributional effects. Mélitz and Zumer (2002) provide an overview of studies focusing on the federal budget's stabilisation role. For the US, the different estimates range from 10-40 percent with the high end found in Sala-i-Martin & Sachs (1991), even though doubts about the latter study have been voiced. Mélitz and Zumer (2002) themselves find that federal government absorbs around 20 percent of regional shocks to personal income in the US, the United Kingdom and France, while the share is lower at 13 percent in Canada. An important methodological problem of the studies is to properly distinguish between stabilisation and redistribution or for inappropriate accounting.

How is shock absorption by the US federal government done? Of the total of 13 percent calculated by Asdrubali *et al* (1996), taxes account for 4.3 percent, transfers (excluding unemployment insurance) for 6.3 percent, unemployment insurance for 1.9 percent and grants for 2.5 percent[5].

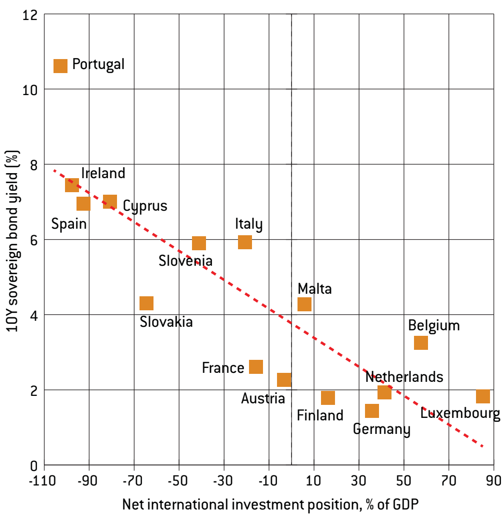
Kalemli-Ozcan *et al* (2004) show that smoothing via factor income flows has been increasing both in the US and within the countries now constituting the euro area. In those countries, it rose from 2 percent during 1973-1982 to 9 percent during 1993-2000. Balli *et al* (2012) use more recent data and also account for smoothing via capital gains. They find that smoothing from factor income was at 14 percent during 2000-2007 while smoothing via capital gains contributed another 6 percent.

4. Keynes (1929).

5. There are other smaller effects from other sources, which is why the highlighted items do not add up to 13 percent.

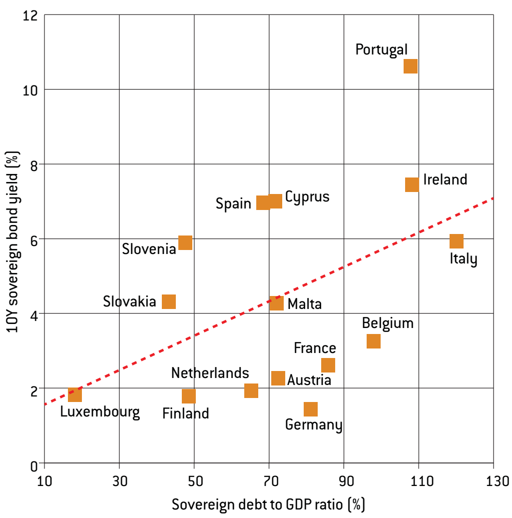
balance-of-payment constraint. But if governments, households and corporations find it difficult to access the credit market, there are effective constraints to any attempt to smooth out a negative income shock. Governments are limited in the extent to which they can stabilise their economies with deficit financing due to rising risk premia. These risk premia have been strongly correlated with the external debt of countries, forcefully showing the limits of national stabilisation policy due to balance-of-payment constraints (see Figure 2)[6].

Figure 2: Sovereign bonds 10Y yields vs. net international investment position (% of GDP)



Source: Bruegel based on Datastream and Eurostat. The explanatory power is high with (R2=-0.85).

Figure 3: Sovereign bonds 10Y yields vs. debt/GDP (%)



Source: Bruegel based on Datastream and Eurostat. The explanatory power is lower with (R2=0.47).

