

# The Economic Crisis

## International aspects of the economic crisis

1. Let us look at this paper which looks at international aspects of the economic crisis:

[http://robertkollmann.com/KOLLMANN\\_PUBL\\_BUSSIÈRE\\_IMBS\\_RANCIERE\\_AEJ\\_MACRO\\_2013.pdf](http://robertkollmann.com/KOLLMANN_PUBL_BUSSIÈRE_IMBS_RANCIERE_AEJ_MACRO_2013.pdf)

Buissière, Matthieu, et al. "The Financial Crisis: Lessons for International Macroeconomics." *American Economic Journal: Macroeconomics* 5.3 (2013): 75-84.

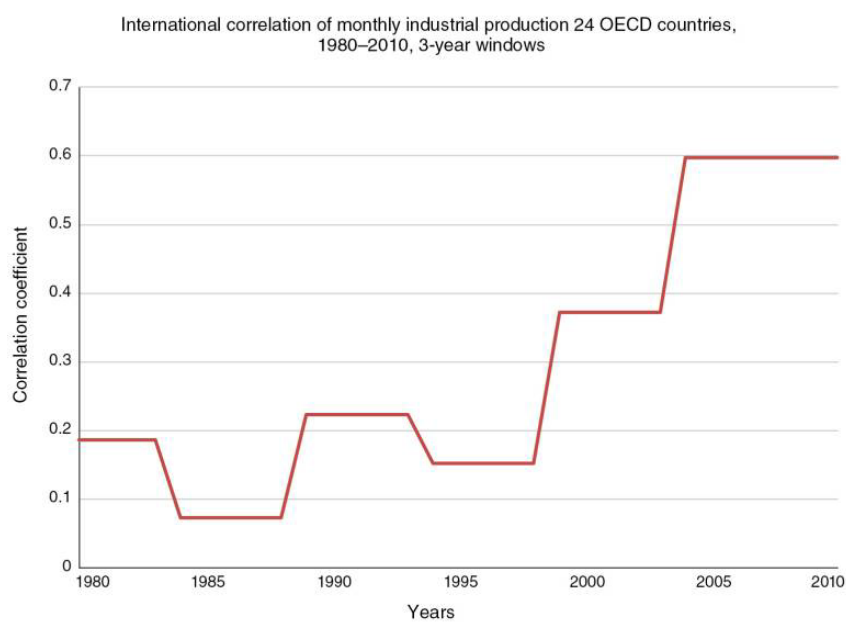


FIGURE 1. SYNCHRONIZATION OF GDP GROWTH

The graph shows how since the latter half of the 1990s economies have increasingly moved together. This is a symposium of papers. One of the issues they seek to explain is why world trade fell much more than GDP in the crisis

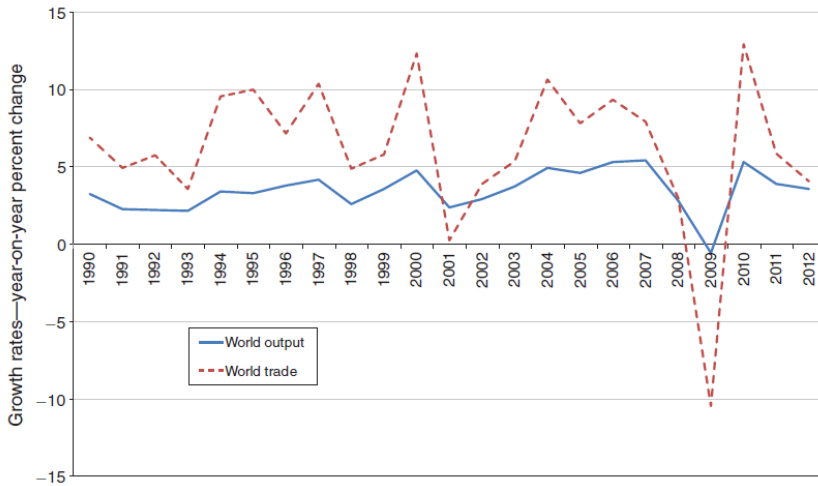


FIGURE 2. TRADE COLLAPSE

They show that investment and exports are markedly more import intensive than private consumption and government purchases. This is particularly important in the context of the crisis, as investment fell much more strongly (in relative terms) than other demand components.

