

European Fiscal Union: Economic rationale and design challenges

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Abstract

Proposals for different types of elements of a fiscal union have flourished in recent years, both from academic and policy circles. Since a fiscal union could take a constellation of different forms, this paper first provides an analytical framework pinpointing the five key elements of a fiscal union. It takes stock of the existing features of EMU that embed some form of fiscal union, and then critically analyses the main arguments for and against further fiscal integration. Finally, it surveys the key proposals for a fiscal capacity and different types of Eurobonds.

Keywords: Fiscal integration, fiscal union, risk sharing, stabilisation mechanisms.

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1. Introduction

The question of a common fiscal instrument for the euro area has been discussed since the early debate about monetary integration in the 1970s, sparked by the Werner report (1970) and followed by the MacDougall Report (1977), which highlighted that the European Monetary Union (EMU) would benefit from a centralised fiscal stabiliser in order to deal with asymmetric shocks. These reports failed to garner much political support, however, and the project of monetary unification did not gain real momentum until only 1988, when Jacques Delors (1989) revived the idea of monetary integration by turning it into a politically viable project, largely ignoring considerations about fiscal union.

The debate preceding the Maastricht Treaty focused on how to ensure fiscal discipline at the domestic level, and the consensus reached at that time involved a combination of fiscal rules and market discipline via a commitment to ‘no bail-out’ and ‘no debt monetisation’. The common budget was set to remain small, on the order of 1% of GDP, with responsibility for fiscal stabilisation policy instruments assigned to national authorities.

The crisis in the euro area, however, revealed critical ‘design failures’ (De Grauwe, 2013) in the functioning of EMU as its arrangements, and its Treaty proved unable to calm the crisis. In response, member states and EU institutions implemented a range of reforms to strengthen the resilience of EMU. The overhaul of the fiscal governance framework focused on strengthening the rules, fostering economic policy coordination and monitoring macroeconomic imbalances. Crisis resolution mechanisms were created. The European Stability Mechanism (ESM) now allows the recapitalisation of banks and provides liquidity to distressed member states. The Outright Monetary Transaction (OMT) was introduced to suppress the so called “redenomination risk”, and the first pillars of a banking union have been established. Despite these changes, most observers argue that EMU architecture remains fragile, blaming the lack of common fiscal resources or of a so-called ‘fiscal union’.

Thus, the failure of the EMU governance framework returned the question of fiscal integration to the top of EU policy-makers’ agenda. The ‘Four Presidents’ Report’ (Van Rompuy et al., 2012) advocated the creation of a fiscal risk-sharing instrument conditional on structural reform implementation that could cushion asymmetric shocks and protect against the costs associated with negative fiscal externalities:

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In 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.

This document was shortly followed by the European Commission's "Blueprint for a deep and genuine EMU" (European Commission, 2012), which notably advocates the gradual development of an autonomous fiscal capacity for the EMU, access to which is conditional on the implementation of sound fiscal policies and structural reforms, and stronger fiscal policy coordination via direct budget surveillance. The 'Five Presidents' Report' (Juncker, 2015), issued in June 2015, further emphasised the need for stronger economic policy coordination and reiterated the call for the creation of a *fiscal stabilisation function* within an autonomous EMU budget to deal with severe crisis, possibly taking the form of an unemployment insurance mechanism. The report established that a fiscal capacity should respect the following guiding principles: it should not lead to permanent transfers between countries; it should not undermine the incentives for sound national fiscal policy-making; it should first be developed within the EU budget; and it should not be an instrument for crisis management.

An important feature in the discourse of EU institutions is the clear emphasis put on the distinction between fiscal insurance and redistribution: a fiscal capacity should not lead to permanent or unidirectional transfers between countries nor should it be considered as an instrument of income redistribution or convergence. The political message sent by the EU institutions echoes the concerns over the risk of moral hazard inherent to any insurance scheme and is crucial to its political feasibility. In particular, fiscal risk-sharing needs to be combined with mechanisms to ensure the implementation of structural reforms and to guard against incentives to adopt lax fiscal policies. Finally, it is clearly stated that fiscal union would be a medium- or long- run project that does not aim to help solve the current crisis.

In this report, we take as a pre-condition that any type of fiscal capacity or joint debt issuance should aim to meet these basic criteria. Since establishing a large common budget does not appear feasible, even in the long run, we focus on proposals that primarily aim to significantly increase the macroeconomic stability of the euro area without implying a degree of centralisation similar to that of other federations. Although we set out to provide a comprehensive review of the debate and proposals for fiscal integration, we pay particular attention to the proposals for 'rainy-day funds' and unemployment insurance mechanisms.

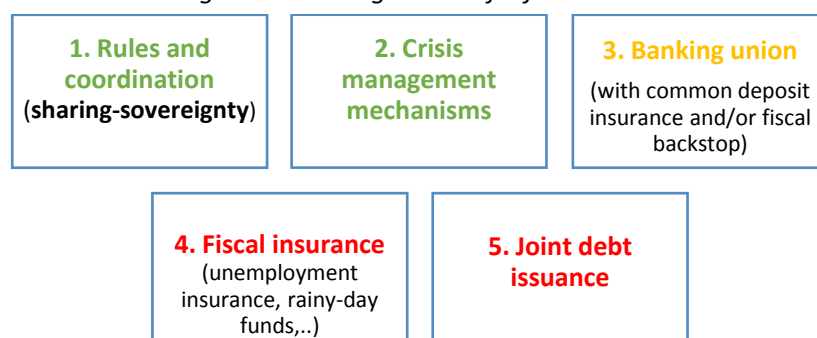
Against this background, the rest of this paper is organised as follows. Section 2 defines the building blocks of a fiscal union and examines their theoretical rationale. Section 3 critically reviews the key arguments for and against further fiscal integration, essentially assessing their merits on the basis of macroeconomic stabilisation properties. Sections 4 and 5 provide a comprehensive review of some of the most relevant proposals for a fiscal insurance mechanism and different types of Eurobonds. A final section 6 offers conclusions.

2. Embryos of fiscal union

The term ‘fiscal union’ tends to have different meanings in the policy literature, with interpretations ranging from a set of common fiscal rules to the creation of a fully federal government with tax and spending authority.¹ A broad definition of fiscal integration is proposed by Dabrowski (2015), who defines fiscal union as “transfers of parts of fiscal resources and competences in the area of fiscal policy and fiscal management from the national to supranational level”. Thus fiscal integration can be interpreted as any attempt to further centralise fiscal policies in EMU, either by sharing resources or decision-making power. Unlike other narrower definitions of fiscal union that restrict it to a common fiscal capacity, this definition considers a broader set of instruments concerning both risk reduction and shock absorption.

Figure 1 diagrams five basic elements that can be considered the building blocks of a fiscal union.

Figure 1. Building blocks of a fiscal union



Assuming that the banking union will eventually be complete, further fiscal integration can take one of two different roads: further shared-sovereignty (1) or risk-sharing (4 and 5). While the French and Italian governments have officially supported a fiscal risk-sharing capacity for EMU, which implies ‘resource-sharing’, several countries in northern Europe seem adamantly opposed to pooling fiscal resources. The German government has instead advocated a ‘stability union’, with a centralisation of budgetary decisions. This approach resembles more an attempt to integrate budgetary policy decisions via further ‘sovereignty-sharing’.

The rest of this section briefly analyses the three elements already present in the current framework (1 to 3): coordination and rules, crisis management mechanisms and an (incomplete) banking union. In particular, we discuss the role of these three types of instruments and, where relevant, identify the remaining gaps and proposals to strengthen these mechanisms.

¹ Although a fully-fledged budget with broad tax and spending powers are typically thought of as the backbone of established federations, we omit this possibility from the analysis since it is considered politically unfeasible. Harmonisation of taxation systems could also be a pillar of a fiscal union, but it too appears to be absent from the current policy agenda due to political objections.

In section 3, we turn to the rationale for further mutualisation of risk (4 and 5) through fiscal insurance and the issuance of joint debt instruments.

2.1 Fiscal rules and policy coordination

One motivation for having fiscal rules in monetary union directly derives from the Optimal Currency Area (Mundell, 1961; McKinnon, 1963). With the exchange rate and monetary policy no longer being handled domestically, a low labour mobility and strong price and wage rigidities, national fiscal policy is indeed bound to take centre stage when it comes to buffer shocks in monetary union. It is therefore crucial, at the country level, that domestic fiscal policies are conducted in a counter-cyclical fashion. This means creating buffers during good times for the bad times.

However, the rationale for coordination is different. In fact, it does not directly relate to being part of a monetary union, although monetary integration certainly reinforces the case for coordination. The motivation for coordinating fiscal policies stems from the existence of policy externalities. The theory of coordination spelled out in the work of Hamada (1976) demonstrates that cross-border policy externalities lead to Pareto inefficiencies in the absence of coordination. As a result, without some form of cross-country commitment, policies that produce positive spill-overs tend to be under-supplied and those with negative ones over-supplied.