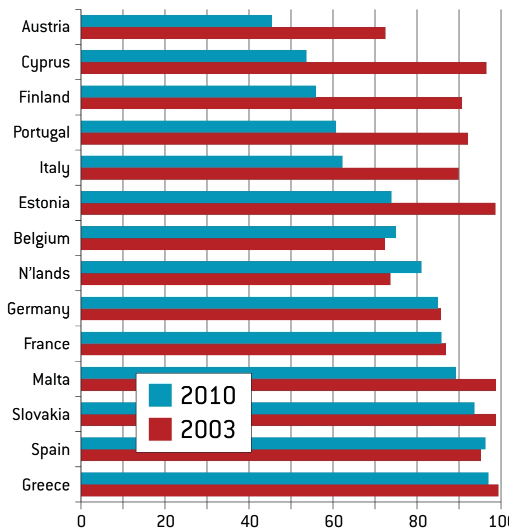
6. This is consistent with the finding of Asdrubali *et al* (1996) that credit market smoothing by US states decreases when the shock is more persistent.

It should be noted that this is really a balance-of-payment effect. Government debt is not the primary driver of sovereign bond yields; external debt has a greater explanatory power (see Figure 3). It is the overall indebtedness of the economy that matters for the ability of governments to use fiscal policy as a tool to absorb shocks of significant magnitude, because unsustainable private debt often becomes sovereign debt.

The establishment of an EU banking union could help unclog the credit channel for stabilisation. In particular, it would allow some decoupling of corporate and household financing costs from sovereign financing costs. Thereby, the magnitude of the cycle would be reduced as the private sector would not experience major interest rate shocks. At the same time, proper macro-prudential policy is needed to prevent credit bubbles in good times. Moreover, the banking union would reduce national fiscal costs to some extent.

The capital channel in the euro area for most countries is currently not a very effective shock absorption channel. The main reason is that asset holdings are highly biased towards domestic assets (Figure 4). While the home bias has come down quite a bit in recent years (Figure 5 on the next page), it is still strong so that the capital channel can only play a limited role in smoothing shocks.

Figure 4: Domestic equity in total euro-area equity holdings

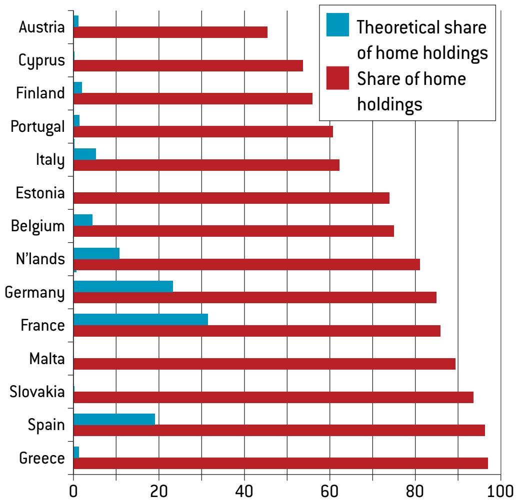


Source: Bruegel based on World Bank data on stock market capitalisation and IMF CPIS data on cross-border holdings following the methodology of Balta and Delgado (2009).

The original idea of the Maastricht Treaty, which established the EU single currency, was that fiscal stabilisation would be exercised only at the national level. The assumption was that governments would be able to borrow on the market to smooth national shocks. A federal transfer system was not foreseen so no fiscal risk sharing was considered. The assumption was that the credit market would work and would allow for sufficient risk sharing. A 3 percent deficit limit was judged to be generally sufficient for automatic stabilisers to operate and address all possible shocks.

