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Can the Euro survive?

As the struggle to find a solution to the sovereign debt crisis bedeviling the European Union (EU) continues, those of us sitting on this side of the Atlantic wonder about the economic repercussions if the euro zone is not stabilized. There is the distinct possibility that widespread default in the EU, and the accompanying banking crisis, could push the United States back in to recession. Therefore, a fundamental question is: can the euro survive? Specifically what are the policy options that have a high probability of resolving the EU's sovereign debt problem, as well as ensuring the long-run future of the euro as a currency?

In October 2011, Europe's political leaders agreed on a three-part package to save the euro: a restructuring of Greek debt; recapitalization of EU banks; and a boost to the firepower of the European Financial Stability Facility (EFSF) of €1 trillion ($1.4 trillion), aimed at protecting solvent but illiquid EU countries. A question at the time was would this be enough to save the euro? Refinancing Spain and Italy's bonds alone is expected to cost €1 trillion over the next three years, which comes on top of existing commitments of €440 billion to Portugal, Ireland and Greece, and any funds that will be needed to recapitalize European banks. Only the European Central Bank (ECB) has unlimited liquidity to credibly guarantee the debt of a country such as Italy. It is the latter possibility that is central to the question of whether the euro can survive.

Onset of the Euro Zone Crisis

Parallel to national currencies, the euro zone officially came into existence on January 1 1999, with 11 members of the EU meeting what are termed the *convergence* or Maastricht criteria for the third stage of Economic and Monetary Union (EMU).[1,2] Subsequently, Greece met these criteria, joining the euro zone on January 1, 2001, with physical notes and coins replacing national currencies on January 1, 2002. Currently, there are 17 members of the euro zone, Estonia being the most recent on January 1, 2011.[3] Significant by their absence are the UK and Denmark who have negotiated a legal opt-out of the euro zone, while Sweden has followed a *de facto* opt-out.[4]

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[1] The 11 members were: Austria, Belgium, Finland, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain.

[2] Based on Article 121(1) of the European Community Treaty, these criteria are: (i) a country's inflation rate can be no more than 1.5% points higher than the average of the three best-performing EU members; (ii) a country's annual fiscal deficit, and its gross government debt, as a ratio of GDP, should not exceed 3% and 60% respectively; (iii) a country should have been a member of the Exchange Rate Mechanism (ERM) for at least two years, and have not devalued its currency in that time; and (iv) a country's long-term interest rate cannot be more than 2% points higher than the average of three EU members with the lowest inflation rates.

[3] The other 4 EU members who have joined the euro zone are: Slovenia (2007), Cyprus and Malta (2008), and Slovakia (2009).

[4] The UK and Denmark are legally exempt from membership of the euro zone unless their governments decide otherwise by either parliamentary vote or national referendum, while Sweden is required to join once it meets the convergence criteria, and currently it is not part of the ERM, membership of which is voluntary.

In terms of analyzing the sovereign debt crisis in the EU, it is interesting to consider the performance of bonds issued by Portugal, Ireland, Greece and Spain, the so-called "PIGS". Prior to 1999, yields on 10-year bonds offered by the PIGS were typically much higher than those of the German Bund. These yield spreads reflected expectations of the financial markets, about the risks associated with inflation and exchange rate depreciation in the PIGS, i.e., none of these countries had independent central banks committed to targeting inflation, and all had independent currencies that could be allowed to depreciate against the Deutsch Mark (Buiter and Rahbari, October 2010). In contrast, between 2001 and the onset of the financial crisis in late-2007, 10-year bond yields of the PIGS relative to the Bund were often less than 20 basis points.

Why this "europhoria"? Buiter and Rahbari (October 2010) argue that, either the financial markets believed that fiscally-responsible members of the euro zone would discipline those members who were less fiscally responsible; or there was an expectation that risk-pooling would work through cross-border fiscal transfers or sovereign bailouts by the European Central Bank (ECB). Once the financial crisis got underway though, yield spreads relative to the Bund began to open up again, this time reflecting not only market expectations about inflation, but also the risk of default on sovereign debt by the PIGS.

