Is a fiscal capacity really necessary to complete EMU?

by

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> "In all federations the different combinations of federal budgetary mechanisms have powerful "shock-absorber" effects dampening the amplitude either of economic difficulties or of surges in prosperity of individual states. This is both the product of and the source of the sense of national solidarity which all relevant economic and monetary unions share."
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> Jacques Delors (1989, p. 89)

1. State of the discussion

Since the publication of the Commission's "Blueprint for a deep and genuine economic and monetary union" in November 2012 and the report of the van Rompuy group "Towards a genuine economic and monetary union" shortly after that, the term "fiscal capacity" has become very fashionable in the discussion on the future of EMU. However, particularly striking is the vagueness of this term. In fact, only the Commission's blueprint gives a short indication of the scope of the definition: it is stated in a footnote that "(t)he adjective "fiscal" (…) is used in the sense of "budgetary"", and it is clarified that "fiscal capacity" is synonymous to "federal budget". As always when the question is a stake whether competencies to tax or spend should be shifted from the national to the European level, one has to clearly define the remit of such a European budget and critically weigh the pros and cons. These, of course, crucially depend on the policy area which is considered.

In those two reports two very distinct objectives for a fiscal capacity are mentioned. First, it is discussed that in the short run funds from the fiscal capacity could be used to support the implementation of structural reforms in the member states in order to strengthen their competitiveness. This approach should also involve a strong commitment to reform through contractual arrangements with the Commission or the Council. This rationale for a fiscal capacity is beyond the scope of this paper. Maintaining competitiveness is not solely relevant for countries of a monetary union, but affects all member countries of the EU. Therefore, such a policy can hardly be regarded as a necessary step to enhance the functioning of a monetary union, and hence complete EMU.

Second, both reports emphasize the capability of a fiscal capacity to absorb shocks which hit the member states of the monetary union asymmetrically. This in turn is a very relevant issue for a monetary union in which the member states lose their independent monetary policy as an instrument to perform adjustments when they are hit by country-specific shocks.

In detail, the van Rompuy report discusses two different options for the specific design for a fiscal capacity which could facilitate the absorption of shocks in the euro area: (1) a macroeconomic approach and (2) a microeconomic approach. In the report, the macroeconomic approach is defined as a mechanism "where contributions and disbursements would be based on fluctuations in cyclical revenue and expenditure items, or on measures of economic activity" (p. 11). The microeconomic approach would "be more directly linked to a specific public function sensitive to the economic cycle" (p. 11). The report mentions unemployment insurance as an example. Through a (partial) centralization of national unemployment insurance systems the level of transfers would depend directly on the labor market situation in the member states. Without going further into detail, the report qualifies this approach by arguing that the transfers could be limited to cyclical unemployment by covering only short-term unemployment. The difference is that in a macroeconomic approach, transfers between member states are explicitly calculated using macroeconomic indicators, whereas in the microeconomic approach transfers are paid to individual recipients, so that implicit transfers between countries would result from diverging economic developments in the euro area.

In general, it is helpful to distinguish between two different concepts when it comes to appraise any kind of further fiscal integration of the euro area: a fiscal union and a transfer union (Keuschnigg, 2012). Both serve very different purposes. A transfer union "leads to systematic and long-lasting income transfers and redistribution across different regions" (p. 41), a classical example is the German fiscal equalization system. The purpose of such systems, which exist in many federal states, is to reduce gaps in income, welfare or revenue-raising potential of sub-federal governments.

However, such a system is not capable of providing a significant insurance against the impact of asymmetric shocks, as will be shown below. This can only be achieved by a system which is set up to "provide fiscal insurance to smooth income fluctuations over time and across regions." (p. 41) This fiscal union presupposes that "insurance means that transfers are transitory and unsystematic" (p. 41). In fact, the van Rompuy report states clearly that it envisages this model of a fiscal union, and that it rejects the transfer union: "Elements of fiscal risk-sharing related to the absorption of country-specific shocks should be structured in such a way that they do not lead to unidirectional and permanent transfers between countries, nor should they be conceived as income equalisation tools. Over time, each euro area country, as it moves along its economic cycle, would in turn be a net recipient and a net contributor of the scheme." (p. 12)

Even though we share the view that the capability of the countries of the euro area to cope with asymmetric shocks has to be increased in order to improve the resilience of the monetary union, we do not consider a fiscal union to be the right policy measure in this regard. First, as we will argue in the following, existing studies from several federal states do not find strong evidence in favor of the insurance characteristics of a centralized tax and transfers system. Second, we show that it is practically impossible to separate the insurance function from the distributional function, so that even a fiscal union designed along the lines of the approaches discussed in the van Rompuy report would inevitably lead to permanent transfers. Third, we argue there is a high risk that any kind of fiscal insurance between member states has negative incentive effects on national governments in several respects. This could lead to an aggrava-

tion of problems due to country-specific risks, since the insurance through fiscal transfers reduces the incentives for national governments to address existing economic imbalances by timely reforms. Moreover, the inevitable distributive effects generate moral hazard problems.

Alternatively, we stress that the discussion should not be narrowed to risk-sharing via a fiscal union, but instead consider the variety of ways to address the problem of asymmetric shocks in a monetary union. There are several measures which have already been taken at the EU or national levels, will be or should be considered in the future, which are capable of reducing the emergence of country-specific shocks, providing risk-sharing between euro area countries or coping with these shocks at the national level. An important undertaking in that respect is the European banking union.

2. Absorption of shocks through a fiscal union

2.1 The economic rationale

The case for a shock absorbing function of the fiscal capacity is made by the van Rompuy report on economic grounds. It is justified by the negative effects of country specific economic shocks in an integrated currency area. Their argumentation has a close connection to the literature on the theory of optimum currency areas (OCA theory) (Mundell, 1961; Kenen 1969; De Grauwe, 2012), even though it is not directly mentioned in both reports. According to this approach, a country faces costs in a monetary union. By eliminating the possibility to adjust nominal exchange rates a member country of a monetary union loses an instrument which allows for a fast and simple adjustment if the country is hit by a country-specific (asymmetric) shock or asymmetrically by a common shock (e.g., due to differences in national institutional details, such as labor market flexibility). For instance, if a country faces a loss in competitiveness after a negative demand shock, flexible exchange rates would automatically adjust or, in a fixed exchange rate system, the country could react by a devaluation of its currency. In a monetary union these options do not exist. If prices and wages cannot adjust sufficiently flexibly, a shock would worsen the impacts on the real economy and increase unemployment. According to this theory a monetary union can become too costly for its members for two reasons: (1) the frequent and strong existence of macroeconomic shocks which hit the countries differently, (2) missing adjustment instruments which are capable of absorbing these shocks in other ways. A classical criterion for (1) is a strong sectoral specialization; examples for (2) are missing elements of risk sharing between the participants of the monetary union.

