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The Euro Crisis: Causes and Solutions

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Key Points

1. The euro crisis was avoidable. It is a self inflicted crisis and the consequence of systemic policy failures in the way European Monetary Union (EMU) was designed, constructed and implemented. The severity of the crisis has itself been greatly exacerbated by the profound mismanagement of Eurozone leaders and by its misdiagnosis as a crisis of fiscal discipline, where, Greece apart, it is really a system crisis with its roots in the design flaws of the currency union itself. It appears that policymakers have failed to learn the lessons of the Great Depression of the 1930s and the long Japanese stagnation of the 1990s. The current responses to the crisis to date have been insufficient and in some cases even counterproductive.
2. The euro crisis is primarily a function of the inability of Eurozone member states to print their own currency. This inability means these countries can run out of money and are therefore exposed to insolvency risks. An essential component of crisis resolution is to eliminate the possibility of sovereign default by any member state exhibiting a demonstrated willingness to pursue sustainable fiscal policies. To achieve this goal a conditional Lender of Last Resort (LOLR) for sovereign borrowers must be established. The European Stability Mechanism (ESM), as designed, is not an LOLR and has an inherently fragile structure. Mutual debt issuance proposals such as most of the various Eurobond models come attached with substantial moral hazard risks. It is nevertheless possible to establish a conditional LOLR model for sovereign borrowers that minimises moral hazard risks and rewards fiscally sustainable policies. If the ESM is awarded a banking licence it would have the right to borrow from the European Central Bank (ECB). The ESM could engage in purchases of government bonds using its first tranche of paid-in capital and then place these bonds as collateral with the ECB in order to maintain its own capital base. By providing conditional liquidity for sovereigns, and then obtaining its own liquidity from the ECB, the ESM would de facto function as an LOLR for sovereign borrowers. Crucially, the

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ESM interest rate offered as a backstop before each future sovereign debt issuance would vary from member state to member state and would be calculated automatically using an agreed mathematical formula set annually by European policymakers. By incorporating the member states' discretionary fiscal actions into this formula it becomes possible to incentivise fiscal prudence and accommodate moral hazard concerns.

3. Eurozone bank supervision, bank regulation and, where applicable, bank resolution, must be made the responsibility of a single central authority rather than national authorities. In other words, the Eurozone should establish a banking union to complement monetary union. The banking union should cover all private banks in the Eurozone and not just larger banks. While the ECB is best placed to perform this function in the short-run, a European Deposit Insurance Corporation (EDIC) funded primarily by the private credit institutions should be established in the short-to-medium-term to take over this responsibility. The ECB in the short-run, and subsequently the EDIC, could underwrite the deposits of all Eurozone banks and should be assigned the power to close down insolvent banks, resolve their winding-up, and transfer deposits to a solvent institution. The ECB would continue to provide guaranteed liquidity support for solvent credit institutions. The goals here are to end the prospect of bank runs in the Eurozone, break the link between member state governments and their domestic banks, improve the quality of financial sector surveillance and regulation, and protect the Eurozone taxpayer from having to fund future bank bailouts. There should be no further bailouts in the Eurozone of insolvent banks, and where found to be insolvent by stress tests conducted by the EDIC, banks should either be wound-up or ownership transferred to creditors as part of a debt for equity process.

4. The narrow focus on austerity is exacerbating recession and stagnation in the Eurozone periphery and there is a need for greater fiscal expansion in the Eurozone core. The inability of member states in the periphery to restore competitiveness through currency devaluation should be addressed through differentiated inflation targeting in the Eurozone. Forcing all the burden of the competitiveness adjustment on the debtor countries makes it more difficult to achieve nominal GDP growth and therefore debt sustainability in the periphery. Higher levels of inflation and wage growth in the more competitive Eurozone core is the only way, at least in the short-run, to successfully obtain the twin goals of rebalanced competitiveness and reasonable nominal GDP growth. In addition, there is a need for overall increases in the levels of pan European public investment. This investment can be funded through a combination of measures. These measures include aggressive efforts to tackle tax avoidance and tax evasion including maximising the revenue potential from more growth

friendly taxes such as on property, wealth and passive income. Additional funding for infrastructure investments can be obtained through increases in the resources of the European Investment Bank (EIB) and changes to the EIB's lending criteria, as well as through more targeted usage of currently unused EU resources.

