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Andreas Hoffmann

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Gold Standard?**

**Government Debt Financing and Political Commitment in
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The Euro as a Proxy for the Classical Gold Standard?

Government Debt Financing and Political Commitment in Historical Perspective

Andreas Hoffmann, University of Leipzig

1 Introduction

In spite of the recent troubles in the euro area, Jesus Huerta de Soto (2012), a famous proponent of the gold standard, argues that the euro should be considered a “second best to the gold standard” and is worth being preserved. From a classical liberal point of view, he sheds some light on the euro’s similarities with the gold standard and on some important advantages of the currency union over its alternative, flexible exchange rates in Europe.

According to Huerta de Soto (2012), the main advantage of the introduction of the common currency is that – like when “going on gold” – European governments have given up monetary nationalism. Like the gold standard, the euro limits state power as it prevents national central banks from manipulating exchange rates and inflating away government debt. Currently, he argues, the common currency – like previously the gold standard – forces important reforms and/or spending cuts upon the countries of the euro area that face severe debt and structural problems. In this respect, the euro should be seen as “a proxy for the gold standard”.

In this policy paper, I attempt to address some similarities and differences in the institutional framework of the classical gold standard (1880 - 1912) and the European Monetary Union (EMU) (1999 -) that affect government debt financing and the way in which countries react to crisis.

I argue that – in line with Huerta de Soto (2012) – giving up monetary nationalism and committing to the rules of either the gold standard or EMU initially restricted the scope of state

action. Therefore, the euro – like previously the gold standard – provided some (fiscal) policy credibility. Fiscal policy credibility was the main determinant of capital market integration and low government borrowing costs in Europe under both systems.

But in contrast to Huerta de Soto (2012), I shall emphasize that neither the gold standard, nor the euro itself force reforms and spending cuts upon countries that face crisis and debt problems. The political commitment to the monetary systems determines the willingness to reform or cut spending and therewith fiscal policy credibility in crisis periods:

During the period of the classical gold standard, the political commitment was one-sided. If countries wanted to adhere to the gold standard in times of crisis, credible policies and reforms were urgent. When such policies seemed too unpleasant or politically unfeasible, governments left the gold standard. A country had to be fully committed to the mechanisms of the gold standard to be able to stay on gold. For instance Portugal went off the gold standard in 1890-1 when deflationary pressure rendered high levels of debt unsustainable.

In contrast, in the euro area, the greater institutional integration and the general European political commitment to the European project and the euro allowed for rescue measures and policies that relieve the immediate adjustment pressure during the latest crisis (that crisis countries certainly face when they cannot devalue the currency). This provides incentives to hold on to the euro *even if* necessary reforms are postponed. The bail-out mechanisms used to contain the crisis have rather strengthened the general political commitment to the euro and contributed to additional institutional integration. Therefore, I argue that - so far - over the course of the crisis, the euro has become less a "proxy for the gold standard" than it was before.

While I concur with Huerta de Soto (2012)'s assessment that a return to monetary nationalism is unlikely to be an accelerator of market friendly reforms in crisis economies, the often discussed move towards fiscal union might be even more problematic and risky. The

credibility of the euro area as a whole might be undermined if, for example, permanent fiscal transfers allow to delay necessary reforms and postpone the fiscal consolidation.

2 Institutional Set-up

Huerta de Soto (2012) argues that the euro can be regarded as a proxy for the *gold standard*. In both cases, countries have given up monetary sovereignty in favor of a common standard or currency. However, substantial differences can be found in the institutional set-up of and the political commitment to the gold standard and euro.

2.1 Classical Gold Standard

The classical gold standard was not a centrally planned project. While governments felt the need for a monetary standardization, for example, as a means to promote trade in the 1860s, there was no common ground among governments about which standard to choose (Eichengreen and James 2003, Flaundreau et al. 1998).

There are several economic reasons why gold made the race during the 1870s-80s. Most importantly Britain, the economy with the largest and most liquid capital market of the time, was on gold. Being on gold allowed countries to borrow at lower cost from Britain (Eichengreen and James 2003, Bordo and Rockoff 1996). Moreover, going on gold could increase trade with Britain and other gold standard countries as, for example, transaction costs would fall (Lopez-Cordoba and Meissner 2003). According to Eichengreen and James (2003), the fact that by 1879 Britain, Germany and the United States were on gold, was the final reason for the spread of the classical gold standard. “With the three major industrial countries on gold, a new world

order was born” (Eichengreen and James 2003, p. 6). Before World War I, most European countries went on gold and gave up monetary sovereignty in favor of exchange rate stability.

Because the classical gold standard was not a centrally planned project, there were no formal rules or agreements countries on the standard had to obey in order to be allowed on the standard. It is a fact that countries that decided to go on gold were able to abandon gold convertibility whenever they wanted (and did so, particularly before 1895) (Flaundreau et al. 1998). Because they did not give up their own currencies, this was easily possible. Debt was usually denominated in domestic currency, not gold.

While the degree of international integration was high, the countries of the classical gold standard did not form an optimum currency area in the way Mundell (1961) proposed. The gold standard was an imperfect currency area. As today, Germany and Britain differed substantially from Portugal or Greece. Asymmetric shocks regularly occurred and labor markets could only partly accommodate them (e.g. via migration to the United States). Because monetary policy was no longer a tool for countries that went on gold, shocks could only be addressed via domestic fiscal policy or structural adjustment. Therefore, in England the gold standard was seen as only one part of a classical liberal program that consisted of stable money, balanced budgets and free factor movements – the Gladstonian Trinity.

2.2 Euro

In contrast to the introduction of the classical gold standard, the euro area was set-up and planned as an island of monetary standardization within a world of by and large flexible exchange rates and free capital movements. Arguments in favor of euro introduction were mainly political. The introduction of the euro was part of a process toward a European political union. As for the gold standard, economic arguments included benefits from lower transaction costs and a reduction of uncertainty in finance and trade (see De Grauwe 2009).

While countries on the gold standard held on to their domestic currencies, joining the euro area meant to abandon them. To allow for a credible and irreversible introduction of the euro, the European Union (EU) set-up several institutions and did not rely on one-sided commitments of governments to a standard at a point in time. On the one hand, only EU members were allowed to be part of the euro area. Members of the euro area have a common legal basis that they agreed on by joining the EU. On the other hand, the EU introduced institutions to guarantee 1) free trade, 2) stable money and 3) balanced budgets in the 1990s – the very ingredients of the Gladstonian Trinity.

First, the Single Market Act guaranteed free factor movement within the euro area. Second, the ECB was supposed to guarantee monetary stability by its 2 percent of inflation rule. Therewith the ECB provided more stability than most members were used to before the introduction of the euro. Third, the Maastricht treaty, including its no-bail-out clause, and the Stability and Growth Pact were *supposed to* keep the currency area stable, and contribute to balanced budgets and sustainable finance.

While the euro area is not an optimum currency area, economists maintained that, for example, increased trade would help make it one after its formation (Frankel and Rose 1998). The idea was that as soon as business cycles are fully synchronized, an independent "one-size fits all" monetary policy would be able to address shocks. Here is another difference with respect to the gold standard where monetary policy was completely ruled out. The ECB can respond to potential shocks. But its policy affects all countries. As long as the euro area is an imperfect currency area, the way the euro area was set up, shocks needed to be addressed by domestic reforms and fiscal policies.

3 Policy Credibility and Government Borrowing Costs

While the institutional framework of the euro area differs to a large extent from that of the gold standard, until 2007 the decline in government borrowing costs within the euro area mirrors that of the classical gold standard period. During this period, the euro like the gold standard provided some policy credibility. But policy credibility hinges on sustainable fiscal policies and low inflation expectations.

