

# Political Credit Cycles: The Case of the Euro Zone\*

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February 5, 2013

## Abstract

We study the mechanisms through which the entry into the Euro delayed, rather than advanced, key economic reforms in the Euro zone periphery and led to the deterioration of important institutions in these countries. We show that the abandonment of the reform process and the institutional deterioration, in turn, not only reduced their growth prospects but also fed back into financial conditions, prolonging the credit boom and delaying the response to the bubble when the speculative nature of the cycle was already evident. We analyze empirically the interrelation between the financial boom and the reform process in Greece, Spain, Ireland, and Portugal and, by way of contrast, in Germany, a country that did experience a reform process after the creation of the Euro.

*Keywords:* Financial crisis, bubbles, Euro crisis, political economy.

*JEL classification numbers:* E0, D72, G15.

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\*We sincerely thank Costas Arkolakis, Markus Brunnermeier, Manolis Galenianos, Philip Lane, Stavros Panageas, Canice Prendergast, Ricardo Reiss, Waltraud Schalke, and Dimitri Vayanos for their generosity with their time in discussing this paper with us. All remaining errors are ours, of course.

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# 1. Introduction

“After entry into the euro area, the Bank of Greece will be implementing the single monetary policy decided by the Governing Council of the European Central Bank and it will certainly be impossible to improve the economy’s international competitiveness by changing the exchange rate of our new currency, the euro. The objectives of higher employment and output growth will therefore have to be pursued through structural reforms and fiscal measures aimed at enhancing international competitiveness by increasing productivity, improving the quality of Greek goods and services and securing price stability.” (Lucas Pappademos, Greece Central Bank Governor, at a conference to mark Greece’s entry to the Euro, 2001).

Before monetary union took place with the fixing of parities on January 1, 1999, the conventional wisdom was that it would cause its least productive members -particularly Greece, Portugal, Spain, and Ireland<sup>1</sup>- to undertake structural reforms to modernize their economies and improve their institutions.<sup>2</sup> This paper argues that, due to the impact of the global financial bubble on the Euro peripheral countries, the result was the opposite: reforms were abandoned and institutions deteriorated. Moreover, it argues that the abandonment of reforms and the institutional deterioration prolonged the credit bubble, delayed the response to the burst, and reduced the growth prospects of these countries.

In the past, the peripheral European countries had used devaluations to recover from adverse business cycle shocks, but without correcting the underlying imbalances of their economies. The Euro promised to impose a time-consistent monetary policy and force a sound fiscal policy. It would also induce social agents to change their inflation-prone ways. Finally, as in the opening quote, it would trigger a thorough modernization of the economy.

As section 7 shows, this was the case for a different economy: Germany. Faced with a limited margin of maneuver allowed by the Maastricht treaty and with a stagnant economy, Germany chose the path of structural reforms, giving a new lease on life to German exports. But this did not happen in the *peripheral* countries. Instead, the underlying institutional divergence between them and the *core* increased. The efforts to reform key institutions that burden long-run growth, such as rigid labor markets, monopolized product markets, failed educational systems, or hugely distortionary tax systems plagued by tax evasion, were abandoned and often reversed. Behind a shining facade laid unreformed economies.

The origins of the financial boom are well understood. The elimination of exchange rate risk, an accommodative monetary policy, and the worldwide ease in financial conditions resulted in a

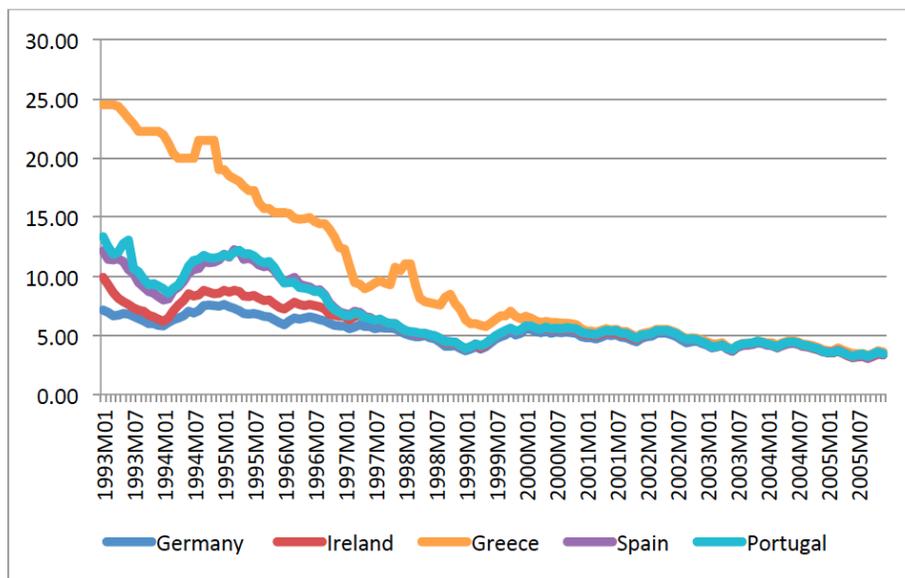
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<sup>1</sup>Our narrative centers on the four countries subject to “Troika” programs as of early 2013. We also discuss Germany by way of contrast. We believe much of what we say applies to Italy and France, but we do not address them due to space limitations.

<sup>2</sup>For example, Bentolila and Saint-Paul (2000) say, “Indeed the conventional wisdom is that EMU will eventually remove some barriers to reform.” Bean (1998) argued that, once monetary and fiscal policies were out of the hands of governments, they would have no alternative but to carry out reforms.

large drop in interest rates (see figure 1) and a rush of financing into the periphery countries, which had been traditionally deprived of capital.<sup>3</sup> Furthermore, demographics in Ireland and Spain favored the start of a construction boom with some foundations on real changes of housing demand (the opposite of Germany, where demographics depressed housing demand).

**Figure 1: The Euro Interest Rate Convergence**



Source: Eurostat Government Bond, 10 year yields, monthly. Sample: 1993M01-2005M12

Section 2 identifies two channels through which these large inflows of capital led to a gradual end to and abandonment of reforms. The first one is the relaxation of constraints affecting all agents. It has long been observed in the political economy literature that for growth enhancing reforms to take place, things must get “sufficiently bad” (see Sachs and Warner, 1995, and Rodrik, 1996). And, as the development literature has emphasized, foreign aid loosens these constraints by allowing those interest groups whose constraints are loosened to oppose reforms for longer. As explained in section 2, Vamvakidis (2007) also finds that this mechanism operates when debt grows, rather than aid.

The second mechanism is more novel. It affects the ability and willingness of principals to extract signals from the realized variables in a bubble, where everything suggests all is well. A sequence of good realizations of observed outcomes leads principals to increase their priors of the

<sup>3</sup>Although there are alternative explanations for the Euro crisis, the view that the credit bubble itself is the source of the disturbance is hard to counter. As shown by Forbes and Warnock (2012), there is a clear global factor, linked to financial volatility, in gross capital flow patterns. Lane and McQuade (2012) report a strong correlation between net debt flows and domestic credit: the ability of banks to raise external finance was crucial in allowing lending to increase faster than deposits, helping finance construction booms and public debt. Finally, Lane (2012) documents how the nontraded sector expanded strongly in the deficit countries, such as Greece, Spain, and Ireland, while it contracted in surplus countries, such as Germany. Our reading of the evidence is thus that the causality mainly runs from the credit bubble to the real changes and not in the opposite direction.

agents' quality. When all banks are delivering great profits, all managers look competent; when all countries are delivering the public goods demanded by voters, all governments look efficient (this mechanism applies both to real estate bubbles, as in Ireland and Spain, and to sovereign debt bubbles, as in Portugal and Greece). This information problem has negative consequences for selection and incentives. Bad agents are not fired: incompetent managers keep their jobs and inefficient governments are reelected. The lack of selection has particularly negative consequences after the crisis hits. Moreover, incentives worsen and agents provide less effort.

Both of these mechanisms, the relaxation of constraints and the signal extraction problem, led to a reversal of reforms and a deterioration in the quality of governance in these countries. Unfortunately, and somewhat counterintuitively, this implies that being able to finance oneself at low (or negative) real interest rates may have negative long-run consequences for growth.

Other economists have already pointed out that the financial cycle reduces future growth, simply because of the debt overhang (Reinhart and Rogoff, 2012; Bernanke, Gertler, and Gilchrist, 1999). Also, researchers working on resource booms have suggested mechanisms that delay growth that apply here by analogy (a financial bubble is, in a way, a form of a resource boom). Grand, ill-conceived government programs involve lasting commitments that lead to higher taxes in the long run. Also, the "Dutch disease" suffered most clearly by Ireland and Spain (with land playing the role of a natural resource here) spreads, whereby human and physical capital moves from the export-oriented sector toward real estate and the government sector. But in our view, the reform reversal and institutional deterioration suffered by these countries are likely to have the largest negative consequences for growth.

Our work is also related to Rajan (2011), who links the real estate bubble in the U.S. with an attempt by politicians to shore up the fortunes of a dwindling middle class. We emphasize, instead, that in Europe the real estate boom interacted with the coalition that blocked reforms, allowing for large policy errors to remain uncorrected and for institutions to deteriorate.

After presenting our analytic framework in section 2, section 3 discusses Spain. We will pay special attention to how the Bank of Spain led the Cajas on a road to nowhere of shockingly ill-advised mergers and useless stress tests. Section 4 shows how multiple rounds of procyclical fiscal policy took place in Ireland and how the country ended with one of the most costly single economic policy mistakes ever: the decision to put the taxpayers on the hook for *all* the debt of *all* Irish banks. Section 5 documents reform paralysis in Portugal and section 6 in Greece, the delay in the urgent reforms required by its pension system. In sum, the bubble that the Euro brought, instead of completing the modernization of peripheral Europe's institutions, became the sedative against any reform. We discuss now in detail why and how it happened.

## **2. Analytical Framework: the Political Economy of Reforms, Institutions, and Monetary Unions**

The Euro project had four goals (see James, 2012, for a historical narrative). The first was to build a unified European identity. The second was to eliminate nominal exchange rate fluctuations and the large imbalances that those could create. Of special concern was channeling the export dynamism that Germany had displayed since the 1960s. Third, it would create a monetary authority isolated from political pressures. This was particularly welcomed by countries such as Italy or Portugal with poor inflation records. The fourth goal, the one we analyze in this section, was to broaden support for structural, supply-side reforms to improve Europe's growth rate. The main channel through which a monetary union was thought to affect the political economy of reform was by imposing additional constraints on monetary and fiscal policy. Without their own monetary authority and with fiscal policy limited by the Maastricht treaty, national governments would have few options but to implement structural reforms they had been previously reluctant to undertake.