5. Full fiscal federalism is not necessary. However the Eurozone does need a mechanism to partially counteract the impact of recessions and of severe asymmetric shocks. A centralised inter-regional insurance fund should be established to provide direct financial support under strict guidelines to member states experiencing recession. The fund should be required to run a surplus over the course of the economic cycle and should be funded from a common Eurozone consumption tax hypothecated for the centralised fund.
6. We must restore the social element to economic policy making in the Eurozone. The clear preference of Eurozone policymakers for prioritising short-run fiscal discipline and inflation as policy goals, at the expense of employment, equality and poverty concerns, is a deeply troubling development. The socialisation of private debt was a massive transfer of wealth from ordinary people to the financial sector and should not be repeated. The new six-pack rules should be expanded to monitor indicators such as poverty rates and income distribution, while the rules of the fiscal treaty should be expanded to incorporate growth, development and social justice considerations. Finally, the governance of the Eurozone needs to be reformed so that larger countries can no longer brush aside the interests of weaker and smaller member states. We can solve the design flaws but it is not sufficient simply to preserve the euro. The type of Eurozone that survives is of paramount importance.

Background Discussion

7. There is no silver bullet to the mutually reinforcing crises wracking the Eurozone. Successful crisis resolution is contingent upon the implementation of a package of complementary policy changes that must be undertaken at the level of the Eurozone itself. Such a package must include changes to the currency union's deeply flawed architecture.

8. The Eurozone crisis is systemic in nature. It is a result of policy failures in the way European Monetary Union (EMU) was designed, constructed and implemented. In particular, the crisis is a consequence of the failure to put in place certain necessary institutional components. Most notable were the failure to establish a centrally run banking union to accompany monetary union, and the failure to designate a Lender of Last Resort (LOLR) for sovereign borrowers. A Lender of Last Resort is an institution with the authority and resources to provide funding to otherwise solvent borrowers suffering from liquidity problems. The purpose of an LOLR within a monetary system is to prevent liquidity problems degenerating into solvency crises. There were also inadequate surveillance and regulatory mechanisms in place to prevent potentially destabilising credit flows and the build-up of other regional imbalances within the currency union. In addition, there has been too narrow a focus on overall price stability at the expense of other macroeconomic targets such as financial stability, economic growth and employment.

9. Most previous attempts at monetary union have ended in failure. It is unwise to assume that the Eurozone experiment will buck the historical trend. Durable monetary unions such as the United States and the United Kingdom were preceded by or accompanied fiscal and political union. These successful monetary unions are characterised by high levels of internal labour mobility, by banking unions, by centralised revenue raising and by automatic fiscal transfers between regions. Previous attempts at fixed currency regimes without these elements in place have almost invariably failed and the Eurozone is characterised by its lack of each of these elements. It is also unclear whether the Eurozone truly qualifies as an Optimal Currency Area (OCA). Robert Mundell (1961) describes an OCA as a region where the benefits of a currency union or fixed exchange rate system outweigh the costs of sacrificing the exchange rate as an instrument of adjustment within the region. OCA characteristics include labour and capital mobility, similar business cycles across the region, as well as risk-sharing systems involving inter-regional fiscal transfers. In the last one hundred years of European history alone, we have seen the collapse of the Latin Monetary Union and the Scandinavian Monetary Union in the early twentieth century, the collapse of the Gold Standard in the 1930s, the collapse of the Bretton Woods system and the 'Snake in the

Tunnel' in the 1970s, as well as the de facto failure of the European Monetary System in the 1990s. Experience shows that systems of fixed exchange rates eventually buckle under the strain of divergences in domestic political priorities and objectives during times of crisis.

10. Barry Eichengreen (1990) argues an EMU without a sufficiently large fiscal apparatus would be unable to work well in the long-term. In particular, monetary unions are likely to be politically unstable unless there are apparatus in place to soften the impact of asymmetric[2] economic shocks. Eurozone member states no longer have the power to adjust to adverse asymmetric shocks through currency devaluation or monetary policy because control over these policy instruments is now held by the independent European Central Bank (ECB). In the event of an adverse economic shock, reduced levels of tax receipts and increased levels of expenditure on social protection puts pressure on the economy's public finances. Unlike the United States and the United Kingdom, the Eurozone has no mechanism in place at the central level to transfer funds between regions as "automatic stabilisers", in a bid to help recovery following shocks. Eurozone member states thus find themselves in a very difficult position and with very few policy levers available, when confronted by adverse economic circumstances. The powerlessness adds to the overall instability of the system by exacerbating economic crises. With limited control over macroeconomic policy, depressed regions in the currency union make take years to recover in the absence of external assistance and this may be politically unsustainable.

