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2008 – BANKING CRISIS, 2011 – SOVEREIGN DEBT CRISIS: TWO SIDES OF THE SAME COIN?

It has been obvious for some time that the banking crisis that engulfed the Western world in 2008 has also seriously weakened sovereign financial systems. The commitments to bail-outs were dwarfed by the sharp fall in tax revenues in the recession that, in turn, led to major increases in fiscal deficits and substantial public debt accumulation. However, the impact on the eurozone has been far more severe than elsewhere.



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Peculiarities in the structure of the eurozone have led to the extraordinary situation in which the stability of banks throughout the zone, and indeed the survival of the currency system itself, have been endangered by a sovereign debt crisis in an entity that comprises a little over 2 per cent of eurozone gross domestic product (GDP).

The structural origins of this extraordinary turn of events are now well known. They include: the absence of any effective all-zone treasury function; the lack of a single eurozone bond; no substantial budgetary operation within which might be embedded the sort of fiscal transfers necessary to stabilise the monetary union that exist in, say, the United States or Australia; and, as has been painfully evident, a lack of coherent and decisive political leadership.

Yet there are some all-pervasive and more fundamental trends in international finance, which have played a major part in the worldwide crisis and have assumed a particular significance in the context of the eurozone.

Key factors contributing to the crisis

First, the growth of the international bond market. Prior to the wave of financial market liberalisation that was sparked by President Nixon's abandonment of the Bretton Woods system in August 1971, post-World War II sovereign bond markets were predominantly national. With liberalisation, international markets grew rapidly. Overseas sales of US bonds rose from 3 per cent of US GDP in 1970 to 200 per cent in the early 2000s; while overseas sales of UK bonds rose from nil in 1970 (such sales would have been illegal) to 1000 per cent of UK GDP in the early 2000s. The enormous scale of international bond transactions today makes it possible for there to be huge swings in the funding of national bond markets, between holdings of, say, dollar, sterling or euro bonds, or between different sovereign euro bonds. These potentially destabilising swings have transformed the sensitivity of funding policy to market forces.

Second, the financial innovation that accompanied liberalisation has resulted in rapid growth in the size of the balance sheets of the banks (and other financial intermediaries) *relative to the underlying transactions that those balance sheets are based upon*. Broadly speaking, the assets of the banks have grown at an average rate of 15 per cent since 1978. Given that world GDP has grown (in nominal terms) at a little more than 5.8 per cent per annum over the same period, the excess growth of 9.2 per cent per year suggests that the banks' balance sheets are now around 20 times greater, relative to the given underlying GDP, than was the case 33 years ago. Since deposits are not likely to rise at a rate much faster than the growth of GDP, the relative increase in the size of financial balance sheets must be due to the growth of wholesale lending between financial institutions.

A simple example of what has happened can be seen in the market for domestic mortgages (see Shin 2010). In the 1960s the financing of mortgages involved households depositing funds in mortgage banks that were then lent on to other households to enable them to buy houses. Today this transaction is likely to pass through a long chain of investments, from the household purchase of money market funds to short-term loans to the bank, which expands funding through repo transactions with a securities firm that in turn purchased securities from a provider of asset-backed securities, which were assembled from a mortgage pool created by lending to home-buying households. Indeed, even this sequence is probably a rather a short, uni-directional chain.

Suppose in the case of a 1960s-style funding, the value of the underlying mortgage is \$100,000. Then there is \$200,000 worth of financial transactions associated with the intermediated transfer of funds from the depositing household to the home-buying household. *Gross* assets of \$200,000 are created — \$100,000 of assets in the form of bank deposits on the household's balance sheet, and a \$100,000 mortgage on the bank's balance sheet. With today's longer chains of transactions, far greater gross stocks of assets are created. And gross assets matter. In the face of an extreme event (such as a mortgage default), netting of the intermediary's position is impossible since the asset (a 20-year mortgage) and the liability (a demand deposit) do not match. The bank has lost \$100,000 on its balance sheet and, presuming it defaults, the lending household has lost \$100,000 too. The destructive power of gross positions was clearly exposed in the financial crisis. In 2008, Lehman Brothers' OTC CDS (over-the-counter credit default swap) book had a gross notional value of \$72 billion. Months later, the net loss was known to be \$5.2 billion. Similarly, AIG's CDS book had a notional value of \$270 billion, whereas actual losses were eventually just \$3 billion. But it was the inability to provide further collateral against the gross figure when the rating on the book was reduced that forced AIG to look for a rescue from the federal authorities.