3.1 Classical Gold Standard

The period of the classical gold standard (1880-1913) was characterized by a relatively high degree of international integration, freedom and stability. Close links between international financial centers allowed for substantial capital market integration and international convergence under the classical gold standard.

Giving up monetary sovereignty reduced inflation expectations, and exchange rate stability can be argued to have lowered transaction costs and uncertainty (Obstfeld and Taylor 2003). Consequently, adherence to the gold standard brought down borrowing costs for governments before World War I. In Figure 1, I illustrate the convergence of European government bond yields. Because, for example, Germany, France and Italy credibly maintained convertibility over longer periods without changing parities in the respective period, they can be considered to be the core members of the gold standard. The core members were able to refinance at rates only little above the risk-free British consol rate (Bordo and Rockoff 1996).

The relatively low long-term interest rates in Britain and other core gold standard countries allowed for substantial capital flows from rich to poor countries that contributed to growth in emerging markets (Schularick and Steger 2010). Even though Russia did not join the gold standard until 1897, Figure 1 shows that Russian bond yields fell as well. And with the

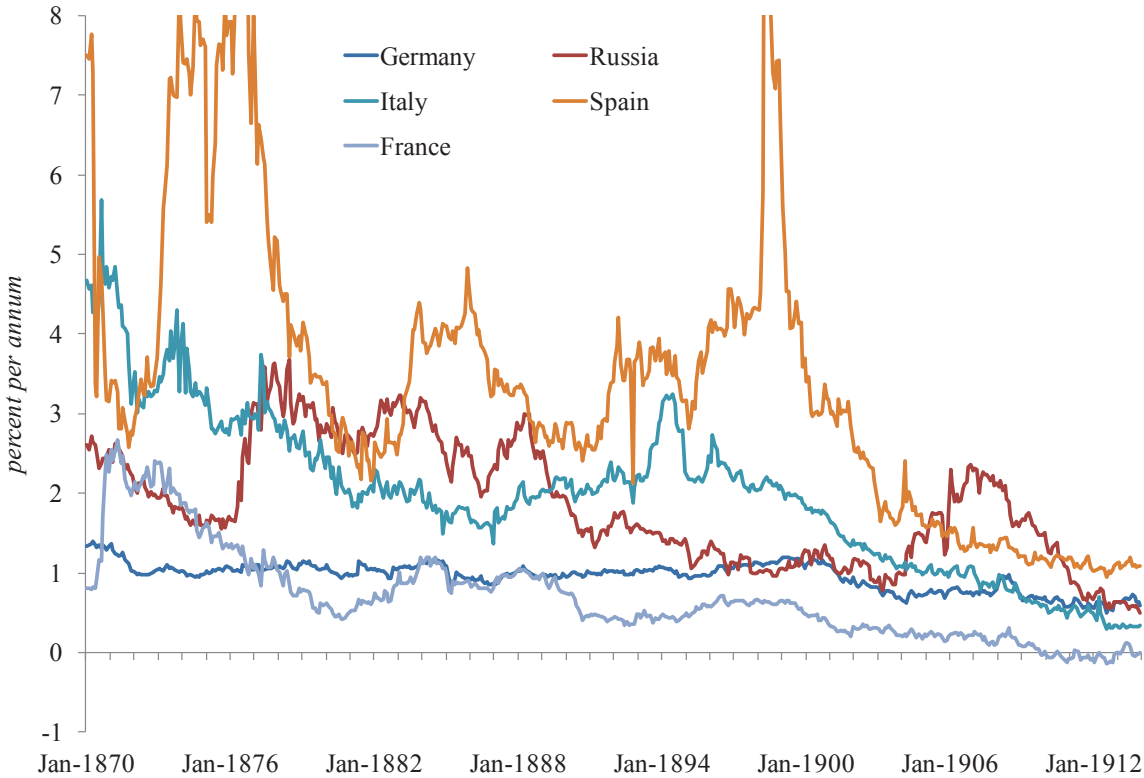
turn of the century even interest rate spreads of Southern Europe (here: Spain) declined substantially. Until 1912 all European government bond yields converged.

According to Huerta de Soto (2012), the gold standard "curbs and limits the arbitrary decisions of politicians and authorities. It disciplines the behavior of all the agents who participate in the democratic process." Figure 2 certainly illustrates that countries that adhered to the gold standard for a long time, the core countries, had lower debt to GDP ratios. In contrast, the Southern and Central and Eastern European countries that were no permanent members of the gold standard, had high levels of debt. So even though there was no fiscal pact between governments, politicians were restricted in fiscal policies.

But the gold standard itself did not provide a safeguard against sovereign debt problems. Investors had easy access to information on political events or data. Therefore, trust in and reputation of policy drove bond yield convergence. In fact, sustained budget deficits were incompatible with low borrowing costs for governments and with the gold standard. Not surprisingly, countries with high debt to GDP ratios faced higher yields even if they were on gold. (Flandreau and Zumer 2004). Similarly, emerging markets were only able to borrow long-term and at declining rates on international markets as long as news and macroeconomic fundamentals were in order (Mauro et al. 2008, p. 10-25).

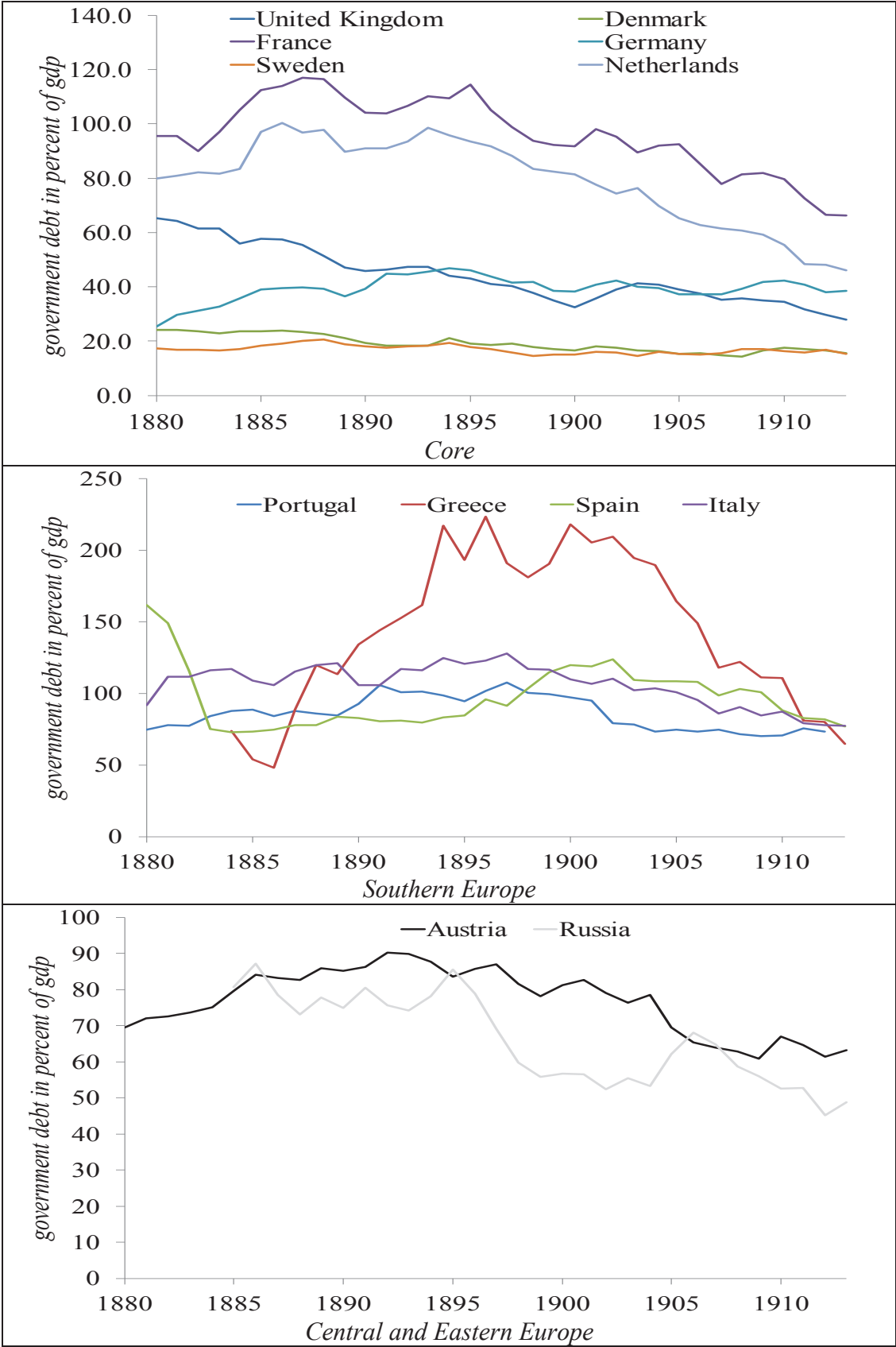
Among the core countries of the gold standard, debt to GDP ratios differed but converged and had a downward trend as average GDP growth exceeded fiscal deficits. Yet, the ability to raise taxes, economic development and its future prospects may have had a greater impact on the credibility of government finances than the respective stock of debt (Sylla and Wallis 1998).