This change in market beliefs became particularly acute in late-2009, when the crisis in the euro zone really took off. Paul De Grauwe (February 2010), who has written extensively on problems facing the euro zone, identifies three key "actors" in the development of the crisis. First, the Greek government lost the trust of the financial markets. In October 2009, the newly elected Greek government revealed that its budget deficit was actually 12.7% of GDP, as opposed to the 6% reported by the previous government. Second, the ratings agencies, reacted very aggressively to Greece's announcement by not only downgrading the latter's sovereign debt, but also that of other members of the euro zone, bond yields of the PIGS increasing substantially against the Bund in late-2009 and into 2010.[5] Third, the crisis was exacerbated by hesitation on the part of other euro zone governments in offering support to Greece, and also the ECB created uncertainty about whether it would accept Greek bonds as collateral for any liquidity provision.[6]

Was it Public "Profligacy"?

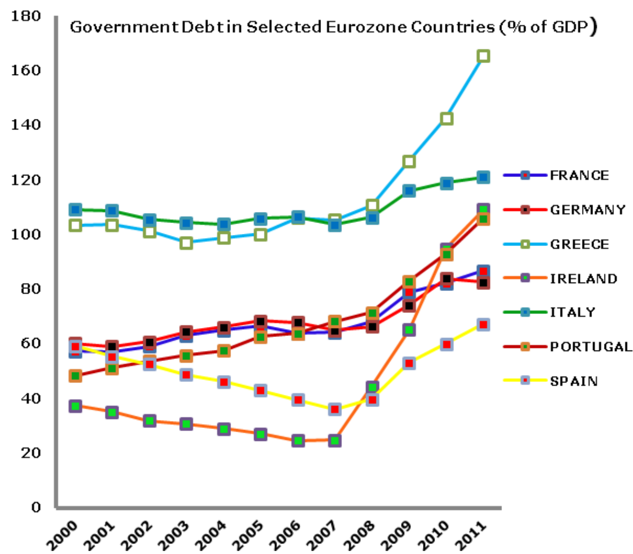
While there is little doubt that Greece is insolvent, and expected to default on its sovereign debt, euro zone countries such as Italy and Spain, while having significant levels of public debt, are likely solvent and instead face a liquidity problem. Indeed as pointed out by De Grauwe (September, 2010), apart from Greece, it is hard to argue that the debt crisis in the euro zone has been due to public profligacy prior to the financial crisis. The data on euro zone debt actually show that by 2008, household and banking sector liabilities had risen to 70% and 250% respectively of GDP, while government liabilities had fallen to 67% of GDP. With the onset of the financial crisis, much of this private debt, especially that of the banking sector, was converted into public debt as governments sought to provide liquidity to the financial system. Along with increased public spending on automatic stabilizers such as unemployment and welfare benefits, and a recession-induced reduction in tax revenues, it is not surprising that with the onset of the financial crisis, public debt levels in the euro zone expanded rapidly.

As the figure below shows, with the notable exception of Germany and Portugal, the ratio of government debt to GDP was falling in several euro zone countries prior to 2008, most notably Ireland and Spain, two of the PIGS. Consequently, the sovereign debt crisis in the EU is not exclusively due to fiscal mismanagement. Instead, the crisis has highlighted a serious fragility in a monetary

[5] De Grauwe uses the language of statistics to describe the behavior of the ratings agencies: during the period of "europhoria", they systematically made type I errors, i.e., they believed no euro zone members had a sovereign debt problem; once the crisis broke, they systematically made type II errors – they believed many if not all euro zone members had a sovereign debt problem.

[6] During the banking crisis, the ECB was willing to accept BBB+ rated bonds as collateral, but in late-2009, it returned to requiring a minimal rating of A-, which created a problem as Greek bonds were downgraded to BBB+ by the ratings agencies.

union, and one which the ECB ought to mitigate, but instead has chosen not to.



The Basic Problem of the Euro Zone

Nobel Prize winner and columnist Paul Krugman has drawn attention in his blog to what he describes as "...De Grauwe's now essential paper..." *(New York Times,* September 11, 2011). What De Grauwe (May 2011) does in this paper is explain the underlying problem of the euro zone, and by implication, how to resolve it. To do this, he compares the public debt and bond yields of Spain and the UK. By 2011, the latter's debt to GDP ratio had risen to 89%, compared to Spain where it had risen to 72%, yet at the same time yields on 10-year Spanish bonds have risen significantly compared to the equivalent UK bonds, the spread increasing to 200 basis points by early-2011. This appears to be a paradox: Spain which has lower public debt compared to the UK appears to be the country that the financial markets believe is more likely to become insolvent.