11. An additional source of inherent instability within the Eurozone arises from the absence of either mutualised debt instruments such as Eurobonds, or alternatively a guaranteed Lender of Last Resort (LOLR) for sovereign borrowers. Without a guaranteed LOLR in place, member states can literally run out of money and become unable to pay their creditors. This possibility exposes member states to multiple equilibria[3] risks. Paul De Grauwe (2011) shows how even solvent member states running government deficits can become exposed to a negative feedback loop of worsening market sentiment and spiralling borrowing costs. As De Grauwe argues: "*countries in a monetary union...become vulnerable to self-fulfilling movements of distrust that set in motion a devilish interaction between liquidity and solvency crises*". Market sentiment becomes self fulfilling as debt servicing obligations

[2] An asymmetric shock within a currency union is where a regional economy is disproportionately impacted by an economic shock, for example a localised banking crisis or a sharp exchange rate appreciation against a major trading partner.

[3] Where multiple equilibria are possible the high yield (high interest rate) outcome is known as a bad equilibrium. If yields rise by too much it can call into question the borrowers solvency. The lenders' benefits from higher yields can become outweighed by the perceived costs associated with an increased likelihood of non-payment by the borrower. Where this happens demand will actually fall as the yield rises.

become more and more unmanageable, and increasingly the member state is propelled inexorably toward a bad equilibrium of higher and higher interest rates, insolvency and ultimately sovereign default. Thus without access to a guaranteed LOLR, Eurozone member states running deficits are susceptible to insolvency risks and are highly restricted in their capacity to stabilise employment levels and growth through countercyclical fiscal policy. Given multiple equilibria risks, it is imperative for the stability of the system that the monetary authority acts appropriately to ensure sovereign borrowers do not fall into a bad equilibrium.

12. As Eurozone member states lack control over exchange rate policy, they are prevented from eliminating competitiveness problems and current account imbalances through the traditional method of currency devaluation. Thus Eurozone member states faced with a large current account deficit, and unwillingness by the other member states to engage in more inflationary domestic policies, are left with no way to eliminate the competitiveness imbalance other than through a deflationary and economically damaging process of internal devaluation[4]. The deflationary process reduces aggregate demand, employment and economic growth. As well as the damaging impact on the real economy, the deterioration in these macroeconomic indicators makes debt sustainability more difficult.

13. Crucially there was no single regulatory and supervisory body with the authority and capacity to respond to financial imbalances across the Eurozone in the lead up to the 2007-2008 crash. The long-term success of any single currency operating across international borders is contingent on an accompanying banking union with centralised regulation and enforcement across all of the participating member states. The half decade leading up to 2007-2008 was characterised by massive credit inflows to the Mediterranean periphery and Ireland from other member states. The credit inflows were fuelled by negative real interest rates[5] and higher levels of economic growth in the Eurozone periphery. With interest rates held low, credit sought greater return elsewhere leading to an explosion of debt fuelled private sector spending in the periphery. Spain and Ireland experienced asset price booms[6] centred on property while Portugal and Greece experienced consumption booms. Inward credit flows to the periphery seized up and then reversed in the wake of the US subprime

[4] Internal devaluation is a process of reducing relative costs, particularly unit labour costs, in a bid to increase competitiveness.
[5] While arguably appropriate for a stuttering German economy, the interest rates set by the ECB governing council were too low for a Eurozone periphery performing much stronger than Germany. It is not possible to set a single interest rate suitable for each of seventeen different and heterogeneous economies.
[6] Generous property related tax breaks, loose fiscal policy and a failure of financial regulation also contributed to the asset price bubble. These were all failures of domestic policy.

mortgage market crisis of 2007-2008. The result was a freezing of lending, crash in asset prices, insolvent banks, and deep recessions. National level bank bailouts intended to prevent bank runs and contagion were attempted in a number of countries. In some cases the bailouts undermined national solvency, most spectacularly in Ireland. Future surveillance, regulation and resolution of the financial system within the Eurozone should occur at the Eurozone level. This implies the need for a banking union. A Eurozone banking union should include transnational deposit insurance mechanisms to safeguard against bank runs[7] and should also include defined protocols for resolving bank failures. This must include a willingness to allow insolvent banks to fail.

14. The Eurozone crisis was avoidable and largely self-inflicted. Monetary union without banking union and certain minimum elements of fiscal union is likely to be an unsustainable model in the medium to long run. As a result of policy failures and misdiagnosis there is now a chronic sovereign debt crisis, a lingering crisis in the banking sector, and a crisis of growth, unemployment and lack of competitiveness in the periphery. Jay Shambaugh (2012) compellingly argues that these crises "*...together challenge the viability of the currency union*". The crises are inextricably interlinked and mutually reinforcing. Successful resolution of any one of these crises is contingent on successful resolution of the other two crises. Policy responses focused on a single aspect of the crisis may inadvertently worsen other aspects of the crisis. A systemic and multifaceted policy response is required.