The arguments in the reports directly aim at such a risk sharing function; e.g., in the van Rompuy report it is said that "(i)n order to protect against negative fiscal externalities, it is important that fiscal risks are shared where economic adjustment mechanisms to country-specific shocks are less than perfect. This is clearly the case in the euro area, where labour mobility is comparatively low, capital flows are susceptible to sudden swings that can undermine financial stability, and structural rigidities can delay or impede price adjustments and the reallocation of resources." (p. 10)

Similar arguments regarding risk-sharing and insurance have come up in the economic analysis of federalism (e.g., Bucovetsky, 1997, 1998; Lockwood, 1999). In contrast to federations, for which it can fairly well be assumed that a common currency exists and flexible exchange rates are unfeasible, the theory of optimum currency areas allows for a broader perspective on the necessity of risk sharing mechanisms. If the exchange rate mechanism is not available to absorb asymmetric shocks, other adjustment mechanisms must compensate for it. In an economy with sticky prices and wages and with low factor mobility, only interjurisdictional transfers insure against asymmetric shocks. This implies that either factor mobility is an alternative mechanism to cope with asymmetric shocks, or higher wage and price flexibility can absorb shocks. Indeed, optimum currency areas may emerge when countries adjust to each other without any exchange rate alignment. International monetary constitutions like the Gold standard, the Bretton Woods system or the European Monetary Union might develop towards optimum currency areas by accepting the disciplining mechanism the abolishment of exchange rate alignments implies with respect to price and wage flexibility or factor mobility.

In this section we shed light on the effectiveness of fiscal integration to increase risk sharing between different entities of a federal setting. For this purpose, we survey the broad empirical literature that has emerged at least since the seminal MacDougall report (European Commission, 1977). While earlier empirical studies had several shortcomings or were merely descriptive, the more recent literature allows for distinguishing between different channels of insurance against asymmetric risks (see von Hagen, 2007, for a survey). In a perfect world, capital markets would fully insure against region-specific asymmetric shocks simply as consumers hold assets that have systematically higher rates of return when incomes in their own regions are low implying that consumption across regions correlates more strongly than incomes. The world is not perfect, at least different other risk-sharing mechanisms may be in place. The studies from the modern generation which mostly rely on the approach suggested by Asdrubali et al. (1996) decompose the contributions of different channels to the consumption smoothing between regional jurisdictions. The idea is that a full insurance, e.g. of a US state, against state-specific shocks would imply that its overall consumption is completely decoupled from fluctuations of GDP. Conversely, if a state does not have any risk-sharing mechanisms, any fluctuation of GDP should be reflected one-to-one in the fluctuation of overall consumption, so that the economic agents are fully exposed to idiosyncratic shocks.

2.2 Risk-sharing through fiscal transfers in quiet times

Krugman (1993, p. 258), as one of the strongest proponents of Keynesian fiscal policies, argues that "a highly federalized fiscal system helps a good deal" regarding the stabilization problems the Euro area is confronted with. However, the empirical literature shows that even for those countries which centralized a large part of their tax and revenue systems, the contribution of these systems to risk sharing between regions is rather limited.

Asdrubali et al. (1996) only find a rather small contribution of fiscal policy to consumption smoothing between US states. According to their estimation results, only 13% of a shock to gross state product is absorbed by fiscal transfers between states. This contribution is much lower than that of capital markets, which works through the cross-ownership of productive

assets and amounts to 39%. In detail, the contribution of the federal tax-transfer system originates in several distinct federal policies: "other federal direct transfers to individuals" (excluding unemployment benefits) play the most important role (6.3%), whereas federal direct taxes (4.3%), federal grants to states (2.5%) and unemployment benefits (1.9%) have some, but quantitatively very small impact. No or even a negative contribution comes from unemployment contributions, corporate income taxes, social security contributions and other excise taxes. Interestingly, the amount of federal smoothing was rather low in the beginning of the period (5% in 1964-1970), but stayed relatively constant thereafter (16% in 1971-1980, 14% in 1981-1990). At the same time, the smoothing undertaken by the capital markets increased dramatically from 27% over 34% up to 48%, thus reflecting financial innovation and better access to securities markets.[1]

Subsequent work has confirmed the rather low impact of a central tax-transfer system for the smoothing of income shocks. Melitz and Zumer (2002) perform a comparative analysis of regional redistribution and stabilization through the central budget in regions of several countries. In no case do they find that regional stabilization exceeds a value of 20%. The central budgets have in most countries a much stronger impact on redistribution with a significant variation between countries regarding the reduction in the regional dispersion in the income distribution through net transfers (from 38% in France to 26% in UK and 16% in US and Canada).

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[1] See also Hoffman and Sørensen (2012) who confirm the role of cross-ownership as shock absorber. The estimated insurance effect of fiscal policy in the US according to the studies that do not decompose the contributions of different channels to the consumption smoothing between regional jurisdictions is similarly small or even lower (see von Hagen 2007).

Table 1: Overview of empirical studies

		Fiscal policy	Capital markets (factor markets)	Credit markets	unsmoothed
Asdrubali et al. (1996)	US states, 1963-1990	13%	39%	23%	25%
Buettner (2002)	German Länder, 1970-1997	14.9%			
Hepp and von Hagen (2013)	German Länder, 1970-1994	54.1%	19.5%	17.3%	8.5%
	German Länder, 1995-2006	11.4%	50.5%	17.5%	20.8%
Balli et al. (2012)	Canadian provinces, 1961-2006	27%	29%	24%	20%
Andersson (2008)	Swedish regions, 1985-2001	20%	59%		

For Germany, the recent study by Hepp and von Hagen (2013) reports significantly different results regarding the contribution of the federal fiscal system and capital markets before and after German reunification. According to their analysis this is mainly due to the fact that "the public sector has lost much of its effectiveness as a risk sharing device among the West German states". The disaggregate analysis demonstrates that fiscal risk-sharing was in both periods almost exclusively driven by the transfer of federal tax share and the centralized social security system (50% and 10%, respectively). The contribution of the fiscal equalization mechanism has always been limited (4.8% and 2%) and its effect is statistically not even different from zero. The strong overall impact of the centralized tax-transfer system in the early period (54.1%) finds no confirmation in an earlier study by Buettner (2002) who does not decompose the different channels for risk sharing, but only looks at the insurance effect of the tax-transfer system and of fiscal equalization. For a similar time period he finds that all components of the federal tax and transfer system smoothed only about 14.9% of short-run differences in states' income. The strongest impact is reported for federal unemployment insurance (4.9%) and the mandatory pension system (4.3%). Both studies find a very limited impact of the German fiscal equalization system; Buettner (2002) estimates a contribution of 6.8% which is mainly driven by horizontal transfers (3.3%) and VAT revenues (2.8%). The other components, i.e. the federal share of income taxes and federal tax revenues, do not have any significant effect.

