

Hoffmann, Andreas

**Working Paper**

## The euro as a proxy for the classical gold standard? Government debt financing and political commitment in historical perspective

Working Paper, No. 119

**Provided in Cooperation with:**

University of Leipzig, Faculty of Economics and Management Science

*Suggested Citation:* Hoffmann, Andreas (2013) : The euro as a proxy for the classical gold standard? Government debt financing and political commitment in historical perspective, Working Paper, No. 119, Universität Leipzig, Wirtschaftswissenschaftliche Fakultät, Leipzig

This Version is available at:

<https://hdl.handle.net/10419/74607>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

UNIVERSITÄT LEIPZIG

**Wirtschaftswissenschaftliche Fakultät  
Faculty of Economics and Management Science**

Working Paper, No. 119

Andreas Hoffmann

**The Euro as a Proxy for the Classical  
Gold Standard?**

**Government Debt Financing and Political Commitment in  
Historical Perspective**

Mai 2013

ISSN 1437-9384

# **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



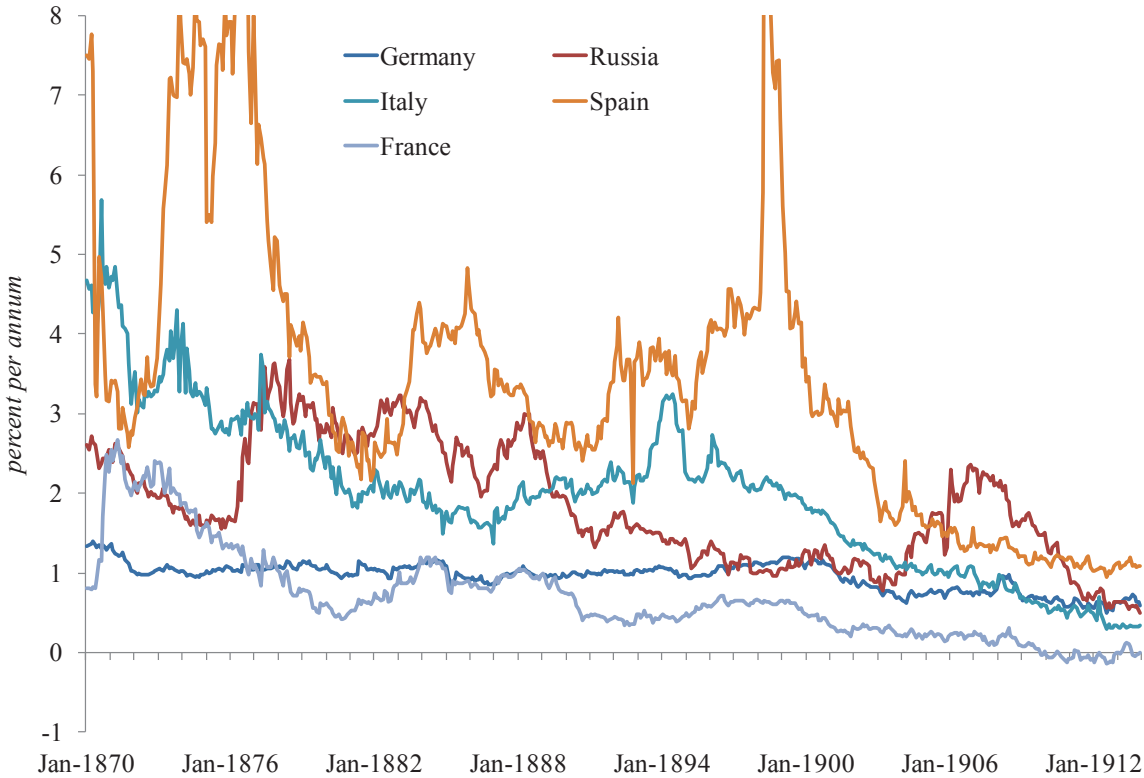
turn of the century even interest rate spreads of Southern Europe (here: Spain) declined substantially. Until 1912 all European government bond yields converged.

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).

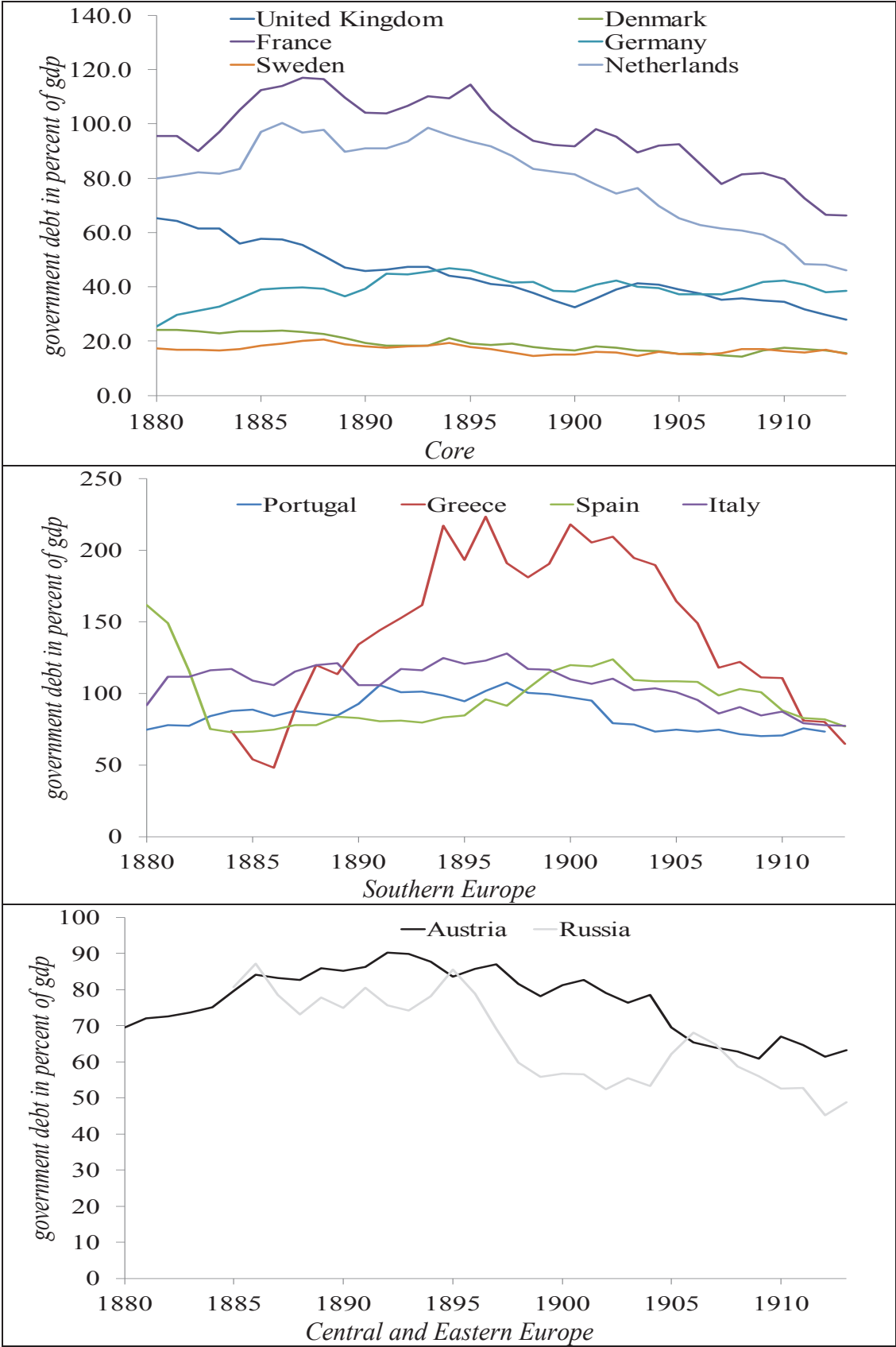
Among the core countries of the gold standard, debt to GDP ratios differed but converged and had a downward trend as average GDP growth exceeded fiscal deficits. Yet, the ability to raise taxes, economic development and its future prospects may have had a greater impact on the credibility of government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