In fact, the steep drop in interest rates in the peripheral countries allowed by the Euro meant that the budget constraints that these countries faced were loosened rather than tightened. Moreover, the resulting financial bubble fueled the deterioration of governance and of the institutional arrangements on the Euro periphery through several mechanisms we will describe momentarily. Therefore, the Euro might have led to a persistently negative impact on the peripheral countries that goes beyond the usual arguments for slow recoveries after a financial crisis.

We provide here a framework to analyze these issues. Specifically, we discuss the three questions begotten by the logic above. First, how does an irrevocably fixed exchange rate regime affect the political economy of reform? Second, how does financial integration, and the ensuing credit boom, alter this logic? And third, how persistent would we expect these effects to be?

### **2.1. The Arguments 15 Years Ago: Reforms Under Fixed Exchange Rates**

The debate on the Euro and the political economy of reform centered on the impact of the loss of monetary and fiscal autonomy implied by the new fixed exchange rate regime. Interestingly, the debate largely ignored the channel that proved, in retrospect, to be crucial: the increasing financial flows and the credit cycle they generated.<sup>4</sup>

The pre-Euro literature (see the summary in Bean 1998) presented four optimistic reasons to argue that the Euro would favor structural reforms. First, it was suggested that governments that cannot use demand-side policies to lower (even if temporarily) unemployment would have no choice but to use structural reforms as a substitute. Second, the ability of business to more

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<sup>4</sup>There was also a large literature on the effects of the Euro on trade, macroeconomic performance, and international finance, but we omit its discussion to center our presentation on the political economy aspects of the common currency.

easily switch between countries would lead European nations to compete by offering the better business environment fostered by those reforms. Third, a Euro zone was likely to increase decentralization in wage bargaining to allow firms to adapt to changing circumstances without the help of monetary policy. Since wage bargaining had been shown to work best when it was entirely decentralized (such as in the U.S.) or totally centralized (such as in the Scandinavian countries), this increased flexibility would help the periphery countries where wage bargaining was done at an inefficient, intermediate level (Danthine and Hunt, 1994). Finally, the Euro could increase the market discipline on government borrowing because domestic private institutions would be able to lend in other countries of the Euro area without exchange rate risk instead of just to their own treasuries. Indeed, the Delors Report that informed the creation of the Euro expected this market discipline to be even more formidable than the formal constraints of the Maastricht Treaty.

The literature also worried about the opposite effect. The absence of an accommodating monetary and fiscal policy meant that the structural reforms must take place “without anesthesia,” increasing the pain that must be endured by losers and making it less likely that the reforms could be implemented. The “two-handed approach” famously proposed by Blanchard, Dornbusch, and Layard (1986) would become impossible (Bentolila and Saint Paul, 2000). Absent supportive macroeconomic policies, the pain from reforms would be harder to tolerate and the coalition supporting reform could dissolve.<sup>5</sup>

In retrospective, during the first years of the Euro, this “rigidity of macro policy” channel played a role only in Germany -absent fiscal and monetary flexibility, Germany had to undertake painful structural reforms, as we discuss in Section 7. But it did not play its expected role, either favorably or unfavorably, in any of the peripheral countries. This was because a different mechanism, the financial boom, gave national governments a tool to avoid painful reforms. We discuss this in the next section.

## **2.2. Booms, Reforms and Information Extraction, Selection, and Incentives**

While the literature on the impact of the Euro disagreed on the ultimate likelihood of reforms, it mostly agreed on the channel through which the impact would take place: tighter macroeconomic policies would affect, positively or negatively, reform incentives. However, the Euro did not make government budget constraints tighter. To the contrary, it made them looser.

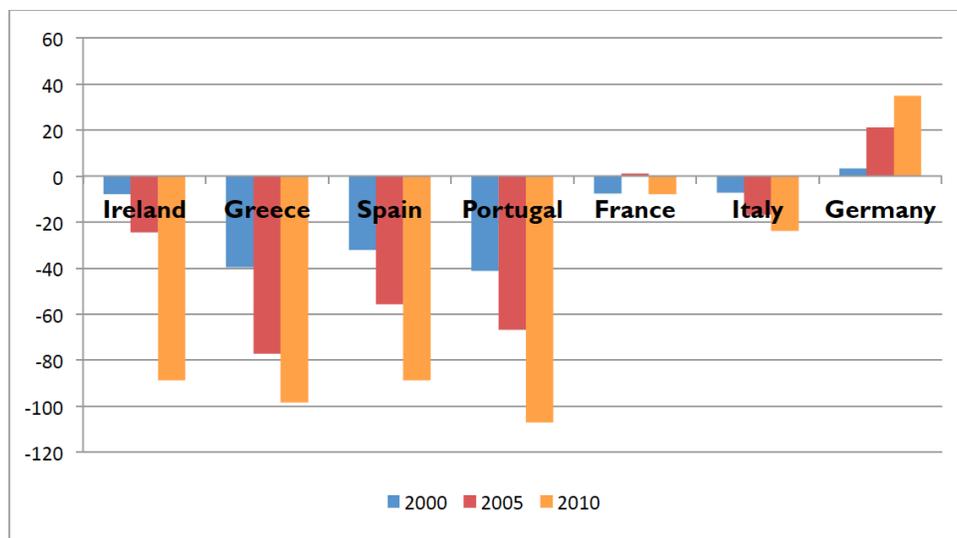
Coinciding with the Euro entry, and caused by it, the peripheral countries enjoyed a gigantic credit inflow. As figure 2 shows, while all of these countries started the decade with sustainable external debt positions, by 2010 all four countries we examine had reached net external debt close to 100 percent of GDP, either through the accumulation of public (Greece and Portugal) or private (Spain and Ireland) debt. This large inflow of capital was largely due to the misperception of

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<sup>5</sup>Chari and Kehoe (2008) also pointed out the danger of “free-riding” in a monetary union. Given that the effects of labor market policies, bank supervision, or fiscal policy of an individual country could negatively affect the welfare of the entire union, the monetary authority could be forced, by the uncoordinated action of each member, to generate high inflation.

the risk existing once the exchange rate uncertainty had been eliminated. True, the Maastricht criteria placed limits on budget deficits. But the unprecedented financial booms enjoyed by these countries, as we shall see in the country sections below, allowed them to hugely expand their budgets, paying for it either directly through historically cheap debt issuance, as Greece or Portugal did, or through the extraordinary income related to the real estate bubble, as Spain and Ireland did, as we shall see below in figure 3.

**Figure 2: Net International Investment position as a share of GDP**



Source: NIIP as a share of GDP. Annual Data. Eurostat.

The consequences for economic reform of such financial windfall would not have surprised researchers working on the impact on reforms of foreign aid. Alesina and Drazen (1991) have argued that the political decision process for economic reform is a war of attrition, in which all groups try to delay the reform for as long as possible (with a cost to all) until one group has no more “budget” and gives up, bearing the largest cost. Casella and Eichengreen (1996) show that, in this context, if these groups expect foreign aid, they will delay concessions and reforms. Svensson (1999) shows, in a game-theory model, that any windfall (including aid) increases rent-seeking and reduces productive public spending, and he presents empirical evidence (see also Drazen, 2000) consistent with the proposition that aid delays reforms. Vamvakidis (2007) extends these arguments to the case of financial booms: a government that can easily borrow abroad may use such borrowing to postpone otherwise necessary reforms. Using an index of economic freedom to measure reform, he finds empirically in a panel of 81 developing and emerging countries that increases in external debt are correlated with slowdowns in economic reforms.

A second channel from the financial boom to the political economy of reforms is more novel in the literature and concerns how the credit bubble affected information extraction about the performance of financial institutions and governmental agencies. It is hard to obtain good signals of performance in a bubble. As Warren Buffet has most famously put it, “You never know who’s

swimming naked until the tide goes out.” During the bubble, accountability is lost. A manager of a Caja in Spain, or of a Greek pension fund, can make bad decisions without any negative short-run consequences because the rising asset prices in the bubble hide any mistakes. But managers and politicians understand that, thanks to the bubble, they can extract more rents without fear of punishment. Consequently, governance deteriorates and weak institutions become weaker.

Our argument, essentially, is that voters, shareholders, lenders, and other interested parties face, as principals, a complicated signal extraction problem: given the sequence of outcomes that they observe from the agent, they need to infer how good the agent is or, similarly, how much effort the agent is exerting. To be more concrete, consider the following problem in which the principal (voters, shareholders, ...) needs to filter signals to understand the quality of governance by the agent (government, top management, ...). First, we specify a transition equation for the evolution over time of the quality of governance  $q_t$ , which is stock:

$$q_t = f(q_{t-1}, e_t, \eta_t) \tag{1}$$

that tells us that  $q_t$  evolves as a function of its own lagged value,  $q_{t-1}$ , the effort exerted,  $e_t$ , a flow measure, and a random shock,  $\eta_t$ .<sup>6</sup> The function  $f$  encodes the dynamics of a key state variable: the capital of governance in a society. In the absence of “investment,”  $e_t$ , governance depreciates. We are interested in the social incentives to exert costly effort to maintain the stock of corporate governance. To inform this decision we assume that agents observe

$$y_t = h(q_t, e_t, \nu_t) \tag{2}$$

that relates a performance variable  $y_t$  (dividends, economic growth, value at risk in a portfolio,...) to the quality of governance, the effort exerted,  $e_t$ , and a random shock,  $\nu_t$ . To ease notation, we assume that  $e_t$  affects both equations (1) and (2), although one can easily think about  $e_t$  being a vector, with one component affecting the quality of governance (for example, searching for independent outside experts for a board of directors) and another component influencing the results (for example, the time spent by the management with the board of directors lying out a strategy for the company). Persistence in the quality of governance is justified because bad decisions (low  $e_t$ ) lead to more bad decisions: Naming someone with no background in banking but who is politically well-connected leads to persistent low governance as he stuffs the board with like-minded individuals more interested in repaying the favor than in monitoring the bank’s financial statements.

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<sup>6</sup>It is straightforward to extend the transition equation to more general setups, for example, by making  $q_t$  a vector that includes the leads and lags of relevant state variables. For clarity of exposition, though, we center on the simplest case in the main text. Also, we do not need to impose much structure on the function  $f(\cdot)$  beyond measurability. In the same way, the shock  $\eta_t$  can have an arbitrary distribution. While assumptions such as linearity of  $f(\cdot)$  or normality of  $\eta_t$  are often computationally convenient, they are somewhat irrelevant for the theoretical point we are making here. A similar argument works for the measurement equation below.