The explanation for this apparent paradox lies in the fact that the euro zone has a fundamental weakness – member countries issue debt in a currency over which they have no control. If investors are concerned about Spain defaulting on its debt, they can sell Spanish bonds, reinvesting the proceeds elsewhere in the EU, driving up the cost to Spain of rolling over its debt. With the ECB issuing currency in the euro zone, the Spanish central bank no longer acts as lender of last resort to its financial system. As a consequence, due to the decline in its money stock, a liquidity crisis in Spain can soon turn into a solvency crisis.

By contrast, the UK can avoid such contagion due to it still being able to issue sovereign debt its own currency. If investors fear that the UK will default on its debt, they sell British bonds, and subsequently sell the proceeds, denominated in British pounds, in the foreign exchange market. As a result, the pound depreciates, but the UK money stock remains the same. Even if part of that money stock is not re-invested in British bonds, the Bank of England, acting as lender of last resort, can always buy up bonds and ensure sufficient liquidity to fund UK public debt at reasonable rates of interest.

The key here is that financial markets can precipitate liquidity, and subsequently solvency crises in countries that are members of a monetary union, as compared to a country with its own currency such as the UK where the Bank of England can always prevent a liquidity crisis turning into a solvency crisis. As De Grauwe (May 2011) notes, this is not dissimilar to the case of an emerging economy, which, due to the lack of a well developed financial sector, has to issue debt in a foreign currency, and as a result may face a "sudden stop" if capital inflows dry up, which then results in a solvency crisis. To quote De Grauwe's paraphrasing of Barry Eichengreen *et al*. (2005), "...this works as the "original sin" that leads these countries into a bad equilibrium full of pain and misery..."

An additional problem is that given the integrated nature of financial markets in the euro zone, the risk of contagion between member countries is great. Due to these spillover effects, it is possible for a country in a monetary union that is facing a liquidity problem to be actually be pushed into a "bad" equilibrium. Specifically, the expectations of the financial market that a country will default on its debt, becomes a self-fulfilling prophecy. In other words, taking the case of Spain, if investors believe that Spain will default on its debt, they sell Spanish bonds, thereby pushing up Spanish interest rates. In the absence of

the Spanish central bank buying up bonds in order to ensure Spain's ability to service its debt at reasonable cost, the rise in Spanish interest rates pushes it closer to default, so default becomes more likely, and the financial market appears to have got it right.

As De Grauwe (May 2011) notes – being pushed into a "bad" equilibrium has two additional consequences. First, what starts out as a sovereign debt crisis subsequently becomes a domestic banking crisis. Due to the fact that the banking sector typically holds a substantial portion of domestic bonds, a fall in their price results in significant losses on the banks' balance sheets. In addition, due to the decline in the money stock, the banks also face a liquidity constraint. This dynamic has been apparent in both Greece and Portugal, and in Ireland, where the financial crisis resulted in a banking crisis the sovereign debt crisis has merely served to intensify the former. Second, once pushed into a "bad" equilibrium, members of a monetary union are constrained in their ability to apply automatic stabilizers. Government budget deficits increase as a recession bites, but facing distrust from the financial markets over their ability to service their debt, they are forced into implementing austerity measures to stave off a solvency crisis, thereby intensifying the recession, a situation Spain finds itself in at present.

The ECB as Lender of Last Resort

There has been considerable discussion as to how the euro zone can be saved, much of the focus being on changes in its governance. To quote Barry Eichengreen (September 9, 2011), there has been a "…cacophony of proposals for restoring confidence…" These include the former president of the ECB, Jean-Claude Trichet calling for stronger budgetary rules, while Germany's finance minister Wolfgang Schäuble has suggested that the EU should move closer to full fiscal union. Others have argued for the creation of Eurobonds. Eichengreen takes the view though that "...European leaders' continued focus on the long run at the expense of short-term imperatives may indeed be the death knell for their single currency…"

How then can the euro be saved? Paul De Grauwe has argued convincingly in several of his papers that the only way to prevent a country such as Spain being pushed into a "bad" equilibrium is for the ECB to act as lender of last resort in the sovereign bond market, much as the Federal Reserve does in the US, and the Bank of England in the UK. Essentially, if it is a self-fulfilling nature of expectations creates what De Grauwe (September 2011) calls a "coordination failure", i.e., fear of a lack of liquidity actually pushes countries into a situation where there is insufficient liquidity. A central bank such as the ECB can provide the solution to this coordination failure by acting as lender of last resort, purchasing government bonds through its open-market operations. If the ECB does not intervene aggressively in the bond market, it may end up having to intervene to mitigate the likely banking crisis. The latter will be considerably more costly to the ECB, banking liabilities in the euro zone currently standing at 250 % of GDP compared to public debt which stands at 80% of GDP.