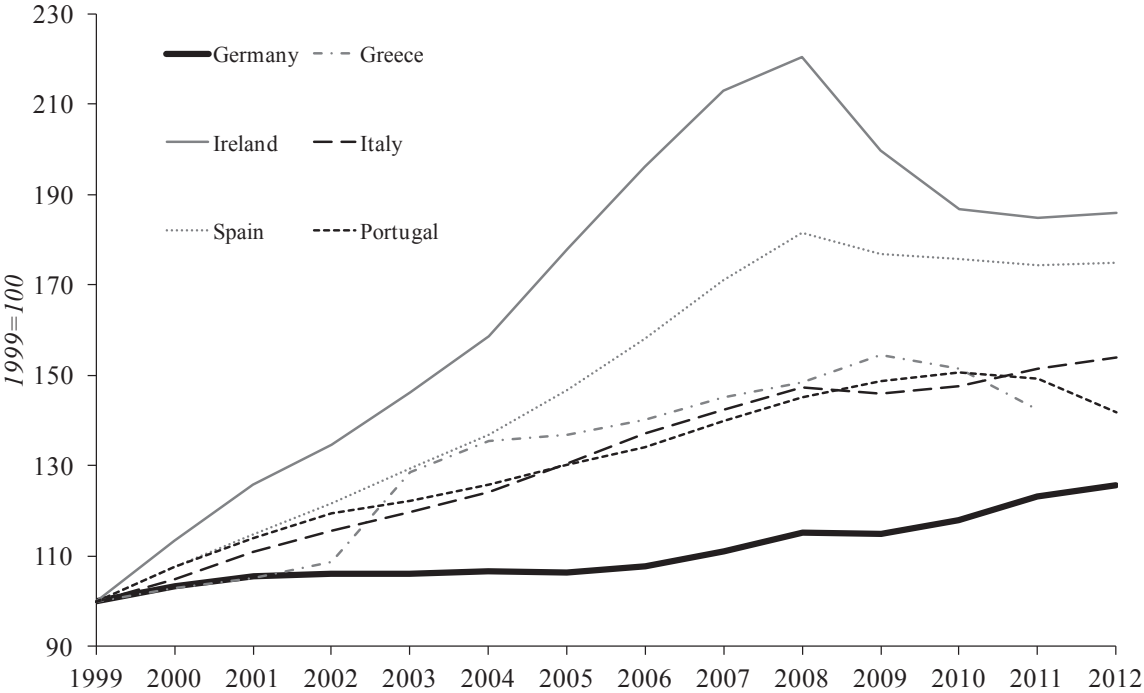
## 3.2 EU 1996-2007

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.

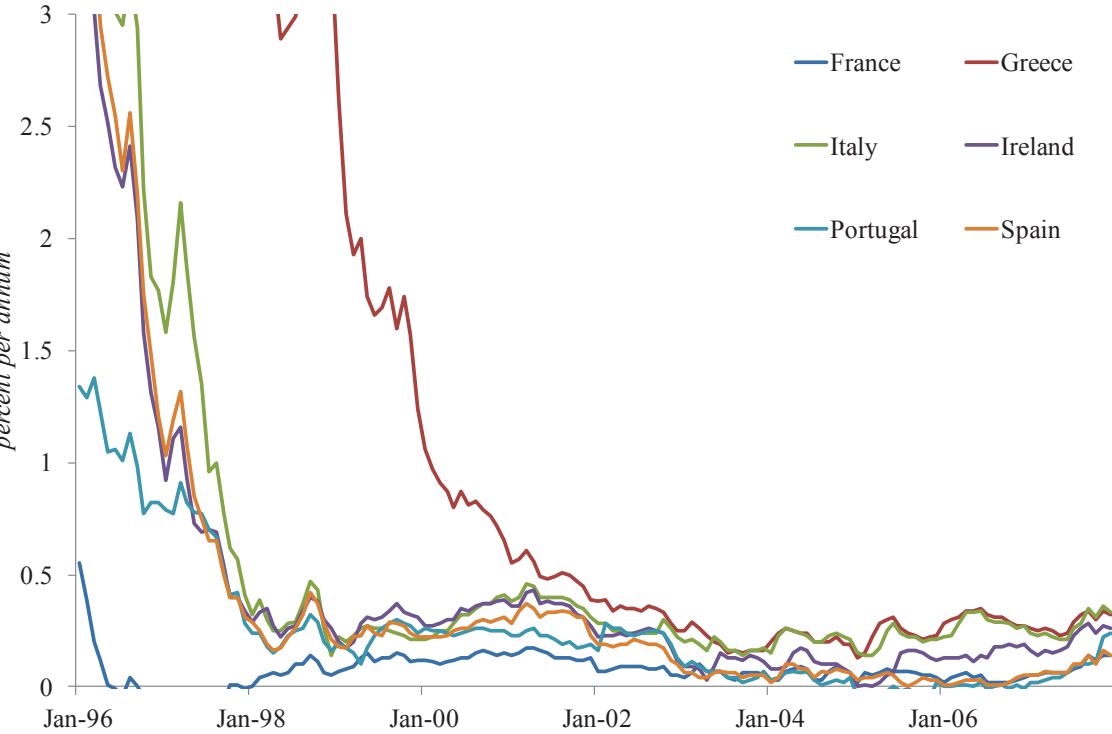
Because all euro area economies were considered to have irreversibly introduced the euro (and to adhere to its principles) and macroeconomic convergence was expected banks as well as regulators did not discriminate between government bonds of different countries. Figure 4 illustrates that the introduction 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).