The combination of the transition and measurement equation is often known as a state-space representation of a dynamic system and can be derived from microeconomic fundamentals of a fully-specified model through the cross-equation restrictions implied by rational expectations and equilibrium dynamics (Fernández-Villaverde *et al.*, 2007). Agents observe a sequence  $\{y_i\}_{i=0}^t$  and must update their beliefs about the quality of governance at time  $t$ , expressed as a conditional distribution  $p(q_t | \{y_i\}_{i=0}^t)$  given some initial prior  $p(q_0)$ . This is a standard filtering problem that can be solved, under some technical assumptions, using recursively the Chapman-Kolmogorov equation and the Bayes' theorem (see Cappé, Moulines, and Rydén, 2010).

How does a financial boom affect the signal extraction problem given by equations (1) and (2)? In particular, what happens if, for several periods in a row, the measurement equation is hit by large and positive realizations of  $\nu_t$  that deliver large and positive values of  $y_t$ ? Think, as an example, of  $y_t$  being the profits of a bank and  $\nu_t$  as the increase in the value of its loan book triggered by a real estate bubble.

The key step in our argument is that bubbles make signal extraction harder. By the properties of filtering problems, no matter how bad a shareholder's original estimate the quality of the bank's governance was, a sequence of large profits forces the shareholder to move this estimate toward higher quality. Unless  $q_t$  and  $e_t$  are perfectly observed, the principal has to divide the observation of a high  $y_t$  between a positive update of its estimate of the quality of governance (i.e., a shift to right of the distribution  $p(q_t | \{y_i\}_{i=0}^t)$ ) and a higher estimate of  $\nu_t$ . The concrete division would depend on the parameters of the problem: for instance, if  $\nu_t$  has a high variance, the principal will update its estimate of the quality of governance less than if  $\nu_t$  has low variance.<sup>7</sup> In other words, when all banks are delivering great profits, all managers look competent and when all countries are delivering the public goods demanded by voters, all governments look efficient. This mechanism applies, therefore, both to the real estate bubble in Ireland and Spain and to the sovereign debt bubble in Portugal and Greece.

This increased difficulty has two consequences: one in selection and one in incentives. First, bad agents are not fired: incompetent managers are able to keep their jobs and inefficient governments are reelected. If the principal's estimate of an agent's quality is sufficiently high, there is no reason to replace the agent. As we will see later, this lack of selection will have negative consequences when the crisis hits. Second, incentives deteriorate. Since there is a lower probability of underperforming, agents exert less effort. From the agent's perspective, there is little reason to spend effort if they believe that things will turn out positively in all events. Through equation (1), this translates into a lower  $q_t$ , which again will add persistence over time to bad governance.

But there are also three additional consequences that, although not necessary for our argu-

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<sup>7</sup>We omit a thorough discussion of the details of the update. In general, since we are not imposing linearity and normality in the state space representation, each new observation  $y_t$  will have three effects on the conditional distribution of  $q_t$ : a change to its mean (*translation*), a change to its variance (*spreading*), and a change to higher moments (*deformation*), which raise some nuances beyond the scope of our brief description. With a linear-normal state-space representation, we will only have translations and spreadings.

ment to hold, we think quantitatively amplify the mechanisms we are highlighting. First, the basic filtering problem in equations (1) and (2) assume that the principal has all the computational power required to perform the filtering at zero cost. Both assumptions are unrealistic: computational power is severely limited in practice and, more important, filtering requires hard work by the filterer. For instance, shareholders need to study the accounts of the firm and voters need to be informed about the issues. When downside risk is perceived as being capped by quasi sovereign guarantees by the other member states of the monetary union, both on states (Greece and Portugal) and on banks/Cajas (Spain and Ireland), voters, shareholders and investors worry less about risk and decrease their investment in monitoring. This leads to a further deterioration in the signals about governance quality and again increases the decision makers' moral hazard.

Second, during the boom times, agents have considerable discretion over the timing of payoffs and can choose to generate large positive payoffs up front and postpone the negative ones. For instance, bank managers can issue highly risky loans that deliver high yields in the short run and that will only become non-performing years later. Or politicians can implement popular spending programs that, while initially cheap, have costs that will quickly escalate over time (this was particularly true in the case of Spain). The result is a large amount of equity extraction from corporate bosses (salaries, options...) or rents by politicians.

Third, we hypothesize that signal extraction is harder when economic activity is concentrated in real estate or finance than in manufacturing. In manufacturing there are accurate, concrete measures of performance: how productive a factory is, how third parties rank the good, and so on. In real estate or finance, it is much harder to assert where the "fundamentals" are: what is the real value of a loan or what will the market price of a condo be in 5 years. Hence, as economies focus more on real estate and finance (such as Spain or Ireland), the signal extracted from performance will deteriorate more than in more manufacturing-based economies (such as Germany), even if both types of economies are simultaneously booming.<sup>8</sup>

Finally, behavioral biases also contribute to the difficulty in providing good incentives during booms, specifically in the form of self-attribution bias: it is hard to convince agents that the good things that are happening are not a result of their own outstanding decisions (in particular, as their bonuses depend on this). As they become more overconfident, they are increasingly likely to overreach, as Cajas did in Spain and Anglo Irish Bank did in Ireland.

As a result of the deterioration -for statistical, strategic, and behavioral reasons- of the quality of the signals of performance obtained by principals (shareholders, voters, etc.), financial booms lead to weaker monitoring and a deterioration in governance. Our next step is to argue that, due to the reform reversals and of the fall in the institutional quality brought by the mechanisms above, economic performance will be worse after the end of the financial boom. That is, we present a new channel for the persistence of the negative macroeconomic shocks.

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<sup>8</sup>This point is related to the difficulty of measuring services in comparison with measuring manufactures in national accounts (Berndt and Hulten, 2007).

### 2.3. Persistence of the Effects of Bubbles on Governance and Performance: Causes and Channels

The financial boom in Europe amounted to obtaining finance at low nominal interest rates, which were for some time even negative in real terms. A priori, financing private and public investments at negative interest rates involves receiving a subsidy from lenders. Hence, it is not obvious why this situation should be bad for a country's growth. However, one can identify multiple paths that lead countries on the receiving end of such financial largesse to suffer from persistently lower growth rates. The first two paths are borrowed from the "resource curse" literature, the third from the literature on financial crisis, and the fourth is the novel path proposed by this paper.

First, similar to the grandiose investments of the oil producers in the 1970s (Gelb, 1988), governments that can borrow freely are likely to waste enormous resources (new hospitals and universities in all towns, airports in the middle of nowhere). These unproductive expenditures create persistently lower growth, since they involve multi-year commitments that must be funded through future distortionary taxation.

Second, also as in the resource curse literature, countries with easy access to large capital inflows suffer a variant of the "Dutch disease" (Sachs and Warner, 1995). The credit bubble leads to a reallocation effect: relative price changes shift the allocation of capital -physical and human- toward activities such as construction investment and away from the production of tradable goods. While some of the inputs can be moved back to the tradable goods sector after the bubble explodes, others are sector-specific and have little scrapping value. Moreover, the investments in human capital are sticky: countries are left with large segments of the population unprepared for more sustainable activities. In the European periphery, a large part of the work force is poorly prepared to take advantage of a knowledge economy in which the returns to skill have been rising, rather than dropping (such as it had appeared in the bubble years).

Third, the literature on financial frictions has argued that the recovery from financial crisis is inherently slow because agents suffer from a debt overhang: they need to deleverage and rebuild their capital. The point has been made empirically by Reinhart and Rogoff (2012) and, in a financial accelerator model, by Bernanke, Gertler, and Gilchrist (1999), among others.

The fourth channel is the institutional deterioration caused by the bubble. That is, the political economy of finance booms itself becomes a drag on recovery. There are two reasons for this persistence. First, there is the argument by Vamkadis (2007) that debt buys time and can be used to postpone resources. The second channel can be understood using our state-space representation in equations (1) and (2). First, as we have seen, the complication in signal extraction during a boom means that bad managers and politicians are not weeded out. When the bad times arrive, at the collapse of the boom, these bad managers and politicians are unwilling to act or simply unable to cope with the situation. Furthermore, since collective action is always slow, it takes time to find more talented agents.<sup>9</sup> This slow turnover at the top deepens and prolongs the recession.

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<sup>9</sup>In Spain or Italy staying in power may be the only realistic alternative to prison to many of the politicians

Second, the lower  $e_t$  in equation (1) yields a lower  $q_t$ , which has persistence over time. For instance, when politicians dismantle the human capital of a central bank to better make it a servant of their own interest, it takes years to rebuild the know-how of the institution. Similarly, bad management at the top of a firm deteriorates the quality of middle management. Thus, when the agents need to be replaced, there is not enough talent in the firm's pipeline.

Third, weakened institutions affect the political-economic equilibrium by strengthening the forces against reform and providing few rewards for those in favor. Normally, political success will reflect economic success: if a group grows, its lobby power will be larger. In a bubble, the success is a mirage. Money flows into the coffers of developers and builders, allowing them to increase their political power, a particularly dangerous proposition given the extent to which real estate depends on the discretionary decisions of the authorities. At the same time, the agents in the tradable goods sector have less income and employ fewer workers, reducing their political influence. That is, the bubble creates its own constituency that is only interested in the bubble continuing. And even after the bubble has burst, the constituency is reluctant to accept the required changes in economic policies.

We turn next to arguing that this simple framework can explain the different paths followed by some countries during the early years of the Euro. These countries (Ireland, Spain, Portugal and Greece) had different dynamics prior to membership in the monetary union, partially driven by demographic factors, and were engaged, to some degree, in reform processes. Our point is to show that these processes were slowed by membership in the monetary union. Specifically, the relaxation of the credit constraints that either the public or the private sector (or both) were subject to delayed either the transition to different economic growth models or simply the adoption of reforms. We then turn to Germany, a country that engaged in long-postponed and painful reforms in its welfare state in the same period, and argue that the circumstances that allowed delays in the periphery actually forced reform on a reluctant Germany

### **3. Spain: the Infernal Triangle of Local Governments, Developers, and Cajas**

The years before the Euro were auspicious ones for reform efforts in Spain. The fiscal position was consolidated, a wave of privatizations created strong multinationals such as Telefónica and the conditions for the emergence of global, competitive companies such as Inditex (Zara) and Iberdrola were laid down for the first time. Moreover the financial system was strong and well capitalized, with firms such as Santander, BBVA, and La Caixa.