Third, the growth of wholesale funding has transformed the balance sheets of the banks. In the 1960s the liabilities of a bank consisted almost entirely of deposits by households and firms. The assets of the bank were a mixture of very liquid assets, such as Treasury bills and trade acceptances (around 40 per cent) and loans to households and firms (the remaining 60 per cent). Today the balance sheet looks quite different. Deposits

by households and firms comprise only about 20 per cent of the liabilities, the rest being made up of lending from other banks (much of it international), commercial paper and repos. In the United Kingdom, funding through the repos market is almost of the same order as funding by deposits. Around 25 per cent of the asset side of the banks' balance sheets consists of loans to households and firms, with the rest being *marketable* loans and securities and other investments, and repos.

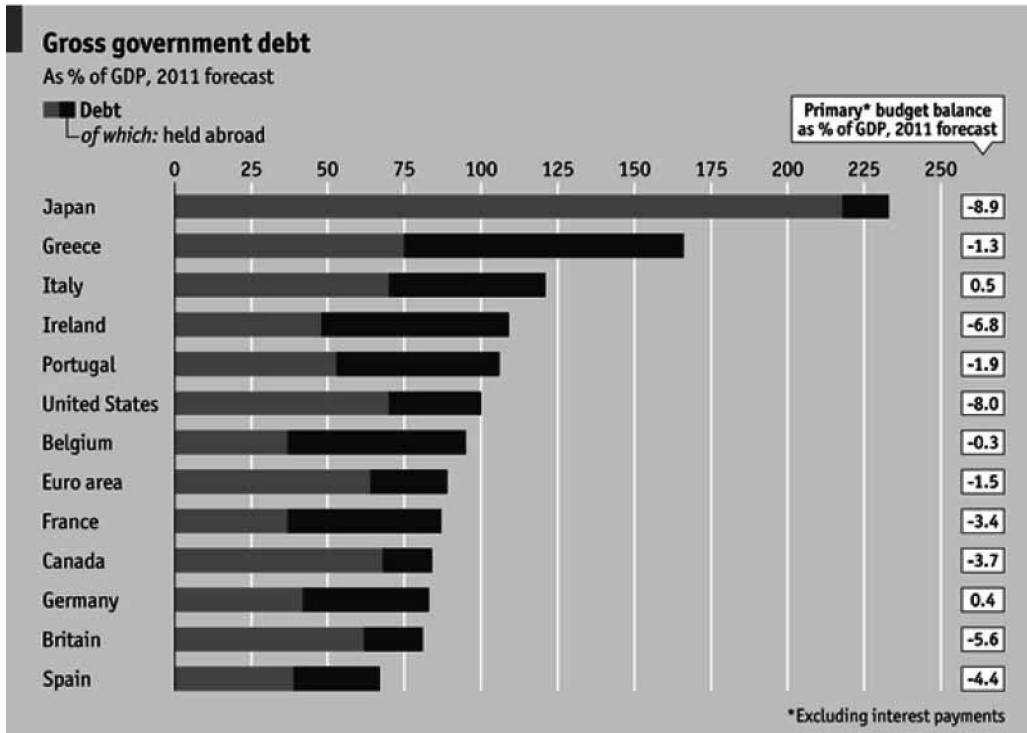
The growth of the repo market has been one of the most extraordinary phenomena of the past decade, with repos growing four times faster than M2 (cash and current accounts — roughly the rate of growth of nominal GDP). *Overnight* repos have grown at the same rate. Management of the repo market has become an important part of central banks' management of overall liquidity; the day-to-day stability of the repo market being a key policy goal.