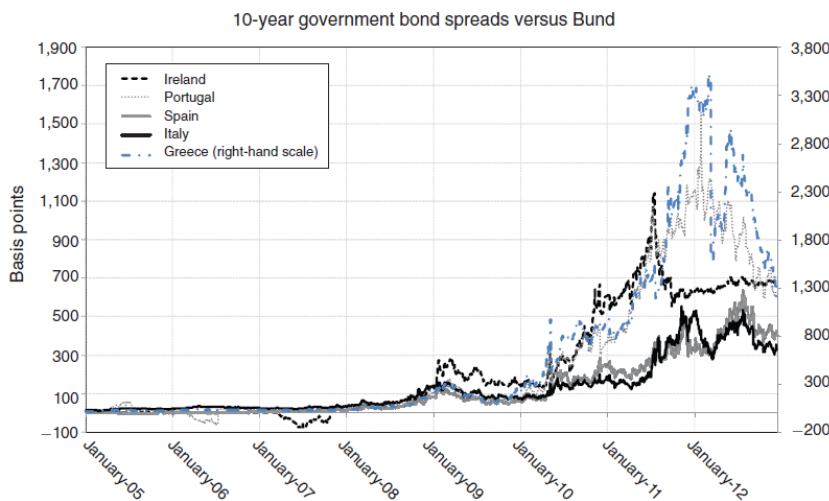


FIGURE 4. RISE OF SOVEREIGN SPREADS

The graph illustrates another aspect of the crisis, the perception that sovereign debt is risky. A 10 year government bond is a debt owed by a government for 10 years. For example, the government issues a piece of paper saying I will pay the owner of this paper 10 million Euro on April 2 2024. It sells this paper on the market, if it gets 9.9 million Euros for it, the difference is the implied 10 year rate of interest. Note the buyer of this bond can sell it on the market before the ten years are up. The graph compares the interest rates of various country bonds viz a viz the german one (the bund). As the paper says

sovereign bond spreads among European countries before the fall of 2008 were minuscule, and remained below or close to 100 bps (basis points) until the end of 2008. While in 2009 and 2010 sovereign spreads between the south and the north of Europe increasingly diverged, the idea that a Euro-area country could be forced to request a restructuring of its public debt was still deemed unacceptable by key policymakers. In 2011, however, several Euro area countries started to

experience spreads above 500 bps, a clear indication that default risk was now a primary concern for investors. Finally, in October 2011, Greek bondholders agreed to a large debt exchange with an announced haircut of 50 percent. Since then, the possibility that other European countries might follow the same path remains an important policy issue.

While default risk remains at the forefront of policy concerns, the existing empirical literature on the measurement of creditor losses (haircuts) and on their consequences for reaccessing international debt markets, and for future costs of borrowing, is relatively scant. Due to the absence of systematic empirical evidence, the literature often makes heroic assumptions about creditor behavior. For example, before the crisis, common wisdom reflected the view of Bulow and Rogoff (1989) that “debt which is forgotten will be forgiven,” i.e., the notion that countries that default do not suffer from a substantially higher cost of borrowing after a debt crisis, and often regain access to international credit markets one or two years after a default. The lack of robust empirical evidence on the costs and consequences of sovereign default is also a source of disconnect between the empirical and theoretical literature on sovereign default. For example, most theoretical default models in the style of Arellano (2008) assume a 100 percent haircut on defaulted debt, disregarding the evidence that sovereign default is always partial, with creditor losses varying across default episodes. Sturzenegger and Zettelmeyer (2006) revamped the empirical literature in the area, by developing the novel and robust approach of computing haircuts based on the ratio of the present value of payments by debtors after debt renegotiation relative to the present value of original contractual payment obligations.

In a paper presented in this special issue, Cruces and Trebesch (2013) considerably extend the work of Sturzenegger and Zettelmeyer (2006) by providing the first complete database of haircuts for all defaults and restructuring episodes between 1970 and 2010. They uncover three important new patterns:

- (i) haircuts do not differ, on average, among different type of creditors (banks versus bond holders);
- (ii) haircuts differ widely by the development status of debtor countries (haircuts in Heavily Indebted Poor Countries (HIPC) were, on average, 87 percent, while only 29 percent in all the other countries);
- (iii) haircuts in the second half of the sample (1990–2010) are twice as large as in the first half of the sample (50 percent versus 25 percent), while the number of default/restructuring events was the same.