Unfortunately, the real estate bubble led to the loss of the reform impulse. Between 1999 and 2007, Spain experienced a period of rapid growth, averaging 3.6 percent -higher than the growth

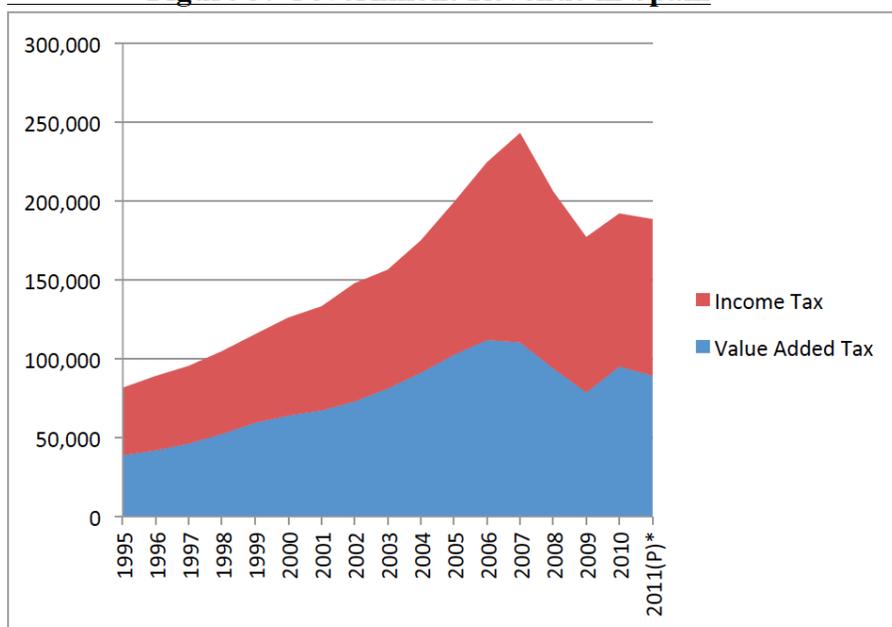
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that extracted rents through corruption during the years of the boom. Thus, politicians will employ every trick imaginable to avoid that fate and the turnover rate may be low.

rates of both the Euro area (slightly over 2 percent), and the U.S. (2.6 percent). This growth was the result of a favorable external environment, due largely to the adoption of the Euro: real ex-post interest rates dropped by 10 points between 1990 and 2005. During this expansion, the grave problems in the Spanish labor market, education system, and institutional design went untouched or worsened. The meager attempts at reforming the labor market (in 2002) were abandoned by the Aznar government, the educational system suffered an increase in the dropout rate, and local governments were infected by the pervasive corruption engendered by the real estate boom.

The drop in interest rates took place in a country with several peculiarities that favored real estate investment. Spaniards hold a very large share of their wealth in real estate: 83 percent of households live in dwellings they own, and 80 percent of Spaniards' wealth is invested in real estate, a significantly larger share than in other countries (Bover, 2011). This makes them particularly sensitive to perceived increases in housing wealth. Moreover, nearly the entire mortgage market is priced at variable interest rates, and thus it is extremely responsive to the sudden increase in the availability of credit. Finally, Spain received large immigrant inflows: foreign-born residents went from 2 percent of the Spanish population to 12 percent between 1999 and 2009.<sup>10</sup>

**Figure 3: Government Revenue in Spain**



Source: Income and Added value Tax Revenue, National Accounts

During the years of the boom, several issues concerned observers (Beltrán *et al.*, 2010). First, the economy was growing by using more labor and capital, but without gains in total factor productivity since 1995. Moreover, this was not the result of a pattern of growth concentrated in low-productivity sectors. On the contrary, more than 50 percent of the gap in productivity

<sup>10</sup>González and Ortega (2009) use regional variation in immigrant numbers within Spain to argue that the immigration inflow is responsible for a 52 percent increase in house prices.

growth with Europe was due to lower productivity within each sector. A second concern was the reliance on internal demand and the consequent external imbalances. While imports of goods and services grew between 1995 and 2008 at a rate of 10.1 percent, exports were growing at 8.5 percent. The consequent large current account deficits meant that, from 2000 to 2009, Spain required 520 billion Euros of external financing (in undiscounted terms). A third concern was the size of the real estate boom: at the peak, 25 percent of all male Spanish workers were employed in construction (Bonhomme and Hospido, 2012). Finally, the impact of the bubble on the government budget was significant: by 2007, tax revenue was at least 2 percentage points of output higher exclusively due to the extra house transactions (Fernández-Villaverde and Rubio-Ramírez, 2009). Figure 3 illustrates the huge cycle in income and added value tax revenue. Even though the public sector presented a small budgetary surplus, it committed itself to expenditure programs that, given the cyclical nature of the revenue, were not sustainable.

These underlying weaknesses were quite apparent. For example, Miguel Angel Fernández-Ordóñez, the governor of the Bank of Spain from 2006 to 2012, wrote in 2003<sup>11</sup> (our translation): “When we see mortgage lending growing at 22 percent and we know that the injection of EU funds will continue through 2006, we see the growth differential due to domestic demand and concentrated in construction can be maintained for some time. The problem is what will happen when the drug of domestic demand is exhausted. (...) We will see negative effects appear on the demand arising from the accumulation of household debt and the debt of public enterprises that the government hides today. Moreover, the failure to improve our productivity over the years means we will not be able to compensate for the future reduction of domestic demand with a greater contribution of the external sector.”

In spite of this awareness, neither the Aznar government and its appointee to run the Bank of Spain (Jaime Caruana, an electrical engineer with no valuable banking or monetary experience)<sup>12</sup> nor the Zapatero government and its own politicized appointee to the Bank of Spain (Miguel Angel Fernández Ordóñez, a prominent member of previous socialist administrations) took any credible measures to deflate the bubble. Later, when the crisis exploded, the Zapatero government wasted years in inexplicable delays and let public finances get out of control. In fact, as we discuss below, the Bank of Spain’s support for a deeply flawed policy of Cajas’ mergers worsened the situation tremendously.

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<sup>11</sup> “El legado de Rato,” El País, September 11, 2003.

<sup>12</sup>In an unusually harsh move, the supervision staff from the Bank of Spain wrote a collective letter to the minister of finance on May 26, 2006 in which they questioned Governor Caruana’s “optimistic” handling of the crisis. The last phrase of the document summarizes it as follows: “For all these reasons, the Inspectors of the Bank of Spain want to note that we do not share the candid optimism of the Governor about the predictable evolution of the Spanish economy and that, from our perspectives, and without wanting to spread alarms, there are enough reasons to worry, particularly if one considers the legacy of the six years of the governorship of governor Caruana.” [our translation, from the original at [http://www.fluzo.org/media/resources/1295/files/inspectores\\_banco\\_espana\\_caruana.pdf](http://www.fluzo.org/media/resources/1295/files/inspectores_banco_espana_caruana.pdf)]

### 3.1. The Incestuous Relation between Regions, Cajas, and Developers

While some demand factors -immigration, a drop in real interest rates- contributed to the start of the real estate boom in Spain, those demand factors cannot matter much over the long run. Spain has a low population density and an excellent transportation system. Thus, while demand may explain a short-run burst in demand, it cannot account for a persistent, large increase in prices. We need to search for other forces that may have altered purchaser's expectations about future prices. As we will search for those forces in the way in which the politicians used the real estate bubble to serve their own interest.

A key aspect of the transition from dictatorship to democracy in Spain was an ambitious decentralization process. The years after the Constitution of 1978 witnessed the creation of 17 autonomous regions (*Comunidades Autónomas*) endowed with a wide range of powers. Among these powers were urban planning and zoning regulation. After some disputes -the 1978 Constitution being deliberately ambiguous about the details of the division of power between the central and regional governments- the Spanish Constitutional Court, in a 1997 landmark decision, gave regions nearly complete control over zoning. The regions rushed to take full advantage of this decision. Interestingly, the most active region was Valencia, which later would become the epicenter of the real estate bubble and which, in 1994, before the Constitutional Court decision, had enacted its own regulation.

Most of the new regional legislation introduced two figures that had been nearly non-existent in the traditional Spanish zoning and planning system, which had relied in urban development plans approved decades in advance and that had received much criticism for its inflexibility and for the slowness it generated. The first figure was the real estate developer (*Agente Urbanizador*, although different regions came up with slightly different terminology). This was a private person or firm who could elaborate a detailed plan to build a whole area of a township (with condos, apartments, shops, etc.) and present it to the city council. The township would usually receive payment in terms of lots to build or cash. Eminent domain clauses could be used to force the owners of the land in the area to be developed to sell to the developer at some "fair price." Then, the real estate developer would prepare the land, divided it into lots, and sell them to builders for a profit. The second figure was the collective zoning agreement (*Convenio Urbanístico*), where a group of landowners could present to the township a development plan of the area they controlled. If the city council approved it -again, thanks to the payment in terms of building lots or cash- the landowners were not bound by any previous zoning restriction.

These two figures, by giving nearly complete freedom to the townships to ignore zoning rules, opened the flood gates to institutional deterioration. Suddenly, an entrepreneur could make millions of Euros developing areas that had never been on the market before if he could just get the city council's approval. This created a strong incentive to politically well-connected individuals to become real estate developers and widespread corruption followed. Similarly, it was too tempting for a small city mayor to let pass up millions of Euros in side payments by denying

his signature to a new development plan. Moreover, since the city would also receive “legal” payments from the developer in cash or in lots, land development became an important revenue source for local authorities, which could use the new-found riches to finance public programs that voters approved of. For politicians, this was the perfect deal: money for their private pockets and money to keep voters happy. For well-connected individuals, this was the fastest path to unprecedented wealth. Now, they only needed someone to finance the whole operation. The *Cajas* were ready and waiting.

The Spanish financial system was divided into two more or less equal parts between the non-profit (or *Cajas*) sector and the for profit bank segment. Originally created to provide banking services to the middle-class and working population, mainly ignored by traditional banks, the *Cajas* had a strong provincial or territorial basis and a conservative outlook. Also the profits generated by their activities was destined for a variety of social activities (support of the arts, fellowships, etc.). It was only in 1971 that the *Cajas* were equated with banks and came under the supervision of the Bank of Spain.