The overall result has been a fundamental shift in bank funding, away from deposits (that tend to be very 'sticky') toward short-term market transactions that must be continually refinanced. The 90 banks covered by the recent European Banking Authority stress tests, for example, need to refinance €5,400 billion of debt in the next two years, equivalent to 45 per cent of European Union GDP. This is not too difficult to turn over in tranquil times, but a significantly greater challenge today.

The eurozone crisis

The impact of the 2008 financial crisis on public debt is well known. Among OECD countries, the ratio of public debt to GDP doubled from 1970 to 2008, rising from 40 per cent of GDP to 80 per cent of GDP. In the past three years it rose to 106 per cent of OECD GDP. Of particular interest is the balance between domestic funding of public debt (a nation borrowing from itself) and international funding. It is noticeable that among developed countries, it is the eurozone countries that have by far the greater international exposure (see Figure 1). Taking Canada, Japan, the United States and the United Kingdom together, the overseas proportion of public borrowing is around 12 per cent. However, taking Belgium, France, Germany, Greece, Ireland, Italy, Portugal and Spain together, around 50 per cent of public debt is funded overseas (predominantly, but not exclusively, in other countries of the eurozone) — and this figure is roughly the same for each country.

FIGURE 1: Gross government debt



Source: IMF Global Financial Stability Report, 2011.

There are two major reasons for this difference in the structure of funding.

First, while the eurozone economy is larger than the US economy and, hence, any balanced bond portfolio must contain euro-denominated bonds, exposure to the euro can be obtained by investing in any of the various eurozone sovereign bonds. Investors therefore have a choice as to which euro sovereign to hold, a choice that is likely to be informed by the risk, return and hence diversification of their entire euro holding.

Second, the policy of the European Central Bank (ECB) resulted, at least up to the end of 2009, in all eurozone sovereign bonds being treated by the market as if they were almost equivalent to one another, despite obvious differences in national debt structures which were, in turn, reflected in bond ratings (Buiter and Sibert 2005). A key decision was made to assign all eligible euro-denominated sovereign debt instruments issued by the eurozone central governments to the same (highest) liquidity category. Accordingly, not only were spreads between the returns on sovereign bonds very small, but also the ECB operations in the repo market ensured that sovereign debt could be transformed into cash, easily and cheaply. It was therefore in the interest of the banks to hold large quantities of sovereign debt on their balance sheets — in effect, earning a substantial risk-free return. Moreover, since all sovereign debt was treated the same, then it made sense to hold a 'balanced portfolio' of sovereign instruments from throughout the eurozone. An unintended consequence of ECB policy was to make sovereign funding very easy and very cheap.