Figure 1: Government Bond Yield Spreads in Europe (over British consol yields)



Source: Website of R. Sylla, (Investor's Monthly Manual).

Figure 2: Debt to GDP in Core, Southern and Eastern Europe: 1880-1912



Data: IMF Public Debt Database.

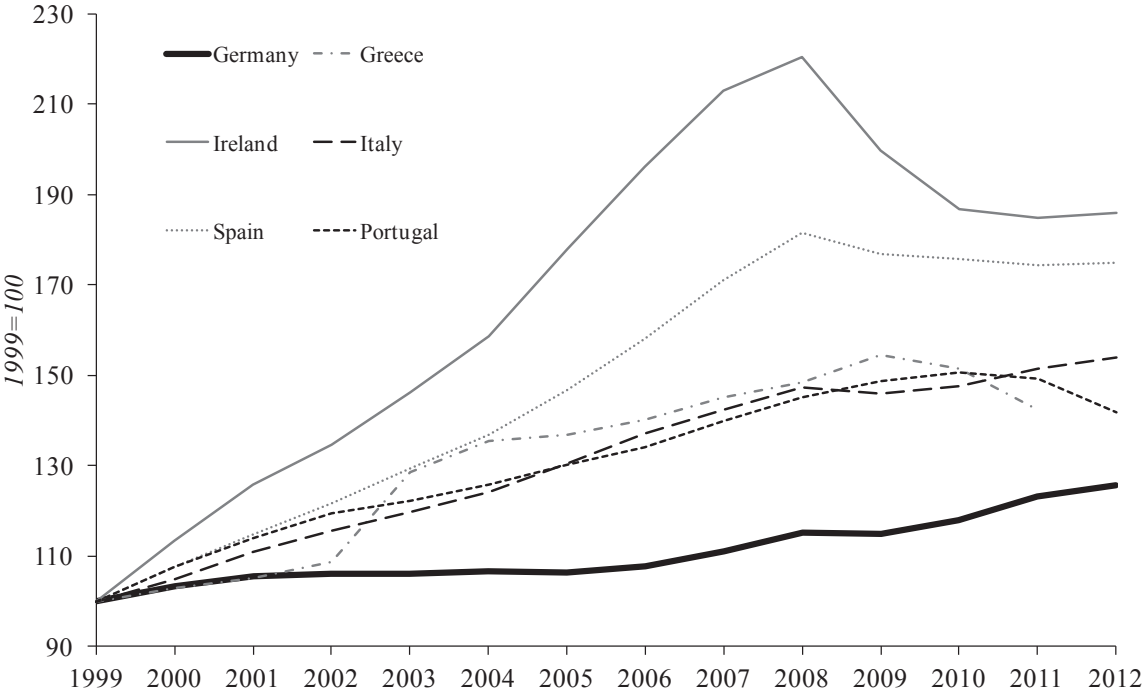
3.2 EU 1996-2007

EMU policy credibility was established by EMU institutions (Porterba and Reuben 2001, Hallerberg and Wolff 2008). Fiscal and monetary harmonization, for example, via the Maastricht Treaty, suggested stable finance and macroeconomic convergence in the near future (see Côté and Graham 2004). Thus, within the euro area capital markets integrated substantially from 1996 onwards when countries tried to fulfill the Maastricht convergence criteria to be ready for euro introduction.

Because expected returns were higher in the European periphery, German savings were, for example, reallocated particularly to Southern Europe. The high interest rates in Southern Europe started to fall toward the German interest rate level. Given investment in Southern Europe until 2006, GDP and wages grew much faster in the periphery economies of the euro area than in, for example, Germany (Figure 3). The capital flows from the EU core countries to the EU periphery were followed by an increase of exports relative to imports. Large intra-European trade and investment imbalances built up (Schnabl and Zemanek 2011). The financial integration was reminiscent of that under the classical gold standard.

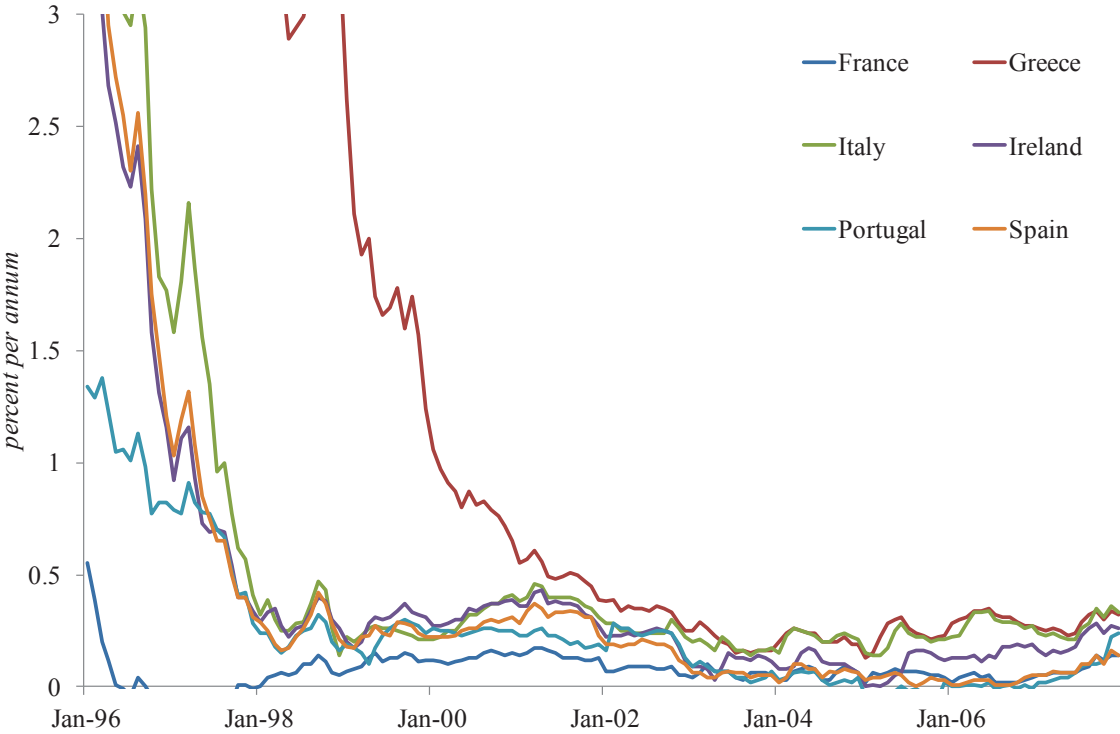
Because all euro area economies were considered to have irreversibly introduced the euro (and to adhere to its principles) and macroeconomic convergence was expected banks as well as regulators did not discriminate between government bonds of different countries. Figure 4 illustrates that the introduction of the euro and the abandonment of the national currencies went along with a convergence of European sovereign bond spreads. Only a small spread over the German bund remained. The degree of convergence is quite comparable to the last period of the classical gold standard.