The relevance of policy coordination and centralisation of competences is also often examined from the point of view of the theories of fiscal federalism (see Oates, 1972; Musgrave, 1983). They usually consider whether a policy tool should be centralised or left at the local level according to two criteria: the spill-overs generated by political decisions and citizens' preferences. In the end, the optimal degree of centralisation of a specific policy competence involves trading off the size of the cross-border externalities generated by decentralised policy decisions and the heterogeneity of local preferences and constraints (Alesina & Wacziarg, 1998).

The existence of large externalities from decentralised policy actions thus provides a rationale for centralising the decision-making of a certain policy area. This is important since the degree of economic interdependence between countries is particularly strong in the context of a monetary union and amplifies the cross-border effects of developments originating in each member country. This occurs primarily through the demand channel, but recent events have shown that financial spill-overs can be large as well, whereas fiscal policy also produces spill-overs through its effects on competitiveness. One difficulty in institutionalising cooperation, from a political economy perspective, arises from the fact that it requires the surrender or the sharing of some degree of sovereignty and, at times, the implementation of policies that do not necessarily reflect a country's best interest.

Coordination can take place ex-ante (mostly via rules) or ex-post. From an ex-ante viewpoint, it aims at limiting the risk of generating shocks stemming from weak fiscal and unbalanced macroeconomic positions. From an ex-post point of view, it seeks to reduce the cost associated with externalities (ex-post).

Ex-ante coordination

The Maastricht Treaty included provisions for (ex-ante) economic policy coordination, relying essentially on a framework based on (fiscal) rules. In particular, the Stability and Growth Pact (SGP) set a number of numerical targets aimed at imposing several constraints on domestic fiscal policy in order to ensure prudent fiscal policy, thereby reducing the risk of shocks that could lead to adverse spill-over effects on other member states. The SGP can be seen as a form of coordination that implies a commitment towards certain policy outcomes, while national governments remain sovereign in the choice of the tools and specific actions to deliver those outcomes (Alcidi et al., 2015).

The debate about (ex-ante) policy coordination resumed after the outbreak of the crisis in 2010, when the framework showed its limits: the old rules proved ineffective to secure the creation of sufficient fiscal buffers. Not only were they strongly asymmetric – i.e. only binding to restrict deficits and not to impose surpluses, but they also too often went unenforced, which wiped out the credibility of future sanctions. The governance and Institutional framework was reinforced with the objective of enhancing the existing rule system. The reforms of the EU fiscal governance framework (via the Six-Pack, the Two-Pack and the Fiscal Compact) included several mechanisms to tighten existing coordination procedures and the surveillance of national budgetary policies and to enshrine balanced budget rules at the national level. In order to address the procyclical bias, reforms introduced cyclically-adjusted variables to the surveillance radar.

The newly introduced Macroeconomic Imbalances Procedure (MIP) as part of the Six-Pack broadens the scope for surveillance and coordination beyond fiscal policy variables by providing a new tool for surveillance and correcting imbalances. This is obviously closely related to fiscal policies since they can themselves foster imbalances, but the MIP also reflects the view that, aside from the case of Greece, it is not only the lack of fiscal discipline that explained the sovereign debt crisis, but also, and mainly, the lack of attention paid to relative price and wage divergence and credit development. Although the revised framework should reduce the risk of policy-induced shocks, one issue with the framework is that, like the fiscal framework, it remains largely asymmetric – i.e. it is only binding in case of an excessive deficit, not a surplus.²

Ex-post coordination

Overall, coordination of macro-fiscal policies in EMU essentially takes the form of common rules. However, in addition to risk prevention, there may also be a more general case for ex-post coordination in order to internalise the externalities of fiscal policy. In fact, the European Recovery Plan in 2009, which was part of a global effort to bolster demand, has probably made a significant contribution towards preventing a global recession.

Recent advancements in economic research shed more light on the different outcomes from coordination, according to whether the state of the economy can be characterised as ‘normal times’

² The performance of the new framework has been mixed so far. Rules have been interpreted with large flexibility, and the track record of implementation of country-specific recommendations has been poor.

or ‘bad times’. In normal times, it is generally not clear whether the welfare effects of externalities generated by aggregate spill-overs are significant: a loose (tight) overall fiscal stance tends to create pressure to tighten (loosen) monetary policy and vice versa.³ On the other hand, monetary policy may need to be complemented by coordinated fiscal policy in certain situations. In particular, the benefits of coordination gain prominence when monetary policy is constrained by the zero bound. An important lesson from the crisis is indeed that fiscal multipliers and spill-overs become significantly larger (Blanchard & Leigh, 2013; Auerbach & Gorodnichenko, 2013), which increases the (de)stabilising capacity of a fiscal policy (contraction) boost. These externalities, however, are unlikely to be taken into account by national fiscal authorities without explicit cooperation arrangements since each country has an incentive to free ride on others: the aggregate fiscal policy stance ends up being less expansionary than is desirable.⁴ Further coordination of domestic fiscal policy may be needed in order to achieve an optimal overall fiscal stance at the euro-area level.⁵

Towards further sharing of sovereignty?

With the overall fiscal policy stance in the euro area being the sum of 19 different domestic policies, achieving an optimal fiscal stance can only be the result of some fortunate coincidence. In order to overcome the risk of a destabilising outcome, several proposals suggest the imposition of further constraints on domestic fiscal policies. The rationale for further fiscal integration based on ‘shared-sovereignty’ is to centralise the decision-making process in order to enhance policy coordination, thereby allowing better internalisation of the externalities of fiscal policies.

The European Commission recently announced the creation of an advisory European Fiscal Board (EFB), composed of independent experts tasked with providing (non-binding) recommendations to the European Commission on the euro area’s aggregate fiscal stance. Ideally, this should lead to better coordination, in particular during bad times, when monetary policy alone is no longer effective. During good times, it should increase pressure to reduce debt levels.

Achieving a common fiscal policy, however, will require more than an advisory EU body in charge of producing non-binding recommendations. Beyond the practical difficulty associated with the identification of the position in the business cycle, soft coordination of national fiscal policies is likely to be insufficient because enforcement will inevitably be imperfect among governments concerned with domestic interests. Another potential issue is that such advisory body may itself prescribe different policies from those recommended by the national fiscal councils. Indeed, one general difficulty is that efforts to move towards more centralisation of certain fiscal policy decisions at the EMU level are not necessarily compatible with the ‘keep your house in order’ approach prescribed by fiscal governance rules. Such contradiction has been lately exposed by the numerous calls from the

³ Gros & Hobza (2001) show that coordination of policy during normal times could lead to suboptimal outcomes because heterogeneous domestic fiscal policy stances provide insurance against bad joint policy decisions.

⁴ For instance, some observers pointed out that the overall fiscal stance of EMU could have been less contractionary if Germany had used its fiscal space in order to support aggregate demand within EMU.

⁵ For a more in-depth treatment of the challenges of coordination of economic policy, see Alcidi et al. (2015).

European Commission requesting Germany to increase fiscal spending, although Germany was experiencing a mild positive output gap.

A stronger version of coordination was proposed by Schäuble & Trichet (2011). They advocate further strengthening of the scope for coordination of budgetary policy by creating a supranational institution with a finance minister with veto power on member states' budgets. Eventually it could possibly enforce sanctions in case of resistance by sovereigns to adopt the required fiscal policy stances. This idea broadly reflects the view of a 'stability union' proposed by Germany in which a European agency would ensure coordination being guided by a euro-area perspective rather than by national interests.

This is aimed to help overcome collective action problems triggered by crises, because common policy reaction would be faster than coordinated policies (von Hagen, 2012). However, in practical terms this would be likely to lead to a politically difficult situation, if for instance, a country with 'fiscal space', and say a positive output gap of one is requested to pursue expansionary fiscal policies in order to support the common fiscal stance.

The decentralised approach to fiscal policy

Another approach proposed to strengthen the capacity of fiscal policy consists of 'dis-integrating' fiscal policy. Its advocates propose to reinforce the decentralized character of fiscal policy. Such approach is essentially motivated by the political reality of EMU, the acknowledgment of different preferences and a general reluctance to transfer fiscal-policy competencies to the EMU level. The central claim is that as long as member countries refuse to transfer national sovereignty over economic and fiscal policy to the European level, incentives to set appropriate national economic and fiscal policy will inherently remain distorted.

Fuest & Peichl (2012) and Fuest et al. (2015) consider that further political integration is illusory at this stage and argue for a fiscal system with decentralised responsibility for sovereign debts, stronger market discipline, sovereign debt restructurings and reforms aimed at decreasing the risk of shocks.

In a similar vein, but more inspired by fiscal federalism theory, Eichengreen & Wyplosz (2016) call for the re-nationalisation of fiscal policy and "abandon[ing] the fiction that fiscal policy can be centralised", because heterogeneous preferences over fiscal policy render the cost of uniformity for fiscal policy centralisation too high. In other words, this view implies that the magnitude of fiscal policy externalities is not large enough to renounce country-specific preferences. Other proposals by the Academic Advisory Board of the Federal Ministry of Finance (2010, 2012), and members of the German Council of Economic Experts (2016) provide similar policy prescriptions.