Recent case studies focusing on other countries with a much more centralized tax-transfer system than the US find slightly higher risk sharing than Asdrubali et al. (1996). Andersson (2008) studies risk sharing between 21 Swedish regions which smooth about 20% of changes in regional output through the fiscal system. A decomposition of this effect indicates that this amount can about equally be attributed to transfer payments and tax payments. Arachi et al. (2010) find that policies in Italy mainly have a redistributive effect since they significantly

reduce differences in per-capita GDP across regions; this amounts to about 28% of GDP. However they find that the Italian system does not provide a smoothing effect on regional economies which are hit by asymmetric, region-specific shocks, they even find a risk-enhancing effect.

For the Canadian federal system, Balli et al. (2012a) find that about 27% of provincial shocks are smoothed through the federal tax-transfer system. They also show that risk sharing through capital markets increases over time. A specific characteristic of the Canadian system is the existence of a system of equalization payments which is designed to address differences in revenue-raising capacity across provinces. However, evidence by Boadway et al. (2003) implies that the fiscal equalization system can actually be destabilizing, thereby imposing on provinces volatility in their potential revenue streams that exceeds what would exist in the absence of equalization. Finally, evidence for Chinese provinces by Du et al. (2011) shows that only 9.4% of shocks to provincial GDP are smoothed by inter-provincial fiscal transfer systems, even though the government is in charge of the main types of tax (amounting to 55.7 % of revenue in 1994).

Summing up, we have shown that while in the US risk sharing through the central tax-transfer system is of limited scope, it seems to be more relevant in Canada or European countries in which the central government level is of more importance. Despite that, the existing fiscal equalization schemes in Canada and Germany only provide for a small stabilizing impact and are not suitable as risk-sharing device. Moreover, even these weak impacts overestimate by far the potential of a European fiscal union for income smoothing, since even proponents of it do not aim at a level of integration comparable to that of existing federal states. For instance, De Grauwe (2013) says that "(t)o be sure, a fiscal union such as that in the United States is a distant prospect that Euro zone leaders should not expect to achieve any time soon – or even in their lifetimes". The prospects of such a limited centralization of the tax-transfer system of the euro area countries to insure the member states against asymmetric shocks would consequently be even more disillusioning.

2.3 Risk-sharing during the crisis

Even though the empirical evidence for a major contribution of the fiscal channel for risk sharing in a monetary union – in particular with regard to the US experience – is rather weak in the long-run perspective as demonstrated in the previous section, several authors justify their claim for stronger fiscal integration in Europe with the experiences of the US during the crisis. For instance, Krugman (2012a, 2012b) presents some simple calculations in which he argues that Florida – which was particularly severely affected by the bust of the housing bubble – received between 2007 and 2010 an annual transfer from the federal level amounting to 31 billion US dollar annually. According to Krugman, this gives support for the claim that the US federal tax-transfer had a strong role in smoothing the income shocks between the US states due to the bust of the housing bubble. However, this view is contested, for instance by Fatás (2012). According to him, most of this figure comes from lower tax payments from Florida to the federal level (about 25 billion); moreover, while tax revenues in Florida shrank by 12%, they overall went down by 8.4%, which led to a large deficit of the federal level.

Consequently, the "true" risk sharing between Florida and the other states was only the difference between 8.4% and 12%, whereas it was mainly countercyclical fiscal policy which accounted for the change in net transfers of the state.

Consequently, it seems that the US federal system was not able to generate automatic transfers to those states which have been hit hardest by the crisis. However, it still contributed to some risk sharing, but this mainly took place in the form of discretionary transfers from the federal to the state level.

2.4 Risk-sharing in the EU

There is also evidence regarding international risk sharing, i.e. without the existence of a fiscal union like in federations discussed above. Balli et al. (2012b) report an increasing role of capital markets for international risk sharing between OECD, EU and Euro area countries. They differentiate between three main channels (i) cross-ownership of assets that smooth income, (ii) transfers that smooth disposable income for given income, (iii) borrowing and lending that smooth consumption for given disposable income. Whereas these channels have been negligible before 2000, their contribution has increased strongly since then (until 2007). The amount of risk sharing through capital gains is about 6%; it is about 14% through net foreign factor income flows in the euro area, which reflects increased international asset and liability holdings. The bulk of risk sharing between euro area countries is provided by private and government savings (24%), whereas 56% remains unsmoothed. This is much lower than the unsmoothed share of 71% in the period 1992-2000, in which only savings had a major impact (30%), whereas the effect of capital gains was only half of its size (3%) and income flows did not differ significantly from zero. They argue that financial integration between the EMU countries, and financial globalization in general, has facilitated the smoothing of income. In particular, they find evidence that increased holdings of foreign assets have been associated with increased income risk sharing. This confirms the finding of Sorensen et al. (2007) who show that less home bias in debt and equity holdings is associated with more international risk sharing; or to put it differently, the higher the level of foreign assets to GDP, the more risk sharing is obtained.

An increase in risk sharing between EMU member states is also documented by Demyanyk et al. (2008) for the first five years of EMU. Similarly, Kalemli-Ozcan et al. (2005) find a steady increase of risk sharing in the euro area even before 2000, in particular through international factor income flows: it increased from 2 % (73-82) to 8 % (83-92) to 9 % (93-00). In a more recent and methodologically different approach, Christev and Melitz (2013) study the effect of EMU on consumption smoothing by focusing on the volatility of consumption. They find that EMU led to consumption smoothing in the period until 2006, but did so through the promotion of the tradability of goods and in particular capital: specifically, the encouragement of price competition, contestable home markets, ability to borrow and buy insurance at home, and the harmonization of regulations.