Figure 3: Wages in Europe: 1999-2012



Data: IMF, International Financial Statistics.

Figure 4: Government Bond Spreads in the Euro Area (over German Bunds)



Data: IMF, International Financial Statistics.

Some may argue that monetary unions in general may reduce the perceived default risk of its member states if investors anticipate that once a member country is in trouble it will be bailed out by other countries or the central bank (Bernoth et al. 2004). With the political commitment and institutional integration in mind, this may have contributed to the convergence of government borrowing costs. The no-bail-out clause may not have been credible.

Additionally, the low world interest rate environment which fed unsustainable credit booms in Southern Europe as well as the new EU member states may have contributed to a *perception of convergence* and fiscal policy credibility. During the boom period growth rates in the periphery economies of the euro area were artificially high. The credit boom has hidden increases in fiscal spending and put a downward bias on debt to GDP ratios, suggesting more convergence than there really was. Not surprisingly, during the boom period from 2002 to 2006 bond yield differentials in the EMU largely depended on factors such as international risk and the prospects of convergence in, for example, debt to GDP ratios (see e. g. Codogno et al. 2003).

The importance of expectations about the economic performance for fiscal policy credibility can be particularly well documented for the “new” member states of the EU. Even though the Central and Eastern European countries did not become members of the euro area in the late 90s, a similar process as in the “older” member states took place when they opened up capital markets and improved macroeconomic stability in anticipation of EU membership.

For the new member states of the EU, joining the EU meant subsequently participating in EMU. The Central and Eastern European countries accepted the common institutions that were thought to guarantee sustainable fiscal policies. This contributed to an "EU halo effect" on bond yields in Central and Eastern Europe. Government borrowing costs fell substantially when EU membership was decided (Luengnaruemitchai and Schadler 2007).

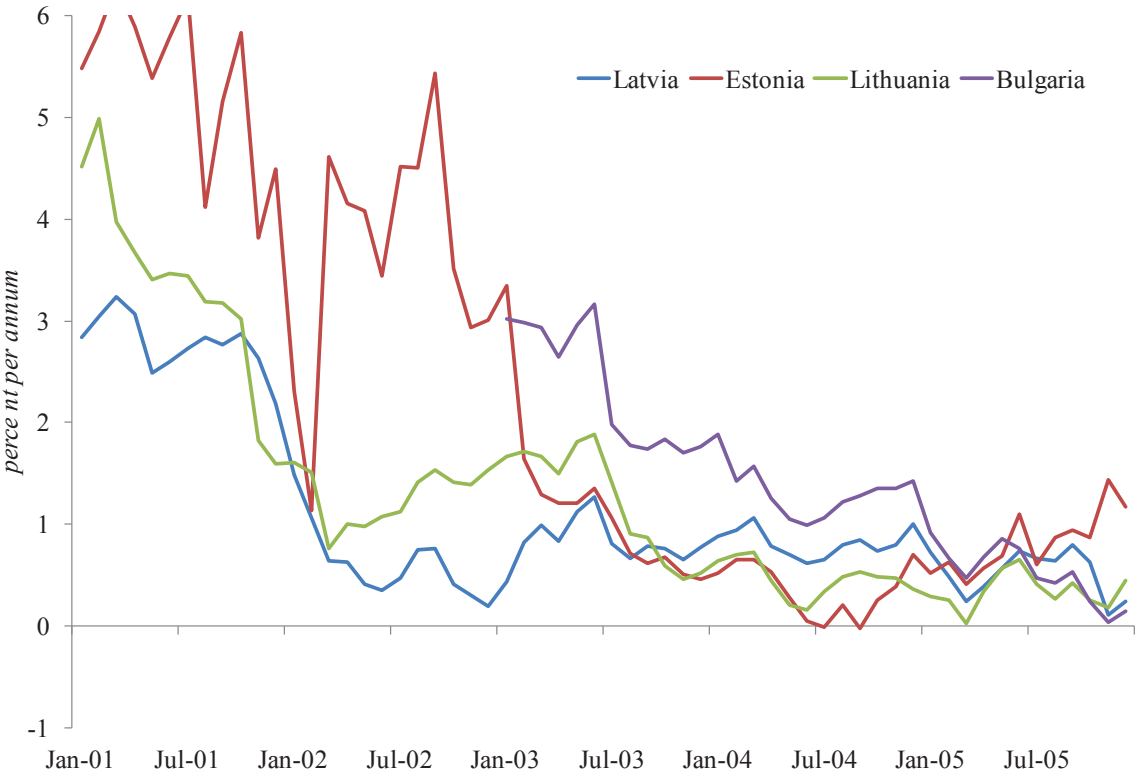
During the boom period of the 2000s the catch-up process in Central and Eastern Europe gained extra momentum. Given catch-up expectations, factors that allowed for substantial growth, such as ECB interest rates, had a larger impact on bond yields than current

fundamentals (Ebner 2009). Like in Southern Europe buoyant capital inflows and excessive foreign borrowing were reflected in high rates of credit growth and large current account deficits (Égert et al. 2006, Hoffmann 2010). This is particularly true for countries with fixed exchange rates to the euro. The hard pegs, like the gold standard or the euro, seem to have provided additional credibility (Figure 5).

But borrowing costs were not fully independent of the state of fiscal policy. I shall illustrate this by turning to the new EU member states with flexible exchange rates that also agreed to join EMU at a later stage. On the one hand, also Polish, Slovak and Czech government borrowing costs fell substantially with the announcement of EU membership. Given the catch-up expectations, fiscal policy was credible. On the other hand, countries that were known to go through large election cycles like Hungary did not benefit from falling borrowing costs even though they also became members of the EU and adopted the same institutions (Figure 6).