2.2 Crisis management mechanisms

An important lesson from the sovereign debt crisis is that rules and coordination alone cannot rule out the possibility that a large recession or financial crisis leads to sovereign debt crises in EMU. The absence of a credible crisis management or regional financial assistance facility was without doubt a major oversight in the architecture of EMU.

Being a member of a monetary union has two important implications that constrain a country's ability to face a fiscal crisis. First the rise in public debt due to a shock cannot be reversed through devaluations. Secondly, lacking a budget backed by lender-of-last-resort guarantees, i.e. a central bank, speculators are systematically able to exacerbate fiscal troubles in weak countries, driving up sovereign risk premia to potentially unsustainable levels. De Grauwe (2013) shows how markets can push member states into a bad equilibrium. Liquidity issues can become, in a self-fulfilling prophecy, solvency issues and turn a liquidity crisis into a solvency crisis. The need for an emergency facility to rescue distressed member states or their banking systems is reinforced by the risk of financial meltdown and contagion in a group of countries featuring large financial and economic interlinkages (Fuest & Peichl, 2012).

For this reason, rules need to be complemented with mechanisms to manage crises via some form of mutualisation of risks. The European Stability Mechanism (ESM) now provides the euro area with a permanent fiscal instrument to give financial support to distressed countries facing liquidity issues and to (directly) recapitalise banks. It is important to highlight that the underlying objective is to address systemic risks and prevent negative externalities in the euro area, not to provide stabilisation against asymmetric shocks. Of course, to some extent it also provides liquidity that enables governments to maintain a higher spending level, but it is a contingent mechanism firstly geared to ensure financial stability, not an ex-ante macroeconomic stabilisation device.

Lending to troubled governments is only provided upon assessment of their solvency via a debt-sustainability analysis, and comes with a macroeconomic adjustment programme that is specified in a memorandum of understanding. The aim is to ensure that the distressed country remains solvent and pursues macroeconomic adjustment efforts so that it can eventually return to the capital market, or, in a worst-case scenario, make an orderly default possible.

The ESM, which has a lending capacity of €500 billion in 2016, representing about 6% of euro-area member states' combined GDP, is a first significant step towards enhancing the stability of EMU, even though its size would remain insufficient to support the needs of countries with debt levels like Spain or Italy if they were to face important financing issues.

The second crisis-management tool introduced since the crisis is the Outright Monetary Transaction (OMT). It enables the ECB to become a lender of last resort to sovereigns on the secondary market under strict conditionality. The OMT is only activated through an ESM programme with significant conditionality, and bond purchases (which are sterilised) are limited to bonds up to three years of reaching maturity. It aims to reduce the so-called redenomination risk premia associated with the risk of break-up, and to ensure the smooth transmission of monetary policy. Although it was never used, the OMT has been so far a powerful tool as it calmed the markets immediately upon its announcement in the summer of 2012, leading to a large reduction in sovereign bond yields. It must be noted, however, that this tool raised a number of concerns from a political economy point of view, as it can be seen as fiscal integration through the backdoor. If it ever has to be deployed, there is no doubt that important concerns will re-emerge, in particular given the ECB's current quantitative easing (QE) programme.

2.3 Banking union

One last major step taken in order to enhance the stability of EMU has been the creation of the first two pillars of a banking union. The euro area now has a common bank supervisor, the Single Supervisory Mechanism (SSM), in which the ECB plays a crucial role. This should guarantee the application of common supervisory standards for banking supervision, and hence reduce the risk of regulatory forbearance and enhance the supervision of cross-border banks. The introduction of a Single Resolution Mechanism (SRM) with a common resolution fund funded by the industry, and the harmonisation of rules under which bondholders and depositors of insolvent banks can be bailed in should increase the shock-absorption capacity of EMU in the event that a small- or medium-sized bank fails.

The bail-ins alone do not eliminate the risk that banking crises might ultimately destabilise national budgets (see e.g. Pisani-Ferry et al., 2013). Admittedly, the national deposit insurance schemes already provide a fiscal backstop at the national level, and the ESM direct recapitalisation instrument provides a limited fiscal backstop (up to €60 billion).

However, the lack of a joint fiscal backstop remains a major concern. While the measures taken should help to limit future bank bail-out costs for governments, a euro-area wide deposit insurance scheme or/and a common fiscal backstop will be needed in order to fully break the sovereign-bank feedback loop and tackle financial and economic fragmentation.

The better resilience of the U.S to the financial crisis can to a large extent be attributed to the fiscal support provided by the Federal Deposit Insurance Corporation (FDIC), and the Troubled Asset Relief Program (TARP), backed by the US Department of the Treasury (Gros & Belke, 2015).

Thus, the shock-absorbing capacity of the banking union will largely depend on whether it will include a sufficiently large common fiscal buffer, which implies a fiscal union.⁶

3. Going forward: Sharing further economic risks?

3.1 Rationale for a fiscal capacity

The seminal theoretical underpinning for equipping monetary union with a common fiscal insurance device was originally developed by Kenen (1969), a scholar of the theory of optimum currency areas (OCAs). It shows that a system of federal fiscal transfers across a region reduces the cost of monetary unification stemming from the loss of nominal exchange-rate adjustment and monetary policy. He argued that interregional fiscal transfers act as an automatic insurance when a country is affected by an adverse country-specific shock so that it could re-adjust to the equilibrium. According to OCA theory (Mundell, 1961; McKinnon, 1963), the case for fiscal transfers should be reinforced if one considers

⁶ Measures to reduce domestic banks' exposure to their own sovereigns are generally considered to be a pre-requisite to such an undertaking.

the limited scope for market adjustment in EMU due to weak labour mobility, sticky prices and wage rigidities.

A related motivation for a fiscal shock absorber is that it provides inter-regional fiscal risk sharing, which allows the smoothing of consumption from asymmetric output shocks among regions or countries. The benefits from international risk sharing are well established in the economics literature (Obstfeld, 1994). In that literature diversity of membership is also seen an opportunity to risk diversification. In the case of monetary union, Mundell (1973) demonstrates that 'non-Optimal' Currency Area can thrive because asynchronous business cycles generate opportunities to share portfolio risks through financially integrated markets. Under imperfect financial markets, the same logic can be extended to government intervention (Eichengreen, 1991), such as a common fiscal shock absorber.

Asdrubali et al. (1996) and Sorensen & Yosha (1998) document the lack of risk-sharing obtained through the EU budget. A common interpretation is that it puts EMU at a disadvantage when faced with region-specific shocks compared to the US where about 15% of individual states' output variability is offset by net transfers from the federal tax and transfer schemes. In EMU countries, the bulk of consumption insurance is provided by national budgets deficits (Arreaza et al, 1999) – ie inter-temporal consumption smoothing. Consumption risks are thus essentially spread across generations through the domestic credit system rather than across the member states.

One of the most salient advantage of a centralised fiscal system is that it allows regions to pool and share risks, and to better coordinate policies through centralised fiscal policy. As discussed above, by having a stand-alone central bank able to purchase federal debt securities, it also largely reduces the risk that the government will be unable to borrow during hard times. This issue clearly is a fundamental weakness of EMU and constitutes the core of the rationale for a fiscal capacity. As stressed by Poghosyan et al. (2015), the centralisation of fiscal resources allows for important economies of scale to pursue stabilisation objectives because the central government usually can borrow from the market at lower costs. By easing the financing needs of countries hit by a large shock and financial tensions, it should improve the capacity of a distressed country to undertake counter-cyclical fiscal policies. Note that there is no reason why the benefits to a fiscal union could not be extended to pursue the purpose of EMU-wide stabilisation rather than just focusing on output shocks.

Such pre-defined fiscal insurance arrangements also reduce uncertainty about future fiscal policy, which can stimulate consumption and reduce the risk of damage to a country's social fabric during crises (Allard et al., 2014). Furthermore, improving the capacity of fiscal policy to react to country-specific shocks should produce benefits throughout the rest of the euro area, given the potentially large externalities in highly integrated economies. A fiscal union is a way to internalise these externalities (Oates, 1972).

In addition, instead of borrowing from the market and paying out debt-servicing costs, countries would tap the fund money as bad luck materialises. Such a mechanism stabilises a country's economy with respect to the average growth rate in the monetary union, and not necessarily with respect to a

country's own business cycle. One additional advantage of such a mechanism is that it could improve the functioning of monetary policy and avoid fostering of imbalances.

3.2 Risk-sharing, EMU-wide stabilisation and domestic stabilisation

It is important to make the distinction between *stabilisation of asymmetric shocks through fiscal risk sharing*, *stabilisation of the aggregate EMU business cycle* (inter-temporal EMU-wide stabilisation) and *stabilisation of domestic business cycles*. In a first-best scenario, a properly designed fiscal capacity should ideally allow all three to be achieved.