3. Fiscal capacity and distributional effects

As discussed above, the proponents of a fiscal risk-sharing mechanism point out that such a system would not entail redistribution over a longer period of time since every country will sometimes be recipients, and sometimes be contributor. Similarly, von Hagen and Hammond (1998) demand that a risk-sharing mechanism has to ensure that transfers should be zero on average over time for each country (no net transfers), and that transfers should have a conditional expectation of zero for every country since they will only be paid as a response to non-predictable shocks (no ex-ante transfers). However, it is an important question whether these desirable characteristics can in reality be achieved.

Contrary, any risk sharing mechanism which entails significant redistribution between the euro area countries is unacceptable for several reasons. One aspect is that it would create additional political tensions between member states if there will always be winners and losers in such a system. Such a redistributive system requires the consensus of its members which is based, for instance, on the desire to create equal living conditions across regions or countries. This objective is derived from the European Treaties in which it is stated that "the Union shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions" (TFEU 174). In the context of this policy, one third of the EU budget is allocated mainly to the poorest regions of the Union, which are defined by a level of GDP below the average. This regional policy is laid down in the financial frameworks where all national governments have to agree on the overall funds for this policy and, implicitly, on the degree of redistribution.

However, any additional transfer mechanism which would be established "through the back door" by a fiscal capacity would therefore be problematic, in particular if the net transfers would be obscured by an opaque calculation formula. This issue would even be aggravated if transfers would not depend on differences in prosperity, but on other indicators leading to arbitrary distributional consequences. One example for such arbitrary redistribution is the EU expenditures within the Common Agriculture Policy (CAP), whose net transfers have regularly benefited richer member states, such as France. These transfers are therefore a permanent issue of conflict between member states which has impeded negotiations on reforming the EU budget (Heinemann et al., 2008).

Moreover, a risk-sharing mechanism which entails permanent transfers between member states also provokes moral hazard effects, which will be discussed in section 4 in greater detail.

3.1 Distributional effects in a microeconomic approach

It is straightforward that any conceivable mechanism in which transfers are paid conditional on indirect realizations of idiosyncratic shocks, such as labor market outcomes in the case of European unemployment insurance, leads to substantial distributional effects. In this case, the institutional setup of the national labor markets would have a major impact on the realizations which determine the direction and amount of cross-country transfers. If heterogeneities of labor market institutions prevail, however, even two otherwise completely identical countries

which have been hit by the identical shocks would end up with completely different unemployment rates. As a result, transfers would flow from the country with the more flexible to the country with the more rigid labor market. The incentive effects of such a mechanism are straightforward: such a mechanism would reduce the incentives of national governments to pursue a policy which aims at eliminating the sources of unemployment (see section 4).

A detailed quantitative approximation of the distributional effects of different microeconomic risk-sharing mechanisms is therefore difficult, since the changes in the behavior of politicians and other economic agents who are induced by such a mechanism are difficult to predict. The recent evidence by Bargain et al. (forthcoming), successfully coping with such difficulties, suggests that the redistributive effects would be substantial. They simulate in a static tax-benefit model for the EU countries the introduction of a separate tax and transfer system which would partly or completely replace the national systems; as an assumption, the European system would lead to the same revenue and progressivity at the EU level as a combination of the existing national systems.

All the simulated reform options would lead to substantial redistribution. And what is worse, these permanent transfers between the countries would even be unsystematic, since not only poorer member states show a net gain. For instance, a reform which will replace one third of the national tax-transfer system with a European system would most notably benefit Greece (which would gain more than 8 per cent in disposable income) and Portugal, but also the German households would be net winners.[2] On the other hand, in Austria and France average disposable incomes would decline by between 2 and 3 per cent. These unsystematic distributional effects are due to current national differences in their national tax and transfer systems and therefore crucially depend on the concrete design of the common European system. Interestingly, in such a model not even all countries would gain in terms of automatic stabilization; i.e. Germany and Belgium, which are those countries with the currently highest automatic stabilizers in their national tax and transfer systems, would be more vulnerable to idiosyncratic shocks. Overall Bargain et al. (forthcoming) find that if a new European tax and transfer system would replace one third of the national systems, the automatic stabilizers of the EU would absorb about 15 per cent of an income shock; this figure appears to be modest given the radical reform under study and is similar to those found in empirical studies of fiscal risk sharing mechanisms in existing federations.

As a second reform option, Bargain et al. (forthcoming) simulate a fiscal equalization system in which tax revenues are redistributed between the euro area countries similarly to existing systems such as the German Länderfinanzausgleich; in such an even more radical reform option the mechanism would fully compensate for differences in taxing capacity between countries. Unsurprisingly, such a system would have even stronger distributional effects between countries, whereas it does not have a stabilizing effect for countries which are hit by a shock. What is even worse, it may have a stabilizing impact on some of the countries when they are hit by an idiosyncratic shock, since they may end up receiving lower payments as a consequence of the decline in overall taxing capacity. This is most notably the case for Greece

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[2] The gains for Germany can be explained by differences in the structure of the existing tax and transfer systems, in particular the relatively high progessivity of the German system.

which would be the most favored country in such a fiscal equalization system. Even though such a model has to be characterized as a transfer union and does not correspond to those models put forward by the Commission or the van Rompuy report, this result is still an important reminder to the fact that a mechanism which aims at equalizing income or taxing capacity would fail entirely with respect to strengthening the capacity to absorb asymmetric shocks and does not contribute to strengthen the monetary union.

3.2 Distributional effects in a macroeconomic approach

At first glance one might expect that a fiscal risk-sharing mechanism designed along the lines of the macroeconomic approach should not lead to substantial distributional effects at least in the longer term perspective. In such a system, the transfers would depend directly on the countries' position over the economic cycle, i.e. a country which is in a boom is a contributor and a country in a recession is a recipient. Since over the economic cycle the relative positions of the countries shift, the transfer would flow back in the other direction at some point in time.

Obviously, in such a mechanism it is not reasonable to specify the transfers according to a measure such as national GDP growth. Then, constant differences which result from different economic policies or national backgrounds leading to differences in potential growth would materialize in consistent transfers from the fast-growing to the slowly-growing countries. As high levels in potential growth often result from convergence processes, it is particularly the poorer member states which would be net contributors in such a system (von Hagen and Hammond, 1998).