Cruces and Trebesch (2013) also examine the link between the severity of creditor losses, the cost of future borrowing, and the length of market exclusion. Here, the two key findings are that default episodes with large haircuts are associated with

- (i) high future sovereign spreads, and
- (ii) long periods of market exclusion.

These results stand in sharp contrast with the previous evidence in the literature, and question not only the conventional wisdom of Bulow-Rogoff, but also more recent empirical and theoretical work (Benjamin and Wright 2009). The effect of a large haircut on sovereign spreads is both important and long-lasting. A 1 standard deviation increase in the imposed haircut—calculated as 27 percentage points—is associated with an increase in spreads of 149 bps in year 1 and 70 bps in year 5. The effect of a large haircut on the future ability to issue debt is also sizable. Almost all countries with a haircut

of 30 percentage points or less are able to reenter capital markets within 5 years, while 50 percent of the countries with a haircut of 60 percentage points or more are still excluded after 10 years.

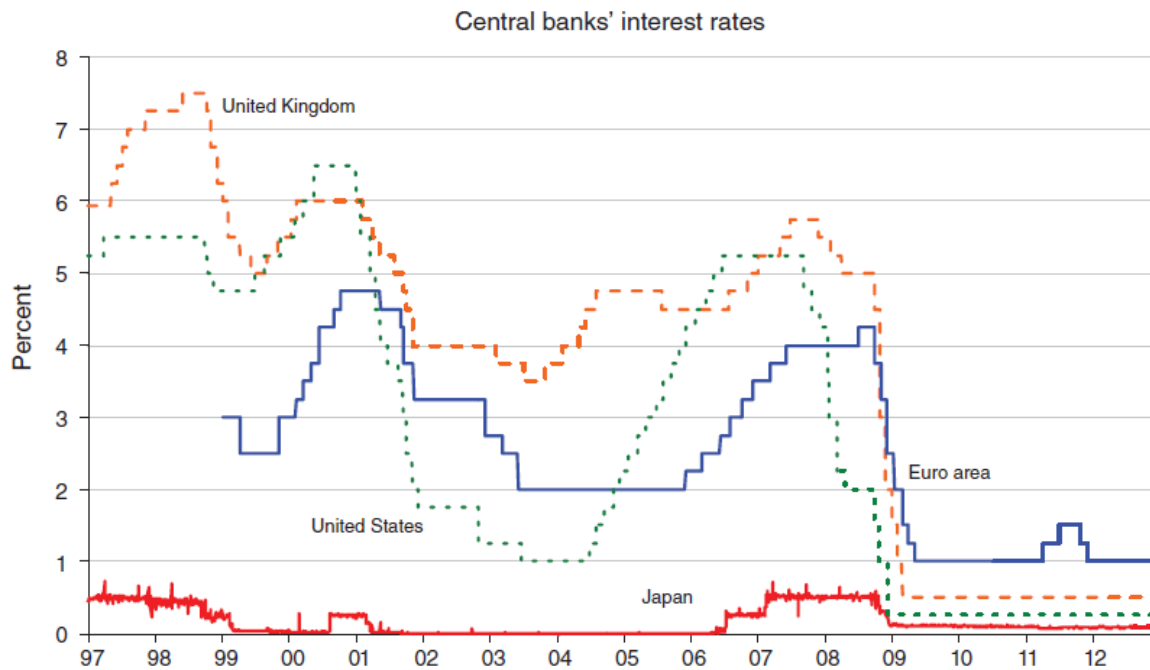


FIGURE 5. POLICY INTEREST RATES BY MAJOR CENTRAL BANKS

During the crisis, central banks in industrialized countries have lowered their policy rates rapidly and sharply (see Figure 5). While the Bank of Japan’s policy rate has been close to zero since the Japanese financial crisis of 1990, in the United States and the United Kingdom, the policy rate was cut to 50 basis points or less. The ECB lowered its policy rate to 1 percent. Interestingly, the ECB cut its policy rate both less aggressively and at a later date than the Fed and the Bank of England, despite similar real economic conditions.