However, achieving all three at the same time is particularly difficult and unlikely. For instance, the dual objectives of stabilising asymmetric shocks and stabilising a country's output gap cannot be reconciled *unless country-specific shocks are randomly distributed around a constant EMU-wide growth trend (i.e. the EMU output gap is constantly zero)*. In fact, if the output gap in the monetary union is not stabilised, it is likely that full fiscal risk-sharing would generate pro-cyclical fiscal policies at the country level since countries doing relatively better than their peers during an EMU-wide recession would need to increase their net contributions despite the fact that they may themselves face a (milder) recession. From this angle, achieving perfect risk-sharing might not be fully satisfactory from the general standpoint of national macroeconomic stability.

Furthermore, another relevant question is whether a common budget should also provide inter-temporal smoothing in order to deal with the common portion of the shock, particularly when monetary policy is constrained. We will come back in more depth to these considerations in the review of the proposals for a fiscal capacity.

3.3 Three main criticisms

This section discusses three arguments frequently raised against the creation of a minimal fiscal capacity, essentially based on macroeconomic stabilisation grounds. The related issue of moral hazard is discussed in section 4.

Domestic fiscal policy

The first line of counter-arguments is that domestic fiscal policy should normally be sufficient to address asymmetric shocks, given the flexibility offered by the fiscal framework. With access to international financial markets, national governments should in principle be able to undertake fiscal policies that smooth out consumption over time in order to stabilise their economies at all times, without international fiscal transfers. Alternative rules or mechanisms could indeed in principle soften the constraint on domestic fiscal policy, for instance by providing additional flexibility in interpreting the fiscal rules during large downturns, or by putting more pressure on member states so that they reduce their debt during upturns.

One could add that automatic stabilisers are already larger, on average, than in the US, even though the euro area lacks a fiscal capacity (Dolls et al., 2012). As such, the rationale for a fiscal capacity in

normal times appears weak if one leaves aside the gain on interest payments: properly designed rules should, at least in theory, be able to guide domestic policies and stabilise asymmetric shocks without fiscal risk-sharing.

However, as pointed out in the discussion on crisis-management mechanisms, the past crisis taught European policy-makers that the assumption that international financial markets could allow governments to let fiscal stabilisers operate in all circumstances proved erroneous. This was most notably the case in Portugal, Greece and Ireland, but also in fiscally prudent countries like Spain.

The fact that 'regional' governments do not have control over the currency in which their debt is issued proved particularly problematic in countries that had accumulated large imbalances and external debt. Some of them found it very expensive to finance deficits, while others were priced out of the market (De Grauwe, 2013). The large increase in sovereign debt yields forced the most vulnerable countries to cut fiscal stabilisers, leading to further recessionary pressures. The negative effects of fiscal contraction during a crisis are then reinforced in the absence of nominal exchange-rate adjustment.

The fact that governments can become credit-constrained is arguably the backbone of the rationale for a supranational fiscal-transfer instrument. Conceptually, it could be argued that fiscal insurance is somewhat redundant in the case of small shocks, as countries should be able to let automatic stabilisers operate. Therefore, the rationale seems the soundest for a common fiscal device against large shocks or specific events that could entail loss of market access and force governments to directly cut automatic stabilisers or discretionary spending elsewhere (e.g. public investment).

The difficulty lies in the challenge to stemming moral hazard while creating a mechanism that does not intervene either too early on (when benefits would be fairly small) or too late (when the magnitude of the crisis requires an ESM programme).

Private risk-sharing

A second line of argument is that private risk-sharing through the capital and credit markets could provide adequate insurance against shocks, so that a fiscal union will be unnecessary if markets become sufficiently integrated. Mundell (1973) highlights that financial integration creates opportunities for private risk-sharing when economic cycles are not synchronised. In a world of perfect and complete markets, capital markets would provide full insurance against asymmetric shocks, and there would be no justification for interregional fiscal transfers (Eichengreen, 1991).

As already discussed, a rich empirical literature examines the channels of risk-sharing among states or countries. In the case of the US, which is often used as a benchmark for EMU, Asdrubali et al. (1996) find that 75% of a shock to GDP in a state is cushioned through the combined role of capital markets (39%), international credit markets (23%) and federal tax and transfers (14%). Thus, the majority of the smoothing is achieved via the market in US.

Recent studies (Furceri & Zdzienicka, 2013 and Alcidi & Thirion, 2016) focusing on EMU show that risk-smoothing among euro-area countries barely attains 50% of the level observed in the US. The most striking difference between the US and EMU is the very low degree of risk-sharing via international factor income in EMU compared to the US (between 0 and 10% in EMU vs. 39% in the US; see Kalemli-

Ozcan et al., 2008 and Kalemli-Ozcan et al., 2014). Fiscal risk-sharing through the EU budget is, not surprisingly, insignificant.

Given the absence of fiscal and factor income risk-sharing, the only channel working in EMU is ex-post inter-temporal consumption-smoothing through the international credit market and domestic savings (i.e. net savings). However, this channel is also particularly fragile: international credit markets tend to amplify shocks rather than smoothing them (Alcidi et al., forthcoming), which implies that consumption-smoothing essentially occurs from adjustment in domestic savings.⁷ This is particularly the case in the EMU periphery. Furceri & Zdzienicka (2013) show that the net-savings channel tends to break down during financial crises in the EMU. This also reflects the fact that member states tend to find it particularly difficult to borrow from international credit markets during crises, leading consumption-smoothing to collapse (Kalemli-Ozcan et al., 2014).

Overall, the resilience of income-smoothing via capital income⁸ and net federal fiscal transfers in the US suggest that these channels would have potential to be more effective at decoupling consumption from production shocks in the euro area during periods of crises.

One important question emerges from this observation: Does the larger degree of risk-sharing achieved in the US via capital income relative to fiscal risk-sharing undermine the rationale for a common fiscal device? On the one hand, US fiscal risk-sharing appears to be actually quite modest to start with (between 10 and 25% according to the methodology⁹). Several authors (Gros & Belke, 2015 and Hoffman & Sorensen, 2012) argue that risk-sharing through a well-functioning banking union and capital markets union may be sufficient to absorb losses from most financial crises, provided that a common system of deposit reinsurance is in place (i.e. some form of fiscal union).

Leaving aside the important issues associated with the measurement of the channels of market risk-sharing mechanisms in the US, there are several reasons why a comparison with the US can be misleading. First, the degree of private risk-sharing that could be achieved in the context of EMU is itself highly uncertain. There remain important political and practical challenges associated with the implementation of a fully-fledged banking union, and even more so for a capital markets union. One potentially crucial point is that the level of market risk-sharing in the eurozone may not reach the desired or requisite level in the foreseeable future, if for instance factors such as knowledge and trust in foreign EU individuals and institutions are a necessary condition for a well-functioning market risk-sharing. Ekinici et al. (2007) find evidence that this may well be the case and point out that these obstacles may be much harder to overcome than formal barriers to economic and financial integration.

⁷ The 'net-savings' smoothing channel essentially operates through domestic savings in the EMU. This channel does not involve any international transaction and risk-sharing whatsoever. The dis-smoothing effect produced by international credit markets suggests that financial market integration has not improved the ability of international credit markets to smooth out consumption. See Sorensen and Yosha (1998) Kalemli-Ozcan et al., (2014) for further details.

⁸ Note that the income insurance role of factor income is over estimated in the US because it includes corporations' retained earnings due to data limitations.

⁹ See Poghosyan et al. (2015) for a recent study on the role of fiscal transfers in the US, and a detailed review of the different methodologies used to distinguish between risk-sharing and redistribution.

Secondly, there may be a broader case for fiscal risk-sharing regardless of the level of risk-sharing that can be achieved or not via alternative mechanisms. Indeed, a minimum degree of fiscal insurance may be perceived by the market as an important catalyst for risk-sharing within private markets. From a theoretical point of view, Farhi & Werning (2014) find that there is no trade-off between private and fiscal risk-sharing, even with complete financial markets. This suggests that the capacity of markets to deliver risk-sharing is not independent of the existence of a fiscal insurance mechanism. In fact, Tabellini (2016) argues that a truly transnational banking union is unlikely to emerge until the risk of sudden stops or a member state exit becomes significantly lower.

Existing elements of fiscal risk-sharing

Thirdly, it can be argued that significant fiscal shock absorbers are already in place at the euro-area level. To some extent, it is fair to argue that the European Central Bank's liquidity provisions, official cross-country flows (TARGET2 settlement mechanism) and the EFSF and ESM programmes have already contributed to compensate for the lack of credit provided by private credit markets at the height of the crisis (Cecchetti et al., 2012). However, the ESM's resources are limited (€500 billion lending capacity) and likely to be insufficient to face a crisis in a systemically important country. Furthermore, it is not properly speaking a risk-sharing mechanism but a tool for ex-post inter-temporal consumption-smoothing. As such, the ESM is not a substitute for a proper ex-ante fiscal risk-sharing instrument since, in reality, its main motivation is to ensure financial stability. In addition, assistance is provided ex-post upon a country's request and is subject to strict conditions that restrict its macroeconomic stabilisation properties. Its intergovernmental nature thus increases the risk of systematically late responses and generates significant uncertainty (Tabellini, 2016), since important bail-out operations can be vetoed by member states.