[7] The Federal Deposit Insurance Corporation (FDIC) was set up in the United States in 1933 by the Glass-Steagall Act to prevent bank runs and provides a good model for the Eurozone to follow. The United States was bedevilled by bank runs for over a century prior to 1933. No depositor has lost insured funds since FDIC insurance has been in place. The FDIC also manages receiverships in failed banks.

The Policy Response to Date

15. In response to the deteriorating crisis the Eurozone member states collectively established a special purpose vehicle in May 2010 called the European Financial Stability Facility (EFSF). The purpose of the EFSF is to preserve financial stability in the Eurozone by providing a source of lending to Eurozone member states shut out of the sovereign bond markets. It is intended the EFSF will eventually be replaced by a permanent institution called the European Stability Mechanism (ESM)[8]. The ESM will have the same goal as the EFSF, namely to preserve financial stability in the Eurozone. Access to funding is conditional on the negotiation of an agreed programme of structural reform in the recipient country[9] combined with an agreed programme of discretionary fiscal consolidation[10] to reduce the country's primary government deficit. In a further bid to ease pressure on sovereign bond yields the European Central Bank (ECB) has purchased over €200 billion of sovereign debt under its Securities Market Program (Shambaugh, 2012).

16. The response to the competitiveness imbalances within the Eurozone has been to encourage a process of internal devaluation and structural reform in the less competitive member states. The attempt to restore competitiveness through internal devaluation has not however been balanced by complementary measures to stimulate demand and generate internal revaluation[11] in the core countries. The entire burden of the competitiveness adjustment has therefore been placed on the shoulders of the weaker economies of the Eurozone periphery. There has been little attention given so far to the problems of low or declining growth (see Table 1) and high unemployment[12] in the periphery, at least in terms of concrete policy measures.

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[8] The EFSF is currently lending €17.7 billion as part of the programme for Ireland, €26 billion as part of the programme for Portugal, and €144.6 billion as part of the programme for Greece. The EFSF had a remaining lending capacity of €248 billion by May 2012 and can agree new funding programmes up to July 2013. The ESM is expected to be operational from mid-2012 and to have an effective lending capacity of up to €500 billion.

[9] The recipient country must negotiate an agreed Memorandum of Understanding (MOU) with the European Commission, the European Central Bank and the International Monetary Fund. Continued lending is then provided on a quarterly basis and is conditional on adherence to the terms of the agreed MOU.

[10] The term 'austerity' is associated with programmes of discretionary tax increases and cuts to public spending. The empirical literature suggests that austerity policies reduce employment and economic growth, particularly where there is no room for offsetting monetary policy. See for example, IMF World Economic Outlook (2010) for a discussion.

[11] Internal revaluation would mean policies to encourage wage and nominal income growth.

[12] The most severe unemployment crises are in Greece and Spain. The Greek unemployment rate increased from 14.7% to 21.7% between January 2011 and January 2012, while Spain's unemployment

Table 1, Real GDP growth rates in the Eurozone periphery (Percentage Change on Previous Year)

	2008	2009	2010	2011	2012	2013
Greece	-0.2	-3.3	-3.5	-6.9	-4.7	0.0
Ireland	-3.0	-7.0	-0.4	0.7	0.5	1.7
Italy	-1.2	-5.5	1.8	0.4	-1.4	0.4
Portugal	0.0	-2.9	1.4	-1.6	-3.3	0.3
Spain	0.9	-3.7	-0.1	0.7	-1.8	-0.3

Figures for 2012 and 2013 are Eurostat forecasts

Source: Eurostat (2012a) May

17. The response to the banking crisis has been to recapitalise the weakest banks in a bid to forestall bank insolvencies, prevent contagion throughout the financial system and kick-start lending to the real economy. The recapitalisations have been done through national level funding support[13] which, in at least the case of Ireland, has undermined the solvency of the sovereign government. In addition to the national level bailouts, the ECB has provided cheap liquidity to the financial sector through its Long Term Refinancing Operations (LTROs[14]), while the capital requirement ratios[15] for financial institutions have been increased and bank stress tests conducted.

18. Finally, the prevailing narrative of the crisis has been to treat it as a problem of fiscal indiscipline in the periphery. This narrative has motivated the introduction of a package of new measures commonly called "The Six Pack[16]" and also drove the German inspired

rate increased from 20.8% to 24.1% over the same period. By January 2012 the youth unemployment rate had risen to 51.2% in Greece and to 50.3% in Spain (Eurostat Unemployment Statistics, 2012).