Figures 2 and 3 show the fallacy of this Maastricht assumption. Credit markets can dry up leaving no tools for macroeconomic stabilisation policy for the affected countries. Credit markets tend to dry up in those regions that have large external debt positions. Yet it is exactly those regions that face major recessions as a result of major deleveraging (Koo 2011). The balance sheet adjustment process in the corporate sector or household sector often happens in response to a debt overhang (Ruscher and Wolff, 2012), which in the experience of the euro area was the domestic counterpart to the external indebtedness of entire economies. Effectively, regional governments in a monetary union cannot provide a fiscal response to large and deep balance-sheet recessions because of the unwillingness of investors to finance external debt. National fiscal policy becomes ineffective (Fahri and Werning, 2012). Monetary policy, by definition, does not address deep recessions that are purely regional.

Figure 5: Domestic equity in total euro-area equity (actual and theoretical) 2010



Source: Bruegel based on World Bank data on stock market capitalisation and IMF CPIS data on cross-border holdings following the methodology of Balta and Delgado (2009). Note: Theoretical share of home holdings is equal to the share of domestic market capitalisation of total euro-area stock market capitalisation.

Addressing area-wide shocks

In case of area-wide shocks, stabilisation policy should also be exercised by the federal budget. A shock occurring simultaneously in all regional economies of the federation tends to be inadequately addressed by regional governments. The main reason for this is that regional governments will tend to provide too little response in the hope that they can free ride on the fiscal response of their neighbours. Unless there are very strong coordination mechanisms, regional fiscal policy will thus be weaker than a centrally provided stimulus. Evidently, monetary policy has an important role to play in addressing area-wide shocks, and is presently the only euro-area wide stabilisation instrument. Yet, monetary policy is only an incomplete answer to a very severe shock, in particular when the lower zero bound is reached and the scope for quantitative easing is limited. In such circumstances, the fiscal multiplier increases (De Long and Summers 2012)[7]. Federal stabilisation requires a federal borrowing capacity.

Another very important function of a federal budget is to provide federal public goods[8]. In the euro area, these would be few. Most public goods such as ecological goods or security at the borders, would qualify as public goods for the EU rather than the euro area. Foreign policy may be appropriate, but to date policy preferences are still far too heterogeneous. Some more common efforts in research and education systems would be warranted but there again non-euro area countries should participate. Perhaps the most important are financial stability and price stability. Price stability is already provided by the common central bank. For the emerging banking union, there is a need to agree on fiscal burden sharing (Pisani-Ferry and Wolff 2012). Taking the US example, the Federal Deposit Insurance Corporation is responsible and has significant own resources to overcome crisis. Yet, the US Treasury stands behind

7. Moreover, fiscal policy, while slower in implementing, has faster effects on activity once it is implemented. Relying on monetary policy alone to address area wide shocks therefore does not seem to be sufficient.

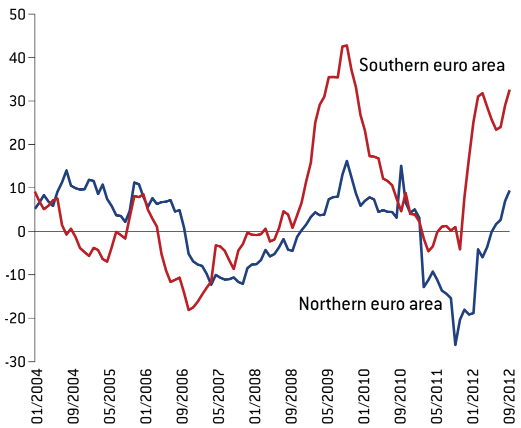
8. In principle, a central provisioning of public goods has the benefit of scale economies and externalities are taken into account. At the same time, a central provisioning of public goods may not satisfy local differences in preferences.

the Federal Deposit Insurance Corporation and provides credibility. One could view a euro-area budget as the backbone for such a common fiscal backstop for a new European resolution authority and fund. Such a fiscal backstop ultimately means that the federal level has the ability to borrow on the market. Borrowing ability is necessary in particular when crises of confidence need to be addressed, as was the case in 2008.