Two key aspects of the *Cajas* regulation changed with the arrival of democracy. First, the governance of the *Cajas* was changed in 1985, when their control was transferred to the regions. The regions were given full legislative powers over the *Cajas* and the door was opened to their capture by local politicians. Also, the law did not address their liability structure. In particular, and fatally once the crisis started, it did not clarify the procedure to be followed for the recapitalization of an insolvent *Caja*. Second, the *Cajas* were allowed to expand territorially. Initially, the *Cajas* were basically only allowed to operate in the province where they were headquartered (a province being a subdivision of a region in Spain). From 1988, they were allowed to operate in the entire region with some exceptions. These regulations were eliminated with the Second European Union Directive on Banking, effective December 31, 1992. From then on, the *Cajas* were free to operate throughout the entire country, with exceptions only if they did not reach the legal solvency ratios. As a result, the expansion of the *Cajas* was relentless and involved a intense geographic diversification. While in 1991, a single *Caja* had a 75 percent market share in 25 provinces, this was the case in only 17 provinces in 1995, 10 in 1999, and none in 2007. Similarly, the number of branches skyrocketed. By January 1, 2008, Spain had almost 25,000 *Caja* branches, one for every 1,800 inhabitants.<sup>13</sup> Not surprisingly, over this period the *Cajas* were continuously gaining market share versus banks: from 40 percent in 1991 to 47 percent in 1999 and to 54.5 percent in 2007.

Furthermore, the *Cajas* channeled lending in an indiscriminate manner to real estate developers. However, they did not have the ability to lend this funding out of deposits; instead, they borrowed in the international markets. Since the loans were Euro-denominated and against physical collateral (real estate assets), international institutions were able and willing to lend. The result was the channeling of enormous sums of money to institutions that were singularly badly

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<sup>13</sup>See Calvo and Martín de Vidales (2010) for a detailed analysis of the provincial expansion of the *Cajas*.

prepared to handle the flow. In their past as small, local institutions, the Cajas never had an incentive to improve their corporate governance. When the European Union liberalized their activities, far from improving their corporate governance, politicians discovered that they were the perfect instrument for their own goals. The Cajas did not have shareholders: instead, they were governed by a board selected by the regional and local governments, employees, and clients. These boards were the perfect target for takeovers by low-human-capital managers with the right political alliances and who could finance the local politicians' pet projects.

This point is clearly seen in Cuñat and Garicano (2009 and 2010), who document that the human capital of managers in the Cajas was low and that, precisely in those Cajas where human capital was particularly low, real estate lending and later non-performing loans are the highest. Specifically, they find that a Caja run by someone with a post-graduate education, with previous banking experience, and with no previous political appointments is likely to have significantly less real estate lending as a share of total lending, a larger share of loans to individuals, a lower rate of non-performing loans, and a lower downgrade in its rating.

With the two ingredients of corrupt regions in partnership with badly run (and politicized) Cajas, the real estate developer sector grew almost limitlessly for a while. Between 1995 and 2005, lending for construction and development went from 8 percent of output to 29 percent of output, eventually reaching 42 percent of all lending to productive activities, while lending to households for housing purchases grew from 17 percent of output to 49 percent over the same period (Beltrán *et al.*, 2010). Thus, the number of housing units built every year went steadily upward from 150,000 in 1995 to 600,000 in 2007 and the price increase was large by any metric. According to data from the Spanish Ministry of Housing, between 1998 and the peak of the boom in 2008 nominal housing prices increased by 175 percent, compared to a 61.5 percent increase in the CPI. The price increases were larger than the increases observed in the UK and the U.S. While in the U.S. the price to income ratio grew from 3 to 4 from bottom (2001) to top (end 2007) and is now back at 3, in Spain it went from 4 to almost 8 and is only back at 6.5.

### **3.2. An Example of Institutional Deterioration: A Brief History of Bankia and its Components**

The collapse of Bankia, a banking giant with assets equal to 33 percent of Spanish output, with the resignation of its CEO, Rodrigo Rato, on May 9, 2012 led directly to Spain's request for a bailout from the European Union. How two long-lived Cajas, Caja Madrid and Bancaja, had come to an ignominious end less than 2 years after merging to form Bankia is a telling story of institutional deterioration triggered by the real estate boom.

Caja Madrid was one the oldest Cajas. For the first decade after the passage of the 1985 law discussed earlier, Caja Madrid was run with the consensus of the main political parties of the rich region of Madrid. Its head, Jaime Terceiro, a distinguished academic economist, ran the entity professionally and managed to make Caja Madrid a fierce competitor in the credit

market. In 1996, one year after the conservative party (PP) gained control of the region from the socialist party (PSOE), the PP put in place a coalition that pooled its votes with those of the trade union closely affiliated with the communist party (CC.OO.) in order to wrest control of Caja Madrid. The union lent its votes to the conservatives for the removal of Caja Madrid's head and its replacement by Miguel Blesa, a close friend of the newly elected prime minister José María Aznar. In exchange, the conservative party granted veto power to the union on personnel appointments and guaranteed that Caja Madrid would never allow the entry of private capital on the board, even if needed to ensure the solvency of the entity. In addition, the agreement called for the reactivation of the relationship with real estate developers, although it also warned against over-reliance on wholesale funding.<sup>14</sup>

Starting in 1996, Caja Madrid expanded aggressively, participating and aiding in the real estate bubble. It also gained significant stakes in strategic segments of corporate Spain, thickening the complex web of politics, finance, and business interests that characterize Spanish capitalism. The apex of political intervention came when, in turn, Blesa was forced to step down by the head of the regional government of Madrid, who proceeded to nominate a close political ally with no experience in banking as the head of Caja Madrid. The resulting infighting within the conservative party led to the appointment of another of its powerful members, the IMF's former managing director and ex-Minister of Finance, Rodrigo Rato, who ran the entity until its nationalization in the spring of 2012 with the help of a board composed entirely of political appointees.

The other half of what was to become Bankia was Bancaja, the main Caja in the region of Valencia. Also an old institution, it was born in 1878 and it stayed local for most of its history. Only around 1997, with the real estate bubble in its incipient stage, did it start a breakneck expansion and tapped for the first time the international debt markets.

The politicization of Bancaja exploded after the Valencia regional government modified the law regulating the Valencia's Cajas in 1997. This law essentially handed control of the Caja to the local government. In addition this law vested supervisory authority in a local entity, the "Valencian Institute of Finance" which was an arm of the regional government without any supervisory capability at the time. This arrangement weakened the Bank of Spain, which retained ultimate responsibility for financial stability.

Perhaps few anecdotes illustrate as well the unhealthy connection between politics and finance than the fact that the person appointed as president of Bancaja when the real estate bubble got going in earnest was José Luis Olivas, the very same politician who, as Valencia's finance minister, drafted the 1997 law regulating the local Cajas (and who, in the meantime, had also been president of the regional government). Olivas had no experience whatsoever in banking.<sup>15</sup>

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<sup>14</sup>The "Acuerdo PP-CCOO sobre Caja Madrid" was signed by the secretary general of the PP in Madrid and a trade union representative and was made available by CC.OO. This agreement was published in the Spanish press (see "El PP modificará la Ley de Cajas de Madrid para cumplir el compromiso con CCOO" and "El contrato de Blesa," both in *Cinco Días*, September 9, 1996) and it was openly discussed in the Spanish press (see "CCOO y el PP rubrican el acuerdo para que Blesa presida Cajamadrid," *El País*, September 7, 1996.)

<sup>15</sup>Olivas also became the president of Banco de Valencia, a publicly traded bank that was owned by Bancaja

As was also the case with Caja Madrid, Bancaja became an additional instrument of the region's political aims in several areas such as housing, energy, telecommunications, and entertainment.<sup>16</sup> Over the next decade, Bancaja would participate in financing all of the major infrastructure projects of the Valencia government, including the Formula 1 in Valencia (at a cost of €244m), the Castellón Airport (€200m; a plane is yet to land there), Terra Mitica (€300m, an amusement park that entered bankruptcy in 2004), etc. As the decade progressed, the link between politics, developers, and cajas tightened further. The bursting of the real estate bubble has brought to light numerous corruption scandals in this otherwise wealthy region of Spain.<sup>17</sup>

When problems started in 2009, the same political economy constraints that were behind the fueling of the bubble informed the early stages of the response to the crisis. Caja Madrid and Bancaja were merged into a large systemic institution, Bankia, dominated by the same political interests that had run both entities during the bubble years and with the Bank of Spain's consent. Two bad Cajas do not make a good bank, and Bankia, after an IPO that perfectly illustrated Spain's institutional weaknesses, was effectively nationalized in the spring of 2012.

#### **4. Ireland: A Procyclical Fiscal and Regulatory Policy**

After a deep recession and huge budget deficits in the late 1970s and early 1980s, Ireland introduced important economic policy reforms in the second half of the 1980s. These reforms led to a sound recovery that delivered a real annual output growth that averaged more than 6 percent from 1987 to 2000. First, after the 1987 elections, a broad consensus emerged among the political parties for a more constructive approach to policy. The Fine Gael, the main opposition party, committed itself to supporting those reforms -in particular budgetary measures- that it considered were in the national interest, especially if they helped in reducing tax rates. Second, the reforms in labor market institutions -combined with persistent high unemployment- kept real wage growth below that of Ireland's major trading partners. Third, strategic sectors of the economy were liberalized, such as air transport (Barrett, 1997) or the telecommunication system (Burnham, 2003), which was, at the time, reputed to be the worst in Western Europe. Finally, the European Union increased its generous transfers up to around 4 to 5 percent of Ireland's output throughout the 1980s and early 1990s.

However, by 2000, this exceptional growth spurt seemed to be coming to an end. From the late 1980s, Ireland's growth had been fueled by an increase in hours worked, while productivity was growing at a rate similar to that other European countries.<sup>18</sup> This was possible because in 1989 Ireland -due to high unemployment and a late baby boom- had the lowest employment ratio

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and that was also nationalized in the recent crisis.

<sup>16</sup>See "Lo que vale Bancaja para el Consell," El País, Nov 4, 2003.

<sup>17</sup>An absorbing description can be found in "Tierra de saqueo," El País, January 15, 2012.

<sup>18</sup>Here productivity growth controls for the effect of multinationals that book a large fraction of their international profits in Ireland to benefit from low taxation (Honohan and Walsh 2002, figure 13).

in the OECD, 31 percent (Whelan, 2010). By the end of the millennium, additional labor as a source of growth was essentially exhausted as unemployment had fallen to 4 percent. Ireland was facing a significant slowdown in growth. And yet, the slowdown never happened.

Instead, real interest rates dropped throughout the 1990s, reaching negative values in 1998, where they stayed for most of the early years of the Euro's existence. Not surprisingly, this led to an increase in valuations and a higher private investment in housing. While many observers complained that a simple Taylor rule dictated that the nominal interest rate in Ireland should have been several hundred basis points above where it was, this was no longer feasible.

