THE SOVEREIGN DEBT CRISIS AND THE WEAKENING OF THE PILLARS OF THE ECONOMIC AND MONETARY UNION

MIKLÓS LOSONCZ

1. Introduction

The sovereign or government debt crisis that entails solvency risk on the part of sovereign debtors or governments began in November 2009 in the wake of the global financial and economic crisis. It brought the institutional weaknesses of the Economic and Monetary Union (EMU), established between 1999 and 2002, to the surface. Given the dysfunctional operation of its institutional and regulatory systems, perspectives emerged that questioned the long-term viability of the EMU and anticipating the exit of individual member states (particularly Greece) or its complete break-up.

This paper analyses the latest developments of the sovereign debt crisis by focusing on the relationship between the institutional system and the operation of the EMU on the one hand and the sovereign debt crisis on the other. The objective of the paper is to discuss the ways in which the sovereign debt crisis affected the pillars (no exits, no defaults and no bail-outs) of the EMU. It argues that they were softened to certain degrees, but because they form essential parts of the monetary integration they cannot be dismissed completely.

Before discussing the issue it should be underlined that the crisis has not primarily affected the euro's role as a common currency. Considering its internal and external purchasing power (its exchange rate to major currencies), the euro is relatively strong in spite of eventual short-term depreciations against major currencies. Its roles in international settlements and central bank reserves were not weakened significantly. In terms of purchasing power parity, the euro is still overvalued vis-à-vis a number of major currencies. The sovereign debt crisis did not have a negative impact on the stability and international position of the common currency. The crisis impacted the member states of the EMU both directly and through the regulatory mechanisms of the EMU. Thus, in this respect, the EMU also contributed to the sovereign debt crisis, as will be analysed below.

The first section of this report discusses the three prohibitions stipulated in the relevant EU treaty (no exits, no defaults and no bail-outs) that form the three pillars of the EMU, their consequences in the management of the crisis, and optimum currency area theory. The subsequent three sections focus on the softening of the pillars of the EMU. The fifth section provides an overview of the latest measures. The final section contains the summary and conclusions. The sovereign debt crisis in the EMU has yet to come to an end. This report relies on data and information that were available before 15 July 2012.

2. The three prohibitions and their consequences on managing the crisis

The legal regulation of the Economic and Monetary Union was originally based on *three prohibitions* or negations that are strongly interrelated and should be interpreted together.[1] Regarding the irrevocability of the EMU, *the first prohibition is that there be no exits*. The possibility of exit would weaken the credibility of the EMU and nurture speculation against weak member states. If exit were a real possibility, investors would purchase the high quality government securities of economically stable member states rather than those of weak ones predicted to leave the EMU. The absence of an exit clause indicates that the EMU is something more than a loose fixed exchange rate area or a group of countries using a common currency.

According to the second prohibition, government default is not possible in the EMU. Government default should be avoided and there are no institutions, legal rules or procedures to handle the default of member states.

The *third prohibition contains rules on the financing of general government deficits and government debts*. The major principle is that general government deficits and government debts have to be financed exclusively using the money and capital markets. Consequently, funding general government expenditures with central bank credits is prohibited, and EU institutions and member states are forbidden from providing the public sectors of troubled members with financial aid. The latter is the so-

[1] In the Hungarian economic literature, this topic was discussed by Benczes (2011).

called *no bail-out clause* that covers all EU member states rather than only those of the EMU. The set of rules included in the Treaty of Lisbon and reinforced by the Stability and Growth Pact and other documents are designed to avoid excessive general government deficits. *The independence of the European Central Bank* (ECB), which is considered an important value, is closely related to the no bail-out clause. The objective of the ECB's monetary policy is price stability; it does not have any other tasks, including fiscal ones.

Because of the no bail-out clause, EU member states facing financial difficulties may only turn to the International Monetary Fund (IMF) for assistance. In fact, the possibility of applying for loans to the IMF may have been a means of escape from the no bail-out clause. Member states are willing to avoid this mechanism because of reputational considerations. Nevertheless, the empirical evidence demonstrates that the IMF had to be involved in the management of the sovereign debt crisis in the EMU. However, the IMF has agreed that it will only begin negotiations regarding loans to EU member states with the consent of EU institutions. Thus, this theoretical legal escape clause was also restricted.

According to the founders, the three prohibitions were necessary to guarantee the credibility of the EMU. They also assumed that if the legal rules ensuring fiscal discipline were observed systematically, financial crises could be avoided.

The three prohibitions have further implications. A consequence of the *exit prohibition* is that an EMU member state using the common currency may not mitigate short-term disequilibria and competitiveness issues by devaluating their national currencies. Devaluations based on the discretionary decision of central banks would only be possible if member states were to exit the EMU, but this is not permitted.

With respect to adjustment mechanisms, the EMU is similar to the *gold standard* of the 19th century but without the use of gold. Historically, those countries that insisted on retaining the gold standard faced more substantial fiscal and political consequences during the Great Depression of 1929–1933 than those that eventually abandoned it. Analogously, under a fixed exchange rate regime in the EMU, competitiveness can be improved only by *internal devaluation*, i.e., by reducing wages (more precisely unit labour costs) and prices, which is a rather painful process; one that is more painful than external devaluation. Unlike the US, the EMU does not have a federal budget that makes it possible to bail out indebted member states facing financial tensions.

The prohibition on government default for individual member states is explained by the desire to inhibit the spill-over of its negative effects to the rest of the EMU. First, a government default would have a negative impact on *banks* with large proportions of the government securities of financially troubled member states in their portfolios. Thus, due to the strong ties between governments and banks, government defaults may also lead to bank defaults. Bank failures may have an adverse impact on financial stability.

Second, the *spill-over effects* may be quite significant. The default of a sovereign debtor in the EMU (at present that of Greece is the most probable) may well have repercussions on other countries (such as Spain, Portugal and Italy) that should also be taken into account. In this context, the first question is whether it is possible for governments to avoid default by exclusively relying on their own resources or if the financial support of other member states and international organisations is indispensable. The involvement of external sources calls the validity of the no bail-out clause into question. The second question is, if it proves unavoidable, whether government default should be disorderly or managed. The latter seems to be preferable because it entails lower expected costs.

The *no bail-out clause* is more than a limiting legal formula; it can be logically derived from the structure of the economic and monetary union. In a decentralised monetary union where no common fiscal policy exists and there are no cross-border transfers due to political reasons, the no bail-out clause is the essential guarantee of the functioning of the EMU.

The first *consequence* of the no bail-out clause was the rise in the default risks of sovereign debtors in the EMU. While this has long been a theoretical possibility, it was regarded as a very low probability event. However, with the expansion and deepening of the sovereign debt crisis, the probability of government defaults has increased. The *second consequence* of the no bail-out clause is that according to the provisions of EU law, the ECB may not assume the role of the lender of last resort for the banking system, a role that otherwise may be very useful in crisis situations. This is different from the status of central banks in non-EMU countries. The balance between solidarity and autonomy is not proportional in the EMU. In the case of complete solidarity, when government debts are fully guaranteed, free riders and moral hazard appear. In the absence of any guarantee, speculation may loom. Mutual guarantees are missing in the EMU. The EMU was established without any insurance mechanism, and it was assumed that a monetary union could be successful without a budgetary or fiscal union (De Grauwe 2010).