[13] The Irish banking collapse has cost the Irish state around €64 billion to date, and there are additional contingent liabilities. The €64 billion figure is equivalent to 41% of Ireland's 2012 GDP.

[14] The first LTRO was conducted in December 2011 while LTRO2 was conducted in February 2012. A combined total of just over €1 trillion was made available between the two LTROs. The LTROs allowed banks to borrow money at cheap rates. The ECB's hope was the banks would then use this money to purchase high yield sovereign debt. In particular, the ECB hoped this would ease pressure on Spanish and Italian bond yields.

[15] The downside to the higher capital requirements is it reduces the level of credit available to the real economy. The higher capital requirements may therefore have a negative impact on growth.

[16] The Six Pack is designed to toughen the rules of the Stability and Growth Pact by increasing surveillance, and making it easier to initiate a procedure against a country. The Six Pack also introduces new

intergovernmental Treaty on Stability, Coordination and Governance (TSCG[17]). The Six Pack and the TSCG are both intended to strengthen economic governance within the EU by increasing the fiscal oversight, and broader macroeconomic surveillance, of member states.

19. Certain policy responses have been necessary as stopgap measures. For example the provision of international bailout funds to Greece, Ireland and Portugal prevented a series of disorderly sovereign defaults. Other innovations such as the Six Pack and the TSCG might in theory, through better surveillance, reduce the frequency of future crises. While the ECB has received widespread criticism, it has also, through its various liquidity supports, played a crucial role in preventing the European financial system from completely seizing up. Nevertheless some aspects of the policy response are problematic or incomplete and taken as a package the policy response has been wholly insufficient to end the crisis.

20. The misguided policies insisting bank bailouts should be conducted at the national level, and all bank bondholders should be paid in full, have deeply exacerbated the crisis in Ireland, and if these mistakes are replicated in Spain they may threaten Spain's solvency. The majority of Eurozone member states are simultaneously pursuing programmes of deep austerity and internal devaluation without countervailing fiscal expansion and revaluation in the stronger economies. Such a combination makes economic recovery and debt sustainability all the harder to achieve. Without economic recovery the domestic banking sectors will continue to remain enfeebled and unwilling to lend, while at the same time increasing capital requirements are forcing the banks to increase their rate of deleveraging, thereby further reducing lending into the real economy.

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surveillance and control over a number of other macroeconomic indicators such as asset prices. The point of these measures is to identify the build-up of macroeconomic imbalances well in advance so that preventive steps can be taken.

[17] The TSCG or "fiscal compact" requires national budgets to be in balance or in surplus over the medium term. Specifically, Eurozone member states are required to keep their structural deficit at or less than 0.5% of GDP over the medium term. The Treaty also provides for greater economic policy coordination and convergence between Eurozone member states.

Suggested Package of Policy Responses to the Eurozone Crisis

Suggested Policy Responses to the Sovereign Debt Crisis

21. An institutional mechanism for breaking negative feedback loops of increasing sovereign bond yields and deteriorating debt sustainability is an essential component of the crisis resolution package. Specifically, the Eurozone needs a 'conditional' Lender of Last Resort (LOLR). If the possibility of sovereign default can be successfully eliminated, the banking sector can confidently begin lending again to sovereign borrowers, while the banks own positions will be strengthened as the quality and value of their sovereign assets will have increased. The overall effect should be to encourage lending to the real economy. Lower costs for sovereign borrowing will free up additional resources at the national level because debt interest repayments will be less of a fiscal burden over time. This in turn will help promote economic growth and further improve debt sustainability. With an LOLR in place the current downward spiral in the Eurozone can be halted.

22. The natural institution to perform the function of an LOLR for sovereign borrowers is the European Central Bank (ECB). However, the ECB is expressly forbidden under European Union law from performing this function and treaty change would be required to alter the ECB's mandate. Treaty change is a time consuming process. There is also genuine moral hazard issues associated with having a guaranteed LOLR for sovereign borrowings. According to the moral hazard argument, member states will delay or avoid budgetary reform and discipline unless they are subject to the market pressure of rising interest rates. Although fiscal indiscipline was indeed a cause of the Greek crisis, Spain and Ireland were both running budget surpluses prior to the crisis. Regardless of the credibility one ascribes to the moral hazard argument, it is a standard justification used in the creditor countries as a rationale against mandating and resourcing an LOLR. Thus for political reasons the moral hazard concern needs to be accommodated.