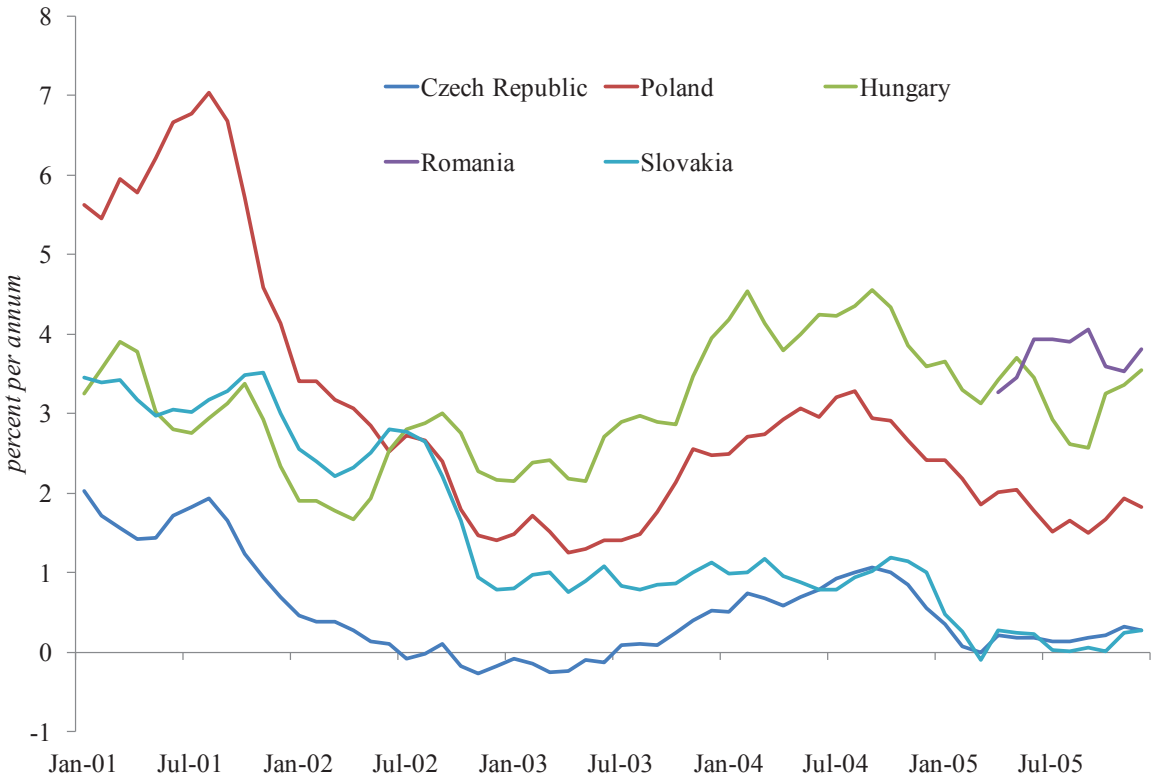
The development of Czech, Polish and Slovak government bond yields is comparable to those of Russia and Austria-Hungary in the 1880s-90s. While Russia and Austria-Hungary floated against the gold standard currencies until they went on gold in the late 1890s, strong links to gold standard countries, capital account openness and fiscally conservative policies allowed them to borrow at declining rates in international markets. In Figure 2, fiscal prudence shows in falling debt to GDP ratios in Russia from 1884 to 1910 and in the Austrian-Hungarian Empire after the 1890s.

Figure 5: Government Bond Spreads Fixed Exchange Rates (over German Bunds)



Data: Eurostat.

Figure 6: Government Bond Spreads Flexible Exchange Rates (over German Bunds)



Data: Eurostat.

4 Sovereign Debt Problems and Political Commitment

As the political commitment to the gold standard was one-sided, countries had the choice to either abandon the peg when debt problems became severe or to cut spending and reform rapidly. In the euro area, the general political commitment of the European countries allows countries to hold on to the euro but delay reforms.

4.1 Gold Standard

When it comes to the European experience with the gold standard, Flaundreau et al. (1998) provide an extensive analysis which I shall heavily draw on in this part. They suggest that the ability of countries to adhere to the gold standard largely depended on price movements and fiscal policies.

Because a country on gold did not give up the national currency but rather made it convertible to gold or gold-backed currencies, it was always possible to decouple the national currency from gold in times of crisis. Unlike the major European economies (with falling debt to GDP ratios) that were permanent members of the gold standard, the Southern as well as Central and Eastern European countries went on and off gold. Table 1 provides an overview.

Price movements are an important explanation. Until 1896, the gold standard was rather deflationary because growth in the core countries could not be matched by adequate gold discoveries (Figure 7). Additionally, events such as the Baring crisis contributed to a rise in international volatility in the 1890s as growing risk aversion made British investors discriminate more than before between different borrowers. Consequently, countries that had accumulated high levels of government debt faced fiscal adjustment problems as the deflationary tendencies increased expected future debt to GDP ratio even more and borrowing costs went up.

Table 1: Gold Standard in Central, Eastern and Southern Europe (1880-1913)

	Southern Periphery				Central and Eastern Europe				
	Greece	Italy	Portugal	Spain	Poland	Austria	Hungary	Russia	Romania
1880	0	0	1	0	0	0	0	0	0
1881	0	0	1	0	0	0	0	0	0
1882	0	0	1	0	0	0	0	0	0
1883	0	0	1	0	0	0	0	0	0
1884	0	1	1	0	0	0	0	0	0
1885	1	1	1	0	0	0	0	0	0
1886	0	1	1	0	0	0	0	0	0
1887	0	1	1	0	0	0	0	0	0
1888	0	1	1	0	0	0	0	0	0
1889	0	1	1	0	0	0	0	0	0
1890	0	1	1	0	0	0	0	0	0
1891	0	1	1	0	0	0	0	0	0
1892	0	1	0	0	0	1	1	0	0
1893	0	1	0	0	0	1	1	0	0
1894	0	1	0	0	0	1	1	0	0
1895	0	1	0	0	0	1	1	0	0
1896	0	1	0	0	0	1	1	0	0
1897	0	1	0	0	0	1	1	1	1
1898	0	1	0	0	0	1	1	1	1
1899	0	1	0	0	0	1	1	1	1
1900	0	1	0	0	0	1	1	1	1
1901	0	1	0	0	0	1	1	1	1
1902	0	1	0	0	0	1	1	1	1
1903	0	1	0	0	0	1	1	1	1
1904	0	1	0	0	0	1	1	1	1
1905	0	1	0	0	0	1	1	1	1
1906	0	1	0	0	0	1	1	1	1
1907	0	1	0	0	0	1	1	1	1
1908	0	1	0	0	0	1	1	1	1
1909	0	1	0	0	0	1	1	1	1
1910	1	1	0	0	0	1	1	1	1
1911	1	1	0	0	0	1	1	1	1
1912	1	1	0	0	0	1	1	1	1
1913	1	1	0	0	0	1	1	1	1

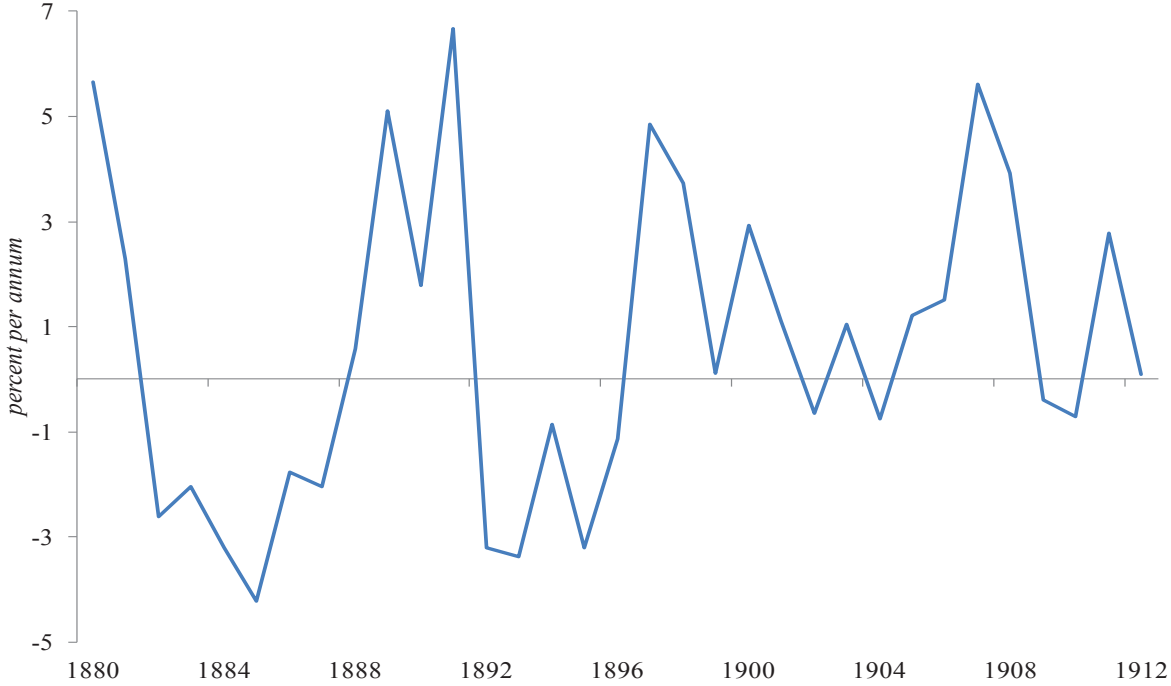
Data: Reinhart and Rogoff (2011). 1 means that the country is on the gold standard in the respective year.