In the 1990s, Ireland combined a high incidence of owner occupation -driven by a low user cost of housing, fiscal incentives, and regulation- with the smallest number of dwellings relative to its population in the European Union (Somerville, 2007). Thus, the Celtic Tiger years started with an abnormally low stock of housing. As is always the case with real estate bubbles, there was a "fundamental" component to the Irish housing boom. Housing construction accelerated in the 1990s, with house completions going from 19,000 in 1990 to 50,000 in 2000 and to 93,000 in 2006.<sup>19</sup> Soon, Ireland was the country in the European Union with the highest share of housing investment in gross capital formation and construction became the dominant sector driving growth and employment. By 2007, 13.3 percent of all employment was in the construction sector (in the United Kingdom and the U.S. that same number never went above 8 percent). Given that the labor market was already tight in 1998, the housing boom put undue pressure on wages, which led to a loss of competitiveness and large current account deficits. In summary: instead of transitioning toward a lower, more sustainable rate of growth based on productivity gains, Ireland went from growth based on increases in the employment ratio to a massive speculative cycle.

Rather than reining in the bubble, governmental policy accentuated it through a procyclical fiscal policy and regulatory and tax changes that made real estate development even more attractive. In the next paragraphs we justify why we interpret these changes as evidence of a deterioration in institutions and governance.

First, fiscal policy became extremely procyclical. Government expenditures doubled in real terms, with an annual growth rate of 6 percent between 1995 and 2007. Taxes were repeatedly lowered during the boom, particularly tax incentives for the real estate sector (Honohan, 2010). The income tax was cut several times, until Ireland reached a stunning income tax and employee contribution average rate of 6.7 percent of gross wage earnings for a single-earning married couple with two children. In the housing sector, stamp duties (a sale tax on homes) were lowered in 2001, 2002, 2003, 2005, and 2007, while the ceiling on income tax deductibility of mortgage interest was increased in 2000, 2003, and 2008.<sup>20</sup> Tax concessions were granted for urban renewal, multi-story

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<sup>19</sup>The ratio of house prices to disposable income remained stable until the second half of the 1990s, when it grew from 7 to 12 in less than a decade (see figure 8 in Whelan, 2010).

<sup>20</sup>These measures added to an already overfriendly tax environment for housing. In general, Ireland has the most generous tax provisions for owner occupied housing, "largely because it is the only OECD country that allows households a tax deduction for mortgage interest payments at the same time as not taxing property values, capital gains or imputed rents" (Rae and van de Noord, 2006, p. 8). For a description of the main tax provisions

car parks, student accommodations, nursing homes, hotels, and holiday camps. Finally, the special incentive tax rate for developers between 2000 and 2007 sought to free up land for development by taxing the proceeds at 20 percent rather than at the higher 42 percent that prevailed before, with an estimated loss of revenue of 800 million Euros (Byrne, 2012).

Second, several major legislative changes worsened the quality of financial supervision. The 2003 act that established the Central Bank and Financial Services Authority of Ireland (CBFSAI) divided supervisory responsibilities between the newly created Irish Financial Services Regulatory Authority (IFSRA) and the Central Bank of Ireland. This reorganization contributed to the lax banking supervision that characterized this period and which forced the (re)establishment of a single fully integrated regulatory institution in June 2009. Some informed parties such as Bertie Ahern, Ireland's former prime minister, have gone as far as identifying this regulatory overhaul as the main culprit in the crisis (Brown, 2009).

This new regulatory framework perniciously interacted with a particular development in the Irish banking sector: the emergence of Anglo Irish Bank.<sup>21</sup> If the Irish economy did well during the early years of the Euro, Anglo did even better. Its balance sheet grew by a factor of 14 between 1999 and 2007, transforming it into a systemic risk for Ireland. This phenomenal expansion was rooted in a business model that emphasized speed in loan approval and a disregard toward applicable bank rules. It was common that a customer would apply to Anglo for a loan of several million Euros for a property development project on a Monday and receive approval by the end of the week (Carswell 2011). Anglo's strategy of relationship lending led to a double concentration in its loan portfolio: few large borrowers and, in a single sector, property development. Furthermore, Anglo's minuscule branch network meant that the loan expansion had to be funded by the international wholesale markets.

But the real impact of Anglo Irish Bank was to change the whole Irish banking sector as other banks reacted by loosening standards to match Anglo in profitability and avoid losing customers. As the Nyberg report states, the problems at Anglo Irish were in plain sight for the regulators, but bank management and boards could not recall a meaningful engagement on prudential issues with the IRSRA. As Whelan (2010) emphasizes, the failure of the Irish banking system was not related to financial innovations or regulatory arbitrage but to a failure to follow up on supervisory oversight on credit concentration risk and fragile funding. It was, simply, low-quality governance.

Why this extraordinarily tolerant governmental policy toward the boom? Given that the problem had been diagnosed at the time by international organizations such as the IMF and the OECD and by Irish economists (Honohan and Walsh, 2002), why did the government add more gas to the fire? The evidence is clearly suggestive that the Irish political class, confronted with an unpleasant growth slowdown, preferred to delay any corrective actions and, as explained in the

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for housing, see Rae and van de Noord (2006, box 1).

<sup>21</sup>For fascinating accounts of the rise and fall of Anglo Irish Bank, see Carswell (2011) and Lyons and Carey (2011). A more systematic survey of governance issues in the Irish banking sector is the "Nyberg report" (Nyberg, 2011).

analytic framework section, to rely on the difficulty that voters faced in filtering the true state of the economy. Also, these measures were reinforced by the standard flow of political donations by interested parties. From 1997 to 2007, 35 percent of disclosed donations to Fianna Fail -the party in government- were from property developers and the construction industry, by far the largest group in terms of donations (Byrne, 2012). Adding hotels (9 percent) and banks and insurance companies (5 percent) shows that 49 percent of disclosed donations were from parties that had a direct interest in the real estate bubble. The coalition of interest-groups and an electorate demanding easier access to housing was too powerful to resist.

The extraordinarily close relationship between bankers, developers, and government was at the heart of the crucial decision to provide a blanket bank guarantee on Sunday September 30, 2008. The nature of the mistake was that *all* existing and new debt -deposits, including corporate and even interbank deposits, covered bonds, senior debt, and some subordinated debt- was to be guaranteed by the government.<sup>22</sup>

This brazen decision is still shrouded with mystery as to why and how it was taken (see Honohan, 2010, ch. 8). It went against the advice of Merrill Lynch, which rightly noted the previous Friday that the guarantee would have a negative effect on the national rating.<sup>23</sup> Prominent Irish economists such as Patrick Honohan, the current Governor of the Central Bank of Ireland, were in favor of some guarantee, though clearly not the overly broad one that was extended. While it is possible that there is nothing more here than the mistake of an exhausted cabinet taking a hard decision at the worse possible moment, it is true that as Byrne (2012, p. 202) points out, the “[k]ey political decisions were insulated from critical debate because they were executed within a closed and cartelized system which facilitated regulatory capture.”

In sum, as in all of the other four countries we study here, the extraordinarily lax financial conditions allowed by the entry in the Euro zone undermined governmental policy, which rather than focusing on making the Irish economy more stable and robust contributed in turn to increasing the virulence of the financial cycle. In the Irish case, the policy extended as far as bailing out private creditors from their mistakes during the crisis, with enormous consequences for Irish taxpayers’ welfare.

## 5. Greece: Sustaining the Unsustainable

In the decade after the accession to the Euro, Greece enjoyed with growth rates over 2 percent in every year from 2000 to 2008, peaking at almost 6 percent in the Olympic 2003. This growth was higher than in the Euro area as a whole. Among the factors behind this strong performance

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<sup>22</sup>In comparison, when the Spanish government launched its own guarantee program in December of that year, it only guaranteed *new* debt.

<sup>23</sup>The rating companies, with their typical lack of acumen, did not see it the same way. For instance, Fitch affirmed the AAA rating on Ireland following the guarantee decision, stating “This proactive measure should help buttress confidence in the Irish financial system and limit the risks of a deeper and more-prolonged-than necessary recession at a time of unusual stress in global banking markets” Bloomberg (2008).

(apart from issues related to national accounting) were financial liberalization coupled with membership in the monetary union, strong export growth, and the fiscal stimulus associated with the Olympic games. Mitsopoulos and Pelagidis (2012) add to these factors partial improvements in the regulation of product markets, although these were concentrated in the telecommunications sector;<sup>24</sup> transportation and energy remain essentially regulated and non-competitive.

And yet, the imbalances building in the Greek economy were there for all to see. The current account deficit, already at almost 8 percent in 2000, reached 15 percent in 2008 and was always above 5 percent. Even after the recession, it was 9.8 percent in 2011. As a result of these large deficits, net external debt rose from 42.7 percent of output in 2000 to 82.5 percent in 2009. This current account deficit was not, as in Ireland and Spain, the counterpart of large inflows of money into the private sector. The entirety of Greece's net external debt is accounted for by the public sector, which in 2009 had debt of over 100 percent of output.

There is not much new in Greece's behavior after the Euro. An unsustainable situation had been developing since 1980. During both the 1980s and the 1990s, the yearly average government deficit was over 8 percent of output. Similarly, the foreign international position of Greece was a long-running problem, with average yearly current account deficits of over 10 percent in both the 1990s and the 2000s. Not that these problems were not recognized. In 2004, the Greek electorate gave a strong mandate to the New Democracy Party after 11 years of PASOK rule to tackle the many problems afflicting the Greek economy, but the results were disappointing at best.

In this sense, Greece is the poster example of a postponed adjustment: the party that was allowed to last, long after it was clear it was unsustainable. Greece's problem, more than any of the other peripheral countries, was the problem of an unreformed economy. Few documents can be a bigger indictment of a state than the report on Greek governance in June 2012 by the OECD, an organization that (like other international organizations) tends to pull its punches in public. One of its conclusions was: "The combination of these factors – a weak Centre of Government, legal formalism, the absence of basic data, the lack of evidence-based policy making and an undeveloped HR strategy – has created an environment conducive to rent seeking." As Mitsopoulos and Pelagidis (2012, page 131) note, Greece can be seen as a country with almost first-class per-capita output, but clearly second-class governance, institutions, business environment, and corruption. The evidence of institutional deterioration in Greece is widespread, from the decreasing reliability of government statistics, from position number 35 to number 78 by 2010 in Transparency International corruption rankings.<sup>25</sup> How can a country in the heart of the European Union, under pressure from a common currency, avoid the most basic reforms in its institutions?

The answer is straightforward. For no country was the Euro as large a boon as for Greece.

