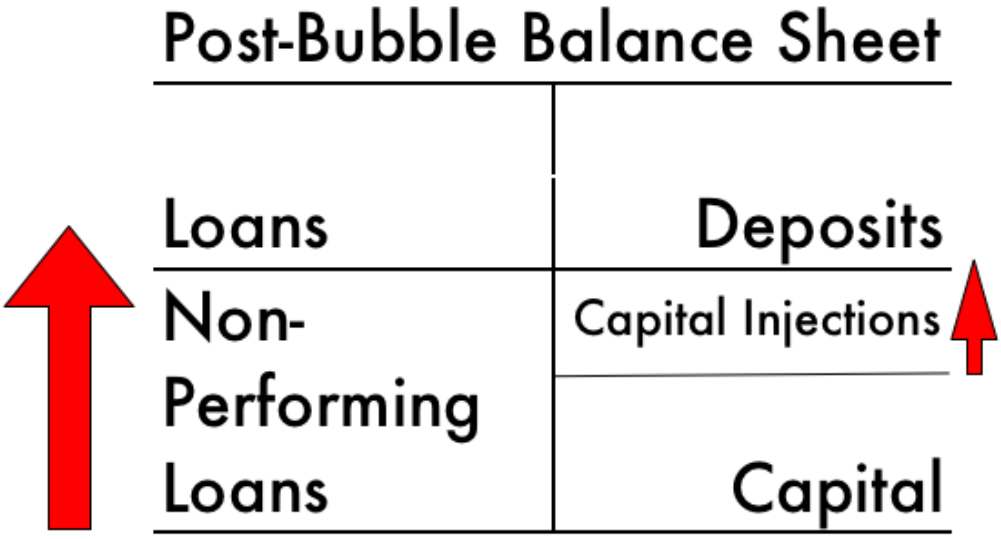


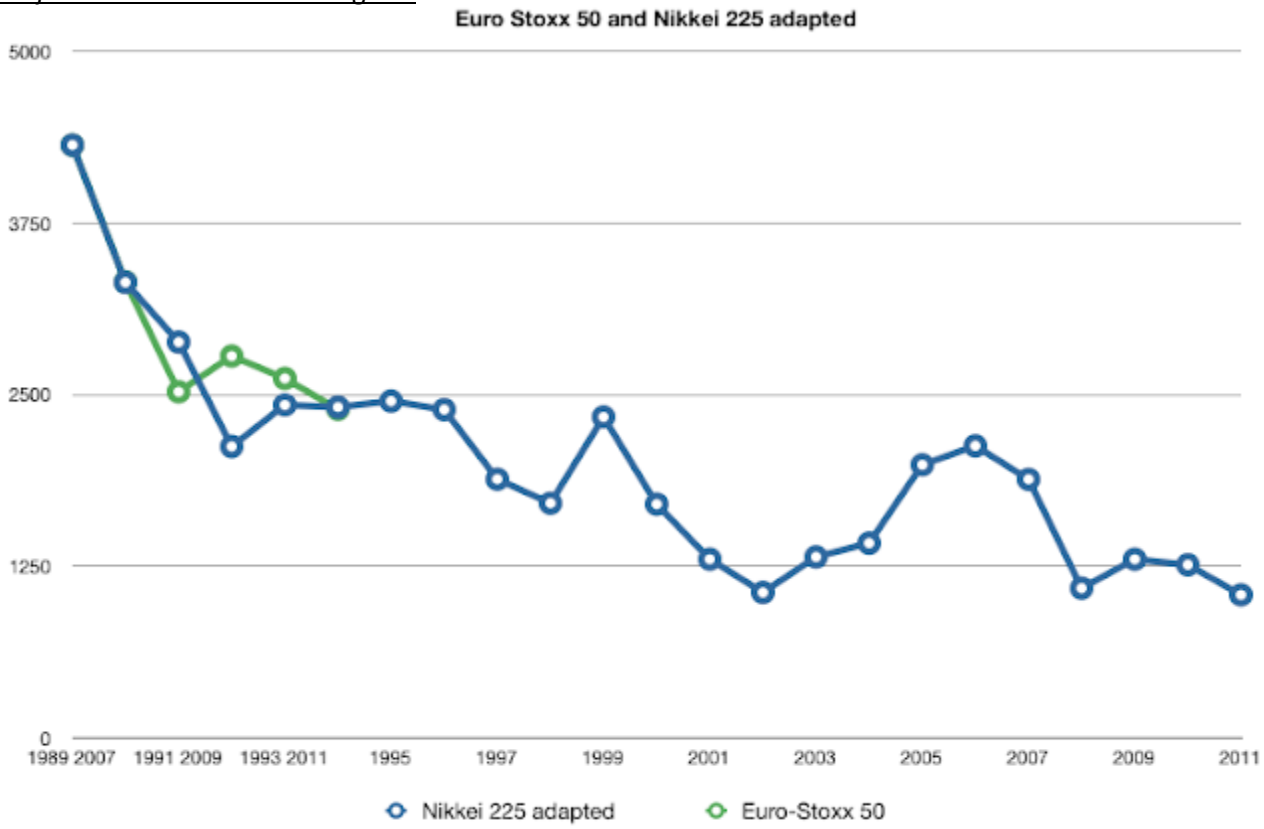
In 2012, the European economy has entered a double dip recession scenario after a banking collapse was avoided via large stimulus packages by European governments after the Lehman shock in 2008. The current sovereign debt crisis has caused major contagion in future economic prospects of the region. This can be seen by the declining gross fixed capital formation, which is still almost 12% below its peak in 2008 and in the first quarter of 2012 declining again. At the same time, one can observe negative changes in inventories and acquisitions less disposals of valuables. Both indicators demonstrate the low business confidence and point out a recessionary scenario. Moreover, both indicators cannot be improved by further monetary stimulus, but by effective fiscal policies that give the region and the EMU member states a competitive advantage to other regions in the world.