In spite of the structural problems, the lack of institutions, financial funds and crisis management mechanisms, the set of rules based on the three prohibitions did not inhibit the smooth functioning of the EMU in a period when the global economy developed without major issues and global liquidity was abundant, although prior to its establishment several experts voiced their doubts over the long-term viability of the EMU (see in retrospect e.g., Feldstein 2012). In the late 1990s, the extent to which the EMU would meet the criteria for an optimum currency area was not clear to experts who were critical of the then current form of monetary integration.

Optimum currency area theory focuses on the criteria that are essential for a country or group of countries to form an economic and monetary union. In an optimum currency area (a group of countries suitable for a monetary union), the following criteria are met:[2]

First, the markets for production factors (labour and capital) are flexible and function well, the production factors are mobile, and therefore their prices are able to adjust to external price changes.

Second, the area is internally homogeneous, implying that its member countries have similar economic structures and their business cycles are synchronised. The internal homogeneity of the area must have reached such a level that it is not threatened by asymmetric external shocks. The term asymmetric external shock means that countries forming the monetary union suffer shocks of different sizes from the same external event. The reason for this is that the commodity and geographical structures of their exports and imports, their reliance on imported energy and external finances, etc., are significantly different.

Third, budgetary transfers are also available to fend off various economic disturbances including asymmetric shocks.

The analysis of the applicability of these criteria to the EMU would go beyond the scope of this study. Nevertheless, it is worth mentioning that, first, the no bail-out clause excluded budgetary transfers in the EMU. The reason for this was that monetary integration was not accompanied with the creation of a fiscal union. Budgetary transfers would have implied a transfer union with permanent transfers from richer to poorer countries as is the case within individual countries. Second, the internal homogeneity of the EMU must have not yet reached a level at which it is exempt from asymmetric shocks. Third, doubts over the mobility of the labour force and the flexibility of the labour market may also be justified. All of these deficiencies are demonstrated by relevant research. These deficiencies

---

[2] The original concept of the optimal currency area was elaborated by Mundell (1961). The theory was amended and further developed by many scholars. The issue and other relevant problems are discussed in detail by, e.g., De Grauwe (2003).

mean that the criteria for an optimum currency area were not met from the outset.

Nevertheless, of the three criteria for an optimum currency area, only one can be directly associated with the three prohibitions, namely the no bail-out clause. The structural weaknesses of inflexible labour markets and differences in macroeconomic structures were *aggravated by deficiencies in the institutional and policy frameworks of the EMU*. One such weakness was the primacy of real interest rate effect over the real exchange rate effect (Tomaso Padoa-Schioppa Group 2012). The one-size-fits-all monetary policy of the ECB led to excessive cyclical divergences and imbalances. Real interest rates were negative in the dynamically growing peripheral countries of the EMU (Ireland and Southern Europe, including Greece, Portugal, Spain and Italy) that led to sharp price and wage increases and the subsequent deterioration of their relative international competitiveness resulting in a competitiveness crisis on one hand and credit and real estate bubbles and the accumulation of private and/or government debts on the other.

Furthermore, in the absence of flexible labour markets and official transfers in the EMU, huge *imbalances* accumulated in conjunction with substantial *current account surpluses* in the core economies (such as Germany, Austria and the Netherlands) and enormous *current account deficits* in the peripheral member states. They generated a balance of payments crisis (EEAG 2012). The EMU regulatory system did not include guarantees for financing international imbalances (current account surpluses and deficits), managing financial shocks or implementing adjustments to restore international competitiveness (for details see e.g., EuroMemorandum Group 2010). The sovereign debt crisis called into question prior assumptions that international disequilibria are not relevant.

In managing the sovereign debt crisis, rules based on the three prohibitions substantially impeded the ability to shift economic policy for both nation states and EU institutions. The constraints were particularly pronounced relative to the possible actions and economic policy tools of the EU’s competitors. The relaxation of some of the prohibitions played an important role in managing the sovereign debt crisis.

3. Easing the exit from the EU

According to Article 50 of the Treaty on the European Union (TEU, the first part of the Treaty of Lisbon) that became effective as of 1 December 2009, any member state may quit the EU. If an EU member state is simultaneously an EMU member, it has to exit the latter as well.

The TEU makes no explicit mention of exiting the EMU. However, according to the relevant EU laws governing monetary integration (regulations concerning the introduction of the euro, the irrevocable fixing of the conversion rates of the national currencies against the euro, the irreversibility of the EMU, etc.) that are based on the basic treaties, member states are not allowed to leave the EMU. This implies that an EMU member state is barred from leaving the EMU while remaining in the EU. Because an exit from the EMU is unprecedented, there are no formal procedures or mechanisms for departing the EU in general and the EMU in particular.

EU law does not allow for the exclusion of any member state from the EU and the EMU. Although from the standpoint of the ECB, it may be feasible to exclude a member state from the EMU through indirect means, it is not possible through current legal provisions. An example of such indirect means would be the ECB refusing liquidity to member state banks that suffered runs on their deposits. This was a perceived danger in Greece in May 2012. The legal possibility of exclusion would undermine the Economic and Monetary Union by sending markets the message that the union is no more than an exchange rate mechanism, which individual countries may join or leave, depending on their actual economic situation (The Economist 2008).

The provisions concerning exit from the EU have nothing to do with the sovereign debt crisis and attempts to ameliorate it with economic policies. The elaboration of the Treaty of Lisbon began well before the outbreak of the sovereign debt crisis. However, the possibility of exiting the EU and the EMU has received a different interpretation in light of the crisis. The major reason for a member state to leave the EMU is to regain its independence in exchange rate policy. This would make it possible to remedy or at least mitigate the negative effects of the crisis by devaluing the national currency that would replace the euro at least in the short run.

From the *legal point of view*, an exit from the EMU *could be* feasible in two ways, at least in principle. First, the TEU and other relevant legal rules regarding the EMU and the euro could be explicitly modified to allow member states to leave the EMU and remain in the EU. Such a change in the basic treaty seems nearly out of the question under normal conditions. It is not realistic to assume that 27 EU member states could agree on a new treaty or the necessary modifications to the existing one at an intergovernmental conference within a reasonable timeframe. In addition, lengthy negotiations would also have an adverse impact on financial stability. The legal codification of exit criteria would also weaken the credibility of the EMU. This possibility could only become reality in a very severe crisis.

Second, apart from the rationality of such a decision, exiting the EMU is the *autonomous, independent decision of a member state*. To avoid or moderate capital flight, exit measures must to be taken on a single day or within a few days. In this sense, a managed exit based on negotiations with other member states and EU institutions would hardly be possible. Of course the detailed conditions for the exit would have to be clarified subsequently in long and complicated negotiations.