In contrast to an ex-post system, an automatic fiscal risk-sharing mechanism should ideally come into action early on and before a country is forced to implement a programme of macroeconomic adjustment. A fiscal risk-sharing instrument could mitigate the need for a fiscal consolidation driven by financial market panic, potentially reducing the probability of the need to request a bail-out ex-post.

3.4 Rationale for joint debt issuance

The idea of common Eurobonds is simple: each member country's debt would be guaranteed by all the others, thereby allowing all members to take advantage of economies of scale and reduce the cost of debt. Since the issuance of common bonds is backed by national guarantees, whose credibility differs across members, one can argue that issuing common debt implies a sort of fiscal union.

The motivation for the creation of a common asset relates to three main objectives. The first objective is to ensure the government's capacity to finance fiscal stabilisation policies in the event of adverse

swings in risk premia, while maintaining discipline.¹⁰ This should improve the ability of distressed sovereigns to deal with a fiscal crisis and thereby directly address a crucial weakness. In the absence of monetary resources provided by a lender of last resort, the common issuance of bonds offers a way to secure access to financial markets at reasonable cost. As a result, it could prevent speculative attacks on countries that could potentially force governments into pro-cyclical fiscal policies that have destabilising macroeconomic effects, and can have negative spill-over effects throughout the euro area. The issuance of common debt could have significant redistributive consequences. On the one hand, it has some ex-ante fiscal risk-sharing features since it provides a sort of implicit ex-ante transfers as sovereigns with low risk premium would implicitly lend their credibility to those with higher sovereign risk (Claessens et al., 2012). On the other hand, ex-post transfers would of course occur in the event that one of the member states defaults.

Secondly, creating a standardised Eurobond, as a safe and liquid asset in the vein of the US Treasury bill, would also enhance financial market stability and increase the role of the euro as an international reserve currency. The insufficient amount of safe sovereign bonds in the system can result in large and destabilising reversals in capital flows as a response to relatively small shocks (Allard et al., 2014). In this respect, a safe and liquid government bond market would decrease the risk of capital outflows toward safe havens, thus increasing financial market stability. This also means that member states could possibly go bankrupt without jeopardising the whole euro area (Henning & Kessler, 2012).

Thirdly, joint debt issuance can help repair the transmission of monetary policy (Claessens et al., 2012). Banks within EMU have maintained a strong home bias, which translates into a disproportionate exposure to their own sovereign health (Allard et al., 2014). As a result, when a sovereign is in trouble, it also directly affects the ability of its own banking system to channel credit. In other words, it can disrupt the transmission of monetary policy and lead to a fragmentation of the financial markets where member states face very different interest rates despite the single rate set by the ECB. A common asset could immunise banks from their sovereigns. Another potential feature is that it could enable the ECB to engage in the purchase of bonds via the OMT or quantitative easing (QE).

However, proposals in support of Eurobonds suffer from two main objections. Firstly, joint guarantees generate moral hazard concerns. The credibility lent by strong countries to weaker ones can diminish the role played by market discipline and reduce incentives to tighten public finances or pursue structural reforms, and could erode the incentives for member states to service the portion of their debt that is guaranteed by others. Issing (2009) goes further and argues that issuing a common bond could increase the interest rates on the old national debt and would be a first step on the slippery road to 'bail-outs'. Second, a key issue is that the pooling of debt may lead countries that generally benefit from low interest rates, such as Germany or the Netherlands, to pay higher interest.

¹⁰ The technical aspects of the design of common bonds, including the mechanisms to reduce moral hazard risks, are discussed later in this paper.

4. A fiscal shock absorber for the EMU: How can it be designed?¹¹

Section 3 provided the theoretical background for a fiscal capacity. Such an exercise, however, overlooks important practical issues related to the design of an efficient stabilisation system. In fact, the effectiveness of a fiscal insurance device in stabilising consumption and income will crucially depend on its design. Conversely, a badly designed capacity could easily be destabilising.

Key design questions relate to: i) whether the fund is allowed to borrow if countries are simultaneously faced with a shock (i.e. provide stabilisation across time); ii) how to channel the funds transferred in a way that maximises the stabilisation effect; iii) the choice of the measure of the position in the business cycle on which transfers/contributions are based and iv) moral hazard concerns.

Two alternative options proposed in the literature are discussed in section. The first aims to provide insurance against country-specific shocks, on the basis of an ex-ante trigger based on a macroeconomic performance indicator capturing the (relative) position of the country in the economic cycle. Transfers are disbursed directly to the government experiencing the shock, not to individuals. This is what we refer to as the ‘macroeconomic approach’. Transfers are either based on output gaps or unemployment rates (see sections 4.1 and 4.2).

The second, more ambitious option is to establish a genuine common unemployment insurance scheme (see section 4.3). Such a mechanism is the standard type of stabilisation system present in federations, where insurance is provided directly from the central level to individuals. Under this option, temporary transfers (i.e. short-term unemployment benefits) would be made directly from the central entity. Section 4.4 discusses moral hazard issues and possible ways to address them.

It is conceivable that such a system could be established at the EU level, but since countries outside the euro area can pursue their own monetary policy, such a scheme would have much less justification.

4.1 Macroeconomic approach (1): ‘Rainy-day funds’ linked to output gaps

The idea of a rainy-day fund is to introduce temporary transfers *between member states* according to their position in the cycle: member states are net contributors to the fund when they experience an upturn, and net recipients when they are hit by a recession. Such an arrangement could function on a permanent basis or could be triggered only in the event of a large recession (see Gros, 2014).

A ‘cyclical shock insurance fund’

One widely discussed proposal was presented by the members of the Tommaso Padoa-Schioppa Group, established by Notre Europe - Jacques Delors Institute (Enderlein et al., 2012), who proposed a “cyclical shock insurance fund” with the objectives of i) providing automatic macroeconomic fiscal insurance against country-specific shocks and ii) fostering the convergence of the business cycle, and hence improving the effectiveness of monetary policy. The mechanism would be based on the national output gaps relative to the euro-area output gaps. The idea behind the group’s proposal is that the

¹¹ Table A1 in the Annex provides an overview of the key proposals made for different types of fiscal union.

single monetary policy can have procyclical effects if inflation differentials persist due to weak price and wage adjustment or low labour mobility. In such cases, real interest rates are systematically too high or too low for certain economies.

Such a mechanism could, according to the authors, substantially alleviate the procyclicality of the ECB's 'one-size-fits-all' monetary policy as it will *foster synchronisation of the business cycle*. Their proposal is based on an 'across-space' stabilisation approach: countries experiencing an output gap larger (smaller) than the euro-area average pay into the fund (receive payments from the fund), even when they experience negative (positive) output gaps. Using relative output gaps prevents the system from running surpluses or deficits at any point and offers the advantage that those surpluses or deficits are not carried over. Enderlein et al. (2013) find that the average deviation from the euro area business cycle would have decreased by around 15-40% for the period 1999-2014.

However (politically) attractive such a solution may seem at first sight, this approach suffers from a number of important limitations. One can indeed question the relevance of focusing on stabilisation vis-à-vis the euro-area cycle, in particular when monetary policy is ineffective and fiscal multipliers are large. From the point of view of fiscal stabilisation, such a system may be destabilising if the ECB happens to be unsuccessful at stabilising fluctuations in the aggregate euro-area business cycle in the euro area (e.g. because monetary policy is constrained by the zero lower bound or the transmission mechanism is broken). In particular, if the euro-area output gap is significantly larger or smaller than zero, then member states with positive (negative) output gaps would end up potentially receiving transfers (or contributing) procyclically during upturns (downturn). In other words, the scheme would induce countries hit by a recession to pay transfers to those that are more severely affected, thus forcing them to lower government expenditure. While this would admittedly lead to further synchronisation of the business cycle, it is unclear whether such an outcome is desirable. Not only is it likely to add political tensions, but it might also exacerbate fluctuations in the business cycle of certain countries.

In addition, fiscal (or private) risk-sharing becomes impossible in the case of full business-cycle synchronisation. Finally, the focus on relative output gaps does not rule out the possibility of moral hazard and permanent transfers, since certain countries may well systematically underperform relative to others, i.e. relative shocks may not be randomly distributed.

Rainy-day fund and common shocks

The 'cyclical shock insurance fund' discussed above only provides macroeconomic stabilisation across a country (space) at a given time. Therefore, such a system is only suited to deal with temporary country-specific shocks, which means that it would not substantively influence the area-wide fiscal stance. Troubles arise in such setting if countries are hit by a shock simultaneously, as has been the case between 2009 and 2012, when most countries displayed negative output gaps. This issue cannot be minimised since it can potentially make a cross-country risk-sharing system unsustainable, either because it runs out of funds, or because it could impose pro-cyclical transfers or contributions.

Against this background, several authors (Furceri & Zdzienicka, 2013; Caudal et al., 2014¹² and Delbeque, 2013) have suggested that the fund should also allow for joint counter-cyclical fiscal policy responses in times of common shocks, or when country-specific shocks have spilled over to other euro-area countries. Such a system would provide macroeconomic stabilisation both across time and space. This could be done either by using contributions saved during good times and/or via borrowings from financial markets when the insurance system runs a deficit.