As an alternative, one might consider basing the transfers on the difference between actual GDP and potential GDP, which is defined as the output gap and should be seen as a proxy for the position in the business cycle. If a country has a positive output gap, i.e. actual GDP is higher than potential GDP, one would say that it is in a boom and an automatic risk-sharing mechanism would generate a transfer to a country with a negative (or less positive) output gap, since this would be seen to be in a less favorable cyclical position. Using the output gap as the benchmark is the basis of several proposals for the introduction of a fiscal union (for an overview of options see, e.g., Wolff 2012).

In table 2, we depict the output gaps of the original members of the euro area; the data are the currently available values from the AMECO database of the European Commission. It is easy to see that the synchronization between the 12 countries is very high: either all or almost all countries show a positive value (boom: 2000-2002, 2006-2008) or a negative value (2003, 2009-2012). Consequently, a risk-sharing mechanism which would distribute funds from countries with a positive to those with a negative output gap would not be very effective. Therefore, we marked in red those country-years combinations in which the respective country had a more negative output gap than the average, which means that the country was in an unfavorable cyclical position relative to the rest of EMU. This picture seems to be more favorable concerning the feasibility of a transfer mechanism: all countries would be winners and losers at some point of time. However, the distributional effects are still substantial even

over the long term. When looking at the cumulated differences in output gaps, one can conclude that only two countries (Spain, Finland) would have a neutral net position over the period 2000-2010; other countries would either be strong net contributors (most notably France, Luxembourg and Italy), whereas others would be strong net recipients (Netherlands, Germany, Austria). If one includes the last two years which are dominated by quite extreme values for some stressed countries, the mechanism would lead to significant additional transfers mainly to Greece, whereas France would keep its position as the biggest net contributor.

Table 2: Output gaps based on AMECO data (downloaded May 2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	cumulated difference to Euro area 2000-2010	2000-2012
Belgium	2.2	2.2	0.1	-0.9	0.5	0.5	1.4	2.5	1.9	-2.0	-0.8	0.0	-1.1	2.7	5.1
Germany	1.6	1.6	0.2	-1.4	-1.5	-2.0	0.2	2.1	1.9	-4.0	-1.0	0.7	0.0	-7.3	-3.2
Ireland	5.3	2.9	1.8	0.1	-0.6	0.4	1.5	3.7	0.4	-4.1	-4.5	-2.9	-1.3	2.1	1.3
Greece	1.5	0.8	-0.8	-0.2	0.0	-0.9	1.7	2.9	1.5	-1.3	-4.9	-9.4	-12.2	-4.8	-22.9
Spain	2.6	2.4	1.4	0.9	0.8	1.0	1.8	2.1	0.5	-4.2	-4.7	-4.1	-4.6	-0.2	-5.5
France	3.0	2.9	2.0	1.1	1.7	1.7	2.4	3.0	1.5	-2.7	-2.0	-1.4	-2.4	9.7	9.4
Italy	2.2	2.5	1.6	0.3	0.8	0.9	2.3	3.1	1.7	-3.6	-1.8	-1.6	-3.1	5.2	4.0
Luxembourg	5.4	2.9	2.4	-0.6	-0.6	0.1	1.3	4.2	1.1	-3.9	-1.7	-1.2	-2.0	5.9	6.2
Netherlands	2.4	1.3	-0.9	-2.5	-2.0	-1.6	0.0	2.1	2.1	-2.7	-1.7	-1.4	-2.5	-8.4	-8.9
Austria	2.0	0.5	0.0	-1.2	-0.9	-0.9	0.5	2.1	1.9	-2.9	-1.7	0.0	-0.3	-5.2	-2.1
Portugal	3.4	2.6	1.2	-1.1	-1.0	-1.1	-0.6	1.0	0.1	-2.6	-0.8	-1.8	-3.5	-3.6	-5.5
Finland	3.0	1.4	-0.1	-1.1	0.0	0.2	2.1	5.1	3.7	-5.7	-3.2	-1.2	-2.0	0.6	0.8
Euro area	2.3	2.0	0.9	-0.3	0.0	-0.1	1.4	2.6	1.6	-3.4	-2.0	-1.3	-2.2	0.0	0.0

However, the picture changes fundamentally when real-time data instead of the currently available data is used. In table 3 we present the same calculations as before for the output gap data which was available in the respective years; in particular we use the current year data published in the Commission's autumn forecast, respectively. This is the data on which the actual calculations of transfers within a fiscal risk-sharing mechanism could be based on. Now, we do not find any country with a nearly balanced net position over a longer period. Moreover, the directions of the net transfers would be completely different: the biggest net contributors over the period 2000-2010 would be Greece and Austria (which would be the third biggest net recipient based on the updated figures in table 2), whereas the main net recipients would be Portugal, Luxembourg and Italy (which would be the third strongest net contributor according to new data). It is particularly striking that there are countries which would be consistently net contributors (e.g., Belgium, Austria) or net recipients (Italy, Portugal) in almost every year.

Table 3: Output gaps based on real-time data (Autumn European Economic Forecast for the respective year)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	cumulated difference to Euro area 2000-2010	cumulated difference to Euro area 2000-2012
Belgium	-0.2	0.8	-0.5	-0.8	-0.8	-0.8	-0.6	-0.2	0.6	-2.3	-2.0	-0.7	-1.3	4.3	6.6
Germany	-0.3	-0.5	-1.3	-1.6	-1.2	-0.9	-0.2	0.3	1.6	-2.9	-1.7	0.0	-0.3	2.4	6.4
Ireland	0.0	4.0	0.8	0.3	-0.8	-1.6	-1.4	-0.7	-1.4	-7.2	-5.2	-3.1	-1.5	-2.1	-2.4
Greece	0.9	2.0	1.2	1.2	1.6	2.0	1.5	1.3	1.5	-0.2	-5.2	-8.3	-13.0	18.9	1.9
Spain	-1.6	0.2	-0.8	-1.3	-2.2	0.0	-0.9	-0.5	-0.2	-2.8	-4.5	-5.0	-4.6	-3.5	-8.8
France	-0.7	0.3	0.0	-0.7	-0.4	-0.5	-0.8	-0.3	0.3	-2.5	-3.5	-2.3	-2.3	2.3	2.0
Italy	-1.8	-0.3	-1.2	-1.2	-1.5	-1.5	-1.0	-0.8	-0.3	-3.6	-2.6	-2.3	-3.2	-4.7	-5.9
Luxembourg	-1.9	-0.3			-1.9	-1.6	-0.9	0.0	0.7	-3.9	-4.4	-2.2	-1.8	-3.1	-2.8
Netherlands	-0.1	0.3	-0.3	-2.0	-2.2	-2.2	-1.2	-0.4	1.4	-2.7	-3.2	-1.9	-2.7	-1.5	-1.8
Austria	0.2	-0.3	-0.3	-0.9	-1.1	-0.7	-0.2	0.4	1.3	-2.2	-1.8	-0.4	-0.5	5.5	8.9
Portugal	-0.4	0.0	-1.4	-2.5	-2.9	-2.0	-2.0	-1.7	-0.6	-2.9	-1.4	-2.6	-4.3	-6.7	-9.3
Finland	-1.0	3.0	-0.1	-0.5	-0.6	-1.2	0.1	0.4	0.9	-4.5	-5.0	-2.2	-2.0	2.6	2.7
Euro area	-1.2	0.1	-0.7	-1.2	-1.2	-0.9	-0.6	-0.2	0.6	-2.9	-2.9	-2.0	-2.3	0.0	0.0