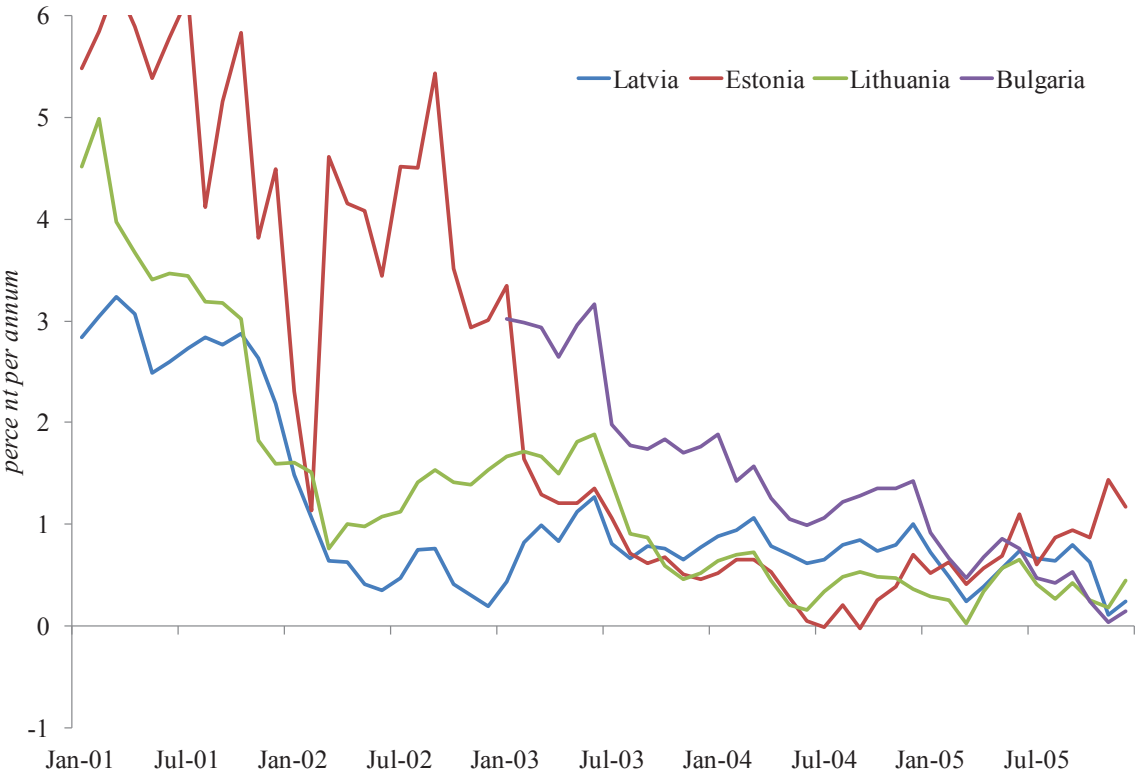
During the boom period of the 2000s the catch-up process in Central and Eastern Europe gained extra momentum. Given catch-up expectations, factors that allowed for substantial growth, such as ECB interest rates, had a larger impact on bond yields than current

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).

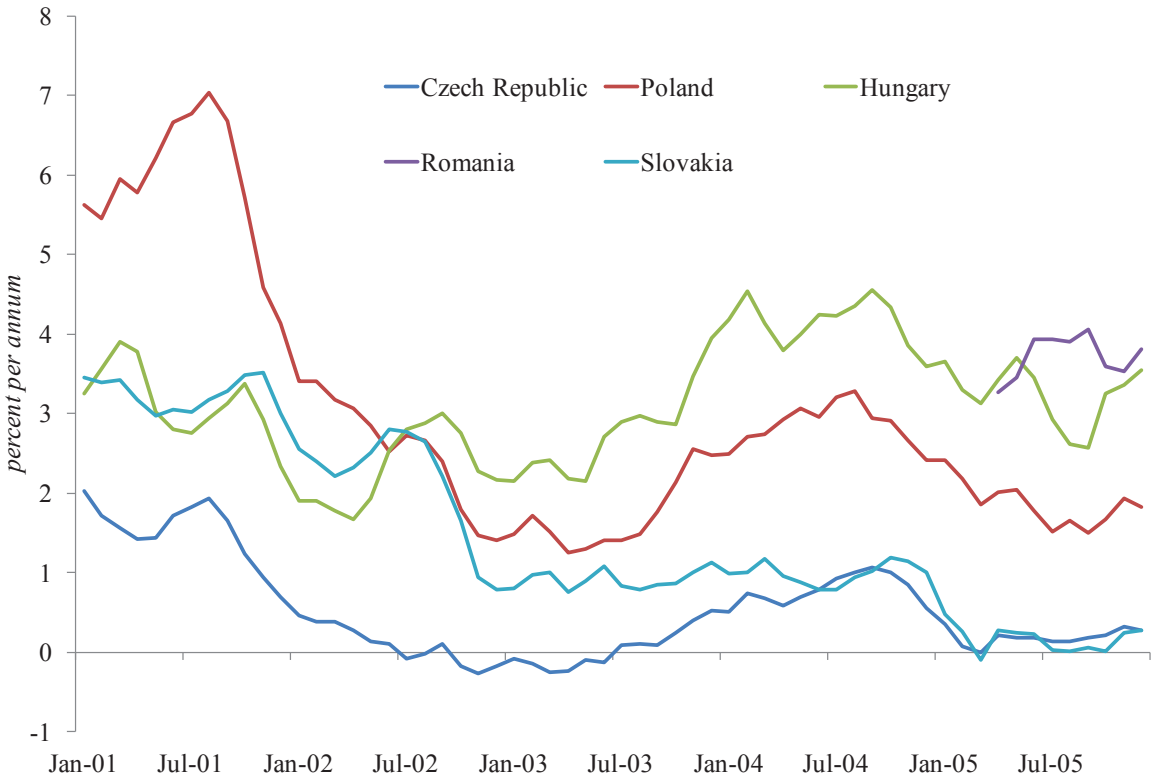
The development of Czech, Polish and Slovak government bond yields is comparable to those of Russia and Austria-Hungary in the 1880s-90s. While Russia and Austria-Hungary floated against the gold standard currencies until they went on gold in the late 1890s, strong links to gold standard countries, capital 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