Furceri & Zdzienicka (2013) propose a fund with the capacity to achieve intertemporal smoothing by accumulating significant savings during good times. The fiscal stabilisation mechanism would collect contributions as a share of the GNP of each member state, and provide transfers proportional to the size of the shock (based on country's own cyclical condition, not its cyclical condition relative to the euro area as a whole). The authors use different measures of shocks, namely the output gap, growth deviation from historical averages and some estimated serially uncorrelated shocks. The results of their thought experiment suggest that with gross contributions of about 1.5% to 2.5% of GNP, the fund could have provided a degree of stabilisation similar to that found in a federation such as Germany (i.e. 80% of an output shock is smoothed), if it had been put in place in 1999. Interestingly, for the entire period, the average net contribution made by each country would have been close to zero, showing that fiscal risk-sharing need not entail permanent transfers.

A comparable approach is suggested by Delbeque (2013), who also proposes that shocks are treated in a symmetric way: both positive and negative shocks need to be smoothed. The size of the transfers to countries in recession would not be limited to the contribution made during the previous periods because the European Stability Fund would be able to borrow in the market during tough times.

Pisani-Ferry et al. (2013) propose a system in which funds (25% of the shock size) are transferred to national governments only as a certain threshold in the output gap is attained (i.e. 2%), so that small deviations in the output gap remain the responsibility of domestic fiscal authorities.

Making timely use of the fiscal space

Another practical concern is that the degree of (relative) domestic demand stabilisation achieved would eventually depend on whether (and how) the governments use the extra fiscal space available to carry out additional public spending or fund tax cuts that would stabilise aggregate demand. In other words, even if the system generates additional fiscal space for countries in a downturn, the stabilisation outcome will crucially depend on how or whether this fiscal space is used. How to ensure that the funds are used in a timely manner is a prominent concern of the 'rainy-day fund' approach that has not been satisfactorily addressed in the various proposals.

One solution could be to earmark transfers to some specific class of expenditure (e.g. public investment or social policy spending). If spending is directly linked to and affected by this expenditure,

¹² This paper by the French Treasury proposes a budget coupled with a borrowing capacity, consisting of cyclical revenues (e.g. corporate income tax) used to finance countercyclical spending (e.g. unemployment benefits) in the face of symmetric or asymmetric shocks, either via automatic stabilisers at the central level or by discretionary intervention.

the system should be able to provide a timely response. However, in reality this may be more difficult, notably due to the uncertainty that is likely to prevail. Therefore, one can imagine that the additional fiscal space generated could be saved or used with significant lag. In such cases, the system would add very limited additional stabilisation. Provided that the position in the cycle has been correctly assessed, an extreme case in which transfers are fully saved is unlikely. Indeed, adverse macroeconomic developments should coincide with a deterioration of the fiscal balance due to the role of automatic fiscal stabilisers. Since financing needs are likely to be larger, transfers should generally not be fully saved.

However, the assumption that all the fiscal space provided would be optimally used is overly optimistic given the uncertainty about the state of the economy and the typical lags in implementing discretionary fiscal policy. It is therefore uncertain how much of the extra fund would be used or rather saved to consolidate debt levels. The potential stabilisation impact ultimately depends on the choice of the trigger, since it can result in notable implementation delays.

More fundamentally, one must realise that there would only be a value added to such a system if the absence of transfers would have otherwise forced the country to cut off automatic stabilisers or discretionary spending, such as public investment, or if a country would have been forced to pay high market risk premia. If not, a similar outcome could theoretically be achieved with a flexible interpretation of the rules, and such a system would not be justified.

4.2 Macroeconomic approach (2): Re-insurance of national unemployment schemes

Recently, the debate has essentially focused on how to design a European unemployment insurance mechanism (Beblavy et al., 2015, Dullien 2007, Gros 2014). Unemployment insurance is not only an important tool for social policy, but it is also an important automatic stabiliser since it cushions the impact of recessions. Such a system automatically functions in a counter-cyclical pattern via contribution fluctuations: the scheme generates surpluses (deficits) during times of low (high) unemployment, since a large (small) number of contributors is set against a small (large) number of recipients. Therefore, unemployment insurance is sensible not only at the individual level but also from a macroeconomic perspective.

Such system can either be designed as a re-insurance of national schemes (section 4.2) or as a centralised system of unemployment insurance administered by a centralised administration (see section 4.3). Thus, unemployment insurance can either link fiscal transfers to governments to high and rising unemployment (with or without earmarking to unemployment benefits spending) or by introducing a euro-area wide unemployment benefits insurance scheme with common financing and provisions.

Box 1. Measurement of the business cycle: Advantages of unemployment

The main motivation for fiscal capacity focused on unemployment insurance is that the disbursement and the net contribution from each member at any given time are highly sensitive to real-time estimates of the position in the cycle. Measurement issues of output gaps suffer from important limitations that seriously undermine the practical viability of such a system while estimates of unemployment rates are usually available more quickly and are prone to much lower error margins.

First, since transfers are not linked or earmarked to some direct type of expenditure, it is more uncertain where they will be channelled in an output gap-based system than in a system in which they are linked to specific social-welfare expenditure, such as unemployment benefits. Secondly, the difficulty to measure the output gap in real time and the substantial ex-post revisions create large uncertainty for policy-makers. An analysis by Caudal et al. (2014) highlights that differences between real-time estimates and ex-post evaluations of the output gap have substantial implications in the stabilisation capacity of a rainy-day fund, since revisions can be substantial in terms of both magnitude and sign.

In fact, Cimadomo (2012) finds that the reaction of fiscal policies to the business cycle is estimated to be more 'counter-cyclical' when real-time data are used instead of ex-post data. This suggests that policy-makers' decisions turn out to be on average more pro-cyclical than intended based on real-time information. This is explained by forecast errors and delays in the implementation of discretionary fiscal policies. In the recent past, we have witnessed how incorrect forecasts by the European Commission have led to misguided policy recommendations. One example was the episode of consolidation in 2012 based on an overly optimistic assessment.

One motivation for a European unemployment insurance scheme is that the use of the unemployment rate as a trigger presents fewer measurement issues. Data are available quickly and subject to lower revisions (see Dullien, 2013). Nevertheless, changes in unemployment itself comes with a lag, particularly so in rigid labour markets. In this sense the output gap better captures the true state of the business cycle. It also has the advantage of not being affected directly by domestic labour market institutions, which reduces moral hazard concerns.

The macroeconomic approach to a European unemployment benefits scheme (EUBS) consists of a system of re-insurance of existing national unemployment insurance schemes (i.e. an 'equivalent system'), via intergovernmental transfers directly linked to short-term unemployment rates instead of output gaps. Such a system, which was proposed by several scholars as long as 20 years ago (see Italianer & Pisani-Ferry, 1992 and Majochi & Rey, 1993), would resemble the rainy-day fund, with the advantage that net transfers are based on changes in short-term unemployment rates, a variable that is directly observable, subject to lower revisions, and more accurately forecast than output.

As discussed in the previous section, an automatic system of transfers based on output gaps could lead to counter-productive outcomes if it were based on a faulty assessment of the position in the cycle. In this respect, using a highly cyclical performance indicator, such as the unemployment rate, may help overcome part of the challenge of identifying the position along the economic cycle, although unemployment is a lagged measure of the cycle. Transfers could be earmarked to some specific expenditure related to unemployment benefits expenditure, in order to ensure that the funds are used for stabilisation purposes.

One interesting variant of such a scheme has been proposed by Gros (2014), who advocates a 'catastrophic' unemployment re-insurance scheme that would transfer funds to national

unemployment insurance schemes to finance unemployment benefits in the face of *large* shocks. Since in normal times cyclical shocks do not impair the functioning of financial markets, stabilisation should continue to be dealt with via borrowing at the national level. In case of large shocks, the fund would then support the national system in countries where the unemployment rate has increased suddenly above a certain threshold. He argues that a contingency insurance mechanism would be the most helpful if it protects against shocks that are rare, but potentially catastrophic, such as those that can constrain national fiscal policy from providing fiscal stabilisation due to high debt levels and high risk premia on government bonds.

In addition, focusing on catastrophic shocks reduces the risk of moral hazard. A common eurozone fund would be financed by yearly premiums of 0.1% each year until the level of 0.5% is reached.¹³ The argument that a fiscal insurance device should be focused on providing insurance against large shocks seems to have gained prominence in the debate, as reflected by recent proposals (e.g. Benassy-Quere & Ragot, 2016). In fact, this is conceptually comparable to the ‘extended benefits’ provided in the US unemployment system, which extends the duration of unemployment benefits from 26 weeks up to 53 weeks under adverse economic conditions and mounting unemployment rates. In such a context, the federal fund partly or fully contributes to the cost of unemployment benefits after individuals have exhausted the regular unemployment benefits programme. Note, however, that euro-area labour markets tend to be more rigid than in the US, suggesting that transfers would be likely to come with a longer time lag unless national schemes are harmonised.