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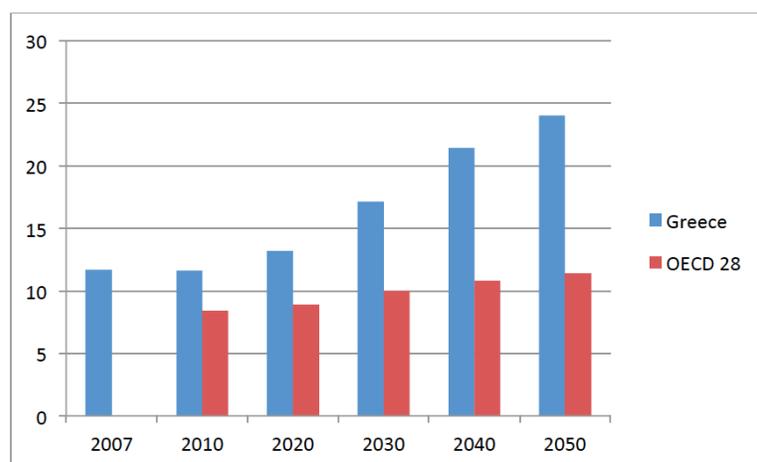
<sup>24</sup>Throughout this period Greece's inflation rate was consistently above that of its trading partners, except for the telecommunications price index (Mitsopoulos and Pelagides, 2012, figure 5.9), which reflects the deregulation in this sector relative to other sectors in the economy.

<sup>25</sup>The number of countries covered by Transparency International expanded in the decade. Holding the sample constant, Greece declined from to position 61 in the list by 2010.

In 1994, the interest on the 10-year bond had reached almost 22 percent, for a differential with Germany of 1500 basis points. By June 2003, the combination of the global lending boom and the perceived disappearance of currency and default risk (the differential with Germany was virtually gone) meant that Greece was paying a hard-to-believe 3.6 percent.

The impact of this enormous drop in the cost of financing on the political economy of the country was commensurately large. Although the examples of arrested reforms are many, one of the clearest ones is the pension system, a very costly and inefficient (with a multitude of “special regimes” for, e.g., employees of a particular ministry) system that faces dramatic demographic challenges (second worst drop in dependency ratio in the European Union, and still at 2009 highest replacement ratio in OECD, at 95.7%)<sup>26</sup>, and where reform has been considered imminent at least since 1990 (Tinios, 2010). As figure 4 shows, Greece’s pensions problem was an order of magnitude larger than in other countries.

**Figure 4: Projected Public Pension Expenditure as a Share of GDP**



**Source:** OECD (2011), “Long-Term Projections of Public Pension Expenditure”, in *Pensions at a Glance 2011: Retirement-income Systems in OECD and G20 Countries*, OECD Publishing.  
[http://dx.doi.org/10.1787/pension\\_glance-2011-32-enp.159](http://dx.doi.org/10.1787/pension_glance-2011-32-enp.159), Data at:  
<http://dx.doi.org/10.1787/888932372431>

**The Political Economy of the Non-Reform of the Greek Pension System** The year 2001 saw the defeat of a reform package of the pension reform system that had been first proposed in 1958 and was already considered, at that time, “extremely urgent” (Borsh-Supan and Tinios, 2001). With a system that was extremely malfunctioning, Greece’s partners “saw her convergence as being partially dependent on pension reform” (Featherstone 2005). However, as we shall see in what follows, after a serious attempt at reform ran aground in 2001, the reform efforts were abandoned with a weak “pseudoreform” in 2002. The European Union, rather than placing real budget constraints, saw itself at that point as simply “facilitating policy learning.”

<sup>26</sup>See OECD (2009), *Pensions at a Glance*.

At the time of the Euro adoption, the Greek pension system was seen as a key problem—pensions consumed 12.1 percent of output, more than in any other European country at the time, and 52 percent of total social expenditure, versus 28 percent on average in the European Union. And yet, the poverty risk for pensioners was 2.3 times larger than for the general population, the largest by far in the European Union (where the same figure is 1.2). Moreover, the system was extremely fragmented, with 236 separate funds in 2003 (O’Donnell and Tinios 2003). The fragmentation not only caused multiple inefficiencies and duplications, but it also had a negative effect on labor mobility, as moving jobs often meant losing previous entitlements. Finally, the system was extremely unequal, with large privileges handed to the liberal professions and the public-sector employees.

There had been sporadic attempts at reforming this defective system. Some serious reforms had only taken place when the budget was under serious strain (1992), but they did not tackle the long-term imbalances. Later, there was a clear window for reform with Euro membership negotiations that went unused. The key moment was the reform proposals in 2001. After a campaign in which the future prime minister, Costas Simitis, from PASOK, had committed to pension reform, his minister Tassos Yiannitsis, in April 2001, published a set of proposals that sought to enhance the viability of the system (Featherstone, 2005). This proposals tackled some hard choices, including raising the retirement age and the contribution requirements.<sup>27</sup> In the face of massive protests, with no support in the country and a general strike called by the main trade union federation, all the proposals were withdrawn. A new reform package, by the new minister Reppas, characterized by creative accounting—no increase in retirement age, while some would be able to retire early (Featherstone, 2005) and little real reform—sailed through parliament in 2002. The key issues identified by observers as problematic (sustainability, inequality, and fragmentation) remained untouched, and the reform impetus started in 1992 was abandoned.

During this process, and once Greece had entered the Euro zone, Europe’s role changed. There was no more real reform pressure and even fewer constraints on Greece’s decisions. Rather, the pressure from the accession negotiations was replaced by “soft” pressure in the form of what the European bureaucracy referred to as the “open method of coordination” based on benchmarking, surveillance, and sharing of best practices, assuming countries wanted to undertake reforms but were constrained by lack of knowledge. In other words, once Greece had dealt with the challenges of the Euro accession, and its budget was sustainable thanks to the large drop in interest payments, the whole reform momentum was gone. The reform that was supposed to be the culmination of the entire process started in 1992 was abandoned, and not taken up again until Greece was already in the midst of the worst of the economic crisis.

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<sup>27</sup> “The retirement age was to be raised; the required insurance period for a seniority pension increased; the replacement rate reduced to 60 percent of reference earnings; the minimum pension raised but means-tested; and the lower retirement age for mothers of younger children replaced” Featherstone (2005).

## 6. Portugal: Neither Reform Demand nor Reform Supply

After the long 15 years of economic growth that followed its accession to the European Union, Portugal's economy started to stagnate around 2000. It is hard to come up with a starker number to show this point than to note that, in 2012, Portugal's output was lower than in 2001. Just as a comparison, Spain's output was still nearly 17 percent higher in 2012 than in 2001 and in Ireland it was 19 percent higher. Only in one year, 2007, of the entire decade 2001-2010 was Portugal able to grow more than 2 percent.

Researchers have pointed to different factors behind this poor macroeconomic performance but, perhaps, the most salient is the disappointing performance of total factor productivity, which according to the KLEMS data set (see O'Mahony and Timmer, 2009, for a description of the data) fell in every year between 1999 and 2005. Restrictions to competition in many sectors, the dominant position of large firms in several key industries, the difficulties for foreign management to take over low-productivity Portuguese firms, and a dysfunctional labor market are prime suspects to account for this drop in TFP.<sup>28</sup>

The government budget did not present a more positive picture. The headline deficit never fell below 2.9 percent and the primary balance was constantly in deficit even after controlling for the effects of the business cycle and one-off and temporary adjustments (Marinho, 2006, updated 2011). The constant deficits led to a fast accumulation of public debt, from 51.2 percent of output in 2001 to 92.4 percent in 2010.

The private sector responded to this stagnant outlook by reducing its saving rate and heavily borrowing from abroad to finance current consumption (investment actually fell as a percentage of national demand). This translated into large and persistent current account deficits (between 6 to 12 percent of output), an acute deterioration in the real exchange rate, and an increasingly negative net asset position, most of which was held by banks (that had borrowed abroad to lend to local households).

Observers might have predicted a decisive program of structural reforms as a response to the previous figures. The behavior of both the public and the private sector was unsustainable in the middle run, a point well-recognized by most economists at the time. However, little action was taken and the parliamentary elections of 2002 and 2005 returned governments with little appetite for real change. Instead of forcing a positive institutional evolution in Portugal, the Euro allowed both the public and the private sector to postpone the day of reckoning.

In particular, the Euro brought historically low nominal interest rates. For example, the yield on the 10-year government bond fell from 12 percent in 1995 to slightly less than 4 percent by early 2005. Consequently, and while public debt was quickly growing, its service did not. In 2001, the interest paid on the debt was 2.9 percent of GDP. Ten years later, in 2010, and with 41.2 additional points of debt, the interest paid was 3.0 percent of GDP. A similar situation occurred

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<sup>28</sup>Portugal also had to face the entry into the European Union of countries such as Poland that specialized in similar low- and middle-technology manufacturing goods and that had more attractive wage costs.

with private debt. A decade of heavy borrowing had been accomplished at a minimal cost in terms of interest payments.

The fact is that there was no push for reform in Portugal because there was no “demand” for it, even less a “supply,” and the Euro allowed the political-economic equilibrium to be sustained in the middle run by the large capital inflows from the rest of the world even if a correction was eventually unavoidable.

With respect to the demand side, there was no constituency for reform. Large firms were reluctant to accept the liberalization of the markets for goods and services, entrenched managers were unwilling to be substituted by newcomers, inside workers resisted attempts at introducing more efficient labor regulations, and many low-income households benefited from increased social transfers (a raise of 4 points of GDP from 2000 to 2005) that actually succeeded in reducing Portugal’s large income inequality and poverty rates. A broad coalition that cut across traditional party lines supported the status quo. The inheritance from Portugal’s historical pattern of inward development<sup>29</sup> and the constraints created by the sudden change to democracy in 1974 made this coalition more powerful than in other European countries and limited the scope of a more dynamic export sector that could support reforms.<sup>30</sup>

From the supply side, the parliamentary system created by the 1976 constitution disincentivizes cooperation among the main political agents and makes decisive reforms difficult to approve. First, Portugal divides executive power between the president and the prime minister to a larger extent than other European countries, lacking the virtues of either purer presidential systems, such as France, or parliamentary systems, such as Germany. During the time analyzed in this article, the conflict between the two was clearly seen when President Jorge Sampaio called for an early parliamentary election in 2005, an election centered to a large extent on the economic policies that Portugal needed to reactivate its economy, despite the fact that the government at the time held a solid parliamentary majority and that no special event occurred at the time. Second, the electoral law, based on proportional representation, makes it hard for a single party to win an outright majority and forces coalition governments. Third, even during single party governments, the power of the prime minister has been curtailed by the need to placate different party factions. This has been particularly true during the governments of the Social Democratic Party (PSD), which despite what its name would suggest, is a big-tent party that has included, over time, a large range of positions from the right to the center-left.