Banks' holdings of sovereign debt also have implications for the fiscal backstop behind the banking union. The home-bias in sovereign bond holdings of banks is significant (Merler and Pisani-Ferry 2012). Banks in southern Europe have recently bought significant amounts of government debt, increasing their dependence on sovereign solvency even further (Figure 6). Banks have helped finance governments but have thereby reinforced the deadly embrace between banks and sovereigns. A banking union in such a deadly embrace essentially becomes a fiscal union. To avoid the sharing of risk resulting from national debt would require national debt to be held less by national banking systems.

Fiscal federalism theory also contends that distribution functions need to be exercised at the federal level because of the mobility of labour and capital, which render local distribution attempts largely ineffective. In the euro area, this is arguably less the case because mobility is more limited than in national federations and there is no political acceptance of redistributive policies across countries.

Figure 6: Bank holdings of euro-area general government securities, 2004-12



Source: Bruegel based on ECB, MFI balance sheets.

To summarise, a monetary union like the euro area requires a common budget in order to (1) provide a temporary but significant transfer of resources in case of large regional shocks to the negatively affected regions, (2) have an instrument to counteract severe recessions in the area as a whole in situations in which monetary policy is less powerful and fiscal policy becomes more powerful, and (3) provide public goods for the area as a whole, which in the euro area is primarily financial stability.

2 EURO-AREA FISCAL CAPACITY: THE OPTIONS

How should a euro-area budget be structured and organised? A number of points need to be considered.

First, in the euro area, the principle of distributional neutrality should hold. Distributional neutrality could be defined as no net transfer over a certain period. This would be a model in which the federal budget would result in net transfers to a negatively-affected country over a number of years, but after some years those transfers would be offset. Continuous contributions from the affected country to the federal budget will mean that over the long run, the net received payments are zero, assuming that country specific shocks are random. An alternative definition of distributional neutrality would consider the euro-area budget as a form of insurance for countries in case of a negative shock. The contributions to the federal budget would then depend on the likelihood of a shock. In case a shock occurs, the insurance would be triggered and a net transfer of resources would take place. The two models essentially converge to the same result in the very long run.

A second important question is how revenues for the euro-area budget should be organised. The organisation of revenues is important both for distributional neutrality and for the economic performance of the area. Moreover, depending on what the insurance is used for, different resources should be contemplated. Revenues could come from national budgets or there could be a specific European tax. A further issue is if the revenue itself should be used as a stabilisation instrument. Ideally, revenues would be linked to income or consumption. Richer countries certainly need to pay more than poorer countries, because rich countries would require more support in case of a major shock. Contributions on a per capita basis therefore do not seem warranted. If revenues are used to insure the financial system, then revenues should be related to the size of the financial sector or the amount of financial transactions. The financial sector itself should provide these resources for reasons of political acceptability, fairness and because it is an insurance against risks created by the sector itself (too big to fail).

A third important point concerns the reasons for support payment. The basic logic of Maastricht was to keep a balanced budget, thereby giving ample room to national governments to counteract recessions. The current crisis shows the limits of that logic. Severe balance-sheet recessions such as those observed in Spain, drive governments with balanced budgets before the recession towards insolvency. It is for such large recessions that outside support is needed. This support needs to take the form of temporary but real transfers. For smaller deviations from potential, a well-established national balanced budget rule is sufficient. Creating a euro-area budget to address small shocks does not appear warranted.

Support for countries affected by asymmetric business cycle shocks should also be used to foster structural change. Support payments often have the tendency to prolong or prevent adjustment to shocks. It is therefore important to conceive the funds in a way to promote change. This is a major challenge, as can be seen from the continuous dependence of some regions on support in existing federations such as Italy, Germany, Belgium and others. Greece has received large transfers from the EU since it became a member in 1981, but structural reforms have been insufficiently implemented and have contributed to loss of competitiveness and to current account deficits, culminating in the Greek crisis of April 2010. To enforce structural adjustment, it would therefore be best to closely link support from the euro-area budget to structural reform, as is currently done in programme countries.