The aim of this report is to compare the European economy with the Japanese economy from their respective peaks in stock prices (1.) and housing prices (2.) until six years after and to find correlations between their economic indicators. A highly positive correlation might indicate that Europe follows Japan into a decade long lasting recession, considering the correlation maintains.

1.) The time period of 2007-2012 will be used for Europe and compared with the time period of 1989-1994 for Japan for the following indicators:
- Major stock indices of both regions
- M3 Money supply

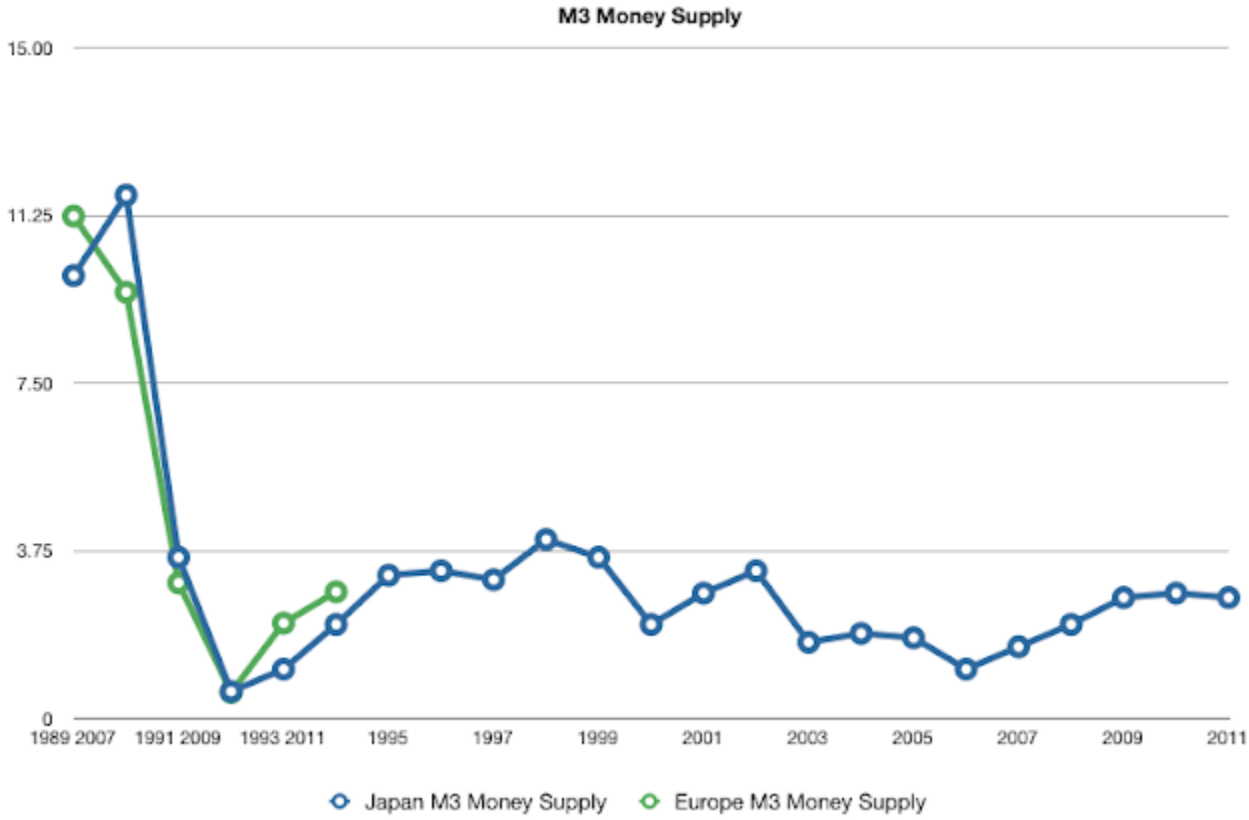
2.) The economic crisis in Japan affected the real economy two to three years after the burst of the bubble (because housing prices kept on rising for two more years after the stock market crashed), but in Europe it occurred simultaneously. For this reason, the time period of 2007-2012 for Europe will also be compared with the time period of 1992-1997 for Japan for the following indicators:
- Call and deposit rate of Central Bank
- Unemployment
- Government budget deficit
- Government debt