When the economic crisis hit Portugal in 2008, private capital flows suddenly stopped. Initially, the financing requirements were met with TARGET liabilities and, after May 2011, with the funds

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<sup>29</sup>See Bermeo (2002) for the strong support of Portuguese voters for aggressive redistribution policies –for example, in comparison with the much milder preference in Spain; Costa, Lains, and Miranda (2011) for a discussion of Portugal’s historical pattern of growth; Fishman (2005) for the long-run political-economic consequences of the Revolution of Carnations of 1974, and Torres (2006), for the reluctance of important sectors of Portuguese elites to adopt the Euro, including the CDS-PP, the smaller of the two right-wing parties in Portugal.

<sup>30</sup>For instance, in comparison with Spain, Portugal liberalized its economy much less during the 1960s, and it was less transformed by foreign capital and managerial know-how.

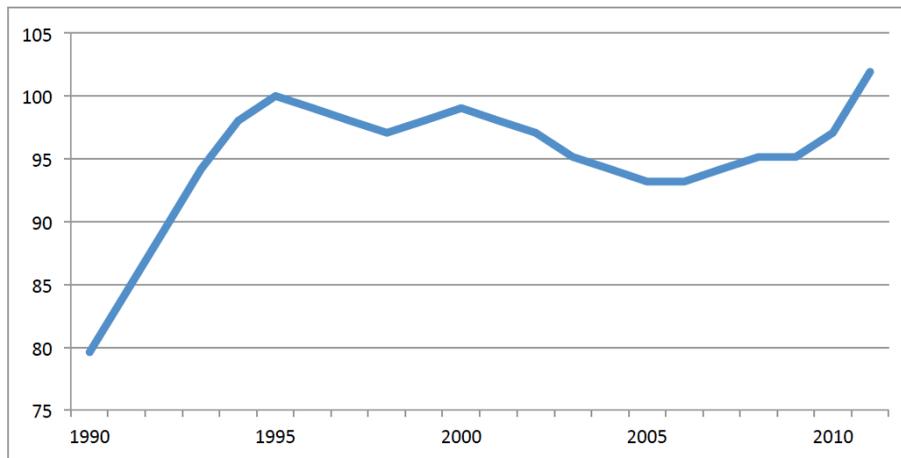
from the Economic Adjustment Programme agreed with the European Union and the IMF. The Portuguese banks, deeply exposed to sovereign debt of their own government, cut loans to firms, and the feedback loop from lower economic activity into lower tax revenue and higher sovereign risk left Portugal in a deep recession and with a banking sector in urgent need of recapitalization. Even if exports have shown over the last few years some dynamism, the fixed exchange rate has prevented a faster adjustment and the current account still presents a substantial deficit that requires fresh external financing. At the same time, the institutional barriers we identified above, including the lack of a broad coalition supporting reform and the constitutional arrangements, have not been removed. If anything, 10 more years of absence of reforms may have solidified them. Finally, the reduced degrees of freedom of the Portuguese government under the programme leaves it with little room to gather public support.

## **7. Germany: Without Financial Bubbles, Reforms are Possible**

In the years after the introduction of the Euro, Germany undertook painful reforms of its welfare state. Why did the Euro not have the same impact on Germany as on the peripheral countries, namely, to buy time and postpone reforms? The answer is in figure 1: neither the Euro nor the bubble changed financial conditions in Germany. The Euro meant the convergence of the other countries' interest rates toward "German" levels, but Germany's rates were, obviously, already at German levels. Thus, for Germany, the Euro had the implications described in section 2.1 -tighter budgetary and fiscal constraints- and not the ones in section 2.2 -looser financial conditions. Absent the leeway provided by the financial boom, politicians had no choice but to act.

Germany was, a decade ago, the "sick man" of Europe. After the years of fast growth that followed reunification, the German economy slowed down. The average growth rate in the second half of the 1990s and first years of the Euro was barely above 1 percent. As a result, unemployment in Germany stayed stubbornly high and reached 11 percent in 2005. In addition, the demographic factors that were so helpful in Ireland and Spain were not present in Germany. The share of the population between 15 and 64 years of age peaked in 1987 at slightly above 70 percent and then declined steadily for the next two decades. The sorry state of the East German economy and the crisis that followed unification only added to the challenges (Akerlof *et al.*, 1991). Figure 5 shows that housing prices actually declined significantly during the first Euro-decade.

**Figure 5: Housing prices in West Germany**



**Source:** BIS, Residential property prices existing dwelling in W. Germany (to keep market constant) per square meter, annual, NSA, All types of dwellings. BIS Code: DEZ1:R:1:1:2:1:0

**Note:** Index normalized to 100 at top of the reunification cycle, in 1998.

This mediocre economic performance, the negative demographic trends, and the costs of the reunification shock put the German welfare state under severe strain. The consequent higher social security taxes and non-wage labor costs endangered German competitiveness (see table 1 in Streeck and Trampusch, 2005). Compared with other countries, Germany's labor market policies were characterized by high expenditures and long duration of programs. Since social insurance schemes were essentially paid by employees, a decline in hours worked made the situation dire (Jacobi and Kluge, 2007). The unification exacerbated an already problematic state of affairs. Indeed, between 1990 and 1998 social insurance contribution rates increased from 35.5 percent to 42.1 percent; German unification accounted for about half of that increase (Streeck and Trampusch, 2005, p. 176).

The constraints faced by German politicians were severe. The independence of the Bundesbank and the political fragmentation associated with federalism prevented expansionary demand policies (Manow and Seils, 2000). These constraints became even tighter with the Euro. In addition, real wage flexibility was limited. But even with reunification, a unique catalyst for reform, reforms were slow in coming.<sup>31</sup> In 1997, Chancellor Helmut Kohl introduced reforms aimed at stabilizing contribution rates by including the use of demographic factors to account for increases in life expectancy. These measures were firmly opposed by the social democrats, who made large gains in the 1998 election by campaigning on the repeal of these changes (which in fact they did as

<sup>31</sup>Hassel (2010) summarizes the prevalent view among German scholars on the dynamics of reform in Germany, “[t]he fall of the Berlin Wall was a catalyst for a major transformation of the German welfare state and labor market. The adjustment process that started in the early 1990s was prompted by multi-layered challenges of unification and the consequent institutional adaptation, the changing role of Germany in European Monetary Union, the recession prompted by unification, and the long-term structure problems of the Bismarckian welfare state, which had been building up since the early 1970s.”

they came to power). This reversal increased expenditures and the Schröder cabinet reacted with a battery of measures aimed at increasing revenues. That is, Gerhard Schröder's first term was characterized by policies similar to those of other countries confronted with unsustainable welfare states: further fiscal commitments to maintain benefits. But as Streeck and Trampusch emphasize (2005, page 181) “[h]aving stretched the federal budget to its limits, the measures of 1999 unintentionally forced the government to consider structural reform that went beyond short-term fiscal remedies.”

Hence, Germany entered the Euro zone in a state of distress and the sustained drop in interest rates the world experienced during those years did little to alleviate these long-run problems. The European Central Bank was setting a monetary policy for a newly created Euro area that was too tight for Germany. In addition, the European Central Bank was establishing its reputation and was unwilling to concede to German politicians' wishes.<sup>32</sup> Unpopular reform was the only road left open.

In particular, Schröder launched the Agenda 2010, the core of which was the Hartz I-IV reforms that constitute the greatest overhaul of the German welfare state since World War II.<sup>33</sup> The Hartz reforms came only after much resistance -and a serious corruption scandal that finally forced the issue on the sitting cabinet- and probably cost Schröder the 2005 election (Helms, 2007). The reforms changed a core principle of the German welfare state: whereas the system prevailing prior to these reforms was meant to preserve the social status of workers through retraining and public work schemes, the new system emphasized instead quick and sustainable job placement.<sup>34</sup> In particular, job seekers were required to accept any offer of suitable work, where the definition of suitable was considerably broadened.

Could German authorities have used the Euro to kick the can further down the road to avoid these reforms? As we mentioned before, Germany did not see a drop in interest rates because rates were already low. Second, the kernel of “truth” behind the bubbles in Ireland and Spain -favorable demographics and strong growth in the late 1990s- was absent in Germany. Thus, welfare reform was the sole option. The long-run effects of the Hartz reforms are still being debated (Jacobi and Kluve, 2007). Since the early years of the Hartz welfare state were characterized by strong growth in the periphery and in China -with which German exports have a high positive correlation- it remains to be seen how the German welfare state progresses when these factors are no longer active.

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<sup>32</sup>For example, as Schröder put it, “As well as their obligation to ensure price stability, the ECB also has the task of keeping growth in mind. And one can be sure that they also will do this” “German Slump Prompts Push for Lower Rates : Schroeder Urges the ECB To Focus on Growth, Too.” *The New York Times*, June 30 2001

<sup>33</sup>For a view of welfare reforms in the context of risk-taking behavior on the part of policy makers, see Vis (2010), pages 127-130, for the Hartz reforms in particular as a gamble for resurrection.

<sup>34</sup>See Bruttel and Sol (2006) for the historical evidence on the adoption of “work first” approaches.

## 8. Conclusions

Observers expected the arrival of the Euro to lead to a modernization of the peripheral European economies. Lacking monetary and fiscal autonomy, governments would have to adopt structural reforms they had been previously refused to implement. In fact, as we have shown in this paper, the steep financial boom derived from the drop in exchange rate risk and from the Euro wide financial bubble meant that the budget constraints that these countries faced were loosened, rather than tightened. Countries that could cheaply borrow delayed painful reforms. Moreover, accountability was lost during the bubble as bad decisions have no negative short-run consequences when rising asset prices hide all mistakes. As a result, the financial bubble fueled the deterioration of governance and of the institutional arrangements on the Euro periphery. After laying out this argument, we have studied the different ways politics and economics connected in the different countries that enjoyed a financial boom, and we have contrasted them with the discipline that the Euro imposed on a country that did not experience any boom.

Our work suggests several avenues for future research. First, while case studies are ideal for providing a careful analysis of the mechanisms at play, a more systematic empirical analysis of public and private governance in bubbles is necessary to test our theory. Second, as we are currently doing in a work in progress, our hypothesis on signal extraction in bubbles needs to be formalized so that the problem can be analyzed with more depth. Third, our theory suggests that there may be differences between how damaging private and public bubbles are -private bubbles appear to be more damaging, since they not only affects the sustainability of the public finances, but also damages governance in the private sector.

A final issue concerns the broader applicability of our analysis. Are all situations where financing is plentiful and cheap conducive to the lowering of standards, the deterioration of governance and the abandonment of economic reforms? If so, this situation is currently the one the United States, at the zero lower bound, is facing, in which case our analysis suggests that we must remain vigilant of the evolution of public and private governance.

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