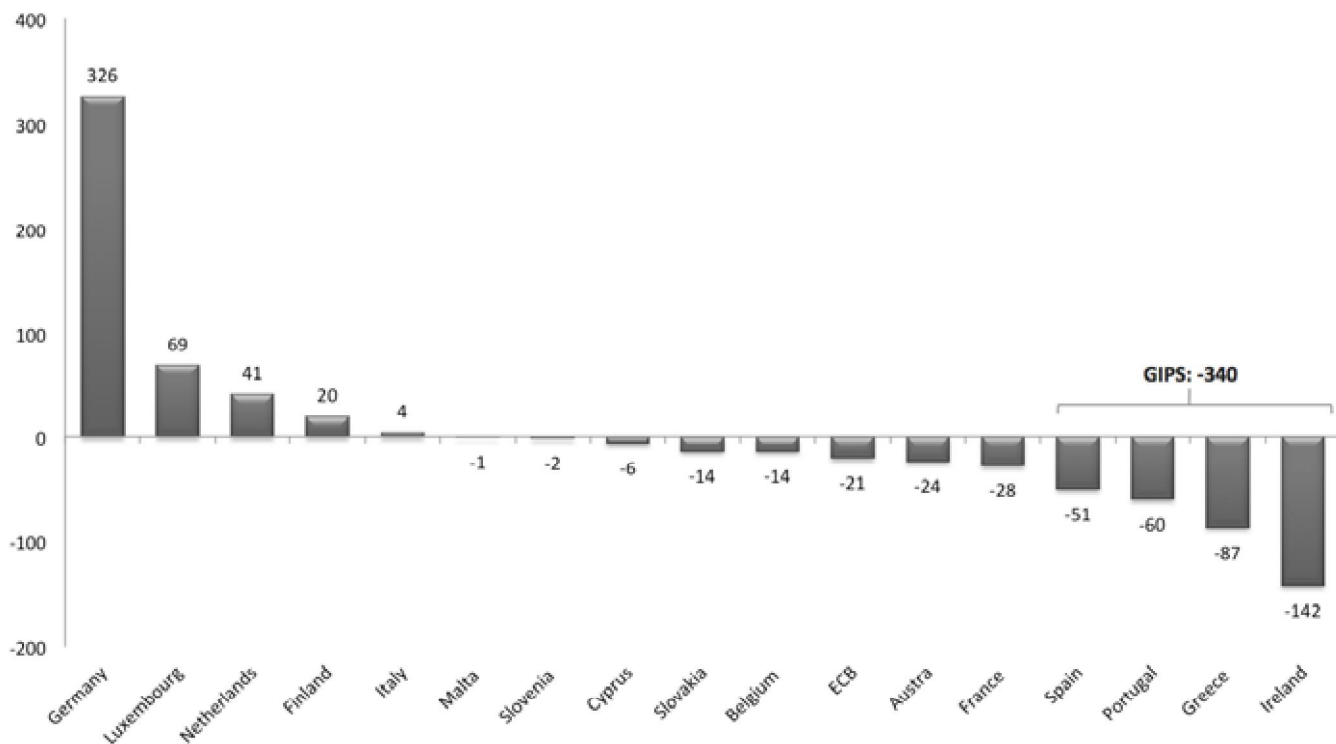
Eurozone states are prohibited from printing money, but they were provided with a financial facility that (so long as confidence lasted) was almost as good! This was a particularly attractive source of funding as tax revenues collapsed in 2007-09.

A further element of ECB policy was the excessive increase in the valuation haircut associated with the maturity of the collateral used in repo transactions. This encouraged the move to short-term funding that has become typical of eurozone banks and eurozone sovereigns.

These arrangements could not survive the market shock of the emergence of funding difficulties in Greece, Portugal and Ireland, and latterly in Spain and Italy. Around €450 billion of sovereign debt is held by Europe's top 24 banks, of which €50 billion is from Greece, Ireland and Portugal, nations that make up about 6 per cent of eurozone GDP. As CDS spreads widened, the repo market was no longer a source of ready cash, indeed Greece could only sell government bonds direct to the ECB. Banks holding large quantities of eurozone sovereign debt faced the prospect of large write-downs. The banking crisis has led to a sovereign crisis that has led back to a banking crisis.

The most spectacular collapse so far has been the recent demise of the Franco-Belgian financial group Dexia — a bank that was rated one of Europe's safest in the stress tests last July. Dexia held €21 billion of 'peripheral' eurozone sovereign bonds. The overall balance sheet was financed by short-term borrowing that required

FIGURE 2: Claims of euro area members from netting of euro system cross-border payments (in billions of euros)



Source: Sinn and Wollmershäuser (2011).

daily funding of €10 billion to €20 billion funding from the wholesale markets. A ratings downgrade closed that short-term door forcing Dexia to turn to the French and Belgian governments to guarantee €90 billion of short-term funding. Dexia is now going through what is effectively an insolvency process.

It is worth reflecting on why the ECB pursued its common strategy toward sovereign bonds. The central bank of a single sovereign, say the Bank of England or the Federal Reserve, will automatically regard bonds issued by its sovereign state as being the most liquid in the market, since the state can always swap the bonds for cash — it can print money. It would seem that the ECB carried over this not unreasonable approach to management of the repo market in a single state to the peculiar multi-state structure of the eurozone.