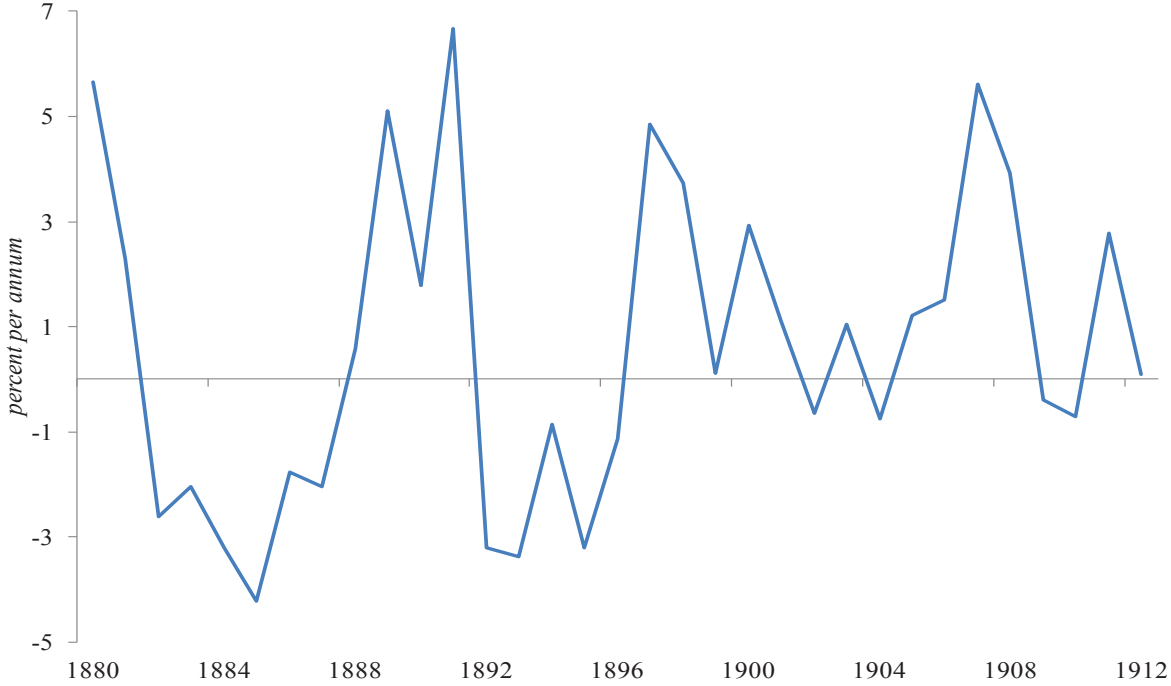
*Data:* Reinhart and Rogoff (2011). 1 means that the country is on the gold standard in the respective year.

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).

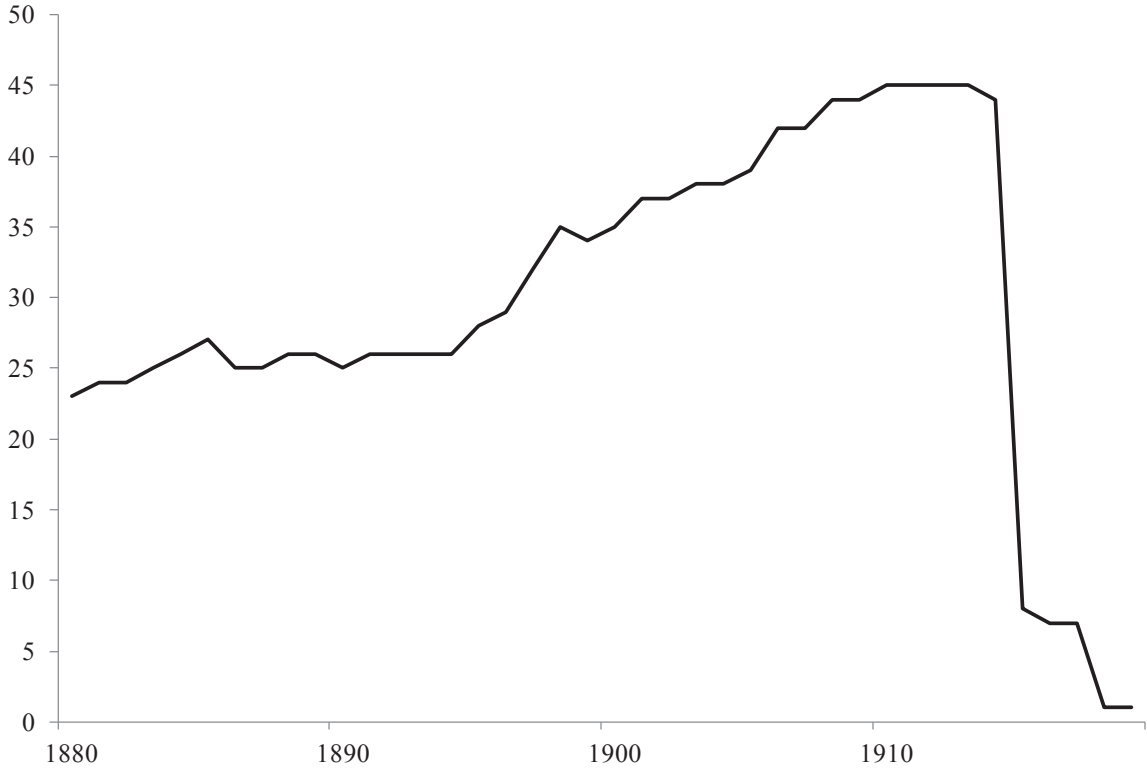
As a result of deflationary pressure, the number of countries on the gold standard stagnated until the late 1890s (Figure 8). Figure 7 signals that after 1896 inflation was on average positive. Then the gold standard started to spread again to further countries (Figure 8). Giving up monetary nationalism 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).