Assuming that a member state leaves the EMU and remains in the EU, it would face serious *legal problems*. In this case, EU law would remain effective in the departing member country. "If it abandoned the euro in all domestic contracts, but maintained it in all foreign contracts, the consequence would be a flood of well-founded lawsuits. Every citizen of the departing country would have a legal case against its own government – and possibly against the other member states as well. A euro zone exit would constitute discrimination on grounds of nationality – the biggest "no, no" under EU law" (Münchau 2012d).

If a member state exits both the EMU and the EU, it will be isolated in Europe. The EU would impose tariffs on its goods. The Schengen Agreement would be suspended with the direct consequence of the introduction of visas. To halt capital flight, the departing country would have to introduce restrictions on capital flows. The departing country would lose access to transfers from the structural funds and the Cohesion Fund.

In addition to legal factors, there are also *economic arguments* against the partial or complete break-up of the EMU. First, it would *trigger chaos or uncontrollable developments*. Second, it would entail *unbearable costs* on those concerned. According to model calculations, the direct losses from a break-up or the exit of strong and weak member states would amount to 20–50% of the GDPs of the countries concerned. Germany would suffer losses amounting to 20% of GDP and those of Greece would be 50%.[3] These are approximate figures. Modelling the consequences is difficult because the effects are unprecedented.

With respect to the most troubled countries, the most probable case may be that Greece would exit the EMU. Then it will have to balance its primary budget (deficit excluding interest payments) immediately, otherwise it would not be able to finance its deficit. As in the ensuing chaos, mass corporate and household defaults, increasing unemployment, recession, etc., general government revenues will decrease, a primary

[3] The figures come from an analysis by UBS. Source: The Economist (2011).

surplus should be achieved rather than a balanced budget. The Greek primary general government deficit amounted to 2.5% of GDP in 2011; it is expected to total 1% in 2012. This would necessitate a 20–30% wage reduction in the public sector. Under these circumstances, the collapse of the public sector would be unavoidable, and the government would not be able to rely on underpaid civil servants to maintain law and order. If the government were to default, Greek banks would be cut off from the liquidity facilities of the ECB. If the Bank of Greece did not comply with relevant EU rules, Greece could be excluded from the EMU's payment system and the government would be forced to reintroduce the drachma.

The new drachma[4] replacing euro would depreciate quickly (likely by 30–40%, but more pessimistic estimates place the decline at 80–90%), the subsequent inflation increase would improve the external competitiveness of Greece through the contraction of real wages. Nevertheless, this possibility could only be modestly exploited because manufacturing accounts for merely 7% of Greek GDP. The role of tourism could be more significant, as its share of GDP is 18% and that of maritime transport is another 12%. Given the relatively low importance of manufacturing, Greece is not integrated in the EU supplier network and German corporations within it. Consequently, the acceleration of GDP growth in the EU in general and Germany in particular would not provide a great deal of a boost to Greek manufacturing. In addition, the depreciation of the new drachma would trigger a strong inflationary spiral.

Devaluation and the subsequent increased inflation would lead to the loss of wealth due to plummeting real estate prices and the devaluation of financial assets. With the expected rapid devaluation of the new drachma, the costs of financing government debt denominated in euros would soar. The paradoxical feature of this strategy is that to avoid hyperinflation and restore international competitiveness, Greece has to pursue *prudent fiscal policy and accomplish structural reforms without external funding* that are similar to those requested by EU institutions and the IMF in exchange for the financial rescue packages (Münchau 2012a). However, the depreciation of the national currency may weaken the pressure for structural reforms faced by the government. In summary, an exit from the EMU would not solve the Greek economy's fundamental issues such as the limited export sector, the lack of competitiveness and substantial external imbalances.

[4] According to various sources, the Greek government would likely declare a bank holiday after announcing the country's exit from the EMU, and the euro banknotes held by the country's banks would be stamped to demonstrate the reintroduction of the drachma.

In the case of a Greek exit from the EMU, bank runs in other endangered countries (Portugal, Spain and perhaps Italy) are certain to occur, as economic actors would transfer their monetary holdings to safer EMU member states. To neutralise this threat, the ECB would have to provide additional liquidity to the banking systems of the countries endangered by the negative spill-over effects. It should be noted, however, that at present the major Greek political parties do not desire to quit the EMU. According to public opinion polls, the majority of the Greek population does not support an exit either.

Despite the severe negative effects, many experts argue that considering the existing set of rules governing the EMU, the most indebted member countries (Greece, Portugal and Spain) should quit the EMU (see, e.g., Arnab and Roubini 2012). They believe that the long term advantages created by such an exit will exceed short-term disadvantages. Apart from the fact that the author of this paper does not find these arguments convincing, a discussion of these views would go beyond the scope of this report. If Spain and Italy leave the EMU, they would likely default on their external debt. Such an act would probably lead to the collapse of the European financial system (Münchau 2012e). A Greek, Spanish or Italian exit would cause investors to perceive that EMU membership is reversible, implying the implicit reintroduction of currency risks (Kramer 2012).

In spite of the great uncertainty and enormous costs, *the partial or complete dissolution of the EMU cannot be excluded, but the probability of such events seems to be rather low*. Nevertheless, in the absence of counterbalancing forces, this probability may increase, particularly if the political, financial and economic tensions surrounding Greece or other troubled EU member countries intensify. Even a low probability of exit may create uncertainty among economic actors and bolster demand for the safest US and German government securities, increase capital outflows from the EMU, and weaken the euro's relative position against other major currencies. The Deutsche Bundesbank may have considered the exit of individual member states from the EMU when President Jens Weidemann proposed the securitisation of German surpluses valued at €500 billion that had been accumulated in the TARGET2 central payment system and which has managed settlements between the central banks of countries where euro is legal tender since 2007. By seeking insurance against the collapse of the euro, the Deutsche Bundesbank does not regard the dissolution of the EMU as a zero probability event (Münchau 2012b).

The insolvency of governments may also endanger the solvency of the debtor countries' central banks. This may impose substantial losses on the central banks of creditor member states that are likely to be covered by the taxpayers of the respective countries. This is a *disguised fiscal transfer* that cannot be sustained.

The major guarantee against the complete break-up of the EMU is of an *economic nature*, namely, the high cost of such an event. None of the member states would benefit from the partial or the complete break-up of the EMU. In spite of the sovereign debt crisis, the costs of maintaining the EMU are much lower than those of its break-up. There is broad recognition by the major political forces in the EU that member states have little future outside the EMU.[5] As the probability of a partial or complete break-up increases, exit costs may decrease. Discussions on managing the crisis focus on, first, the distribution of burdens across the remaining member states and economic actors rather than the question of whether the system is worth saving. The answer to the latter question is clear (The Economist 2012b). Second, the unwillingness of the governments of individual member states to abandon their sovereignty or at least parts of it inhibit a move towards stronger monetary and fiscal integration.