A further notable characteristic of the eurozone is the lack of a single, all zone funding mechanism — the lack of a eurobond. This means that investors seeking exposure to the euro are required to hold bonds issued by individual sovereigns. This also means that exposure can be maintained while switching from one sovereign to another. Moreover, any holder of euro cash and bank deposits (which lack any national identity) can achieve the security of a desired national identity by moving cash balances from say, Greek current accounts, into, say, German bonds. There is thus the potential for massive capital flight. Between states with different currencies, capital flight results in the accumulation of unwanted currency in the central bank of the recipient state. That

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central bank will seek to transform unwanted currency into desired reserve denominations, putting downward pressure on the currency from which capital has fled. Nothing of this sort can take place within the eurozone since it is a single currency area. The result has been that large balances have been accumulated in the accounts of the central banks of recipient countries at the ECB, and equivalent negative balances in the accounts of the central banks of the countries from which capital has fled (see Figure 2). This capital flight might well be reversed if a convincing rescue deal for the euro were put in place. Its very existence is evidence of a serious design fault in the eurozone.

The solutions

The short-term solution to the eurozone's problems is clear enough. The ECB must guarantee the sovereign debts of all member states and, where necessary, print money to clear them. Whether this is preceded by a refinancing of debt that imposes a haircut on bond-

holders is a matter of political taste (or perhaps, political necessity in the case of countries that are doing the refinancing). However, the larger the haircut imposed, the greater the resources that will be required to recapitalise the banks that have suffered the haircut. Despite the broad economic logic of the short-term solution to the current situation being straightforward, it has, up to now, run into a brick wall of political resistance.

Moreover, these short-term measures would not solve the medium- to long-term problem. Once the debt of the less competitive countries has been in some way written off, and growth resumes, then the same pattern of indebtedness will begin to reappear. This is inevitable in any monetary union. The idea that a monetary union could be uniformly competitive is a fantasy. That is why all workable monetary unions have the characteristics listed above — most notably, an all-union bond issuance to fund a major part (though not necessarily all) of public debt and a substantial budgetary process that redistributes income from rich to poor, hence limiting the accumulation of debt. For example, tax revenues in London and the south-east of England are roughly 25 per cent greater than government expenditure in the region, the difference being used to support other parts of the United Kingdom. Nobody notices.

The importance of the all-union bond should be evident from the experience of the internal capital flight that has afflicted the eurozone. Compare this situation to that of the United States. The fiscal problems of California (far bigger within the US economy than is Greece within the eurozone) affect the funding of the Californian deficit, but are in no way destabilising to the federal bond market. There is no comparable dollar crisis.

Will solutions be found, to both the short term and the longer term problems? The answer is to be found in the saying 'follow the money'? In other words, who is the

greatest beneficiary of the existence of the euro? The answer is Germany. Not only does the rest of the eurozone absorb 40 per cent of German exports, but consider the exchange rate of a reconstituted deutschemark. The German economic model of export-led growth would crumble as the mark soared, in the same way that the prosperity of Switzerland is now threatened by the 'safe haven' status of the Swiss franc.

The beneficiary may be reluctant to pay for the benefits it enjoys, and there are still obvious historical inhibitions to German leadership, but the remorseless logic of economic advantage will triumph in the end. After 20 excruciating months of inflammatory indecision, Germany's Angela Merkel and France's Nicolas Sarkozy are talking of a 'real economic government' for the euro, though they have not yet defined what this means or when it will happen. Sarkozy has even declared that 'euro bonds can be imagined one day', though this would be 'at the end of the integration process, not the beginning'. That eurobond market would be as large as the dollar market, and equally irresistible.

The deals reached this autumn are still in the 'fire-fighting' category, and the key to temporary success will be whether the flames are doused. The longer term reconstruction of the eurozone will determine whether this is a temporary respite or whether a new, resilient structure emerges. Such a structure will inevitably involve a far greater degree of political integration (at least in economic decision making) than has been conceived of up until now.

There is a long way to go and along the way many reluctant electorates to be persuaded. But in five years, with coherent political leadership and a lot of luck, the institutional framework of a passably workable monetary union will have been cobbled together. ■

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