23. As currently designed, the European Stability Mechanism (ESM) will not function as an LOLR capable of preventing sovereign borrowing costs from spiralling out of control. Instead, the ESM is better understood as a Eurozone equivalent of the International Monetary Fund. The ESM is inherently unstable under its current design. While a single Eurozone country entering an ESM bailout programme may credibly be supported by the other sixteen member states, a pair of bailed out countries would have to be supported by the remaining fifteen, while five bailed out countries would effectively be supported by just twelve member states and so on. Thus the ESM is an inherently fragile structure. If Spain and Italy were both to become bailout countries, the ESM would be overwhelmed as a bailout fund.

The possibility of sovereign default is therefore not removed and the current ESM model is unfit for purpose as a mechanism for ending the sovereign debt crisis.

24. Various proposals in favour of Eurobonds have been advanced since the crisis started. These include the blue bond proposal of Jacques Delpla and Jakob von Weizäcker (2010); the E-bond proposal of Jean-Claude Juncker and Giulio Tremonti (2010), the ECB bond proposal by Yanis Varoufakis and Stuart Holland (2011) and the European Safe Bonds (ESBies) proposal of Markus Brunnermeier et al (2011). Unconditional Eurobonds have obvious moral hazard concerns and might even increase borrowing costs for currently low yield countries. In addition, it is unclear whether the Eurobond proposals will actually eliminate the multiple equilibria risks in the Eurozone. For example, the blue bond and E-bond proposals would only cover government debt worth up to 60 per cent of GDP and it is unclear why debts beyond that level would not remain susceptible to multiple equilibria risks. Meanwhile the ESBies proposal is a securitization model based on senior and junior tranches of debt and Erber (2012) argues a securitization model would have serious credibility problems in the financial markets. Sovereign insolvency still remains a risk unless access to Eurobonds is unlimited as a percentage of national GDP, yet unlimited unconditional Eurobonds create substantial moral hazard issues.

25. A better solution is to provide the ESM with a banking licence. Daniel Gros and Thomas Mayer (2011) have pointed out that although the ECB is forbidden from lending directly to member states; it already acts as an LOLR for private credit institutions. The ESM is a private company registered in Luxembourg. If the ESM were to be granted a banking licence, there would be nothing to prevent the ECB from lending to it. Once registered as a private credit institution the fund would be able to engage in purchases of government bonds at future debt issuances using its paid-in capital[18]. The ESM could then place these bonds as collateral with the ECB in order to maintain its own capital base. Under this model, by providing conditional liquidity for sovereigns, the ESM would de facto function as an LOLR for sovereign borrowers. While this may lead to a degree of monetary expansion, particularly in the short run, a higher level of Eurozone inflation in the short-to-medium term would actually have important advantages.

26. Without appropriate safeguards in place, the ESM banking licence model would clearly be susceptible to the same moral hazard risks as Eurobonds. The best way of dealing with the moral hazard issue is to properly incentivise the sovereigns to employ fiscal discipline. The

[18] ESM has a paid in working capital of €80 billion and further callable shares of €620 billion. Euro-area countries will pay the initial paid-in shares in five annual instalments beginning in 2012.

moral hazard concerns could be accommodated by applying differentiated interest rates for different member states. The precise interest rate offered by the ESM could be determined based on the member state's particular context and on its budgetary actions. For example, a sovereign borrower deemed to be closely adhering to its medium term budgetary objective, as negotiated with the European Commission under the revised stability and growth pact, and under the TSCG rules, would qualify for a lower interest rate from the ESM than would a member state choosing to ignore these rules. Unlike Eurobonds, the system would reward member states for adopting a fiscally prudent stance regardless of the member state's current debt to GDP ratio. To safeguard against political interference, the system of differentiated interest rates, and the relevant criteria for determining those interest rates, should be agreed upon and set annually by the board of the ESM in consultation with other relevant bodies such as the ECB.

27. The system could work as follows: In advance of the member state proceeding with its scheduled sovereign bond auction the ESM would announce the interest rate at which it will offer to purchase the bonds being sold. The interest rate would be calculated automatically using the defined criteria and formula agreed annually by the ESM Board of Governors. The ESM's announcement would effectively create a ceiling for the yield demanded on those bonds in the primary market. The auction would take place as normal, and whatever portion of the debt issuance is not taken up by private investors at lower yields than demanded by the ESM, would then be taken up by the ESM itself. The multiple equilibria problem would be eliminated under this framework for any member state showing a willingness to pursue a sustainable fiscal path. The riskiness of sovereign bonds would decline, which in turn would increase the value of sovereign bonds assets, and exert further downward pressure on the cost of borrowing. The overall effect should be to reduce the sovereign's annual debt interest repayments and free up additional resources for growth enhancing measures. Such a system would also aid the domestic banking systems by providing a safe haven for lenders.