During the 1880s and early 1890s this was particularly a problem in Southern Europe (Figure 2) but also in, for example Argentina, where deflationary pressure and an increase in borrowing costs undermined central bank independence and with it the credibility of the gold standard. As the commitment to the gold standard was one-sided, countries had to cope with problems by themselves. Britain did not bail-out Argentina or Portugal in the 1890s. Instead, there was the option of rapid reform and austerity, or dropping out.

Now, going off gold usually meant that investors lose money because of a subsequent devaluation of the national currency. They would be hesitant to finance future debt. Thus, there was an incentive to stay on gold, which made necessary reforms and prudent policies. Yet, in 1890-1, Portugal went off gold when pressure on government finances was immense and sustained deficits were out of sight. Portugal devalued the currency and defaulted on external debt. Also Greece was only able to stay on gold for a short period (Flandreau et al 1998) (Table 1).

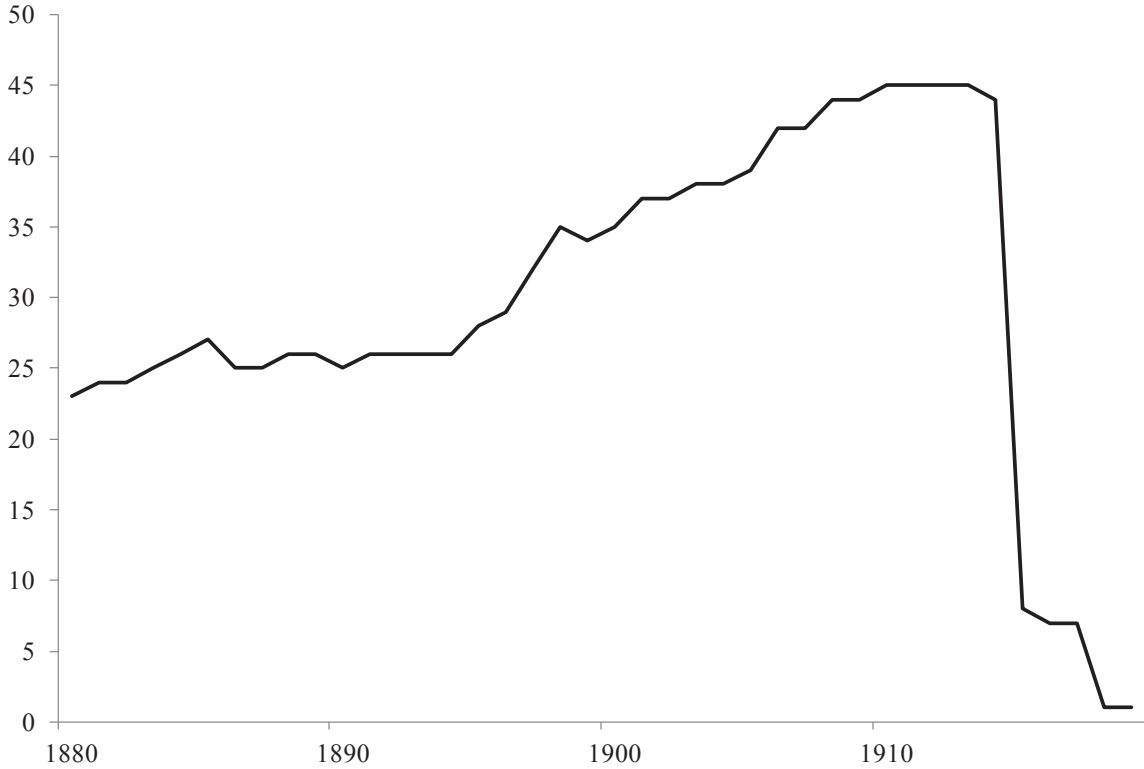
As a result of deflationary pressure, the number of countries on the gold standard stagnated until the late 1890s (Figure 8). Figure 7 signals that after 1896 inflation was on average positive. Then the gold standard started to spread again to further countries (Figure 8). Giving up monetary nationalism was less costly for countries with higher debt to GDP ratios. Even the countries of Central and Eastern Europe, which were far less developed than the rest of Europe, were able to go on gold during the more inflationary period. The gold standard contributed to a fall in borrowing costs and helped finance their catch-up process in Central and Eastern Europe (Flandreau et al. 1998).

Figure 7: Inflation in Europe: 1880-1912



Data: Reinhart and Rogoff (2011), Averages for France, Germany, Greece, Finland, Italy, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, UK, Austria, Belgium, and Denmark.

Figure 8: Number of Countries on the Gold Standard: 1880-1913



Data: Reinhart and Rogoff (2011).

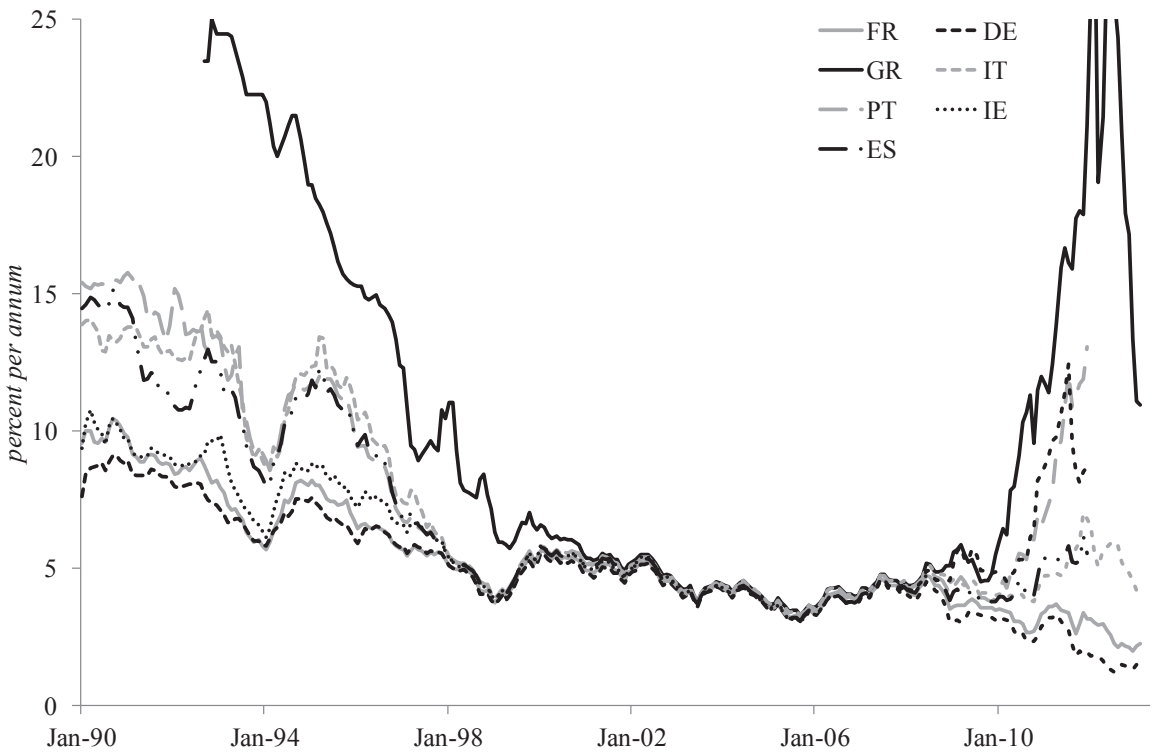
4.2 Euro Area and the New EU Member States

Price movements and fiscal problems in the euro area periphery also rendered adhering to the euro's principles difficult. In 2006, the economies of the euro area periphery (Spain, Portugal, Ireland, Greece and Italy) as well as of the "new" EU member states started to "overheat". Inflation picked up. Consequently, the ECB raised interest rates to rein in inflation. The interest rate increases dampened the macroeconomic outlook and thereby the stability of the markets in both the periphery of the euro area and the new member states. Asset prices and credit growth stagnated.