Not surprisingly, there is significant opposition to the ECM acting as a lender of last resort, the key arguments revolving around the risk of inflation, the fiscal consequences, the problem of moral hazard, and questions of legality. Each of these arguments can be dealt with in turn:

- when a central bank buys up bonds through open market operations, it provides much needed liquidity to the market by increasing the money base, thereby preventing a deflationary spiral. However, an increase in the money base is not always correlated with an increase in the money stock, and therefore is not necessarily inflationary. De Grauwe (September 2011) shows that after 2008, there was a clear "disconnect" between these two variables, the former increasing substantively compared to the latter, as the ECB purchased assets from the banking sector, the banks using the injection of liquidity to rebuild their balance sheets rather than lending to the non-banking sector;[7]

- any open market operations undertaken by a central bank have the potential to result in

[7] A similar phenomenon also occurred in the US and UK after the onset of the financial crisis.

losses, be it in foreign exchange transactions, or purchase of private paper and government bonds. Therefore, if negative fiscal consequences are to be avoided, there should be no open market operations at all. As De Grauwe notes, this misses the point – loss making operations by the central bank may be necessary to ensure financial stability, and if they actually prevent the type of "bad" equilibrium that can characterize a monetary union, then it is possible there will be no losses, and hence no fiscal consequences. In other words, the financial markets, faced with a credible pre-commitment by the central bank to act as a lender of last resort, will no longer expect a country such as Spain to default on its sovereign debt, so the ECB does not actually have to intervene;

- necessarily there will be a problem of moral hazard if a central bank commits to acting as a lender of last resort in the government bond market, i.e., governments may have an incentive to issue too much sovereign debt. De Grauwe argues, however, that the functions of fiscal oversight and provision of liquidity need to be kept separate, i.e., the ECB should be permitted to act as a lender of last resort while an independent European agency should be responsible for regulating and supervising issuance of public debt by euro zone governments. In principle, the ECB should not lend to countries that are insolvent, but in practice, however, liquidity and solvency issues are hard to separate.[8] If it were that straightforward, the financial markets would be able to tell the difference, and there would be no need for a lender of last resort;[9]

- it has been argued by some observers that the purchase of government bonds by the ECB would be in violation of the EU Protocol covering its operations.[10] However, the prohibition is not on the ECB buying government bonds in the secondary market, but according to Article 21 of this Protocol, it is prohibited from purchasing debt from "public entities". In other words, by conducting open market operations in secondary markets, the ECB is able to provide liquidity to agents in the financial sector who hold the bonds, which is quite distinct from underwriting of public deficits.

If there is no real substance to concerns about the ECB acting as a lender of last resort to the bond market, then it should be allowed to give a clear commitment to the financial markets that it will act in this way. By creating confidence that it will do this, the markets will be less likely to push countries that face a liquidity problem into a "bad" equilibrium of insolvency. As a result, the ECB will rarely have to act as a lender of last resort. To quote from Krugman's blog, "….What's needed, clearly, is for Europe — and ultimately that probably means the ECB — to provide for Spain and Italy the kind of backstop countries with their own currencies can provide for themselves. Without that, the whole euro system is at risk of unraveling…." (*New York Times*, September 11, 2011). In other words, the euro zone can be saved – if only the ECB were allowed to.

[8] This principle is often referred to as the Bagehot doctrine, named after Walter Bagehot's analysis of finance and banking in the late-19th Century, *Lombard Street: A Description of the Money Market* (1873).

[9] De Grauwe suggests that the ECB could always provide unlimited liquidity in the bond market at a penalty rate once a country's bond yield was so many basis points above the risk-free yield

[10] "Protocol on the Statute of the European System of Central Banks and the European Central Bank" – this is an Annex to the Maastricht Treaty of 1992.

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