

CREDIT BOOMS: IMPLICATIONS FOR THE PUBLIC AND THE PRIVATE SECTOR

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Abstract

The period preceding the global financial crisis that started in 2008 was one characterized by ample liquidity, a credit boom, and low yields in a wide range of asset classes. It was also defined by the accumulation of risks on and off the balance sheets of many financial intermediaries, particularly banks, as well as a substantial increase in public and private sector debt in some countries. Understanding the relation between liquidity and the excessive accumulation of risks remains a central policy question. How do credit booms affect incentives? In the case of the government sector, credit booms may affect the incentives of different interest groups to agree on policies for reform or fiscal stabilization. In the case of the private sector, it may change the incentives that originators have to produce good assets. Credit booms complicate inference and make it difficult to evaluate the benefits and costs of alternative policies and strategic choices as well as monitor agents. Finally, credit booms facilitate the entrenchment of interest groups and may lead to a deterioration of governance institutions.

I. INTRODUCTION

The period preceding the global financial crisis that started in 2008 was one characterized by ample liquidity and low yields in a wide range of asset classes. It was also defined by the accumulation of risks on and off the balance sheets of many financial intermediaries, particularly banks, as well as a substantial increase in public and private sector debt in some countries. These two regularities are not unrelated and understanding the relation between liquidity and the excessive accumulation of risks remains a central policy question. For instance, Shin (2013) speaks of a second phase of “global liquidity” that started around 2010 and that now is centered around debt markets, mostly emerging market debt securities .

Liquidity is a key but elusive concept in financial economics. Whether a market is liquid depends on the portfolio decisions of a myriad of agents in the economy. For instance, agents may coordinate and conduct treasury operations in a particular market, which then becomes liquid by virtue of those decisions. This encourages others to conduct their treasury operations in the same market, and so on. This view of liquidity is though incomplete as it does not pin down which market is to become the focus of these treasury activities.

Assets with volatile and difficult to model payoffs seem poorly suited to trade in liquid markets, such as those described in the previous paragraph. The reason is that such assets may elicit information acquisition by part of some with better information acquisition technologies which immediately introduces adverse selection issues in that market, the opposite of liquidity. Symmetric information about payoffs seems thus a precondition for liquid markets. As Dang, Gorton and Holmstrom (2012) emphasize¹ this symmetry is often easier to achieve through shared ignorance rather than by having all relevant parties acquire the same amount information, which is socially wasteful. Securities that have information insensitive payoffs seem natural candidates to be liquid.

¹See also Bengt Holmstrom’s 2012 Econometric Society Presidential Address.

The cost of opacity is that it may push risks to the tail increasing the possibility of systemic risk crises and thus the need for monitoring.² Still if financial markets are going to perform its central allocative mission (some) market participants must collect information, screen alternative projects to make sure asset originators produce good assets and monitor agents to prevent incompetence or malfeasance. Financial markets are thus permanently on a tenuous balance, living uneasily between the need for opacity to induce liquidity and the knowledge required to allocate capital properly.

The present paper is concerned with the economic impact of a breakdown of this tenuous equilibrium between opacity and knowledge acquisition. Specifically I am interested in situations in which a positive exogenous shock to the pool of uninformed funds, funds in the hands of uninformed investors, affects the liquidity of asset markets, the incentives to collect information and the incentives of the issuers of these assets for good origination at the margin, inducing the type of tail risk discussed above.³

This positive shock to the pool of uninformed funds can be due to several reasons. For instance it may be that some countries are running large running current account surpluses that need to be refinanced in assets denominated in foreign currency, as in the savings glut hypothesis (Bernanke (2005), or that non-financial firms increase their cash balances fearing some liquidity shortages (Pozsar (2011)). In the first case a foreign investor is at an informational disadvantage relative to local investors and may prefer to invest in, say, sovereign debt or securities issued by agencies that benefit from some type of government guarantee.⁴ In the second, corporate treasurers may seek deposit like

²See also Rajan (2008), in particular chapter 8, for a discussion on the issue of tail risk.

³As in Diamond and Dybvig (1983) and Gorton and Pennachi (1990), to name two classic references, I assume the existence of debt and don't consider why it arises as a form of optimal contract.

⁴Recently there has been a remarkable amount of work on the topic of global liquidity, starting with the "Landau Report" (BIS, 2011). See also Borio, McCauley and McGuire (2011), Bruno and Shin (2013), Caruana (2013 a and b), Chung, Lee, Louikoinova, Park and Shin (2013), Chen, Liu, Maechler, Marsh, Saksonovs and Shin (2012), Eickmeier, Gambacorta and Hoffman (2013), and Shin (2011, 2012 and 2013).

instruments, the banking sector unable to supply enough deposits to satisfy the demand, and invest in money market funds, asset backed securities or commercial paper.