At first glance, the demise of the EMU would involve the cancellation of a number of obligations enshrined in the Treaty of Lisbon. Furthermore, the complete and disorderly break-up of the EMU would also lead to the collapse of the EU, including the single markets for goods, services, capital and labour. The benefits of European integration achieved over the past 55 years would disappear.

The other argument against the break-up is one of a *political nature*. Member states invested substantial political capital in the EMU over the past 10–15 years; they do not want to write it off. The political commitment to the euro is strong in a defensive sense but is not sufficient to support stronger financial integration.

Apart from the possibility of a partial or complete break-up, economic actors regard the elaboration of contingency scenarios for the EMU at both the macro- and microeconomic levels as necessary. Contingency scenarios were prepared, i.a., by British and US investment banks for their clients rather than by EU institutions for the general public. With the escalation of the crisis in Greece in May and June 2012, increasing numbers of such

[5] Of the $11 trillion worth of euro-area debt outstanding, $4 trillion must be regarded as at risk in the near term in a restructuring process. The capital markets of the EU, including that of $185 trillion in outstanding euro-denominated derivative contracts would be in turmoil, causing large-scale capital flight to the US and Asia (Vallée 2012). The general view among experts is that the disorderly break-up of the EMU would be a much greater shock than the default of Lehman Brothers in 2008.

contingency scenarios appeared that were elaborated by banks and large corporations.

It is difficult to judge whether discussions of contingency scenarios on the macro level would trigger market panic or help to reduce uncertainty.[6] Fearing panicked reactions, until recently EU institutions refrained from compiling contingency scenarios under the otherwise justifiable assumption that they cannot be kept secret. Such a worst case contingency scenario should discuss the ways in which financial assets and liabilities would be redenominated after the managed break-up of the EMU. This is particularly important if the EMU collapses with the demise of the euro. It should be noted, however, that the majority of assets and liabilities are subject to UK law rather than EU law. It is unclear how they can be redenominated. An interesting suggestion is that in the case of a break-up, the euro should be replaced by ECU-2 (European Currency Unit – ECU), similar to the original ECU (Nordvig 2012). The EMU and the euro have developed to a point where the return to individual member state currencies is unlikely, and the only future recourse would be the use of the ECU as a basket currency. Nevertheless, the tensions accumulated within the EMU can only be eased in the absence of its partial or complete break-up.

4. The softening of the prohibition on government default

It is worth considering the possibility of government default because it is *doubtful whether indebted countries* in general, and Greece in particular, *can repay their government debts*. In addition, large government debts could *stifle economic growth* for an extended period independent from the issue of repayment. It is assumed that the costs of avoiding a government default, in terms of external rescue packages, are smaller than those of the default itself, including its spill-over effects on the rest of the EMU.

Government *default* may take two forms. First, it could be *accompanied by an exit from the EMU* or, second, it could be accomplished *within the EMU*. The consequences of an exit have already been discussed. This implies at first glance that government default does not automatically imply that the defaulting countries would exit the EMU. Nevertheless, in

[6] In this context, the Wolfson prize should be mentioned. The British Tory offered GBP251 thousand to the authors of the best plan for the dismantling of the EMU (see, e.g., Rachman 2012). For some details of the proposal, see The Economist (2012c).

the case of Greece a government default would also result in the country exiting the EMU, as it would likely only be able to obtain financing by reintroducing a national currency. This also holds for Spain and other indebted member states.

Government defaults in the EMU can be either disorderly or managed. In a *disorderly default*, the government stops servicing its debt without consulting and cooperating with concerned parties including EU institutions, member states, banks and the private sector. The revenues of the Greek government are not sufficient to finance the public sector. Not only would public services collapse, but banks would as well, because they would be forced to write off the government securities they own. Following a disorderly government default, it would be difficult to find investors willing to finance the Greek government. A disorderly government default may easily lead to the country exiting the EMU, which would have negative implications for the rest of the EMU through contagion effects.

An *orderly or managed default* is based on negotiations between the parties concerned. This raises the issue of the creation of a European Crisis Resolution Mechanism, as proposed by Bruegel, based on two pillars (Gianviti et al. 2010). The first pillar is a procedure to initiate and conduct negotiations between a sovereign debtor with unsustainable levels of debt and its creditors resulting in an agreement. The second includes the provision of financial assistance to EMU member states in an effort to resolve the crisis.

A government default within the EMU would not improve the competitiveness of the Greek economy or any other defaulting member state. As devaluation is not allowed, the forces driving economic growth would likely be external, in the form of European investment programs. The precondition for this is the restoration of credibility and co-operation between the interested parties (Münchau 2012a). The probability of this scenario is very low.

The weaker form of government default, which can be considered an orderly or managed one, is the write-off of a certain portion of government debt. The dilemmas here are the following. 1) Do the advantages deriving from the decrease in government debt and related debt service burdens exceed the financial and economic losses that are associated with the decline in credibility (that may spill-over to the rest of the EMU)? 2) Are the costs of government default lower than those of a potential bail-out?

In Greece, 74% of government debt held by private investors was written off as losses in March 2012. The haircut of more than €100 billion was one of the largest in economic history. Representatives of EU institutions frequently underline the fact that the partial write-off of Greek government debt having only involved the private sector was an exceptional case; it cannot be regarded as a precedent and is not applicable to other EMU member states. This implies that these other states must employ all available measures to avoid government default. Nevertheless, after the Greek precedent, investors buying the government securities of indebted member states are likely to be more cautious, and this may make it more difficult to finance other troubled EMU member states. A sovereign debt default mechanism may have other negative effects; it may nurture moral hazard and speculation (De Grauwe 2010).

A Greek exit from the EMU or a government default would involve Greek debts worth €121 billion owed to official creditors, €27 billion owed to the IMF and €155 billion directly owed to the euro system (comprising the ECB and the 17 national central banks in the EMU). The last figure includes €110 billion provided directly to Greece through the TARGET2 payment system (Vallée 2012). These figures demonstrate that a Greek government default could have far-reaching consequences on the euro zone. If we consider the potential candidates for government default, according to estimates based on official data the claims of the euro system on troubled periphery countries amount to approximately €1.1 trillion, corresponding to 200% of the broadly defined capital of the euro zone (Vallée 2012). These figures indicate quite considerable risks for bank capital and taxpayers and represent a strong argument for avoiding government default in the EMU. The risk of the fear of contagion, including capital flight, cannot be quantified.

Because bank portfolios contain significant shares of government securities, the recapitalisation of banks in the EU and the EMU envisaged in mid-2012 by the European Council can be considered, inter alia, a precautionary move to dampen the effects of potential government defaults. The new idea of a banking union will be discussed below.