4.3 A genuine European unemployment insurance scheme

A ‘genuine’ euro-area wide unemployment insurance scheme would distribute transfers in the form of short-term unemployment benefits automatically and directly to EU citizens (under pre-defined criteria and without political interference) in order to stabilise households’ income in the event of negative shock affecting the short-term unemployment rate. Its proponents emphasise that it would also strengthen the social dimension of the EU as it would play an important social insurance function and protect those households that are the most vulnerable. Such a system could also foster convergence of labour market policies, which could lead to a better functioning EMU.

Dullien (2007 and 2013) has been one of the early advocates of this approach. Under the system he proposes, transfers would be limited to a maximum of one year, and recipients would need to have been insured by the system for a period of certain number of months before being unemployed. Benefits could be determined by contributions based on wages (payroll taxes) or corporate tax (Pisani-Ferry et al., 2013), and governments would be able to top up the benefits or to increase coverage. Dullien (2013) argues that such system would ensure that the scheme’s generosity is automatically in

¹³ In a more detailed research paper, Beblavy et al. (2015a) find that in 2009 and 2010, the hard-hit Baltic countries and Spain could have counted on a stabilisation effect of between 1.75% and 3.25% of GDP annually. They find that for Greece and Ireland, the effects would have been much smaller – between 0.5% and 0.9% of GDP in 2009 and 2010 – but assistance for Greece would have continued in 2011 and 2012, exceeding 1% of GDP in both years.

line with the country's GDP per capita, and would allow for a large degree of discretion over national social policy. At the same time, it should ensure that member states do not shift the cost of longer-term unemployment to the EU fund. Similar to the case of the rainy-day fund, Dullien (2013) remarks that allowing the scheme to run surpluses during upturns and to borrow during downturns would enhance the macroeconomic stabilisation capacity of the system, notably if a symmetric shock occurs.

Dolls et al. (2014) carry out an empirical analysis using counterfactual simulation techniques based on harmonised European micro data to examine the macroeconomic effects of a hypothetical euro-area-wide unemployment benefit scheme over the period 2000-13. They show that a basic scheme, which would partly replace national unemployment systems, with a replacement rate of 50% and covering all newly unemployed for a maximum duration of 12 months, would have helped smooth 36% of the unemployment shock in 2009, at a contribution rate of 1.6% of employment income.

Although linking the insurance role of the scheme to short-term unemployed individuals helps overcome a number of measurement issues, several challenges remain. First, there are important questions regarding the effect of a European insurance scheme for short-term unemployment in case of a protracted slowdown. Farvaque & Huart (2015) points out that long-term unemployment typically rises after a large crisis, whereas short-term unemployment decreases. Important challenges might arise since long-term unemployment would not be covered, rapidly imposing a significant fiscal cost.

Secondly, the diversity in the generosity of the national unemployment benefits systems is also an important determinant of the income-smoothing effect of domestic unemployment insurance. A study by Dolls et al. (2012) on the effectiveness of automatic stabilisers indicates that automatic stabilisers in the euro area smooth 38.5% of a proportional income shock in the EU on average (compared to 34% in the US), but that the effect is highly heterogeneous across member states, with stabilisation effects ranging from 28% to 32% in the PIGS (Portugal, Italy, Greece and Spain), compared to 51% in Belgium. Their results suggest that the stabilisation effects could be highly heterogeneous and potentially rather weak in certain countries.

In addition, it is possible that some countries with high long-term unemployment and relatively rigid labour markets, such as Italy, would bear the cost without benefiting significantly. While exact figures vary from one scenario or study to the other, Dullien (2013) finds that a EUBS would have only provided 1.8% stabilisation in Italy over the period 2008-09, whereas it would have provided Spain with stabilisation effects estimated at 24%.

The sheer diversity in the unemployment benefits systems therefore raises the question of the need to harmonise the schemes across participating countries. Beblavý et al. (2015b) point out that different designs of the schemes require different levels of harmonisation. One advantage of an 'equivalent system' (i.e. a rainy-day fund) is that it should in principle allow member states to re-distribute the transfers to unemployed workers without the need to amend existing national legislation. It would pay every country (a portion of) what is required to pay for the unemployment benefits, according to their national system. While this would reduce the need to harmonise the system, it could also give rise to incentives to increase the generosity of benefits. On the other hand, a common unemployment benefit scheme would allocate transfers directly to EU citizens from a supranational fund and would require

further harmonisation since citizens of the EU should enjoy similar eligibility requirements, generosity and duration of benefits. One must then bear in mind that if harmonisation of social policy is a prerequisite for a successful unemployment insurance scheme, political resistance to modifying social standards may well be a more challenging obstacle to overcome than convincing politicians to pool resources.

4.4 Fiscal insurance and moral hazard

One central issue that is inherent to any insurance mechanism is that it could lead to moral hazard and distortion of incentives at the sub-national level. The political economy literature finds that concerns are particularly prominent if the system potentially allows for permanent redistribution among members. Persson & Tabellini (1996) suggest there is a trade-off between insurance and moral hazard, arguing that full insurance against regional shocks by a federal transfer system is not optimal because of the undesirable incentives it would create. If an insurance against country-specific shocks exists, local governments may have incentives to avoid the implementation of unpopular and politically costly structural reforms, or to create more debt and eventually let others pay for it. In addition, if transfers are earmarked to short-term unemployment benefits, there is a risk that member states will reduce efforts towards activation policies or soften the eligibility conditions for short-term benefits. This issue is typically characterised as ‘institutional moral hazard’ (Vandenbroucke et al., 2016).

The issue of moral hazard and, in particular, the need to prevent permanent transfers are crucial to the political viability of the project. The moral hazard problem should ideally be addressed ex-ante, possibly via a strengthening of oversight over budgetary decisions and coordinated structural reforms to ensure the alignment of price and wage developments. The main motivation is that mutual insurance runs into trouble when asymmetric shocks are generated endogenously from policy itself. Therefore, mechanisms to reduce the risk of structural divergences that are harmful to the stability of EMU may need to be considered in parallel with the implementation of a fiscal capacity. Another way to mitigate the risk of permanent transfers (ex-ante) is to introduce an experience rating mechanism. As for the issue of institutional moral hazard, it can be addressed by the introduction of common standards on activation policies and commitments to strengthening national administrations among participating member states.

One potential corrective feature of the system, in the case of a common unemployment insurance scheme, is that the coverage could be restricted to new unemployed and for a maximum duration of 12 months. This provides the advantage of excluding long-term unemployment, a variable that is typically strongly associated with structural problems in domestic labour markets. Since short-term unemployment is less likely to be endogenous to national policies than long-term unemployment, it should reduce the risk of incentive distortion.

Another way to mitigate the problem of moral hazard is to choose a trigger that would activate transfers only in case of sizeable negative shocks (Gros, 2014). This solution also presents the advantage of making the scheme cheaper. Note that the latter mechanism seems to be better fitted to an ‘equivalent’ unemployment benefits scheme.

Finally, ex-post corrective mechanisms embedded in the system (such as a claw-back system or an experience rating system) can also prevent permanent transfers. This is done by adjusting the net contribution to the fund by each country depending on the past net contributions, hence reducing the risk of permanent cross-country redistribution. The idea is that countries that receive more are subsequently asked to contribute proportionally.

While it is likely to be effective to counter moral hazard problems, Dolls et al. (2014) suggest that there is a trade-off between limiting risk of permanent redistribution and the level of automatic stabilisation achieved. They find that an ex-post adjustment to contribution rates reduces the stabilisation capacity of the scheme since it can lead to a pro-cyclical adjustment of contribution rates. Note that although such a system is generally considered as only 'second-best', the US unemployment insurance system includes several adjustment mechanisms aimed at automatically reducing the deficit carried out by state schemes under normal circumstances (Dullien, 2013).

5. Proposals for common issuance of Eurobonds

The notion of creating some form of common debt instrument gained some momentum in the policy debate over the period 2009-12. The most important issue with the design of a Eurobond is to avoid that countries lose incentives to take care of their own public finances and to implement structural reforms. The need to mitigate the moral hazard problem is addressed by some proposals by limiting the access to Eurobonds such that countries remain partially dependent on financial markets. However, the fact that countries remain partially dependent on financial markets gives rise to a trade-off between imposing strong market discipline and the risk that countries remain vulnerable to public finance crises. In other words, the design implies a trade-off between stability and moral hazard. Another concern is to avoid the situation in which some of more creditworthy countries end up paying higher interest rates than previously.

De Grauwe & Moesen (2009) proposed the introduction of a Eurobond issued by the European Investment Bank (EIB) in order to avoid a divergence in borrowing costs and to stem the risk of contagion and adverse consequences on debt sustainability. Each government would participate on the basis of its equity shares in the EIB. Interest rates on the Eurobond would be calculated as the weighted average of the yields observed in each government bond market at the moment of issue, and proceeds would be channelled using the same weight. This set-up includes an internal transfer mechanism between the members that pooled their debt in order to ensure that countries with poor credit ratings compensate the more creditworthy ones, at least partially. In this way, market access is restored for those economies in financial distress, but the interest rate paid continues to reflect domestic economic fundamentals.