28. Introducing a conditional LOLR of the type described would not diminish the reality Greece and perhaps other member states such as Ireland require substantial debt write-downs to achieve debt sustainability. However, it would at least prevent countries falling into bad equilibriums in the future, and it would therefore enhance Eurozone stability. The specific issue of debt restructuring requires a different response in different countries. For example, while Greece's sovereign debts are unsustainable and need substantial write downs, it is probable Ireland would become solvent if it was able to reduce the burden of the debt arising from its ill fated and ill advised bank bailout.

Suggested Policy Responses to the Banking Crisis

29. The Eurozone's failure to construct transnational bank resolution mechanisms has imposed enormous costs on taxpayers through the socialisation of private debt. The policy of funding bank bailouts at the national level, as opposed to the Eurozone level, has transformed the banking crisis into a series of full blown sovereign debt crises. ECB insistence all bank bondholders and creditors be paid in full, irrespective of the recklessness of their lending decisions, is a source of enormous moral hazard as it removes market discipline from lenders. Finally, the absence of a pan European deposit insurance scheme is generating a series of slow bank runs across the Eurozone periphery because depositors in these countries fear enfeebled sovereigns will be unable to support all of their debt obligations.

30. The ongoing capital flight will not end until depositors are sufficiently confident their money is equally safe in every Eurozone bank. This will only happen if Eurozone deposits are underwritten by a Eurozone level backstop. The solution to this problem in the United States was the creation of a federal deposit insurance system which was originally set up in 1933. The deposit insurance system has proven highly successful in the United States. A centralised deposit insurance scheme may well be a necessary component of any viable monetary union, and it is certainly a necessary component of a monetary union characterised by massive transnational banks. The difficult questions are (A) how such a mechanism should be implemented and (B) which institution should have responsibility for managing the scheme. In the short term, responsibility for underwriting Eurozone deposits should be assigned to the ECB, as only the ECB has unlimited resources to draw upon. The mere existence of such a backstop may, in itself, be sufficient to negate the need for its resources ever to be called upon. In the medium-term the responsibility for deposit insurance should be assigned to a dedicated institution, a European Deposit Insurance Corporation (EDIC). The EDIC should be funded directly by the Eurozone's private credit institutions so the consequences of bank failures do not fall on taxpayers in the future. A banking union is required to break the damaging link between large transnational banks and individual member states. Centralised supervision and regulation at the Eurozone level under a single agency with the authority to close down insolvent banks is the quid pro quo for a pan Eurozone underwriting of Eurozone bank deposits.

31. The suggested EDIC should also be responsible for managing the receiverships of failed banks. While continued liquidity support from the ECB for solvent banks is critical, such support should not be extended to insolvent credit institutions. Banks should be closed and

allowed to fail where shown to be insolvent by mandatory regular stress tests conducted by the EDIC itself, with deposits moved overnight to other banks where insolvency is revealed. Legislation for a pan Eurozone Special Resolution Regime (ESRR) for insolvent banks should be prioritised and rules for bank resolution should be clearly defined with transparent protocols. Without ESRR rules in place and a commitment to closing down failed institutions there will be no market discipline imposed on borrowers and lenders therefore dramatically increasing moral hazard risks in the Eurozone banking system.

32. Finally, the ongoing deleveraging in the Eurozone banking sector has negative implications for lending and economic growth. The ECB could ease pressure on the banks by helping them to deleverage faster. The deleveraging process could be facilitated by increased ECB purchases of financial assets using electronically created money. While such quantitative easing would probably generate higher inflation and a depreciation of the Euro, such effects may be helpful in generating growth in nominal GDP thereby improving sovereign debt sustainability in the periphery.

Suggested Policy Responses to the Crisis in the Real Economy

33. The fiscal austerity programmes across the Eurozone are weakening growth and reducing employment. IMF research by Leigh et al. (2010) provides estimates for the impact of austerity measures on both output and employment. Pro-cyclical fiscal contraction unsurprisingly heightens the scale of economic decline. Leigh et al. find discretionary fiscal consolidation equivalent in scale to 1 per cent of GDP will typically reduce GDP growth by approximately 0.5 per cent within two years and will raise the unemployment rate by about 0.3 percentage points. Such measures are found to be more painful when these adjustments occur simultaneously across many countries. The reason is not every country can increase their net exports at the same time. Budget cuts are also found to be more damaging when monetary policy is not in a position to offset them. If interest rates are at or just above zero per cent, the effect of the fiscal consolidation will ultimately be more costly in terms of lost output. The effect of underemployment of labour and capital on output over time makes debt sustainability more difficult. Weak output growth can undermine national solvency while sluggish growth also weakens the banking sector and its ability to lend to the real economy.