Should the spending of the euro-area budget be automatic or based on discretion? Automatic stabilisers can be agreed on ex-ante and therefore have the advantage of being easily enforceable in case of a shock. They respond quickly and automatically to changing external conditions. Automatic stabilisers would therefore be the best instrument to be used when one intends to create an insurance system with clear *ex-ante* rules. Discretionary spending requires a strong decision-making centre that would be able to take decisions quickly in favour of countries in need. At the same time, this decision making centre would need to be clearly controlled by rules and independent watch-dogs to avoid misspending. Discretionary spending is desirable to address specific shocks in a targeted way.

A further consideration is whether the stabilisation would come from federal spending on common goods or whether spending will remain national. Federations typically organise stabilisation using federal spending. However, the euro area is different and already has large spending with national budgets. Increasing federal spending would mean that national spending would have to be reduced. A common unemployment insurance system would be an attempt to shift spending to the federal level. The alternative is to keep spending at a national level but essentially provide federal support to the budget. These two options are described in more detail below.

A final consideration is whether the budget should be a euro-area budget only or whether it should be open to countries outside the euro area. In principle, balance-of-payment crisis as described above are also of relevance to non-euro area countries with a fixed exchange rate to the euro. Also, the banking union should allow for non-euro area members to participate and a similar fiscal backstop may prevent competitive distortions. Ideally, the common budget should thus be euro

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area plus all EU countries willing to join the euro which already have a fixed exchange rate and are in the ERM II (Exchange Rate Mechanism) thus preparing themselves for euro membership.

Against this background, a number of instruments can be considered.

2.1 Unemployment insurance

In many federations, unemployment insurance plays an important role in the federal budget. Unemployment insurance has major advantages in terms of stabilisation policy. Contributions to the insurance and to the unemployed happen quickly and automatically.

However, there are significant disadvantages. First of all, unemployment insurance systems typically do not matter in macroeconomic terms for absorption of regional shocks. Asdrubali *et al* (1996) estimate the effect to amount to around 1.9 percent of the shock. Furthermore, designing a European unemployment insurance system would be a major task. Labour market institutions and laws differ widely in euro-area countries (see Box 2 on the next page). Differences in labour market regulations and institutions have very significant implications for the duration and type of unemployment. Creating a common insurance scheme will give countries an incentive to shape their labour market regulations in order to maximise the benefits from the common resources.

To overcome this incentive problem, it has been suggested to cover just the first months or first year of unemployment with EU-financed unemployment insurance. This approach would not create an incentive to artificially prolong the duration of unemployment through specific national labour market institutions. However, a system that would only cover the first months of unemployment might not be right instrument to address long and lasting recessions. Moreover, the duration of unemployment is very differently distributed in different member states. Figure 7 (left panel) shows that unemployment of less than 3 months duration is of different importance in different (selected) euro-area countries. During the recession, different durations of unemployment became relatively more important (right panel). The prerequisite of a common insurance system that does not have distributional biases would therefore have to be the harmonisation of euro-area labour market rules. Otherwise countries with better job-matching institutions would end up permanently supporting countries with more rigid labour markets.

Overall, it seems that unemployment insurance would be of limited help to smooth out regional shocks. It would be fraught with major incentive problems and it is unlikely that a common unified labour market with harmonised labour regulations and one unemployment insurance scheme is feasible or even desirable.