Major stock indices of both regions



From the results above, a correlation coefficient between the Euro-Stoxx 50 (2007 – 12) and Nikkei 225 adapted to Euro-Stoxx 50 prices (1989 – 94) can be found at 0.9092. In other words, there is a correlation of more than 90% of stock prices between the two regions over a six year period. This means, in both cases, stock prices first decline and then stagnate. Considering that Japanese stock prices declined further after 1994 and have a current value that is half of that in 1994, the European crisis might deteriorate even further and more dramatically than it has already (in case the correlation maintains).

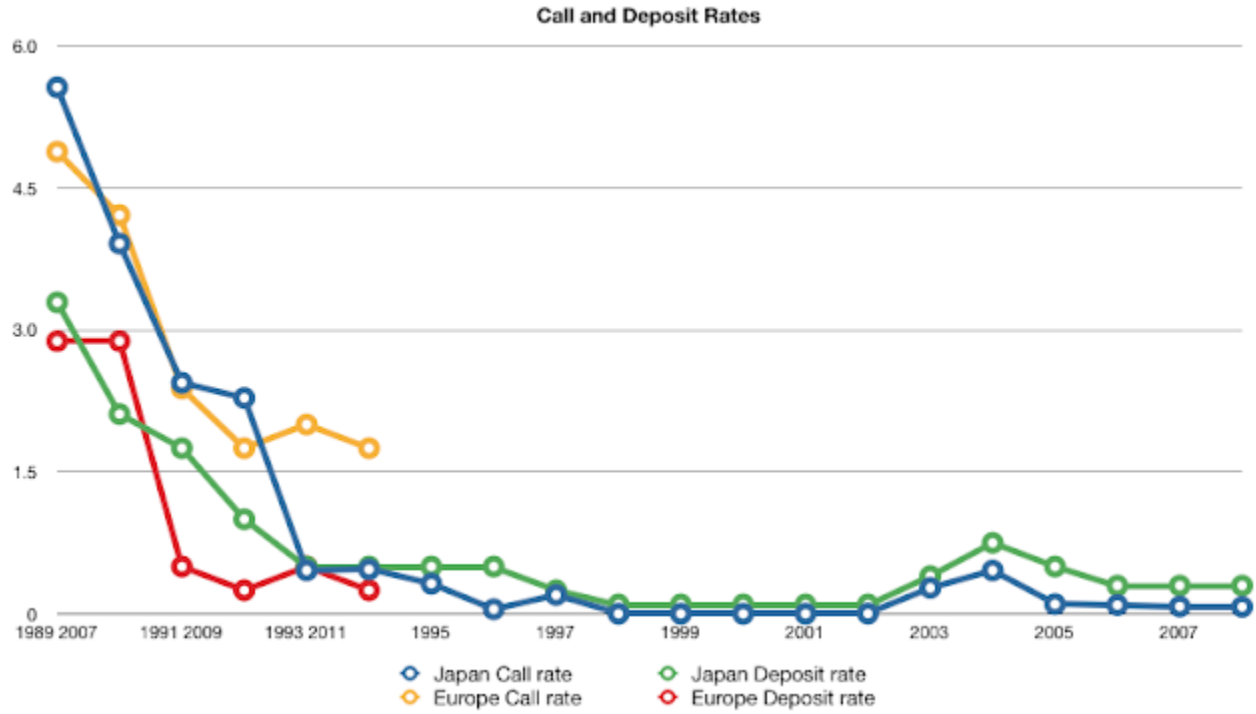
M3 Money supply



The correlation coefficient of M3 money supply between Europe (2007 – 12) and Japan (1989 – 94) is even higher with 0.9635. In both regions, money supply decreased from very high level of around 11% to less than 1% within six years. Interestingly, in both regions, the M3 money supply is positively correlated with stock prices obtaining a correlation coefficient of 0.8568 and 0.8814 respectively. On the one hand, this demonstrates the importance of increasing stock prices to raise money supply. On the other hand, it shows how speculation on stock prices can fuel a bubble that affects money supply positively.

When looking at the time horizon after 1994, one can observe that the M3 money supply lies between 1% and 3.8% until 2011 in Japan. With regard to 1998 and 2008, the M3 money supply in Europe has always ranged between 5.5% and 12%. If the correlation of 0.9635 maintains between the two regions, a deflationary scenario for Europe might soon be the outcome.

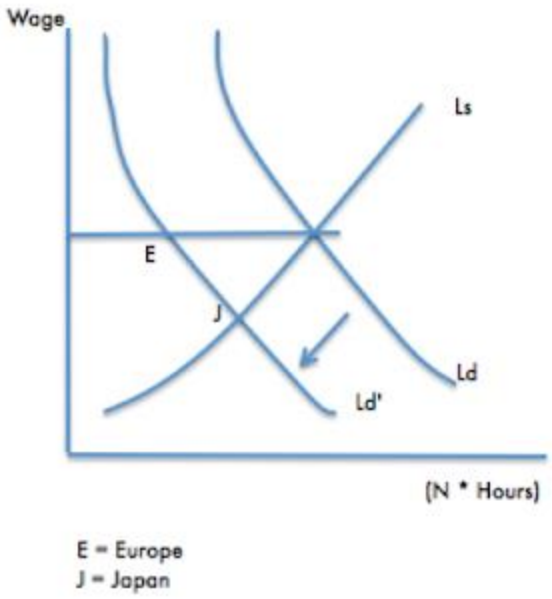
Call and deposit rate of Central Bank



The correlation coefficients of call and deposit rates are very high with 0.9124 and 0.8491 respectively between Japan (1992 – 97 (the graph's timeline is wrong and starts with 1992 instead of 1989)) and Europe (2007 – 12). Importantly, in both regions the banks had large amounts of non-performing loans on their balance sheets. In Japan, 188 banks went bankrupt during the lost decade and through M&A or via large capital injections big four mega banks emerged during the crisis. The BoJ, however, did not only lower interest rates to almost zero, but also engaged in large JGB purchases and even became shareholder of financial institutions. In this sense, Europe should lower call and deposit rates to nearly zero now, before ending up in the liquidity trap as Japan did. At the same time, the ECB should buy government bonds and engage into long term commitments in the same way as not only Japan did, but also the USA does to bring back confidence to the European market.