Finally, the sudden-stop after the Lehman collapse and the following "Great Recession" turned the world of finance on its head. In the periphery economies of the euro area, credit and housing booms went bust. The US subprime market crisis of 2007-8 contributed to an increase in risk aversion around the world. When liquidity in the large capital markets dried up, emerging markets faced substantial capital outflows and depreciation pressure. The following crisis was followed by large scale bail-outs of private and public banks, and enterprises that put an additional burden on debt to GDP ratios. The bursting bubbles in the euro area periphery disappointed Europe's prospects of a quick macroeconomic convergence.

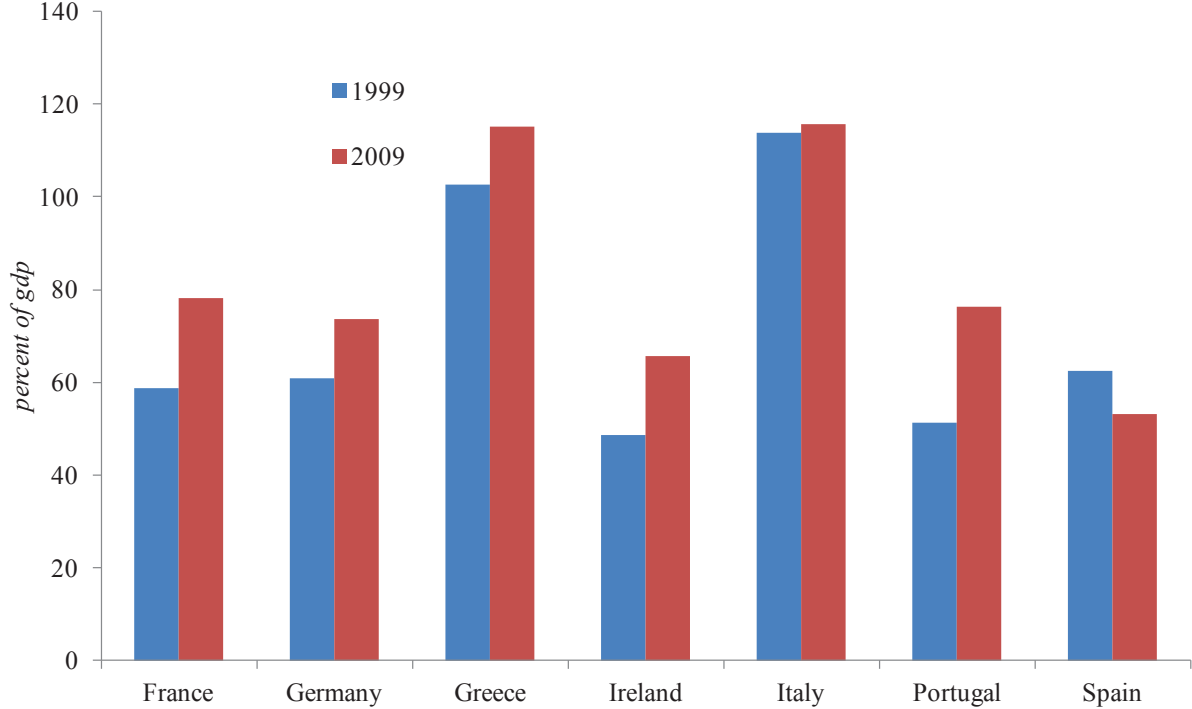
Consequently, investors started to discriminate more between different government bonds. The bond spreads reached pre-EMU levels (Figure 9). Discrimination did not only depend on debt to GDP ratios. Otherwise Germany should face greater state financing problems than Spain (Figure 10). But as expectations about future developments, tax revenues or the sustainability of current account balances were revised for the crisis economies, they pushed up government borrowing costs (Barrios et al. 2012, Aßmann and Boysen-Hogrefe 2012).

Figure 9: Government Bond Yields in the Euro Area: 1990-2012



Data: IMF, IFS.

Figure 10: Debt to GDP in Core and Southern Europe: 1999 and 2009



Data: IMF Public Debt Database.

Huerta de Soto (2012) argues, "the arrival of the Great Recession of 2008 has [...] further revealed to everyone the disciplinary nature of the euro: for the first time, the countries of the monetary union have had to face a deep economic recession without monetary-policy autonomy."

Indeed, in theory, without monetary policy at hands, holding on to the euro makes necessary credible reforms e.g. on labor markets and conservative fiscal policies to regain confidence of markets and lighten up future growth prospects. For instance in Greece the bursting of the bubble revealed that growth during the 2000s was unsustainable. Negative growth rates and declining tax revenues put a drag on fiscal sustainability. Borrowing costs rose.

A tremendous degree of tax evasion and rigid labor markets limit the scope of action for governments to lean against the fiscal drama and prevent the quick adjustment and rebound of the Greek economy. Therefore, for the Greek government public spending cuts were the only solution. This is particularly hard in a deflationary environment that adds to the debt mountain. In Greece spending cuts may not have been conducive to lowering deficits as growth slowed down further and a downward-spiral set in (De Grauwe and Ji 2013). Here, the European experience with the gold standard and euro are similar once more. With deflationary pressure or sustained negative GDP growth, governments are in a trap when debt mountains slide out of hands. As the level of debt to GDP continues to increase, fiscal policy lost its credibility.

If Greece was on the gold standard, it would probably cut the ties to gold, devalue the domestic currency and default on external debt like Portugal in 1890-1. In contrast, the members of the EMU feel obliged to stick to the euro. If this was the full truth, the euro would be a stronger engine for reform than the gold standard ever was. Greece would have to do what it can to liberalize labor markets quickly and get rid of bureaucracy that prevents setting up companies, or otherwise sink in chaos.

But the commitment to the euro is not one-sided. There is a general political commitment to the euro and the European integration process. Therefore, e.g. the ECB is pushed into a role of a government financier until credible reforms lighten up growth prospects of the countries in the southern periphery. Additionally, governments in stronger countries provide fiscal help for crisis economies. As many expected, when a crisis hit, the no-bail-out clause was completely ignored.

While adhering to the euro prevents a rapid shut-down of the public and private sector, the bailout mechanisms can also be argued to dampen the immediate adjustment pressure. By accepting the ongoing erosion of the institutions that gave credibility to the euro in the first place, politicians may make necessary additional institutional integration. Therefore, in the future the euro will likely become less a proxy for the gold standard than it already is.

In contrast, the new member states of the EU were forced to adjust much faster to the crisis events. With the capital flight, currencies in countries with flexible exchange rates depreciated and foreign denominated debt increased. More interestingly, the Baltics went through a process of rapid internal devaluation to be able to keep the peg to the euro. Decisive spending cuts and labor market reforms were credible signals. Borrowing costs in the Baltics quickly declined below those of Greece or Spain. The economies rebounded quickly. Estonia introduced the euro during the crisis. This signals that it is not the euro itself that forces reforms but the political commitment to the principles of a currency union and sustainable fiscal budgets. This commitment is tested whenever a boom turns bust which can reveal seemingly sustainable budgets to be unsustainable.

5 Summary

Inspired by Huerta de Soto (2012), the paper sheds some light on similarities and differences of the institutional framework of the classical gold standard and euro that affect government

debt financing and the way in which countries react to crisis. I have argued that giving up monetary nationalism and committing to the rules of either the gold standard or euro theoretically restricts the scope of state action. Therefore, the euro – like previously the gold standard – provided some (fiscal) policy credibility and contributed to substantial capital market integration and low government borrowing costs in Europe until 2007.