These calculations demonstrate that it is hardly possible to construct a risk-sharing mechanism which is isolated from any distributional effects. Even though it appears tempting to use the output gap as an indicator for the calculation of transfers between countries, transferring funds from those with positive to negative cyclical positions, we have demonstrated that such a measure has a poor reliability at the current edge. This problem is already well-known from the literature, as for instance Orphanides and van Norden (2002) show that it comes from the unreliability of the end-of sample estimates of the output trend. Consequently, any of the two options discussed, i.e., the microeconomic and macroeconomic approach, would lead to inadequate and permanent transfers between member states which are substantial in size on a more or less insufficiently reliable basis.

4. Incentive effects of a fiscal risk-sharing mechanism

The political-economic literature discusses several problems which are inherent to any form of fiscal integration which aims at providing a risk sharing mechanism in a federation. These problems are most notably related to moral hazard at the sub-federal level and distorted incentives which become eminent if such a system goes hand in hand with redistribution. As shown in section 3, this is highly relevant for the discussed models since it is hardly possible to isolate the insurance function from distributional effects.

A first fundamental problem is the trade-off between risk-sharing and moral hazard which is highlighted by Persson and Tabellini (1996a). They argue that a risk sharing mechanism which reduces the costs of idiosyncratic shocks may reduce the incentives of sub-federal governments to take measures which decrease local risk (or even increase their incentives to engage in politics which increase it). For instance, instead of tackling national (labor and product market) rigidities leading to a high vulnerability to idiosyncratic shocks which is often unattractive for the incumbent due to political costs in the short-run – e.g. by increasing the flexibility of the labor market –, governments could be tempted to rely too much on the ex-post correction of imbalances by the risk-sharing mechanism. As a consequence, it is very likely that the emergence of country-specific shocks will increase endogenously in the long-

run – against the expectations that the occurrence of idiosyncratic shocks should decrease if alternative adequate reforms will be undertaken (see section 5). According to Persson and Tabellini (1996a), a mitigation of the general moral hazard problem caused by fiscal risk sharing could be achieved by a centralization of powers. Such far reaching steps towards centralization do not appear to be realistic in the euro area in the near future.

Interestingly, this expectation has a close relationship to recent work by Fernandez-Villaverde et al. (2013) who argue that the easier refinancing conditions in the peripheral countries after the convergence of interest rates subsequent to the introduction of the euro has contributed to a suspension of necessary structural reforms and, consequently, to the buildup of imbalances in the public and private sectors. On the one hand, this relaxed the constraints for public and private actors which reduced the pressure for reforms. On the other hand, it made it harder for principals in both the public and private sectors to evaluate the performance of the agents, e.g. the governments appeared to be efficient even though they could only maintain their unsustainable policies due to the imperfectly functioning market mechanism. Therefore even bad politicians were re-elected and growth-enhancing reforms were delayed. Similarly, one could easily imagine that the fiscal insurance against negative country-specific shocks – which are often related to country-specific problems – would similarly reduce the incentives to address the underlying causes at the national level. Additionally, an insurance system following the microeconomic approach would furthermore reduce the incentives of individuals to adjust after a shock, for instance by accepting temporary wage cuts or relocations (von Hagen, 2007). In any case, the effectiveness of the market mechanism for adjustment would be impaired.

A second fundamental problem associated with a fiscal risk sharing mechanism is the existence of distorted incentives caused by redistribution. This argument goes back to the work by Persson and Tabellini (1996b) who demonstrate the problems of organizing an efficient risk sharing mechanism in the presence of heterogeneous sub-federal units. If a mechanism implies ex ante the redistribution of funds between the sub-federal units, a conflict arises between those which can expect to win and therefore demand an oversupply of risk sharing, and those which can expect to lose and therefore demand an undersupply.

The exact form of the moral hazard problem related to distributional consequences depends on the concrete design of the risk sharing mechanism. The fundamental problem is that idiosyncratic country-specific shocks which would ideally be insured by the mechanism are not perfectly observable – and the output gaps, which seem to be the closest proxy, are not usable in practice as demonstrated above. Therefore, transfers have to be conditioned on other measures, but these measures may also be affected by other policies.

This problem can be easily demonstrated for the example of a European unemployment insurance which was already discussed above. National labor market institutions can differ in very many dimensions, and many of them are under the control of politics in a direct (e.g., minimum wages, active labor market policies, retirement age) or indirect way (e.g., negotiation power of trade unions), whereas others are not. This bunch of national differences affects both, the level of employment (measured e.g. by the structural unemployment rate) and the reaction of the employment rate to economic shocks. These underlying national peculiarities

are so manifold that a harmonization would be neither feasible in the short- or medium-run, nor desirable since they also reflect differences in the preferences of the citizens. But without a level playing field, any mechanism which conditions transfers on the unemployment rate or on temporary deviations from the long-term trend, such as an option mentioned in the van Rompuy report which limits transfers to short-term unemployment – would most benefit those countries with the more rigid labor market. There is no need to say that such a transfer mechanism would lower incentives to increase the flexibility of the national labor markets.