In this special issue, Cook and Devereux (2012) provide an interpretation of these cross-country differences in policy responses to the financial crisis. The authors analyze optimal monetary and fiscal policy in a two-country world [another theoretical model], when a negative demand shock in *one* country pushes that country into a liquidity trap (zero interest rate). As the negative demand shock lowers the expected inflation rate in the source country, its *real* interest rate rises, and thus the source country’s real exchange rate appreciates (due to real interest rate parity), which exacerbates the slump in that country. Cook and Devereux show the policy that maximizes the joint welfare of the two countries requires the *foreign* central bank to keep its policy rate *above* that of the source country; this dampens the appreciation of the real exchange rate of the source country, and thus alleviates the slump in the source country.

Even when central banks act noncooperatively (i.e., solely seek to maximize national welfare), the foreign monetary policy is tighter than source country policy, in order to combat the rise in foreign inflation due to the foreign real exchange rate appreciation. Optimal policy also calls for strong fiscal stimulus in the source country, and for a more muted fiscal expansion in the other country.

## Quantitative Easing

Governments need to borrow money, but the markets are reluctant to lend and certainly to lend the amount they need to cover their debts. The solution has in part to get the central banks to 'print the money' and give it to them. That is a simplification of course, but not really a falsification.

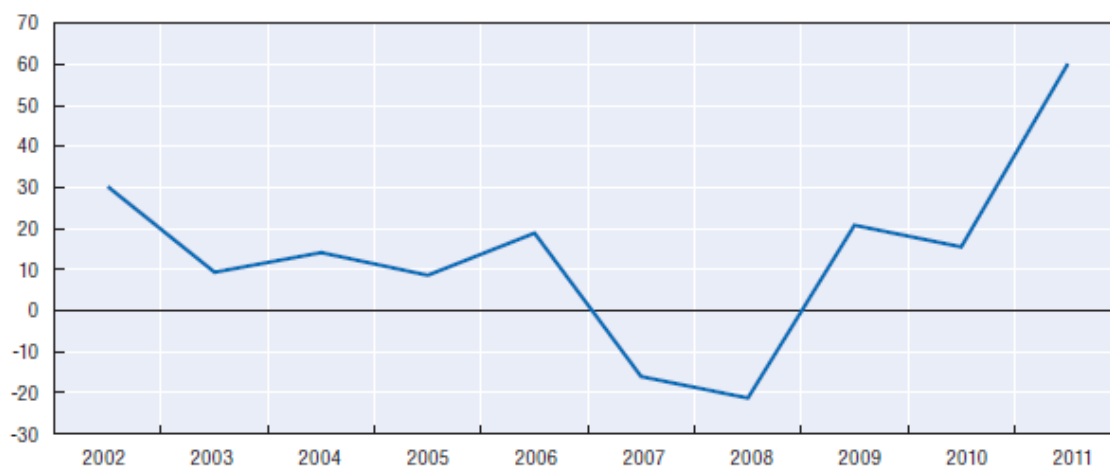
For example, in 2011, the FED (FED is the Federal Reserve Bank, the US's central bank) in the USA purchased 60.2% of the total net Treasury issuance.

<http://www.treasurydirect.gov/RT/RTGateway?page=institMktbles>

up from very small amounts prior to 2008 (see Figure below). Thus in 2011, a substantial proportion of the US government deficit was being bought by America's central bank. Where did it get the money to buy this from? It effectively printed it, although you don't print in the electronic age. On the 30 August 2012, total Fed Treasury holdings stood at \$1.63 trillion, or 16% of total marketable US Treasuries. What is net treasury issuance? The difference between new loans raised and old ones paid back.


The US Federal Reserve held between \$700 billion and \$800 billion of Treasury notes on its balance sheet before the recession. In late November 2008, the Fed started buying \$600 billion in mortgaged backed securities (MBS). By March 2009, it held \$1.75 trillion of bank debt, MBS, and government debt, and reached a peak of \$2.1 trillion in June 2010. In November 2010, the Fed announced a second round of quantitative easing, or "QE2", buying \$600 billion of government debt by the end of the second quarter of 2011. The markets and the World are waiting for QE3. To put this in perspective the US economy was just over \$15 trillion in 2011. Hence this printing of money is a sizeable portion of the US economy.