Despite the softening of the prohibition on government default, *the roll-over of government debt* is still more difficult in the EMU than outside it. Countries outside the EMU are less likely to be subject to liquidity crises than EMU member states because, first, the devaluation of the exchange rate will generate buyers for government securities, albeit presumably at a weak exchange rate and high yields. Second, the national central bank can assume the role of lender of last resort and inflate the debt by excessive money creation. In this way, a government default can be avoided. In the case of fixed exchange rates or a common currency and the absence of a national central bank, there may be no demand for government securities at high yields and the government may default. This may explain why Spain's rating is worse despite the lower level of government debt relative to GDP than that of the UK despite its higher level of indebtedness.[7] As a consequence, the indebtedness levels should be much lower in economic and monetary unions than outside them.

5. The modification of the no bail-out clause: financial rescue packages and bail-out funds

In the wake of the Greek sovereign debt crisis that began in autumn 2009, as well as the subsequent crises in Ireland and Portugal, the softening of the no bail-out clause in the Treaty on the European Union became necessary. According to an evaluation of EU institutions and the leaders of major EU member states, defaults on the part of the countries mentioned – including spill-over effects – would have entailed higher costs than bail-outs financed by credit.

With respect to the legal basis: "Member states referred to Article 122 of the Treaty on the Functioning of the European Union, according to which assistance by EU countries is allowed if member states are faced with difficulties that are beyond their control. Before the actual rescue packages this article was interpreted in such a way that it cannot be applied to the bailing out of debtor countries. Since the resolution of the European Council as of 8/9 May 2010, governments of EMU member states have based their bail-out actions on it by arguing that the sovereign debt crisis endangered the solvency of individual member states and posted a threat to the financial stability of the Economic and Monetary Union" (Sinn 2010, 5). Nevertheless, the Economic and Monetary Union has faced crises in specific indebted EMU member states rather than a systemic crisis since that time (Sinn 2010, 7). "The use of this provision to the legal justification of bail-outs may give ground to different interpretations by the constitutional courts of EMU member states. However, this seems to be a smaller risk for the time being than the rather complicated modification of the Treaty of Lisbon to provide a clear legal basis for bailing out troubled EMU member states. The legal basis of bail-outs is still rather shaky" (Sinn 2010, 7).

A European Council decision (European Council 2011) added the following paragraph to Article 136 of the Treaty on the Functioning of the European Union: "3. Member States whose currency is the euro may establish a stability mechanism to be activated if indispensable to safeguard the stability of the euro-area as a whole. The granting of any required financial assistance under the mechanism will be made subject to

[7] See details based on the explanation of Paul De Grauwe in Wolf (2011).

strict conditionality." As this mechanism is designed to safeguard the financial stability of the euro-area as a whole, Article 122(2) of the TFEU will no longer be needed for such purposes.

In light of the circumstances, *three funds* were established, which did not conform to the spirit of the original provisions of the Treaty of Lisbon, to bail out member states coping with funding difficulties. The first fund is the *European Financial Stabilisation Mechanism* with €60 billion that expired on 30 June 2012 and is designed to aid EU member states outside the EMU. The second is the *European Financial Stability Fund* (EFSF) with €440 billion in effective lending capacity that expires as of 30 June 2013. Its successor will be the third fund, called the *European Stability Mechanism (ESM)*, with €500 billion in effective lending capacity that will be operative as of June 30th 2013. The EFSF and the ESM are likely to work simultaneously until mid-2013. The combined lending capacity of the two funds will amount to €700 billion, out of which fresh money will total €500 billion, the remainder being parts of the on-going Greek, Portuguese and Irish programs. These efforts will be supported by a contingency reserve valued at €240 billion. The overall size of the funds will reach €940 billion. They are operated jointly by the European Commission, the European Central Bank and the International Monetary Fund. The difference between the EFSF and the ESM is that the loans of the ESM are senior to those of private investors, in other words, government defaults will be possible at rather limited risk to the budgets of lender countries. In the case of the EFSF, the lending member states are burdened with the costs of government default. The creation of bail-out funds can be considered an initial shift towards an optimum currency area where budgetary transfers are available to fend off various economic disturbances. The disputed issues include, first, the size of the funds required to match the potential risks and, second, the ways in which they are used, including conditionality.

Until recently, Greece, Ireland and Portugal have received financial packages. In June 2012, Spain was awarded €100 billion and Cyprus applied for assistance. The sizes of the funds fall short of the total needs of EMU member states endangered by potential government default. In principle, the optimal sources of the bail-out funds have to be sufficient to guarantee that new government securities can be issued to roll over the government debt of troubled sovereign debtors, such as Greece, Portugal, Ireland, Spain, Italy, France and Belgium, until the EU issues common euro bonds. According to the calculations of Bloomberg and the IMF, €2.5 trillion – €3 trillion would be necessary until 2015 (Bloomberg Business Week 2011). In addition, if temporary and transfer items are excluded, the actual amount of funds that can be used for bail-outs amounts to only €500 billion in the long run. This is significantly less than the amount necessary to guarantee the government debt of all of the member states potentially facing financial difficulties. However, the available money is sufficient to prevent government default in smaller countries (such as Greece, Portugal and Ireland), but it is insufficient to bail-out Spain.

On one hand, increased financing for the funds may have *psychological implications*. The larger the size of the funds, the more convincing the deterrence, and the lower the probability of their deployment. Therefore, the risk of political debates challenging solidarity within the EU diminishes (Editorial 2012). Another interesting psychological question is whether the interventions of the European Stability Mechanism avoid crises or, on the contrary, trigger them.

On the other hand, increasing the sizes of the funds is a *signal to the US, China and other non-EU member states* in general and those belonging to the G20 in particular that they, too, may wish to increase their contributions to the IMF's global crisis management funds that were promised in April 2012 in the amount of $430 million.

The further extension of the EFSF and ESM funds runs the risk that international rating agencies will *downgrade the best debtors* because both the EFSF and ESM raise funds in international money and capital markets. Another political obstacle to further increases in the funds is that an addition to German's existing €211 billion contribution is subject to parliamentary approval. Domestic political issues may make the approval of new sums uncertain. In addition, the simple fact that the German contribution temporarily exceeds the approved ceiling may provoke political disputes.

Furthermore, multilateral programs seem to approach their political limits. The liabilities faced by the individual member states are not sufficient to justify increasing the size of the bail-out funds. It is necessary to pool or share liability across the member states by issuing Eurobonds, etc. (Münchau 2012c). Nevertheless, the ESM can be perceived as a specific form of transfer mechanism among member states. Some experts regard its establishment as a further step towards a *transfer union*. Nonetheless, the bail-out packages and the EFSF and ESM shift risks from banks to taxpayers rather than improving the competitiveness of the beneficiary countries.

The provision of financial aid from the bail-out funds is tied to conditions designed to reduce general government spending by introducing, inter alia, austerity measures and structural reforms. Until recently, beneficiary member states attempted to meet stringent, self-imposed austerity conditions. Nevertheless, a new situation may emerge if a beneficiary country fails to comply with austerity and structural reform conditions wilfully and permanently. This risk is quite plausible in Greece, where the stringent measures implemented in previous years combined with the subsequent recession fuelled political and social resistance to further austerity. The Greek public opposes the program designed by the European Commission, the European Central Bank and the International Monetary Fund. The situation is similar in the other heavily indebted member states. If wilfully and permanently non-compliant program beneficiaries are denied further funding, the exit of the respective member state cannot be avoided, entailing the risk of spill-over and contagion effects for other endangered countries. If further funding is not denied, the result may be "the creation of an open-ended, uncapped transfer union without the surrender of national sovereignty to the supranational European level" (Buiter 2012).