Unemployment

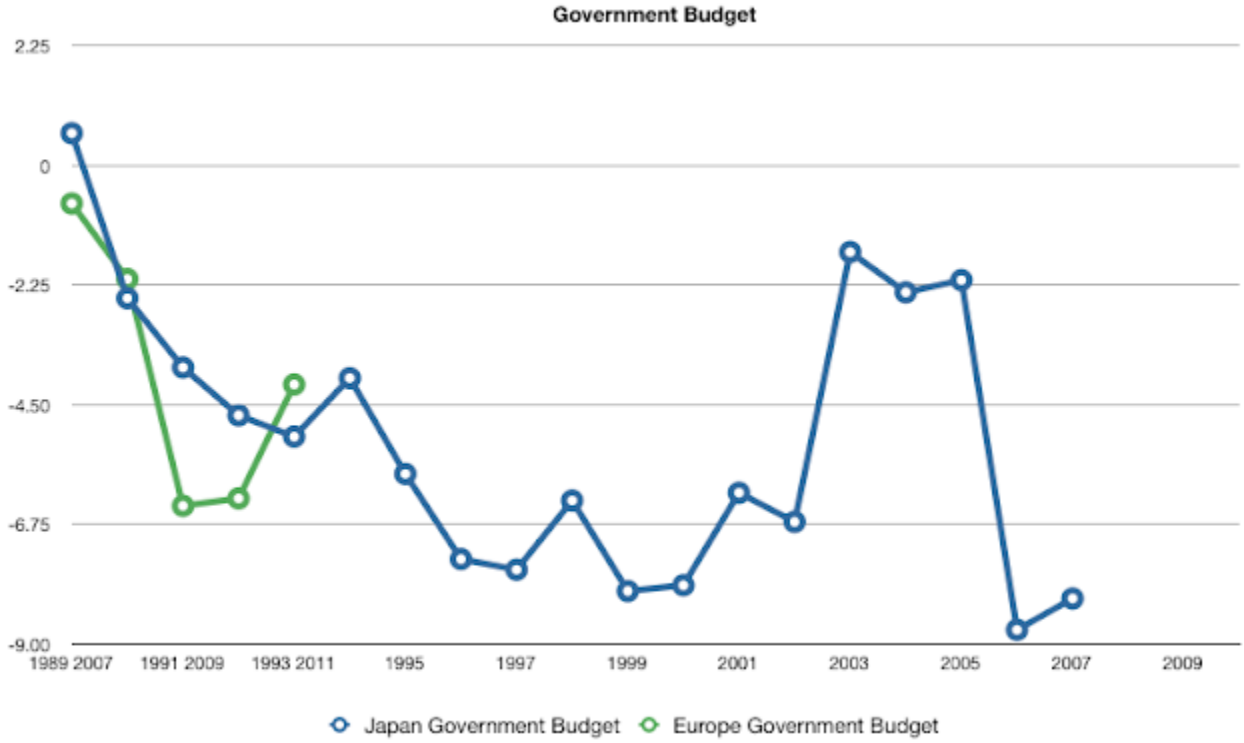
The correlation coefficient of unemployment between Europe (2007 - 12) and Japan (1992 - 97) is also very high with 0.9614. The big difference is that in Japan the unemployment rate in 1992 was at only 2.2%, whereas in Europe it was at 7.62%. This is due to structural differences, in Japan, for instance, it is common to work for the same company for the rest of ones life. However, considering a continuing correlation of the unemployment rate in Europe with the one in Japan, in 2018 the unemployment rate would be at 17.23% in Europe. The graphic below demonstrates which steps to take are essential in Europe to avoid a further deterioration.