Delpla & Von Weizsäcker (2010) proposed a 'Blue-Red bond' in 2010, which aimed to enhance market-based discipline and reduce the cost of member states' debt without the need to create a new institution. The main idea of this influential proposal is to mutualise the first 60% of national debt to GDP through the issuance of a common 'blue bond', which would benefit from joint and several guarantees of the member states. The remaining amount of debt would be labelled "red bond" and

issued by national governments. In this framework, countries would face reduced debt costs up to 60% of GDP, and any additional borrowing would be via junior 'red-bonds', which would be issued at a marginal cost that reflects the country's creditworthiness.

An important degree of market discipline would be introduced by such a system in that it provides strong incentives to stay within the borrowing limit of 60% of GDP. The expectation of its proponents is that such a system would be more effective than rules in order to prevent the build-up of large sums of debt. From the point of view of the banking system, the blue bond would be insulated from national sovereign risks, and there should be less risk of flight to safe havens. One shortcoming of this system is that Red Bonds would be particularly prone to adverse national fiscal shocks, which could easily lead to attacks on these bonds and similar funding issues to those observed during the sovereign debt crisis.

In addition, it is unclear how such a system would be compatible with a fiscal insurance device or with a bail-out of red bonds (Wyplosz, 2011) and there is a risk that highly indebted countries would immediately be forced to restructure their debt as they would possibly no longer find buyers for the portion that is only guaranteed nationally (Gros & Mayer, 2011).

Following a 2011 report by the German Council of Economic Experts, Bofinger et al. (2011) proposed the implementation of a European Debt Redemption Fund, which would divide the stock of debt accumulated by member countries into two parts. The part exceeding 60% of GDP would be refinanced through the Redemption Fund, which benefits from the joint guarantee of all the member states. While each country would have to service its own share of debt transferred to the Fund, the joint liability would allow a strong reduction of the costs linked to debt, facilitating the reduction of the stock of debt over time. The fund has the potential of reducing the debt burden of over-indebted member countries (at least) to the 60% debt-to-GDP ratio.

Enderlein et al. (2012) suggested the implementation of a European Debt Agency (EDA) that would issue its own bonds alongside a fiscal insurance device. Member states would be able to issue part of their debt through this agency in normal times (up to 10% of GDP), and would continue to issue the rest of their debt nationally. Countries facing short-term financial market pressure could increase this share to up to 20% without strict conditions so that countries that experience important borrowing constraints are able to stabilise their economies. Issuance above 20% of a country's GDP would be conditional upon implementation of a macroeconomic adjustment programme. The Agency would be jointly guaranteed by all euro-area countries.

Given the political difficulties associated with joint guarantees, the Euronomics group (Brunnermeier et al., 2011) suggested the creation of a European Debt Agency (EDA), with the goal of issuing Euro-Safe-Bonds (ESBies) without a public guarantee. The new EDA would buy sovereign bonds of member states according to their size and use these bonds as collateral to issue two securities: the ESBies and a second security with junior claim. The ESBies would be a senior claim on the payments from the sovereign bonds held in the portfolio, while the junior security would absorb the first losses. The ESBies would be the new safe asset, while the second security would be used to hedge (or speculate) on the member countries' ability to service their debt.

This proposal does not involve any joint guarantee by member states and, according to the authors, should reduce the need for a fiscal union. The EDA would make use of financial engineering to create a safe and a junior security asset, backed by national bonds. This should reduce the likelihood of a future sovereign debt crisis, avoiding the 'flight to safety' from one sovereign to another, in a set-up where investors would move from one security to another, without affecting the countries' fiscal sustainability. Beck et al. (2011) proposed the creation of a Synthetic Eurobond, similar to the ESBies except that the junior security tranche would not be able to absorb the first losses.

6. Concluding remarks

In recent years, the architecture of EMU has undergone a number of institutional reforms aiming at strengthening its resilience to adverse shocks. Important challenges remain, however. The improvements in the macroeconomic and fiscal policy framework are bound to remain insufficient as they do not eliminate the possibility of fiscal crises in which member states are eventually forced to implement pro-cyclical policies (De Grauwe, 2013). The ESM, which is a contingent mechanism mainly geared to guarantee financial stability, is by its conditional nature ill-suited to ex-ante fiscal stabilisation purposes. It also lacks the capacity to deal with crises of a systemic nature. The capacity of the banking union to fully sever the feedback loop between banks and sovereigns will remain limited unless a fiscal backstop is created and measures are taken to reduce the exposure of national banking systems to their governments (Pisani-Ferry & Wolff, 2012). The former also eventually implies a fiscal union (De Grauwe, 2013).

Thus, despite the additional shock-absorption capacity that could be achieved with a banking and capital union, the nature of national fiscal policy in a monetary union suggests that an ex-ante fiscal insurance, in particular against large shocks and events potentially resulting in the loss of market access, could yield important benefits in the medium or long run (Alcidi & Thirion, 2016). As a complement, the issuance of some type of common debt would reduce the problem of self-fulfilling high-interest rates on some sovereign bonds. This would ease pressure on governments to implement pro-cyclical fiscal policies during downturns and could enhance financial stability and the transmission of monetary policy (Claessens et al., 2012). A minimal element of ex-ante fiscal insurance could also generate further private risk-sharing (Farhi & Werning, 2014).

Nevertheless, whereas the theoretical rationale appears rather compelling on grounds of macroeconomic stability, major design challenges persist, even when one abstracts from the political difficulties that such an undertaking entails. The key design challenges for a fiscal insurance mechanism can be summarised as follows:

1. Should the fund be able to borrow in order to provide inter-temporal stabilisation of EMU-wide shocks?
2. Should disbursements from the fund be triggered only by large asymmetric shocks?
3. What is the best measure of the business cycle?
4. How to timely channel the funds in order to maximise the stabilisation effect?
5. How to reduce moral hazard without damaging stabilisation?

It is in our view crucial that Inter-space risk-sharing be complemented with measures to stabilise EMU-wide business-cycle fluctuations over time as well, in particular when monetary policy is constrained. This implies that a fiscal capacity should be able, at least as a last-resort solution, to issue joint debt if necessary. The reason is that inter-space insurance would produce destabilizing effects when the EMU faces a large common shock, as some countries will be forced to implement pro-cyclical policies. It also seems that the rationale for mutual fiscal insurance is the highest in the face of shocks that are potentially disruptive in terms of financial market access.

From a practical point of view, the timely measurement of the position in the business cycle is a general concern for any fiscal policymaker wishing to stabilise the business cycle. One way of ensuring that fiscal transfers are used in a timely and effective manner would be to link those transfers to some automatic stabiliser, such as unemployment benefits. However, the unemployment rate is a second-order measure of the cycle, which comes with varying degrees of lag according to labour market institutions. The ability of such a system to provide a timely response against large shocks therefore depends on labour-market rigidities and on the reaction of unemployment to the cycle. This suggests that a significant degree of convergence in labour market policies may be a necessary pre-condition.

The last difficulty relates to the need to ensure the neutrality of contributions in the long run and thereby reducing moral hazard. The good news is that a shock absorber system can be designed such that it prevents permanent transfers. One simple solution is the introduction of an experience rating system or claw-back mechanisms. The bad news is that such systems have been found to have negative effects on the ultimate stabilisation capacity of fiscal transfers (Dolls et al., 2014 and Beblavý et al., 2015a). In any case, further fiscal integration will require stronger central control over domestic fiscal policies.

The case for a fiscal union as a macroeconomic stabiliser should not be examined independently of the role played by other economic policy areas. In particular, fiscal insurance should be accompanied by further coordination efforts to reduce the occurrence of policy-induced shocks that could lead to macroeconomic divergences (e.g. structural policies or counter-cyclical fiscal policy), and other developments in the private sector (e.g. macro-prudential policies).

As a final remark, it is also crucial that the discussion on the design of a fiscal capacity includes a political economy dimension, and takes into account the domestic political realities of EMU member states.

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Annex

Table A1. Proposals for a fiscal union in Europe

	Crisis resolution mechanism	Rules, coordination, monitoring	Joint guarantee for government debt	Insurance and stabilisation
De Grauwe & Moesen (2009)			X	
Gros & Mayer (2010)	X			
Gianviti et al. (2010)	X			
Delpha & Weizäcker (2010)			X	
European Commission (2011 and 2012)		X	X	X
Bofinger (2011)			X	
Van Rompuy (2012)		X		X
Enderlein et al. (2012)			X	X
Belke (2013)		X	X	X
Bordo et al. (2013)			X	X
Cottarelli (2013)		X		X
Enderlein et al. (2013)				X
Furceri & Zdzienicka (2013)				X
Allard et al. (2014)		X	X	X
Corsetti et al. (2014)		X	X	
Gros (2014)				X
Beblavý, Gros & Maselli (2015a)				X
Dolls et al. (2015)	X			X
Fuest et al. (2015)	X			
Juncker (2015)		X		X
Benassi et al. (2016)				X

Source: Adapted by the author from Dolls (2015).



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