6. The modification of the no bail-out clause: changes in the ECB's tasks

Faced with the financial and economic crisis, the European Central Bank also modified its views on bail-outs. First, *the ECB began to buy the government bonds* of EMU member states facing financial difficulties in 2009 *in the secondary market*. The purchases were beyond the size required for conducting its monetary policy operations. In the framework of its Securities Market Program, the ECB purchased government securities valued at more than €200 billion. Moreover, the ECB sold high-quality government bonds to neutralise the inflationary effects of these purchases. Although this type of operation stabilised the yields on sovereign debt, it drove banks to sell off the government bonds of weak EMU member states, which are hence being accumulated by the ECB. "Since the start of 2007, the ECB purchased financial assets totalling 1.7 trillion euros, expanding its portfolio from 13% to over 30% of the euro zone's GDP" (Mallaby 2012, 7). This figure represented more than eight years of Greek GDP.

Second, the ECB offered unlimited liquidity loans to banks at an auction held in June 2009 with one-year maturities. The amount totalled €442 billion. Through these operations, the ECB reduced short term interest rates to US and UK levels (The Economist 2012a).

Third, the threat of a new recession loomed, bank capitalisation reached critical levels and investors only purchased the safest government securities in December 2011. As a response, the ECB offered commercial banks *unlimited liquidity* loans for three years against any collateral at a 1% interest rate (Long-term Refinancing Operation – LTRO). The action was repeated in late February 2012. Commercial banks borrowed more than €1000 billion under this scheme, although the assets of the banking system grew by only €503 billion if expiring loans and deposits at the ECB are taken into account. These measures are similar to the quantitative easing practices of the US Fed and the Bank of England.

In this scheme, the ECB formally observed the no bail-out clause of the Treaty on the Functioning of the European Union. Nevertheless, the LTRO can be regarded as a disguised bail-out. In Germany the ECB was criticised for not fully respecting the provisions of the EU Treaty that prohibit monetary financing of government debts. The ECB circumvented the formal legal provisions of the EU Treaty because commercial banks were provided loans rather than the governments directly. As the ECB accepted government bonds deposited by banks as collateral, the LTRO is an indirect means of bailing out indebted governments. It should be noted that the ECB is legally allowed to accept government securities as collateral.

Although the motivations for their introduction were more diverse, the loans provided by the ECB under the LTRO framework amended or extended the financial sources of the rescue funds. However, decision making in the ECB is more rapid than in the EFSF and ESM, and the ECB is more credible than the bail-out fund institutions.

There is insufficient space in the present article to analyse the effects of the LTRO in detail. However, it should be mentioned briefly that the ECB's primary objective with the LTRO was to reduce the yields of government securities and other risky assets and thereby fend off liquidity crises in some indebted EMU member states (particularly in Spain and Italy). The LTRO also contributed to the recapitalisation of banks, thereby preventing an eventual banking crisis. The LTRO undoubtedly helped to ease liquidity tensions in the EMU, but it was not appropriate to improve solvency and reduce general government debt, let alone improve competitiveness in indebted EMU member states and dampen current account imbalances in the EMU.[8] The three-year maturity of the loans provided governments and banks with time to make adjustments and reforms.

---

[8] EU policies "have failed to recognise the possibility of insolvency and have addressed all crises as if they were pure liquidity crises; they have failed to address systematically the interdependence between banking and sovereign crises and cross-country interdependence; and they have been reactive rather than proactive, squandering credibility because of inadequate responses" (Darvas et al. 2011, 1).

The risks of the LTRO are rather diverse. First, commercial banks may face difficulties in December 2014 and February 2015 in raising the amounts needed to repay the loans (Jenkins 2012). In addition, the three-year maturity is rather short for many banks.

Second, commercial banks may become too dependent on the ECB's inexpensive loans. If they buy government securities using these loans (this is a carry trade, and governments are prone to encourage it), the relationships between banks and governments may intensify. The relationship between the sovereign debt of financially troubled countries and the actual state of the banking sector will be reinforced (The Economist 2012b). With government securities in their portfolios, banks may be more vulnerable during difficult periods of the sovereign debt crisis. Therefore, sovereign debt crises may easily lead to bank crises.

Third, inexpensive loans may foster money and capital market bubbles similar to those that preceded the global financial and economic crisis, but with sovereign debt securities being purchased in this case. With the LTRO, the ECB may be unwillingly sowing the seeds of the next crisis (Milne and Watkins 2012).

Fourth, the central banks in the US and UK purchased government securities. In other words, sovereign risk was transferred from the public sector to the central bank. In the EMU, sovereign risk is still being carried by the private sector, namely the ECB shifted it to the balance sheets of undercapitalised commercial banks. In the US, the Fed directly provides loans to banks with a wide range of control mechanisms. In the EMU, the ECB offers banks refinancing, therefore its monetary policy is less predictable than that of the Fed. To add insult to injury, ECB monetary policy remains tight; there is room for a further reduction in its reference rate, although it was reduced from 1% to 0.75% in July 2012.

Fifth, there is no guarantee that the commercial banks that borrowed from the ECB are willing to buy the government securities of EMU member states with high yields and high risks or that increased liquidity can be channelled to the real economy.

Sixth, it is difficult to assess how long the ECB's last two liquidity injections through the LTRO will last. There are signs that their effects tend to fade away slowly.

Finally, the inexpensive loans provided by the ECB have reduced the pressure on both governments and commercial banks to implement reforms. For governments, the unconditional and unlimited purchase of government securities also leads to moral hazard problems.

By providing commercial banks with unlimited loans against government bonds (as collateral at specific LTRO auctions) the ECB essentially assumed the de facto role of the banking system's lender of last resort with some limitations (although the scheme cannot be considered a European Monetary Fund at present). However, this has yet to be declared officially, causing uncertainty among economic actors to remain. Germany opposes this mainly because of its inflationary impact in the long run. Nevertheless, in sharp crisis situations the benefits of crisis prevention outweigh the long-term costs in terms of inflation.

7. Measures aiming at the overhaul of the institutional system

The objective of softening the three prohibitions was to gain the time needed to take further measures at both the EU and the EMU levels to correct institutional deficiencies. They included the improvement of economic governance (the Stability and Growth Pact, Euro Pact, Six Pack, Treaty on Stability, Co-ordination and Governance in the Economic and Monetary Union, etc.), prevention (Excessive Imbalance Procedure), etc. The common objective of these legal rules is to reinforce fiscal discipline and thus somehow compensate for the lack of a fiscal union. The analysis of these measures is beyond the scope of this paper.