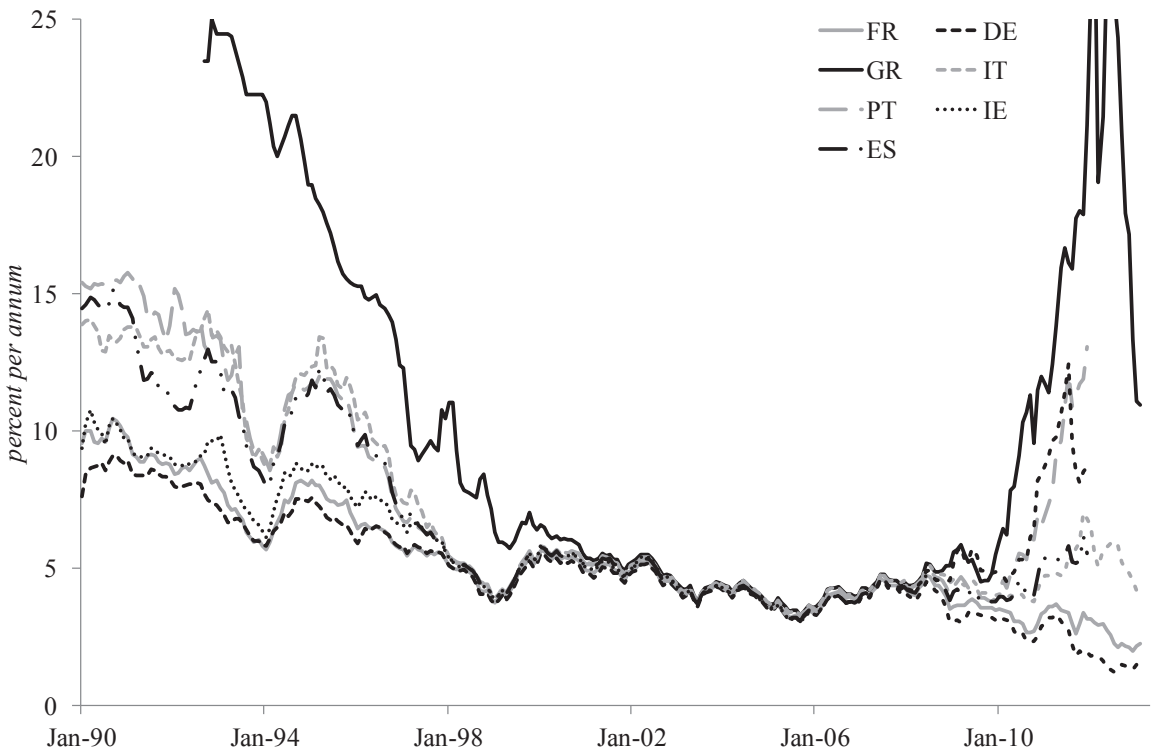
## 4.2 Euro Area and the New EU Member States

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.

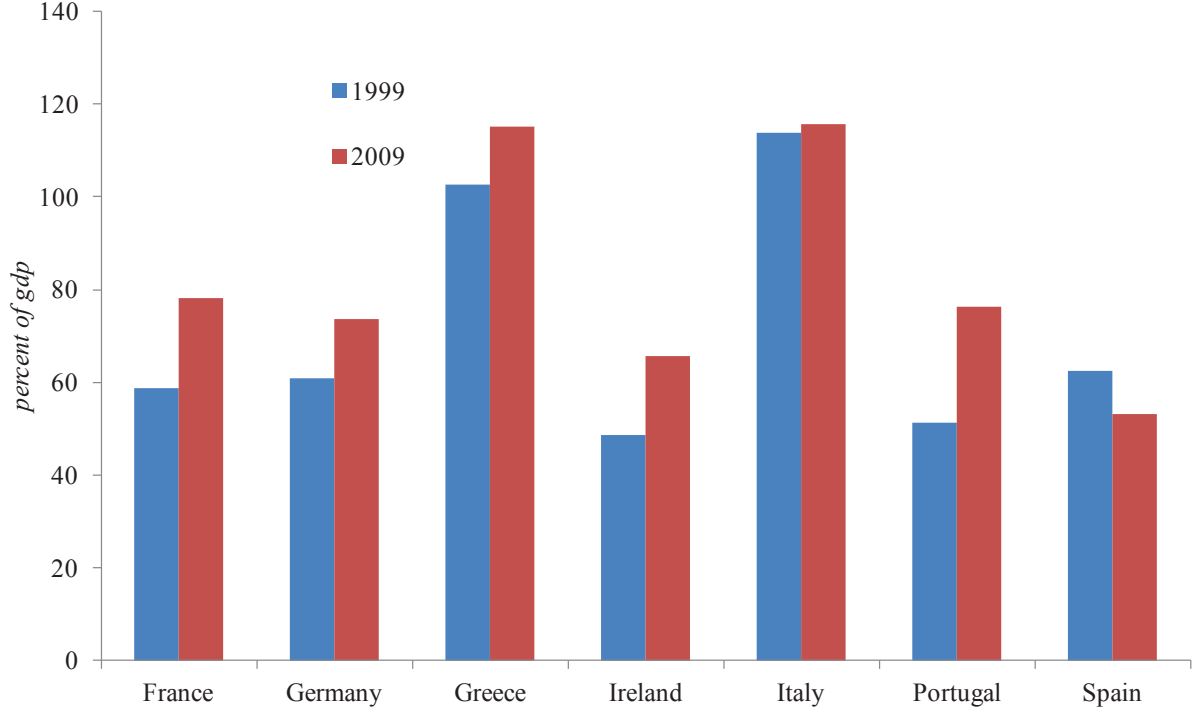
Consequently, investors started to discriminate more between different government bonds. The bond spreads reached pre-EMU levels (Figure 9). Discrimination did not only depend on debt to GDP ratios. Otherwise Germany should face greater state financing problems than Spain (Figure 10). But as expectations 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.