E = Europe
J = Japan

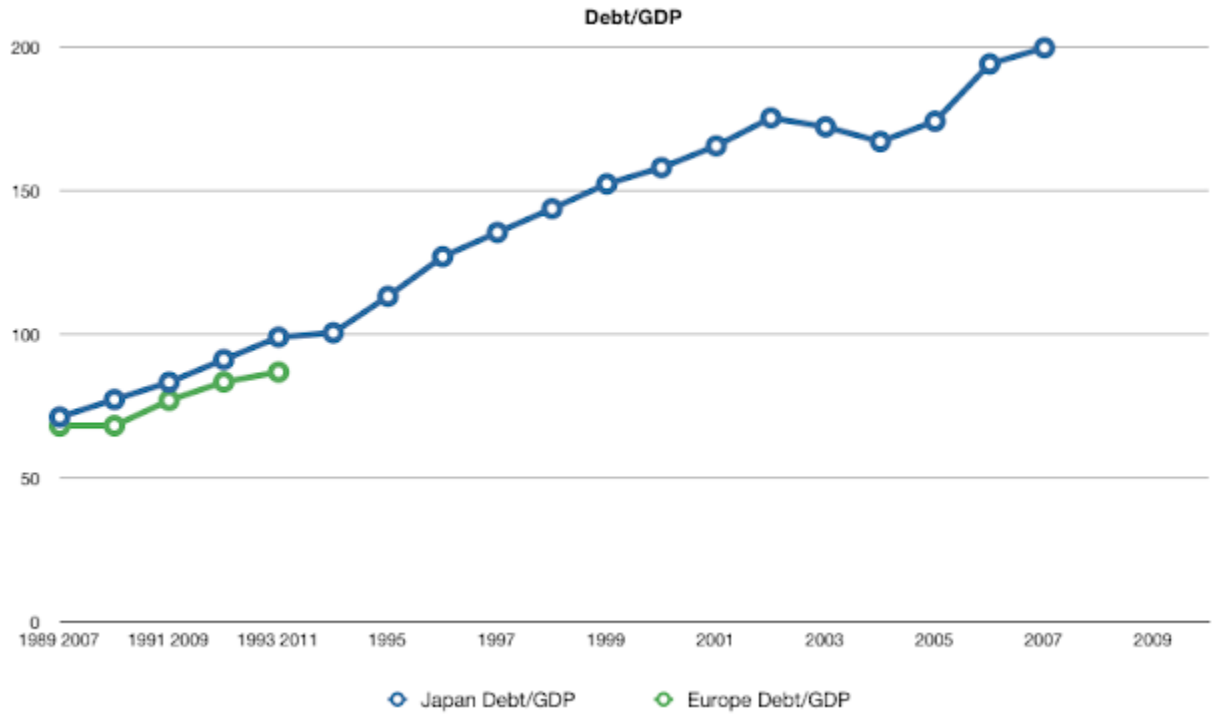
In both regions, after the crisis began the labour demand shifted to the left. In Japan, this meant lower wages for the people employed. In Europe, however, in many regions wages remain rather sticky although labour demand has decreased. This is mainly due to labour unions, especially in Germany, which keep wages constant or make them even rise slightly. In addition to this, Japan has many part-time jobs and many employees have 2-3 part time jobs in one week, which keeps productivity and the employee's motivation high.