Huerta de Soto (2012) suggests that the common currency - like the gold standard - forces painful adjustment processes and spending cuts upon its members. But in this paper, I have emphasized that neither the gold standard, nor the euro itself force reforms and spending cuts upon countries that face unemployment and severe debt problems. The political commitment to the international currencies determines the willingness to reform or e.g. cut spending. I have argued that the institutional set-up of and therefore the political commitment to the classical gold standard and the EMU give very different incentives to deal with crisis and to implement credible reforms.

If countries wanted to adhere to the gold standard in times of crisis, credible policies and reforms – perhaps as recently implemented in the Baltics – were urgent. Otherwise, they had to leave the gold standard. When Portugal faced major budget problems and deflationary pressure in 1890-1, the government abandoned the gold standard, devalued the currency and defaulted on debt (Flaundreau et al. 1998).

In a similar way as Portugal during the 1890s, currently the southern periphery countries of the euro area have to cope with sovereign debt problems and negative growth rates. Debt levels and fiscal policies that seemed sound during the credit boom of the 2000s became unsustainable. But in contrast to the period of the classical gold standard there is a general political commitment of the euro area countries to Europe's integration process and the euro. The exit of a country from the euro seems even more (at least politically) costly.

In contrast to a return to monetary nationalism, holding on to the euro prevents a rapid shut-down of the public and private sector. But competitiveness, debt or unemployment

problems have to be addressed by other means than nominal devaluation. Credible reforms e.g. on labor markets and conservative fiscal policies to regain confidence of markets and lighten up future growth prospects become necessary. Unfortunately, such policies are particularly hard to implement in a deflationary environment that adds to the debt mountain as we see it in southern Europe.

Because rapid real devaluation and fiscal austerity were not politically feasible in the crisis economies, the general European commitment to the euro has forced the ECB and other bail-out institutions to continuously intervene in bond markets and set-up fiscal transfer packages or guarantees. The bail-outs have relieved the immediate adjustment pressure and provided additional incentives to hold on the euro for both the creditor (senders) and periphery debtor countries (recipients). Therefore, - so far - over the course of the crisis the euro has become less a "proxy for the gold standard" than it was before, and the EMU faces major problems.

While I concur with Huerta de Soto (2012)'s assessment that a return to monetary nationalism is unlikely to be an accelerator of market friendly reforms in the crisis economies, the often discussed move towards fiscal union seems to be even more problematic and risky. Fiscal union might undermine the credibility of the euro area as a whole if, for example, permanent fiscal transfers provide incentives to further delay fiscal consolidation efforts, postpone important (e.g. labor market) reforms and preserve structural distortions.

REFERENCES

Aßmann, C. and J. Boysen-Hogrefe 2012: Determinants of Government Bond Spreads in the Euro Area: in Good times as in Bad. *Empirica* 39, 3, 341-356.

Barrios, S., Iversen, P., Lewandowska, M. and R. Setzer 2009: Determinants of Intra-Euro Area Government Bond Spreads During the Financial Crisis. *European Economy - Economic Papers* 388.

Bernoth, K., J. von Hagen and L. Schuknecht 2004: Sovereign Risk Premia in the European Government Bond Market. *ECB Working Paper Series* No.369.

- Bordo, M. 2002: Globalization in Historical Perspective, *Business Economics*, 20-29.
- Bordo M., B. Eichengreen and D. Irwin 1999: Is Globalization Today Really Different Than Globalization a Hundred Years Ago?, *NBER Working Paper* No. 7195.
- Bordo, M. and H. Rockoff 1996: The Gold Standard as a 'Good Housekeeping Seal of Approval', *Journal of Economic History* 56, 2, 389-428.
- Codogno, L., C. Favero and. A. Missale 2003: Yield spreads on the EMU Government Bonds. *Economic Policy* 18, 37, 503-532.
- Côté, D. and Chr. Graham 2004: Convergence of Government Bond Yields in the Euro Zone: The Role of Policy Harmonization, *Bank of Canada Working Paper* 2004-23.
- De Grauwe, P. 2009: *Economics of Monetary Union*, Oxford University Press.
- De Grauwe, P. and Y. Ji 2013: Panic-Driven Austerity in the Eurozone and its Implications. VOXEU.ORG Blog, 21 February 2013.
- Huerta De Soto, J. 2012: An Austrian Defense of the Euro, *Mises Daily*, 22 June.
- Ebner, A. 2009: An Empirical Analysis on the Determinants of CEE Government Bond Spreads, *Emerging Markets Review* 10, 2, 97-121.
- Égert, B., P. Backé and T. Zumer 2006: Credit Growth in Central and Eastern Europe – New (Over)shooting Stars? *European Central Bank Working Paper* No. 687.
- Eichengreen B. and H. James 2003: Monetary and Financial Reform in Two Eras of Globalization, In M. Bordo et al. (eds.): *Globalization in Historical Perspective*, 515-548, University of Chicago Press.
- Flandreau, M. and F. Zúmer 2004: *The Making of Global Finance*. Paris: OECD.
- Flandreau, M., J. Le Cacheux and F. Zumer 1998: Stability without a Pact? Lessons from the European Gold Standard 1880-1914, *Economic Policy* 13, 26, 117-162.
- Frankel J. and A. Rose 1998: The Endogeneity of the Optimum Currency Area Criteria, *Economic Journal* 108, 449, 1003-25.
- Hallerberg, M. and G. Wolff 2008: Fiscal Institutions, Fiscal policy and Sovereign Risk Premia in EMU. *Public Choice* 136, 3, 379-396.
- Hoffmann, A. 2010: An Overinvestment Cycle in Central and Eastern Europe? *Metroeconomica* 61, 4, 711-734.
- López-Córdova, E. and Chr. Meissner. 2003: Exchange-Rate Regimes and International Trade: Evidence from the Classical Gold Standard Era, *American Economic Review* 93, 1, 344-353.
- Luengnaruemitchai, P. and S. Schadler. 2007: Do Economists' and Financial Markets' Perspectives on the New Members of the EU Differ?, *IMF Working Paper* No. 07/65.

Mauro, P., N. Sussman and Y. Yafeh 2007: *Emerging Markets and Financial Globalization: Sovereign Bond Spreads in 1870-1913 and Today*, Oxford University Press.

Mundell, R. 1961: A Theory of Optimum Currency Areas, *American Economic Review* 51, 4, 657-665.

Obstfeld, M. and A. Taylor 2003: Sovereign Risk, Credibility and the Gold Standard: 1870-1913 vs. 1925-1931. *Economic Journal* 113, 2, 241-275.

Reinhart, C. and K. Rogoff 2011: From Financial Crash to Debt Crisis. *American Economic Review* 101, 5, 1676-1706.

Poterba, J. and K. Rueben 2001: Fiscal News, State Budget Rules, and Tax-Exempt Bond Yields. *Journal of Urban Economics* 50, 537-562.

Schmuckler, S. and L. Serven 2002: Pricing Currency Risk under Currency Boards, *Journal of Development Economics* 69, 2, 367-391.

Schnabl, G. and H. Zemanek 2011: Inter-temporal Savings, Current Account Trends and Asymmetric Shocks in a Heterogeneous European Monetary Union, *Intereconomics: Review of European Economic Policy* 46, 3, 153-160.

Schularick, M. and T. Steger 2010: Financial Integration, Investment, and Economic Growth: Evidence from Two Eras of Financial Globalization, *Review of Economics and Statistics* 92, 4, 756-768.

Sylla, R. and J. Wallis 1998: The Anatomy of Sovereign Debt Crises: Lessons from the American State Defaults of the 1840s, *Japan and the World Economy* 10, 267-293.

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