Similarly, a mechanism in which transfers are conditioned on fiscal measures involves serious moral hazard problems (von Hagen, 2007). If national tax revenues are selected as benchmark, this would bias the collection of taxes, for instance through lower tax effort. This issue has already been studied for several sub-national equalization systems (e.g., Baretti et al., 2002; Goodspeed, 2002). Similarly, a system focusing on budget balances would induce governments to exert insufficient fiscal discipline (Beetsma and Bovenberg, 2001, Goodspeed 2002). In any case the moral hazard problems would be substantial.

5. Alternative channels of risk sharing and containment of asymmetric shocks

As discussed above, there is no convincing empirical evidence in favor of a strong role of fiscal risk-sharing even for federal states in which a high share of spending and taxation is centralized at the federal level. At first glance this appears to be a sobering result for the prospect of the monetary union to cope with asymmetric shocks in the future given its disappointing track record in the past. However, the discussion on strengthening the resilience of EMU to asymmetric developments in the member states should not be restricted to risk-sharing through a fiscal union. First, the emergence of asymmetric shocks in EMU should not be regarded as exogenous, since the synchronization of the business cycles also depends on policies at the national and European level. Second, there exist other mechanisms for risk-sharing and these play an even stronger role in other currency areas such as the US, as shown above. Third, countries should get into a better position to absorb such shocks, e.g. by making labor markets more flexible and improving the functioning of automatic stabilizers.

In all these dimensions, we believe that the countries of the monetary union should already be in a better position than before the crisis due to several institutional reforms which have been undertaken at the EU level in recent times. Moreover, the resilience of the monetary union could be further strengthened through accompanying reforms in the banking sector and concerning macro prudential instruments.

5.1 Synchronization of shocks

A first important objection to the allegedly vital role of a fiscal shock absorbing mechanism is the fact that the existence of asymmetric shocks between Euro area states cannot be regarded as exogenous; in fact, these shocks depend on many different factors of which many can be influenced by economic policy. In particular the extent of (a)symmetric shocks in the euro area has been scrutinized by several empirical studies (e.g., Weyerstrass et al., 2011) and its

causes have been identified (De Haan et al., 2008). According to these studies the synchronization between the cycles is already quite pronounced between the countries of the euro area and has increased steadily during the 1990s; after this, it has remained relatively stable. Clear evidence for a positive effect on synchronization has mainly been found for trade integration. Other relevant factors with a positive impact are monetary integration, industrial diversification, financial market integration and sound fiscal policy.

The early literature on the endogeneity of the OCA criteria stressed market integration as a major driving force to reduce the asymmetry of shocks within a monetary union (Frankel and Rose, 1998), which itself is enhanced by the formation of the monetary union. It can be expected that this channel has already contributed to an increasing synchronization over time. However, despite the relatively high degree of integration of EU countries, trade links still fall short compared to those in other monetary unions such as between the US states. In addition to many impediments which can hardly be solved overnight (e.g. language barriers), one reason is that the single market is far from being completed. Consequently, further advancement in particular in the area of services and the implementation of proposed measures such as the Single Market Act II could also contribute to a further symmetry of business cycles.

A significant contribution to a stronger synchronization of shocks can be expected from the reforms of the EU fiscal governance frameworks. Several elements of these reforms (European semester, common budgetary timeline, fiscal compact) tighten the surveillance of national budgetary policies and therefore contribute to a stronger coordination of national economic policy. This coordination reduces the danger of country-specific shocks which emerge when single countries pursue very different fiscal policies from those of the rest of the euro area. In detail, the empirical literature (Darvas et al., 2005) shows that diverging fiscal balances, and in particular high deficits, contribute to the emergence of asymmetric shocks. Therefore the measures aiming at the strengthening of fiscal discipline at the national level (fiscal compact, strengthening of the stability and growth pact through the six-pack) could limit the occurrence of fiscal shocks.

A further element of the six-pack reforms of the EU economic governance, the Macroeconomic Imbalance Procedure (MIP), has been designed to address the problem of asymmetries even more directly. The MIP is a surveillance mechanism which consists in a first step of an early warning system which is based on a scoreboard of eleven indicators published every year by the Commission. The scoreboard indicators help to identify those countries which have problematic imbalances which are then analyzed by in-depth reviews. As a result of the in-depth review, the Commission can consider the existence of an excessive imbalance which, after approval by the Council, opens an excessive imbalance procedure. As part of this procedure the affected country is obliged to present a corrective action plan which has to be accepted by the Council. The compliance with this plan is closely monitored by the Commission, and non-compliance can be sanctioned by an interest-bearing deposit or annual fine of 0.1 % of the GDP. Consequently, the rationale behind the MIP is to make the member states more aware of destabilizing country-specific imbalances and to commit them to counteract such asymmetric developments by means of their national policy instruments. However, it remains to be seen whether the MIP will be effective in reducing asymmetries. The Commission has only recently identified "excessive imbalances" for the first time in the cases of Spain and

Slovenia, which gives us a first occasion to study whether the excessive imbalance procedure is capable of provoking effective actions in the member states to counteract the build-up of imbalances.

Finally, we regard several aspects of a European banking union as a major contribution to reduce the asymmetry of country specific shocks in the EMU. This issue is discussed in greater detail in Buch et al. (2013). Our arguments mainly rest on the fact that the common rules which are determined for the banking sectors of all euro area countries contribute to a level playing field which reduces the risk of country-specific shocks stemming from the national financial sector. One measure which contributes to this aim is the European Systemic Risk Board (ESRB), which is designed to prevent the buildup of too large exposures to systemic risk in the national financial sectors. Another one is the introduction of a Single Supervisory Mechanism (SSM) with a single rulebook which guarantees the application of the same standards for banking supervision in all euro area countries and therefore averts that financial sectors of single countries become more vulnerable to shocks because of regulatory forbearance. In addition, macro-prudential policies play a role since they can constrain the build-up of country-specific risks in financial markets.

5.2 Risk-sharing channels

As shown above, the euro area already now has better mechanisms to counteract the emergence of asymmetric shocks than before the crisis which could be strengthened further by steps towards banking union. Moreover, several of the discussed measures can also contribute to an effective risk sharing between countries in the case that the monetary union is still hit asymmetrically by a financial market shock. For this purpose a European bank resolution fund can play an important role, which, however, should only be introduced after certain criteria are met (see Buch et al., 2013). This fund, financed through a bank levy, helps to mitigate the country-specific negative consequences of a banking crisis, since it avoids that a single country is overburdened by its fiscal costs. Similarly, a European deposit insurance scheme can fulfill the same costs of protecting single countries from the cumulative effect of a country-specific financial shock, since it also mutualizes the losses of the depositors and moreover increases the depositors' confidence in the financial sector, thus avoiding mutually reinforcing national financial crisis, such as the threat bank runs as a consequence of bank distress. However, a European deposit insurance can only be endorsed after prudential and restructuring powers have been transferred to the European level and after the legacy problem in the bank balance sheets has been solved.