The most important proposals concerning the future of the EMU were submitted to the European Council in late June 2012. They contained, inter alia, an *integrated financial framework* including *integrated supervision* to ensure the effective application of prudential rules, risk control and crisis prevention throughout the EU; a *European deposit insurance scheme* to strengthen the credibility of the existing arrangements and secure eligible deposits at all credit institutions; and a European bank resolution scheme funded by contributions from financial institutions to provide assistance to banks (Rompuy 2012). This issue was also addressed previously by the Tommaso Padoa-Schioppa Group.

The concept is referred to as a *banking union* and it should be elaborated in detail. Based on the available information, the banking union should comprise all 27 member states of the EU to avoid the fragmentation of the single market for financial services.

Banking supervision would be delegated to the ECB. *Bail-out funds* could go directly to banks (the ESM will be allowed to recapitalise banks directly) rather than to governments, therefore they would not increase the government debts of the member states involved. This rule has already been applied to Spain. In addition, the ESM will be allowed to buy government bonds in secondary markets and thereby stabilise the market.

The common deposit insurance system could reduce the risk of bank runs in vulnerable member states. If a country is likely to leave the EMU and deposits are guaranteed in euros, people may borrow heavily in their local markets and deposit the money in their bank accounts. Their debts would be redenominated while their savings would be protected. This could be considered a direct transfer from the rest of the euro zone to the periphery (The Economist 2012d).

According to calculations by Barclays, an insurance fund would have to cover €11 trillion in deposits. For the banking industry to raise an amount worth 1.4% of assets, EMU banks would have to be taxed a fifth of their annual earnings for five years. According to more conservative calculations, more than €100 billion would have to be raised (The Economist 2012d).

The banking union could dismantle the link between governments and banks, creating a more stable financial environment in the EU. It can be considered a first step towards a fiscal union, although common responsibility and liability are rather limited.

8. Summary and conclusions

The sovereign debt crisis that evolved in the Economic and Monetary Union was fundamentally the result of economic policies in general and unsustainable fiscal policies in particular, pursued by member states, rather than the introduction of the *common currency*. The external and the internal stability of the euro have yet to be challenged. During the global financial and economic crisis, the *euro provided EMU member states with protection* against internal exchange rate shocks. After its introduction, conversion costs, exchange rate risks and uncertainties disappeared and, as a result, transaction costs decreased in intra-EMU trade, which also boosted GDP growth.

Nevertheless, the *basic legal rules* governing the EMU combined with some specific features of member states have long mitigated or even hidden economic disequilibria and tensions that developed both within and among member states for a long time. They were primarily the consequences of the fact that, first, the EMU was not an optimum currency area; second, EU legal rules were not efficient enough to enforce fiscal discipline and inhibit the accumulation of private sector debts in member states. The absence of the first two preconditions for an optimum currency area (flexible factor markets and internal homogeneity) was of minor importance in contrast to critiques written prior to the establishment of the EMU; whereas the third criterion (the availability of budgetary transfers) was not compatible with the notion of a monetary union in the absence of a fiscal one. Under the given circumstances, *exchange rate and liquidity crises were avoided*.

However, the economic disequilibria and tensions that had accumulated as a consequence of the global financial and economic crisis, the lack of an optimum currency area and the inadequate policies pursued by member states since the launch of the EMU in 1999 led to a sovereign debt crisis to *which the institutional and regulatory framework of the Economic and Monetary Union* also contributed. In addition, with the establishment of the EMU, its member states lost the majority of the traditional, national crisis management tools, which were replaced by very weak tools and mechanisms and funds that were endowed with limited financial resources at the level of economic integration.

The sovereign debt crisis challenged the three pillars of the Economic and Monetary Union. The three prohibitions (no exits, no defaults and no bail-outs) were originally incorporated in the Treaty of Maastricht and secondary EU legislation to ensure the credibility of monetary integration. They did not constrain economic development and economic policy in the period of excessive global liquidity, but they did restrain the EMU member states' manoeuvrability during the sovereign debt crisis. With the softening of two of the three prohibitions (no government defaults and no bail-outs), the economic policy tools and crisis management mechanisms in the EMU became more similar but far from identical to those prevailing in countries outside the EMU.

As far as the *first pillar* is concerned, the Treaty on the European Union (the first part of the Treaty of Lisbon) allows any member state to exit the EMU if it simultaneously leaves the EU. This is independent of the sovereign debt crisis. The exit of a member state, be it a strong or weak one, from the EMU would pose insurmountable legal difficulties and would constitute economic suicide due to the costs, despite the arguments of economists stressing the presumed advantages of such a move. The major guarantees for the EMU are the enormous cost of its dissolution, the fear of the collapse of the EU and the loss of the tremendous amount of political capital invested in it over the past 10–15 years. Therefore, assuming rational behaviour on the part of governments, no member state is likely to make use of the legal possibility of exiting the EU. Despite the great uncertainty and enormous costs, the partial or complete dissolution of the EMU cannot be excluded, but its probability is relatively low under more or less "normal" circumstances. Nevertheless, contingency scenarios for the break-up of the EMU may be justified.

In the EMU, where their debts are issued in a currency over which they do not have full control, member states *cannot rely on devaluation* as a means of managing the crisis and restoring international competitiveness. Therefore, the likelihood of default is rather high. Devaluation could only be an option if member states leave the EMU. Therefore, the means of making adjustments and restoring international competitiveness include the consolidation of the general government through fiscal austerity, structural reforms and *internal devaluation*, in terms of reducing prices and unit labour costs, which are rather painful and may have adverse effects on GDP growth.

The prohibition on *government default* was only partially softened because, regarding economic actors on the one hand, it was limited to the write-off of government debts held by private investors (the weak form of government default) and, on the other, in geographical terms to Greece, establishing a precedent. Because of its limited scope and size (in terms of the exclusion of public debt), its impact on easing debt's drag on Greek economic growth is likely to remain modest.

The *softening of the no bail-out clause* included establishing rescue funds, the ECB's purchases of government bonds in secondary markets and the indirect involvement of the ECB in the purchase of government bonds through the provision of loans to commercial banks against government bond collateral, based on an innovative interpretation of existing basic EU legal rules. The legal basis for the softening of the no bail-out clause is rather uncertain. In addition, the rescue funds and ECB loans assist in the creation of conditions necessary for the member states to make adjustments rather than substituting for policy measures to be taken by the EU and the individual member states.

It is also theoretically possible for the ECB to assume the role of lender of last resort should the necessity arise, although this is not included in its statute and opposition to this remains rather strong, mainly because of the inflationary risks perceived by some member states, particularly Germany. Nevertheless, it seems most likely that in serious crisis situations, the European Central Bank would provide member states with unlimited liquidity.

The softening of the prohibitions on government defaults and bail-outs was a necessary but insufficient precondition for the management of the crisis. It was sufficient to prevent financial and economic disaster (bank crises and sovereign defaults) in the short-term, but it did not properly address the core issues related to the limited compliances of the EMU with respect to the criteria for an optimum currency area.