# Universität Leipzig

## Wirtschaftswissenschaftliche Fakultät

Nr. 1	Wolfgang Bernhardt	Stock Options wegen oder gegen Shareholder Value? Vergütungsmodelle für Vorstände und Führungskräfte 04/1998
Nr. 2	Thomas Lenk / Volkmar Teichmann	Bei der Reform der Finanzverfassung die neuen Bundesländer nicht vergessen! 10/1998
Nr. 3	Wolfgang Bernhardt	Gedanken über Führen – Dienen – Verantworten 11/1998
Nr. 4	Kristin Wellner	Möglichkeiten und Grenzen kooperativer Standortgestaltung zur Revitalisierung von Innenstädten 12/1998
Nr. 5	Gerhardt Wolff	Brauchen wir eine weitere Internationalisierung der Betriebswirtschaftslehre? 01/1999
Nr. 6	Thomas Lenk / Friedrich Schneider	Zurück zu mehr Föderalismus: Ein Vorschlag zur Neugestaltung des Finanzausgleichs in der Bundesrepublik Deutschland unter besonderer Berücksichtigung der neuen Bundesländer 12/1998
Nr. 7	Thomas Lenk	Kooperativer Föderalismus – Wettbewerbsorientierter Föderalismus 03/1999
Nr. 8	Thomas Lenk / Andreas Mathes	EU – Osterweiterung – Finanzierbar? 03/1999
Nr. 9	Thomas Lenk / Volkmar Teichmann	Die fiskalischen Wirkungen verschiedener Forderungen zur Neugestaltung des Länderfinanzausgleichs in der Bundesrepublik Deutschland: Eine empirische Analyse unter Einbeziehung der Normenkontrollanträge der Länder Baden-Württemberg, Bayern und Hessen sowie der Stellungnahmen verschiedener Bundesländer 09/1999
Nr. 10	Kai-Uwe Graw	Gedanken zur Entwicklung der Strukturen im Bereich der Wasserversorgung unter besonderer Berücksichtigung kleiner und mittlerer Unternehmen 10/1999
Nr. 11	Adolf Wagner	Materialien zur Konjunkturforschung 12/1999
Nr. 12	Anja Birke	Die Übertragung westdeutscher Institutionen auf die ostdeutsche Wirklichkeit – ein erfolg-versprechendes Zusammenspiel oder Aufdeckung systematischer Mängel? Ein empirischer Bericht für den kommunalen Finanzausgleich am Beispiel Sachsen 02/2000
Nr. 13	Rolf H. Hasse	Internationaler Kapitalverkehr in den letzten 40 Jahren – Wohlstandsmotor oder Krisenursache? 03/2000
Nr. 14	Wolfgang Bernhardt	Unternehmensführung (Corporate Governance) und Hauptversammlung 04/2000
Nr. 15	Adolf Wagner	Materialien zur Wachstumsforschung 03/2000
Nr. 16	Thomas Lenk / Anja Birke	Determinanten des kommunalen Gebührenaufkommens unter besonderer Berücksichtigung der neuen Bundesländer 04/2000
Nr. 17	Thomas Lenk	Finanzwirtschaftliche Auswirkungen des Bundesverfassungsgerichtsurteils zum Länderfinanzausgleich vom 11.11.1999 04/2000
Nr. 18	Dirk Büttel	Continuous linear utility for preferences on convex sets in normal real vector spaces 05/2000
Nr. 19	Stefan Dierkes / Stephanie Hanrath	Steuerung dezentraler Investitionsentscheidungen bei nutzungsabhängigem und nutzungsunabhängigem Verschleiß des Anlagenvermögens 06/2000
Nr. 20	Thomas Lenk / Andreas Mathes / Olaf Hirschfeld	Zur Trennung von Bundes- und Landeskompetenzen in der Finanzverfassung Deutschlands 07/2000
Nr. 21	Stefan Dierkes	Marktwerte, Kapitalkosten und Betafaktoren bei wertabhängiger Finanzierung 10/2000
Nr. 22	Thomas Lenk	Intergovernmental Fiscal Relationships in Germany: Requirement for New Regulations? 03/2001
Nr. 23	Wolfgang Bernhardt	Stock Options – Aktuelle Fragen Besteuerung, Bewertung, Offenlegung 03/2001

Nr. 24	Thomas Lenk	Die „kleine Reform“ des Länderfinanzausgleichs als Nukleus für die „große Finanzverfassungs-reform“? 10/2001
Nr. 25	Wolfgang Bernhardt	Biotechnologie im Spannungsfeld von Menschenwürde, Forschung, Markt und Moral Wirtschaftsethik zwischen Beredsamkeit und Schweigen 11/2001
Nr. 26	Thomas Lenk	Finanzwirtschaftliche Bedeutung der Neuregelung des bundestaatlichen Finanzausgleichs – Eine allokoative und distributive Wirkungsanalyse für das Jahr 2005 11/2001
Nr. 27	Sören Bär	Grundzüge eines Tourismusmarketing, untersucht für den Südraum Leipzig 05/2002
Nr. 28	Wolfgang Bernhardt	Der Deutsche Corporate Governance Kodex: Zuwahl (comply) oder Abwahl (explain)? 06/2002
Nr. 29	Adolf Wagner	Konjunkturtheorie, Globalisierung und Evolutionsökonomik 08/2002
Nr. 30	Adolf Wagner	Zur Profilbildung der Universitäten 08/2002
Nr. 31	Sabine Klinger / Jens Ulrich / Hans-Joachim Rudolph	Konjunktur als Determinante des Erdgasverbrauchs in der ostdeutschen Industrie? 10/2002
Nr. 32	Thomas Lenk / Anja Birke	The Measurement of Expenditure Needs in the Fiscal Equalization at the Local Level Empirical Evidence from German Municipalities 10/2002
Nr. 33	Wolfgang Bernhardt	Die Lust am Fliegen Eine Parabel auf viel Corporate Governance und wenig Unternehmensführung 11/2002
Nr. 34	Udo Hielscher	Wie reich waren die reichsten Amerikaner wirklich? (US-Vermögensbewertungsindex 1800 – 2000) 12/2002
Nr. 35	Uwe Haubold / Michael Nowak	Risikoanalyse für Langfrist-Investments Eine simulationsbasierte Studie 12/2002
Nr. 36	Thomas Lenk	Die Neuregelung des bundesstaatlichen Finanzausgleichs auf Basis der Steuerschätzung Mai 2002 und einer aktualisierten Bevölkerungsstatistik 12/2002
Nr. 37	Uwe Haubold / Michael Nowak	Auswirkungen der Renditeverteilungsannahme auf Anlageentscheidungen Eine simulationsbasierte Studie 02/2003
Nr. 38	Wolfgang Bernhard	Corporate Governance Kodex für den Mittel-Stand? 06/2003
Nr. 39	Hermut Kormann	Familienunternehmen: Grundfragen mit finanzwirtschaftlichen Bezug 10/2003
Nr. 40	Matthias Folk	Launhardt'sche Trichter 11/2003
Nr. 41	Wolfgang Bernhardt	Corporate Governance statt Unternehmensführung 11/2003
Nr. 42	Thomas Lenk / Karolina Kaiser	Das Prämienmodell im Länderfinanzausgleich – Anreiz- und Verteilungsmittlungen 11/2003
Nr. 43	Sabine Klinger	Die Volkswirtschaftliche Gesamtrechnung des Haushaltsektors in einer Matrix 03/2004
Nr. 44	Thomas Lenk / Heide Köpping	Strategien zur Armutsbekämpfung und –vermeidung in Ostdeutschland: 05/2004
Nr. 45	Wolfgang Bernhardt	Sommernachtsfantasien Corporate Governance im Land der Träume. 07/2004
Nr. 46	Thomas Lenk / Karolina Kaiser	The Premium Model in the German Fiscal Equalization System 12/2004
Nr. 47	Thomas Lenk / Christine Falken	Komparative Analyse ausgewählter Indikatoren des Kommunalwirtschaftlichen Gesamtergebnisses 05/2005
Nr. 48	Michael Nowak / Stephan Barth	Immobilienanlagen im Portfolio institutioneller Investoren am Beispiel von Versicherungsunternehmen Auswirkungen auf die Risikosituation 08/2005