**Figure 3.3. US Federal Reserve purchase of total net Treasury issuance**  
Percentage



Note: Cut-off date is December 2011.

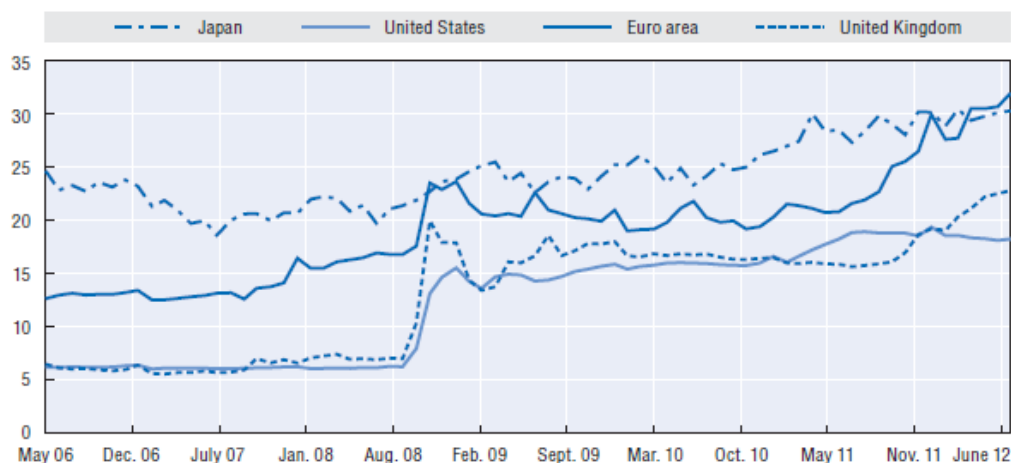
Source: Federal Reserve System (Flow of Funds Accounts of the United States) and OECD staff calculations.

StatLink  <http://dx.doi.org/10.1787/888932779449>


The other aspect of this has been: an increase in the money supply both to provide a fiscal stimulus to the real economy and help the financial sector, the banking sector. This is known as quantitative easing (QE). There was no sudden spike in broad money growth in the UK. Nonetheless it was 60 per cent higher at the end of 2010 than it had been in mid-2006. This was primarily achieved by the Bank of England buying bonds from the government (although they could also buy 'safe' bonds from private firms). This put narrow money (M1) into the system. Most of this eventually ended up being held by banks as reserves at the Bank of England, as we have

noted above the banks were reluctant to lend to the private sector for a number of reasons. From May 2008 to July 2009, banks' reserves increased from £27 billion to £152 billion. Broad money increased from £1737 billion to £2001 billion. Hence the £125 billion increase in bank reserves led to a £264 billion increase in broad money. Hence the banks did loosen up a bit in response to the injection of narrow money and the increase in their reserves. The impact on the central bank reserves is shown below. We see two rounds of activity for the UK and the US, around August 2008 and again in the summer/autumn of 2011.

Figure 3.1. Central bank balance sheets  
Percentage of GDP



Note: Cut-off date is June 2012.  
Source: Datastream and IMF.

StatLink  <http://dx.doi.org/10.1787/888932779430>

To summarise central banks have either been lending to the banking system, buying up parts of the banking system or lending to governments from money the central bank creates. This should put money in the system. Thus the central bank buys government bonds, this is used for spending by the government and will eventually end up in someone's pocket as money (e.g. nurses salaries). This should then be deposited in private sector banks who could on the basis of this relend it (and relend it many times, there is a ratio that governs this). This to a large extent they have not done, preferring to build up their core assets, in part by depositing it with the Bank of England. *But they could do it* and one can ask the question what would happen to broad money supply (and inflation) if they suddenly start to do so?

In recent months the process has moved to a new phase. The FED has begun 'tapering'. This is by where each month the FED gradually puts less and less money into the economy. But note it is not yet taking money out of the economy, i.e. selling back to the market some of the bonds it has bought. There is thus still a risk that this huge build up of money will lead – eventually – to inflation. This same risk applies to other areas such as the Eurozone and the UK. It is far too early to say the worst of the crisis is behind us.