2.2 Potential output as a benchmark

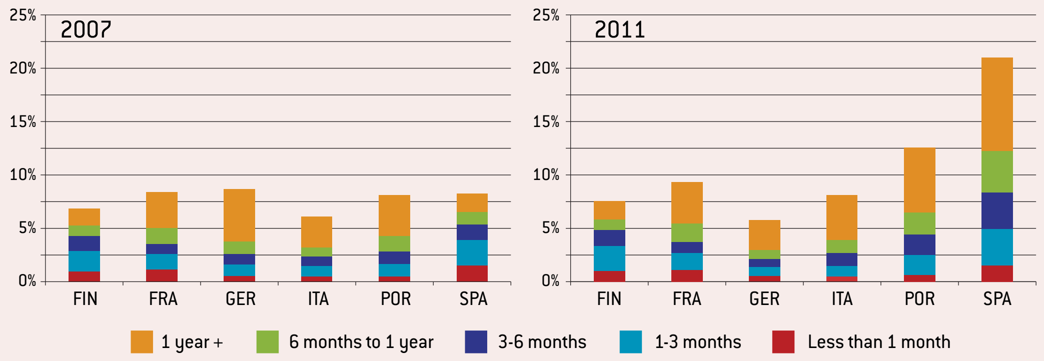
A second option for the euro-area budget would be to link payments into and from the budget to a measure of the business cycle (for an early analysis see Italianer and Pisani-Ferry, 1992). The idea would be to complement the Stability and Growth Pact, which is centred on the budget balance net of business cycle effects, with a system of financial support based on the business cycle. Countries whose output is significantly below potential output would be allowed to run deficits and would be supported by common resources. Thereby, the counter-cyclical reaction could be greater or the nominal deficit smaller. Operationally, the European Commission could be in charge of determining potential output and based on this calculation it would determine the allocation from the common budget based on a clear rule. The rule would have to be designed so that large output gaps would lead to large payments, while small output gaps would remain a purely national responsibility. A simple linear rule would probably not be sufficient; rather, in very significant recessions, much larger payment would be necessary. The mechanism would be automatically time-limited because large output gaps are by definition temporary and neutral over the business cycle. Long-run dependence on transfers, as in existing federations, can therefore be avoided.

The biggest advantage of this option is that it would fit nicely into the existing EU framework and would allow for counter-cyclical support of

BOX 2: EURO-AREA LABOUR MARKET HETEROGENEITY

Hobijn and Sahin (2007) use OECD unemployment duration data to calculate job finding and job leaving rates for 27 countries. They find that euro-area countries differ substantially in job finding rates but less so in job leaving rates. Figure 6 uses OECD data to represent the total level of unemployment in selected countries broken down by duration in 2007 and 2011.

Figure 6: Unemployment by duration in selected euro-area countries, 2007 and 2011



Source: Bruegel based on OECD unemployment data.

Unemployment in Spain and Portugal has increased considerably since 2007. Finland, France and Italy have also recorded smaller rises. On the other hand, unemployment in Germany has actually decreased.

In addition to stabilisation, any common scheme would, however, also have redistributional effects. These would depend on whether the scheme would cover only short-term, only long-term, or all unemployment benefits. A completely unified system would naturally subsidise those countries that have relatively high total unemployment (if contributions are by worker basis). In both 2007 and 2011, Finland and Spain had relatively many people unemployed for short durations (<3 months). Consequently, unified insurance for only short-term unemployment would result in transfers from France, Germany and Portugal to Finland and Spain. On the other hand, Finland had comparatively low long-term unemployment (>6 months) in both periods. Therefore, unified long-term unemployment insurance would result in transfers from Finland to the other countries.

The previous differences in outcomes are partly explained by differences in labour market institutions. Table 2 summarises these differences according to the OECD Employment Protection Index (EPI) (2008). According to theory, higher employment protection increases the cost of both firing and hiring leading to ambiguous effects on the total unemployment rate (Mortensen & Pissarides 1999). However, Stähler (2007) argues that this result does not hold in unionised labour markets that are characterised by collective bargaining. In such countries, including many euro-area states, he finds that higher employment protection leads unambiguously to higher unemployment. Finally, Blanchard and Portugal (1998) have shown that high employment protection makes labor markets more sclerotic by increasing unemployment duration.