34. The Eurozone is experiencing a major balance of payments and competitiveness crisis. Recovery in the less competitive Eurozone periphery is constrained by the inability of these countries to restore competitiveness through currency devaluation. Competitiveness can only be restored through a sustained period of lower wage growth and overall inflation in the periphery than in the more competitive regions. However, low inflation in the periphery reduces the nominal growth of GDP making debt sustainability much harder to achieve. But restoring competitiveness to the periphery does not necessarily require low inflation and wage growth in the periphery. Because competitiveness is a relative concept, improved competitiveness in the periphery simply requires lower rates of inflation than those prevailing in the more competitive regions. This suggests the ECB and other European policymakers should broaden the scope of their inflation targeting beyond the headline rate for the Eurozone, and expand their focus to incorporate a system of differentiated inflation targeting, with each regional economy being assigned its own inflation target. As part of this process, the ECB's target inflation rate of 2 per cent for the Eurozone as a whole should temporarily be increased to 4 per cent for a defined period. The Eurozone periphery is approximately one third of the overall Eurozone economy, and Table 2 shows indicative inflation targets required to restore competitiveness to the Eurozone periphery without compromising nominal GDP growth in the periphery. As can be seen, higher inflation targets for the overall Eurozone clearly make it easier to reconcile improved competitiveness with debt sustainability through higher nominal GDP growth. Higher inflation will lead to a devaluation of the euro which will partially offset some of the competitiveness losses in the core Eurozone countries. The implication is wage and income increases combined with looser fiscal policy in the more competitive economies are a vital element of Eurozone recovery.

Table 2, Differentiated inflation targeting in the Eurozone[19]

	Target for peripheral regions (weight = 1)	Target for non-peripheral regions (weight = 2)	Overall Target
Inflation (%)	0	3	2
Inflation (%)	1	4	3

[19] The purpose of differentiated inflation targeting is to reconcile the twin goals of restoring competitiveness to the periphery without damaging nominal GDP growth.

Inflation (%)	2	5	4

35. In addition, the Eurozone needs to better coordinate its resources to lift overall demand. Sony Kapoor and Peter Bofinger (2012) have outlined a persuasive seven point plan underpinning a 'Growth Pact' for the European Union. The plan calls for increases in the levels of public investment to be funded through a combination of measures. For example, Kapoor and Bofinger suggest aggressively tackling tax avoidance and tax evasion; maximising the revenue potential from the most growth friendly taxes[20]; dramatically increasing the resources of the European Investment Bank and accelerating plans for project bonds using unused EU resources to support infrastructure investments in areas such as telecommunications and green energy.

36. Crucially, the Eurozone comprises a number of heterogeneous economies and is almost certainly not an Optimal Currency Area (OCA). Each country has its own economic structure, its own institutions, and its own set of fiscal policies. Individual member states gave up control of important macroeconomic policy levers such as monetary and exchange rate policy when the Euro was adopted. These key policy levers were not adequately replaced and this left individual member states particularly vulnerable to asymmetric shocks and to divergences in competitiveness. But this does not imply that full fiscal federalism is a necessary requirement of a successful monetary union. A commitment to fiscal union is unnecessary. Instead, what is required is a centralised insurance fund to ameliorate the impact of recession and severe asymmetric shocks, combined with intergovernmental coordination of policies to prevent competitiveness and fiscal imbalances from growing too large. An inter-regional insurance scheme to provide fiscal transfers in a counter cyclical manner could be funded by a pan Eurozone consumption tax hypothecated for and paid directly to the centralised insurance fund. The fund would be mandated to run a surplus over the economic cycle and could be called upon under strict guidelines to provide direct fiscal support on a temporary basis to countries suffering recession or a severe asymmetric shock. The funding should be automatic subject to the conditions and terms of access agreed annually by Eurozone governments.

A Viable Monetary Union

[20] Good examples of growth friendly taxation include the taxation of wealth, land, property and inheritance windfalls. On the other hand income taxes on low earners are particularly harmful to growth and employment.

37. The monetary union can fail. But if the correct policies are adopted the Eurozone can also be transformed into a viable structure over the long-term. We must learn the lessons of history as well as the lessons of economic theory. Monetary unions must be supplemented by banking unions including trans-national deposit insurance. Monetary union requires a guaranteed lender of last resort with safeguards against moral hazard. A centralised fiscal apparatus to help offset regional recessions and asymmetric shocks is also a crucial element of any successful monetary union. Finally, we must consider the type of EMU we want to be part of and the type of EMU we want to save. We must restore social Europe and the EMU must not be become a straightjacket that automatically preferences inflation and deficit targets at the expense of unemployment and poverty targets.

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