The empirical literature (see section 2) has demonstrated that it is not fiscal integration, but financial integration which provides the largest contribution to risk sharing in existing monetary unions, such as the US. This is caused by the cross-holding of credits and assets of individuals and firms which also induces investors from other countries to participate in country-specific shocks, both positive and negative ones. Through this capital market channel, individuals can smooth their consumption, which partially decouples the countries' aggregate consumption from its production and thus mitigates the consequences of idiosyncratic shocks.

Even though financial integration through banks can also have destabilizing effects in "quiet" times (Kalemli-Ozcan et al., 2012), there is some evidence that banking integration is an important element to contain the consequences of a local banking crisis. This is illustrated by Goodhart and Lee who compare the experiences of Spain and Nevada which were both hit quite similarly by a collapse of their real estate markets. However, both differed in their banking sector. In Spain the bulk of loans and deposits were held by local banks, so the local banking system was severely damaged and as a consequence unwilling and unable to extend new loans which further transmitted the crisis to the real economy. Contrary, in Arizona the banking was mainly done by large nation-wide US banks that could better diversify their risks and thus continue to apply their lending criteria in Arizona.

Moreover, in addition to the significant increases in risk sharing which could be achieved through the capital market and banking channel, we already have a significant increase in intra-EU risk-sharing during crisis episodes through the establishment of the European Stability Mechanism (ESM). The ESM is designed to provide financial assistance to euro area countries which experience or are threatened by financing difficulties. Through this assistance the ESM can mitigate the immediate consequences for countries which face serious problems and can reduce country-specific shocks. Consequently, the ESM offers already a fiscal channel for the absorption and reduction of asymmetric shocks, even though it has merely insurance character since it is intended to only step in at systemic crises and when the monetary union as a whole is at risk.

5.3 Flexibility at national level

Finally, it is an ongoing political task to increase the flexibility of the national economies to be able to better cope with country-specific shocks which can never be avoided as in any other currency area. In particular the labor market is of high relevance since some flexibility in the determination of wages and working time is imperative in a monetary union to ensure that temporary negative shocks in an economy do not lead to a long-term increase in unemployment. This necessity to reform the labor markets has now been recognized by most countries of the EMU and has led to significant reforms, in particular in the most stressed countries which are even committed to certain kinds of reforms as part of their macroeconomic adjustment programs. Before the start of the monetary union it was a widely held view that due to the loss of the option to devaluate the national currencies in order to restore competitiveness, the propensity to undertake structural reforms would increase after the introduction of the common currency (Alesina et al., 2010). Consequently, a return to a "normal" sanction mechanism at the financial markets after the reestablishment of the no-bailout clause should lead to a better adaptability to idiosyncratic shocks.

Finally, for the better functioning of automatic stabilizers it is important that the stressed countries gain back their full capacity to act at the financial markets. Only when they are all able to borrow at acceptable rates, they are able to counteract future idiosyncratic temporary economic slumps by anti-cyclical fiscal policy and contribute to an intertemporal smoothing of consumption. One precondition for this is restoring the market confidence. Most of the

countries already have come a long way in this direction through their austerity policies which can be read from the constantly declining risk premia on their sovereign bonds.

Moreover, for the long-term perspective it is important that fiscal sanity will also be maintained in "good times" in order to have fiscal space in "bad times". For this purpose it is of high importance that the member states stick to their new fiscal rules which have been established in the Fiscal Compact. These rules limit the structural deficit to 0.5% of GDP which additionally supports the realization of counter-cyclical fiscal policies: whereas during recessions, the rules allow for a deficit exceeding the given value, the rule limits the countries' spending options during booms. Such a limitation to expenditure growth could also be very helpful in the case of a temporary positive shock in a country. In this case, they would limit the expansion of the public sector during the boom, which would give the country much more fiscal space to counteract a subsequent slump, for example due to the burst of an asset price bubble or the sudden reversal of capital flows. This demonstrates that the strict implementation of the deficit rules enshrined in the Fiscal Compact are also a valuable contribution to make automatic stabilizers at the national level stronger and, thus, increase the resilience of the member states with respect to the smoothing of idiosyncratic shocks.

6. Conclusion

The necessity of establishing a fiscal capacity at the European level in order to smooth asymmetric shocks in EMU is largely based on the theory of optimum currency areas. If countries do not have the possibility to align exchange rates, the effects of asymmetric shocks on a country's income must be absorbed by other mechanisms. In an economy with sticky wages and prices as well as with low factor mobility, only a transfer mechanism between countries provides for a compensation of such adverse cyclical effects and thus serves as an insurance against the risk of asymmetric shocks. This rationale is based on many assumptions regarding the economic conditions in a country. Instead of a fiscal capacity for risk-sharing an increase in factor mobility or a higher wage and price flexibility also allow for an absorption of shocks. Indeed, a monetary union requires economies to become more flexible.

The analysis in this paper shows that the contribution of a fiscal capacity to absorb shocks in federations in which a fiscal union is established is relatively low. This holds for the US, Germany and Canada alike. More important according to empirical studies are capital markets. The more integrated capital markets are, the better they serve as an interregional risk-sharing mechanism. Thus, the creation of a banking union along the lines proposed by Buch et al. (2013) in the EU will be the best way of insuring EMU member countries against adverse asymmetric shocks. In addition, higher labor mobility and higher wage and price flexibility will help to accommodate future shocks. Moreover, if member countries consolidate their budgets following the rules of the fiscal compact and the six pack regulations, their ability to smooth shocks by national fiscal policy will be increased.

It should be noted that the establishment of a fiscal capacity does not only provide for at best a rather small risk-sharing mechanism. It also induces negative incentives for member countries to reduce the probability of being affected by economic shocks adversely. Reforms of

labor and products markets aiming at higher wage and price flexibility will be postponed. Consolidation efforts will wane. Moral hazard occurs. Given this downside of a fiscal capacity, its introduction cannot be advised.

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