Government Budget



The correlation coefficient of the government budget between Europe (2007 - 11) and Japan (1992 - 96) is also relatively high with 0.8170. Now, taking the Stability and Growth Pakt into consideration, it becomes clear that, if the correlation maintains, a budget deficit of <3% won't be achieved in the next decade. Looking at the current sovereign debt crisis in Europe, a further deterioration in the budget deficit could lead to serious deterioration in interest rates on certain government bonds of EMU members. The non-performing loans of banks play an important role on a region's economy. European banks have many government bonds of weak economies like Greece or Spain on their balance sheet. These "non-performing loans" can be compared with the loans that Japanese banks gave to East Asian countries before 1997. When the 1997 Asian financial crisis occurred, many of those loans became toxic assets and weakened the Japanese economy further. The same thing might happen with European banks engaged in government bonds of weak EMU member states, and hence a maintenance of the correlation is plausible. In this sense, the EMU should give their highest effort trying to avoid to make government bonds turning into toxic assets for the banks.

Debt/GDP



From the figure above, one can observe a 0.9721 correlation coefficient of the debt/GDP between Europe (2007 - 11) and Japan (1992 - 96). This is a serious danger for the European economy, considering that Japan has a current debt/GDP of 220%. The question is whether European economies can handle such large amounts of debt. For instance in Greece up to 80% of the debt is owned by non-domestic investors, whereas in Japan 95% is hold by domestic investors. The current sovereign debt crisis shows that Europe cannot convince investors to hold on to their bonds.

Conclusions

The highly positive correlations of the given economic indicators demonstrate that Europe is facing a very similar situation as Japan did six years after their asset bubble burst. This is, on the one hand, low money growth and a low interest rate environment. On the other hand, it is higher unemployment and higher debt and expenditure incurred by the governments. However, a big difference is that some European governments are unable to give investors confidence in their public finance, which led to high yields on bonds that make countries like Greece, Portugal, Spain or Ireland unable to finance themselves. The are two reason why Japan can still finance itself although government deficits and debt/GDP are much higher than any other country on the world:

1.) Profound monetary and fiscal policy
2.) 95% of debt is owned by domestic investors

Therefore,

1.) Europe should now copy Japanese monetary and fiscal policies implemented during the late 1990s and 2000s to avoid a maintenance of the positive correlations of the economic indicators compared above.

2.) Europe should implement a new Pakt that allows EMU members to sell only 5 - 10% of their debt to foreign investors. In this sense, 90 - 95% of each member state's debt is owned by domestic investors, which should lower yields and make economically weak governments able to finance themselves again.

To view the presentation on this topic:
http://www.slideshare.net/dhdavidherrmann/why-european-governments-should-not-have-more-than-5-10-of-their-debt-owned-by-foreign-investors-13966230

Data retrieved from the European Central Bank and the Bank of Japan

Special thanks to prof. Naoyuki Yoshino for the helpful comments and advice