Table 2: OECD Employment Protection Index 2008 for selected countries

	Protection of permanent workers against (individual) dismissal	Regulation on temporary forms of employment	Specific requirements for collective dismissal	OECD employment protection index
Finland	2.38	2.17	2.38	2.29
France	2.60	3.75	2.13	3.0
Germany	2.85	1.96	3.75	2.63
Italy	1.69	2.54	4.88	2.58
Portugal	3.51	2.54	1.88	2.84
Spain	2.38	3.83	3.13	3.11

According to the OECD general index, employment protection is smallest in Finland and highest in Spain. France and Spain stand out in the cost of hiring temporary staff in contrast to the more lenient Finland and Germany.

Another set of regulations that affect labour market outcomes are those concerning unemployment benefits. The consensus view according to both theory (Mortensen 1977) and evidence (Katz & Meyer 1990) is that unemployment duration varies positively with the duration of benefits. However, Stovicek and Turrini (2012) show that also other dimensions of unemployment benefit systems are important. There does not seem to exist one optimal system but there are different avenues to good labour market outcomes. The crucial issue is that different pieces of the whole fit together.

significant magnitude. The biggest drawback, as in the case of the deficit procedure, is the fact that potential output is a concept that is appealing in theory but controversial in practice. Linking financial payments to countries to a non-observable variable is at least as controversial as defining fiscal consolidation based on it. Moreover, there would be little control of how the transfers would be spent. In fact, countries may find it useful to use the received resources for purposes that are not useful in tackling the recession. It is therefore advisable to link the payments to the fulfilment of structural reforms. This solution appears to be the easiest to implement in the current framework, and has the potential to meaningfully contribute to the mitigation of large asymmetric shocks. Moreover, spending and stabilisation policies would remain national and no common European stabilisation expenditure programmes would need to be developed.

Both options 2.1 and 2.2 would be neutral over the business cycle and prevent permanent transfers. As such, they could imply payments from rich to poor countries and vice versa depending on the state of the business cycle.

2.3 Large spreads

A third approach would be to link direct budget support to excessive deviations of the interest rate on sovereign bonds from the average interest rate. One could consider automatic payments of 50 percent of the spread to the average interest rate times the allowed 60 percent debt in case of very large spreads. For example, a country with an interest rate of 6 percent when the weighted average interest rate would be 3 percent would then receive 1.5%*60%=0.9% of its GDP as a transfer. Countries with below the average interest rate would pay into the system, thereby reducing their safe-haven benefits. This would be a direct way of addressing the problem of countries being priced out of the market when significant shocks occur. At the same time, significant pressure would remain to consolidate public finances and reduce debt[9]. The mechanism should only set in when spreads exceed certain thresholds.

The disadvantage of this approach is that it could result in relatively permanent transfers. It is also contestable if politics should start setting interest rates instead of letting the market operate freely. An argument in favour is that the same function is currently implicitly undertaken by the European Central Bank with the new government bond purchasing programme (OMT – outright monetary transactions), which implicitly subsidises the borrowing of some affected countries. Exercising the same function via the common budget would make explicit the implicit fiscal transfer. It would reduce the benefits that the benchmark bond, the German Bund, currently enjoys as a safe-haven bond. Overall, such a scheme has some advantages, but would create major incentive problems.

2.4 Discretionary ad-hoc spending

A further option would be to make temporary transfer payments to countries dependent on a European political decision. The precondition for this would be a robust European decision-making process that is able quickly to support countries in need. The advantage of this approach is that it would allow for targeted and significant payments to countries most in need. It is debatable how much of a 'political union' is required for such a system to work, but the current difficulties relating to Greece and to the EU budget suggest that even small net transfers are reasons for long and inefficient debtates. More federal decision making with political union therefore appears necessary.