Nr. 49	Wolfgang Bernhardt	Familiengesellschaften – Quo Vadis? Vorsicht vor zu viel „Professionalisierung“ und Ver-Fremdung 11/2005
Nr. 50	Christian Milow	Der Griff des Staates nach dem Währungsgold 12/2005
Nr. 51	Anja Eichhorst / Karolina Kaiser	The Institutional Design of Bailouts and Its Role in Hardening Budget Constraints in Federations 03/2006
Nr. 52	Ullrich Heilemann / Nancy Beck	Die Mühen der Ebene – Regionale Wirtschaftsförderung in Leipzig 1991 bis 2004 08/2006
Nr. 53	Gunther Schnabl	Die Grenzen der monetären Integration in Europa 08/2006
Nr. 54	Hermut Kormann	Gibt es so etwas wie typisch mittelständige Strategien? 11/2006
Nr. 55	Wolfgang Bernhardt	(Miss-)Stimmung, Bestimmung und Mitbestimmung Zwischen Juristentag und Biedenkopf-Kommission 11/2006
Nr. 56	Ullrich Heilemann / Annika Blaschzik	Indicators and the German Business Cycle A Multivariate Perspective on Indicators of Ifo, OECD, and ZEW 01/2007
Nr. 57	Ullrich Heilemann	“The Soul of a new Machine” zu den Anfängen des RWI-Konjunkturmodells 12/2006
Nr. 58	Ullrich Heilemann / Roland Schuhr / Annika Blaschzik	Zur Evolution des deutschen Konjunkturzyklus 1958 bis 2004 Ergebnisse einer dynamischen Diskriminanzanalyse 01/2007
Nr. 59	Christine Falken / Mario Schmidt	Kameralistik versus Doppik Zur Informationsfunktion des alten und neuen Rechnungswesens der Kommunen Teil I: Einführende und Erläuternde Betrachtungen zum Systemwechsel im kommunalen Rechnungswesen 01/2007
Nr. 60	Christine Falken / Mario Schmidt	Kameralistik versus Doppik Zur Informationsfunktion des alten und neuen Rechnungswesens der Kommunen Teil II Bewertung der Informationsfunktion im Vergleich 01/2007
Nr. 61	Udo Hielscher	Monti della città di firenze Innovative Finanzierungen im Zeitalter Der Medici. Wurzeln der modernen Finanzmärkte 03/2007
Nr. 62	Ullrich Heilemann / Stefan Wappler	Sachsen wächst anders Konjunkturelle, sektorale und regionale Bestimmungsgründe der Entwicklung der Bruttowertschöpfung 1992 bis 2006 07/2007
Nr. 63	Adolf Wagner	Regionalökonomik: Konvergierende oder divergierende Regionalentwicklungen 08/2007
Nr. 64	Ullrich Heilemann / Jens Ulrich	Good bye, Professir Phillips? Zum Wandel der Tariflohndeterminanten in der Bundesrepublik 1952 – 2004 08/2007
Nr. 65	Gunther Schnabl / Franziska Schobert	Monetary Policy Operations of Debtor Central Banks in MENA Countries 10/2007
Nr. 66	Andreas Schäfer / Simone Valente	Habit Formation, Dynastic Altruism, and Population Dynamics 11/2007
Nr. 67	Wolfgang Bernhardt	5 Jahre Deutscher Corporate Governance Kodex Eine Erfolgsgeschichte? 01/2008
Nr. 68	Ullrich Heilemann / Jens Ulrich	Viel Lärm um wenig? Zur Empirie von Lohnformeln in der Bundesrepublik 01/2008
Nr. 69	Christian Groth / Karl-Josef Koch / Thomas M. Steger	When economic growth is less than exponential 02/2008
Nr. 70	Andreas Bohne / Linda Kochmann	Ökonomische Umweltbewertung und endogene Entwicklung peripherer Regionen Synthese einer Methodik und einer Theorie 02/2008
Nr. 71	Andreas Bohne / Linda Kochmann / Jan Slavík / Lenka Slavíková	Deutsch-tschechische Bibliographie Studien der kontingenten Bewertung in Mittel- und Osteuropa 06/2008