In addition, it involved undesired negative side-effects. First, the EMU has faced solvency problems rather than liquidity problems, while the rescue funds were designed to ease the liquidity problems of indebted member states. Second, the softening of the non-default assumption and the no bail-out clause had nothing to do with long-term issues, such as the core problems of the Economic and Monetary Union including the restoration of competitiveness in the peripheral member states, the reduction of external imbalances (huge current account surpluses in the core economies and equally large deficits in the periphery) and the stimulation of economic growth. The changes to the pillars of the EMU provided EU institutions, member states and economic actors with the time to implement structural reforms, undertake measures to transition towards a genuine optimum currency area (not discussed in this report) and promote economic growth. However, the increased flexibility created by the softening of the prohibitions on government defaults and bail-outs may mitigate the pressure weighing on national governments and EU institutions to introduce reforms. Given the specific features of the monetary union, including the impossibility of devaluation, crisis management is more difficult, and the requirements for implementing structural reforms and improving competitiveness are more difficult in the EMU than outside it.

Concerning future prospects, the possibility of moving towards an optimum currency area is limited. Such a move would only be feasible with the exclusion of the southern European member states (Greece, Portugal, Spain and Italy) from the EMU, which is neither a realistic assumption nor feasible. In addition, transitioning the EMU towards an optimum currency area would not be sufficient to solve the underlying institutional and governance problems.

The most desirable development in the EMU would be progress *towards a genuine monetary union combined with some forms of a fiscal union* based on the mutualisation of debts with more common responsibilities. A first step in this direction could be a banking union. This scenario would be most appropriate for overcoming the institutional weaknesses of the present Economic and Monetary Union. The probability of this development is rather low because of the diverging interests of the member states. Germany has opposed proposals aimed at a shift towards fiscal union because of fears of free riding and moral hazard. The probability of a painful *scenario based on internal devaluation* is also low. Considering the political constraints, the most probable scenario is that as a result of the softening of the no bail-out clause, *government debts will be inflated* with the help of the ECB's indirect quantitative (hopefully with strict conditionality) easing in the long run (there is no imminent inflationary danger in the EMU), particularly if no solutions are found to the structural weaknesses of the EMU.

References

Arnab, D. and Roubini, N. 2012. "A blueprint for an amicable divorce settlement." *Financial Times*, April 3: 9.

Benczes, I. 2011. "Az európai kormányzás előtt álló kihívások. A hármas tagadás lehetetlensége" [Challenges facing European governance. The impossibility of the three negations]. *Közgazdasági Szemle* [Economic Review] 57, 9: 759–774.

Bloomberg Business Week. 2011. "A Powell Doctrine for Europe on Debt." October 24–October 30: 10.

Buiter, W. 2012. "Race to save euro will follow 'Grexit'." *Financial Times*, June 21.

Darvas, Zs. and Pisani-Ferry, J. and Sapir, A. 2011. "A comprehensive approach to the euro-area debt crisis." *Bruegel Policy Brief*, January.

De Grauwe, P. 2003. *Economics of Monetary Union*, 5th edition. Oxford University Press.

—. 2010. "A Mechanism of Self-destruction of the Eurozone." *Intereconomics*, 45, 6: 343–346.

Editorial. 2012. "Euro fireproofs itself on cheap." *Financial Times*, March 30: 10.

EEAG. 2012. "The European balance of payments Problem." *The EEAG Report on the European Economy*, Munich: CESifo. 57–81.

EuroMemorandum Group. 2010. *Europe in Crisis: A Critique of the EU's Failure to Respond and Alternative Proposals in Times of Crisis.* http://www.lwbooks.co.uk/ebooks /EUROMEMORANDUM%202009-2010.pdf

European Council. 2011. "Decision of 25 March 2011 amending Article 136 of the Treaty on the functioning of the European Union with regard to a stability mechanism for Member States whose currency is the euro (2011/199/EU)."

Feldstein, M. 2012. "The failure of the euro. The Little Currency that Couldn't." *Foreign Affairs* 91, 1, January/February 2012: 105–106.

Gianviti, F. and Krueger, A.O. and Pisani-Ferry, J. and Sapir, A. and Hagen, J. 2010: "A European mechanism for sovereign debt crisis resolution: a proposal." *Bruegel Blueprint* 10, Brussels.

Jenkins, P. 2012. "Banks must beware the side-effects of ECB magic medicine." *Financial Times*, March 6: 14.

Kramer, M. 2012. "Beware the consequences of an accidental exit by Greece." *Financial Times*, June 13: 26.

Mallaby, S. 2012. "Europe's Optional Catastrophe. The Future of Monetary Union Lies in Germany's hands." *Foreign Affairs 91*, 4.

Milne, R. and Watkins, M. 2012. "The leaning tower of perils." *Financial Times*, March 28: 7.

Mundell, R. 1961. "A theory of optimum currency areas." *American Economic Review* 51, 4: 657–665.

Münchau, W. 2012a. "Greece needs another year to prepare for a total debt default." *Financial Times*, February 27: 9.

—. 2012b. "The Bundesbank has no fight at all to be baffled." *Financial Times*, March 5: 9.

—. 2012c. "Europe's bailout bazooka is proving a toy gun." *Financial Times*, March 26: 13.

—. 2012d. "The Wolfson prize for European Political illiteracy." *Financial Times*, April 9: 7

—. 2012e. "What happens if Angela Merkel does get her way." *Financial Times*, June 18: 9.

Nordvig, J. 2012. "Planning for the worst is the best way to save the eurozone." *Financial Times*, January 13: 9.

Rachman, G. 2012. "The euro is a time bomb that no one can defuse." *Financial Times*, April 3: 9.

Rompuy, H.V. 2012. "Towards a Genuine Economic and Monetary Union." European Council. The President. 26 June, Brussels: EUCO 120/12 Presse 296, PR PCE 102.

Sinn, H-W. 2010. "Rescuing Europe." CESifo Forum, Special Issue, Volume 2010, August: 5.

The Economist. 2008. "Redesigning global finance." November 15: 13.

—. 2011. "After the fall. The costs of break-up." September 17.

—. 2012a. "The silent bazooka." February 4: 64.

—. 2012b. "A firewall full of holes." March 3: 65

—. 2012c. "Currency disunion. Why Europe's leaders should think the unthinkable." April 7: 33.

—. 2012d. "Bankers of the euro-area, unite!" June 30: 72.

Tomaso Padoa-Schioppa Group. 2012. "Completing the Euro. A road map towards fiscal union in Europe." Paris: Notre Europe, June: 68.

Vallée, L. 2012. "How Europe Will disintegrate." *The Sceptical Market Observer*, June 6, http://scepticalmarketobserver.blogspot.hu/2012/06/how-europe-will-disintegrate.html

Wolf, M. 2011. "Managing the Eurozone's fragility." *Financial Times*, May 4: 9.