Euro-area stabilisation

To address area-wide shocks, euro-area fiscal capacity should include the ability to borrow on the market. Federal borrowing would be used to stabilise the economy. Yet the question then would be how to spend the federally borrowed resources so that they have macroeconomic effects in the euro area. As there is no clearly defined federal spending, the federally borrowed money would be distributed to national budgets. The national decision-making system would be left with the choice of how to use the additional funds. It could make up for the shortfall in revenues due to the recession, or enable additional discretionary spending. Federal borrowing should not be misused. In particular, a system should not be created in which the new federal capacity has a deficit bias which would

9. See Marzinotto, Sapir and Wolff (2011) for an earlier analysis.

lead to new ever-increasing 'federal' debt. Therefore, any new borrowing capacity should have firm limits. One option would be to introduce a structural balance rule requiring the budget to be structurally balanced so that debt does not accumulate. An independent fiscal watch-dog should control the new federal level. In the medium run, one could see a gradual evolution towards a system in which national borrowing would be replaced by euro-area borrowing. This would require a new level of institutional integration.

How large a federal budget is needed?

It is difficult to say precisely how large the EU federal budget should be. The stabilisation of purely regional shocks would require perhaps 1 percent of euro-area GDP[10]. An additional 1 percent revenue stream would be more than enough to allow for aggregate stabilisation and for the backing of the necessary borrowing in case of a major banking crisis. Overall, a budget of 2 percent would seem sufficient to support a significant capacity to fund asymmetric shocks, to give sufficient credibility to borrow in the market to address area-wide shocks, and to be a credible backstop to the common resolution fund.

3 CONCLUSIONS

The creation of a European fiscal capacity is of major importance for the euro area. Purely national fiscal stabilisation is insufficient because countries can be forced out of the market in case of major shocks and large external debt. Over-indebted countries such as Spain do not benefit from national fiscal stabilisation because market pressure is high. Fiscal consolidation is then a necessary response to the high market pressure. Yet, undoubtedly, fiscal support is needed to address the severe recession and alleviate the political and social costs of adjustment.

Agreeing on an *ex-ante*, reasonably automatic support system will require only a relatively limited degree of political integration. In fact, it could be based on rules agreed between countries, in which countries agree on contributions *ex-ante*. Making payments in the case of large deviations from potential output is probably the best option in this regard. However, such a system has the drawback of very limited flexibility and is therefore unable to react more effectively to shocks outside the standard norms. Such a system would also fail to provide for the democratic legitimacy and control that should be related to payments of significant size. Moreover, such a system would be rather unsuited for the creation of common debt. Certainly, democratic legitimacy for the backstop for the resolution authority would need to be developed. Even a limited budget with automatic stabilisation tools would require a treaty base. It would have to be checked whether the current Treaty could provide a basis for this. Article 352 allows the Union to adopt measures in areas where the Treaties currently do not provide necessary powers to obtain the Treaty objectives. It could therefore possibly be a suitable treaty base.

A more ambitious European fiscal union is desirable to improve the functioning of Economic and Monetary Union. It could consist of a strict no-borrowing rule at national level, a centrally-determined deficit for the area as a whole, and centrally-made political decisions on the distribution of the deficit across the euro area[11]. Such a system would allow for the creation of a federal euro-area debt. A new system would need to be based on a new Treaty. In the run-up to the Treaty change envisaged by some[12] for 2015, the discussion on the future fiscal union needs to start in earnest now.

Finally, a clear distinction should be made between the system for the long-run and the solution to today's most pressing problems. The current debt overhang and adjustment challenge is enormous. It may require more ad-hoc debt restructuring and flexible support via the EU budget and the ESM.

'Purely national fiscal stabilisation is insufficient because countries can be forced out of the market in case of major shocks and large external debt. Fiscal consolidation is a necessary response to market pressure but, undoubtedly, fiscal support is needed.'

10. Suppose a quarter of the euro area is hit by a negative shock. A 1 percent aggregate budget would then be sufficient for a 4 percent support of the crisis hit countries.

11. Bordo *et al* (2012) identify that the fiscal union requires the right institutions, including a no-bailout rule and a debt restructuring mechanism.

12. Commission President Barroso in his State of the Union 2012 refers to the need for a new Treaty http://ec.europa.eu/soteu2012/files/soeu_web.pdf.

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