Nr. 72	Paul Lehmann / Christoph Schröter-Schlaack	Regulating Land Development with Tradable Permits: What Can We Learn from Air Pollution Control? 08/2008
Nr. 73	Ronald McKinnon / Gunther Schnabl	China's Exchange Rate Impasse and the Weak U.S. Dollar 10/2008
Nr. 74	Wolfgang Bernhardt	Managervergütungen in der Finanz- und Wirtschaftskrise Rückkehr zu (guter) Ordnung, (klugem) Maß und (vernünftigem) Ziel? 12/2008
Nr. 75	Moritz Schularick / Thomas M. Steger	Financial Integration, Investment, and Economic Growth: Evidence From Two Eras of Financial Globalization 12/2008
Nr. 76	Gunther Schnabl / Stephan Freitag	An Asymmetry Matrix in Global Current Accounts 01/2009
Nr. 77	Christina Ziegler	Testing Predictive Ability of Business Cycle Indicators for the Euro Area 01/2009
Nr. 78	Thomas Lenk / Oliver Rottmann / Florian F. Woitek	Public Corporate Governance in Public Enterprises Transparency in the Face of Divergent Positions of Interest 02/2009
Nr. 79	Thomas Steger / Lucas Bretschger	Globalization, the Volatility of Intermediate Goods Prices, and Economic Growth 02/2009
Nr. 80	Marcela Munoz Escobar / Robert Holländer	Institutional Sustainability of Payment for Watershed Ecosystem Services. Enabling conditions of institutional arrangement in watersheds 04/2009
Nr. 81	Robert Holländer / WU Chunyou / DUAN Ning	Sustainable Development of Industrial Parks 07/2009
Nr. 82	Georg Quaas	Realgrößen und Preisindizes im alten und im neuen VGR-System 10/2009
Nr. 83	Ulrich Heilemann / Hagen Findeis	Empirical Determination of Aggregate Demand and Supply Curves: The Example of the RWI Business Cycle Model 12/2009
Nr. 84	Gunther Schnabl / Andreas Hoffmann	The Theory of Optimum Currency Areas and Growth in Emerging Markets 03/2010
Nr. 85	Georg Quaas	Does the macroeconomic policy of the global economy's leader cause the worldwide asymmetry in current accounts? 03/2010
Nr. 86	Volker Grossmann / Thomas M. Steger / Timo Trimborn	Quantifying Optimal Growth Policy 06/2010
Nr. 87	Wolfgang Bernhardt	Corporate Governance Kodex für Familienunternehmen? Eine Widerrede 06/2010
Nr. 88	Philipp Mandel / Bernd Süßmuth	A Re-Examination of the Role of Gender in Determining Digital Piracy Behavior 07/2010
Nr. 89	Philipp Mandel / Bernd Süßmuth	Size Matters. The Relevance and Hicksian Surplus of Agreeable College Class Size 07/2010
Nr. 90	Thomas Kohstall / Bernd Süßmuth	Cyclic Dynamics of Prevention Spending and Occupational Injuries in Germany: 1886-2009 07/2010
Nr. 91	Martina Padmanabhan	Gender and Institutional Analysis. A Feminist Approach to Economic and Social Norms 08/2010
Nr. 92	Gunther Schnabl / Ansgar Belke	Finanzkrise, globale Liquidität und makroökonomischer Exit 09/2010
Nr. 93	Ulrich Heilemann / Roland Schuhr / Heinz Josef Münch	A "perfect storm"? The present crisis and German crisis patterns 12/2010
Nr. 94	Gunther Schnabl / Holger Zemanek	Die Deutsche Wiedervereinigung und die europäische Schuldenkrise im Lichte der Theorie optimaler Währungsräume 06/2011
Nr. 95	Andreas Hoffmann / Gunther Schnabl	Symmetrische Regeln und asymmetrisches Handeln in der Geld- und Finanzpolitik 07/2011
Nr. 96	Andreas Schäfer / Maik T. Schneider	Endogenous Enforcement of Intellectual Property, North-South Trade, and Growth 08/2011
Nr. 97	Volker Grossmann / Thomas M. Steger / Timo Trimborn	Dynamically Optimal R&D Subsidization 08/2011



Nr. 98	Erik Gawel	Political drivers of and barriers to Public-Private Partnerships: The role of political involvement 09/2011
Nr. 99	André Casajus	Collusion, symmetry, and the Banzhaf value 09/2011
Nr. 100	Frank Hüttner / Marco Sunder	Decomposing $R^2$ with the Owen value 10/2011
Nr. 101	Volker Grossmann / Thomas M. Steger / Timo Trimborn	The Macroeconomics of TANSTAAFL 11/2011
Nr. 102	Andreas Hoffmann	Determinants of Carry Trades in Central and Eastern Europe 11/2011
Nr. 103	Andreas Hoffmann	Did the Fed and ECB react asymmetrically with respect to asset market developments? 01/2012
Nr. 104	Christina Ziegler	Monetary Policy under Alternative Exchange Rate Regimes in Central and Eastern Europe 02/2012
Nr. 105	José Abad / Axel Löffler / Gunther Schnabl / Holger Zemanek	Fiscal Divergence, Current Account and TARGET2 Imbalances in the EMU 03/2012
Nr. 106	Georg Quaas / Robert Köster	Ein Modell für die Wirtschaftszweige der deutschen Volkswirtschaft: Das "MOGBOT" (Model of Germany's Branches of Trade)
Nr. 107	Andreas Schäfer / Thomas Steger	Journey into the Unknown? Economic Consequences of Factor Market Integration under Increasing Returns to Scale 04/2012
Nr. 108	Andreas Hoffmann / Björn Urbansky	Order, Displacements and Recurring Financial Crises 06/2012
Nr. 109	Finn Marten Körner / Holger Zemanek	On the Brink? Intra-euro area imbalances and the sustainability of foreign debt 07/2012
Nr. 110	André Casajus / Frank Hüttner	Nullifying vs. dummifying players or nullified vs. dummified players: The difference between the equal division value and the equal surplus division value 07/2012
Nr. 111	André Casajus	Solidarity and fair taxation in TU games 07/2012
Nr. 112	Georg Quaas	Ein Nelson-Winter-Modell der deutschen Volkswirtschaft 08/2012
Nr. 113	André Casajus / Frank Hüttner	Null players, solidarity, and the egalitarian Shapley values 08/2012
Nr. 114	André Casajus	The Shapley value without efficiency and additivity 11/2012
Nr. 115	Erik Gawel	Neuordnung der W-Besoldung: Ausgestaltung und verfassungsrechtliche Probleme der Konsumtionsregeln zur Anrechnung von Leistungsbezügen 02/2013
Nr. 116	Volker Grossmann / Andreas Schäfer / Thomas M. Steger	Migration, Capital Formation, and House Prices 02/2013
Nr. 117	Volker Grossmann / Thomas M. Steger	Optimal Growth Policy: the Role of Skill Heterogeneity 03/2013
Nr. 118	Guido Heineck / Bernd Süsmuth	A Different Look at Lenin's Legacy: Social Capital and Risk Taking in the Two Germanies 03/2013
Nr. 119	Andreas Hoffmann	The Euro as a Proxy for the Classical Gold Standard? Government Debt Financing and Political Commitment in Historical Perspective 05/2013