Clearly flows of uninformed funds have different effects depending on which market absorbs these flows. If uninformed funds flow to sovereign debt markets one should be naturally concerned with the impact this flow may have on the political economy games that determine fiscal sustainability and thus the (long run) quality of the debt. For instance, consider the situation in which a country is in an unsustainable fiscal dynamic and needs to adopt a fiscal stabilization policy. Political economists, such as Alesina and Drazen (1991), model the adoption of these stabilization policies as an attrition game between parties who share differently on the benefits and costs of fiscal stabilization. How does a sudden inflow of uninformed funds affect the attrition game? If this inflow translates into lower yields for government debt then easier credit can create the conditions for some budget breaking and relieve the constraints preventing agreement between different interest groups, perhaps by sharing some of the costs of reforms with future generations.⁵ But it may also be the that the different parties will feel less pressure to agree on a particular policy and be tempted to “kick the can down the road,” borrow and let future generations deal with the consequences of today’s inaction. Liquidity inflows can thus have ambiguous effects on the political economy of fiscal stabilization and structural reforms.⁶ The political economy of policy reform non adoption and delay is large.⁷ The contribution here is to explore some of the political economy mechanisms in the context of credit booms in some detail as well as to offer

⁵This point has been emphasized by the Tompson (2009, p. 41): “[m]any structural reforms, particularly pension reforms, involve up-front fiscal costs, while the benefits are realized only later. A severe fiscal squeeze may therefore make reform harder to adopt and implement.”

⁶Current research with Jesús Fernández-Villaverde focuses on the construction of models of fiscal stabilization in the presence of unsustainable social security arrangements. This research explicitly considers the role of liquidity shocks in the political economy game played by successive generations to reform social security arrangements and stabilize debt dynamics.

⁷For a textbook treatment of this issue see Drazen (2000, particularly chapter 10).

some specific examples.

This is not the only channel through which the large inflows of uninformed funds can affect the political economy of debt sustainability. In particular, the asset appreciation that accompanies the inflows of uninformed funds may complicate the inference that agents draw regarding, for example, the quality of policy makers and politicians. In turn these, firmly in power due to the prosperity that increasing leverage typically brings, may actually take actions to entrench themselves in power and weaken governance institutions. This channel acts as a sort of political economy multiplier: It adds to the potential problems of delay discussed above by making it more challenging to address the problems, not only because the higher level of debt but because the institutional environment in which to implement the reform has deteriorated perhaps irretrievably. All this requires of course some form of bounded rationality by part of voters or some costs of monitoring that leads to a lower monitoring intensity during booms. In section II, I build on Fernández-Villaverde, Garicano and Santos (2013) to explore these ideas in some detail and offer examples.

If instead uninformed funds flow into markets where private sector securities are traded they may change the incentives to originate assets of a given quality. This may depend precisely on how this flow of uninformed funds alters the distribution of informed and uninformed capital, which is the mechanism explored in Bolton, Santos and Scheinkman (2014). To gain some intuition on this effect consider a situation where there is a sudden increase in the pool of uninformed funds flowing into markets for private sector securities, such as mortgages, corporate loans, and other securities. If the supply cannot respond immediately, a sudden increase in the pool of uninformed funds may result in an increase in the price of these securities and a drop in yields. The flow of uninformed funds into particular markets crowds out existing capital in those markets. As a result this existing capital may migrate to other markets in search of higher yields and in the process managers of that capital will acquire information about these other markets, which improves allocative efficiency. It follows that the inflow of uninformed

funds may be beneficial in that it encourages information acquisition by part of some agents in the economy and potentially may lead to better origination incentives. This is the standard competitive force operating in financial markets.⁸

But consider now a situation where generating those higher yields through information acquisition becomes increasingly difficult as the investment opportunity set displays decreasing returns to scale. In this case the continuous inflow of uninformed funds will compress the spreads across markets in the process undoing incentives for good origination for what's the point of originating a good asset when the market pays the same for a good or a bad asset? What arises is thus a theory where the impact of a positive shock in the pool of uninformed funds can have strong non linear effects on the incentives to originate good assets, whether mortgages, auto loans, real estate loans or sovereign debt. A little bit of uninformed funds may be good because they push other, more agile capital, into alternative markets producing in the process information about new investment opportunities. But too much of it destroys incentives for good origination.

The theory advanced in this research agenda also informs the increase in leverage of informed financial intermediaries. Indeed, managers of uninformed funds do not necessarily invest the funds themselves. They typically rely on intermediaries to allocate these funds for them but they also restrict the class of assets in which these managers can invest. As a result many of these funds find their way, for example, to repo markets where they are the source of cheap leverage for many financial intermediaries. This is a double edged sword. On the one hand the existence of these markets allows for additional funds to potentially flow into the hands of informed investors, increasing the amount of funds bundled with information. On the other hand the increased leverage is a source of increased fragility. In sum variations in liquidity affect the joint distribution of knowledge and capital and with that the incentives to originate good or bad assets.

⁸Rajan and Zingales (2003) emphasize the role of financial development in fostering product market competition and guaranteeing entry. Here competition is between financial intermediaries.

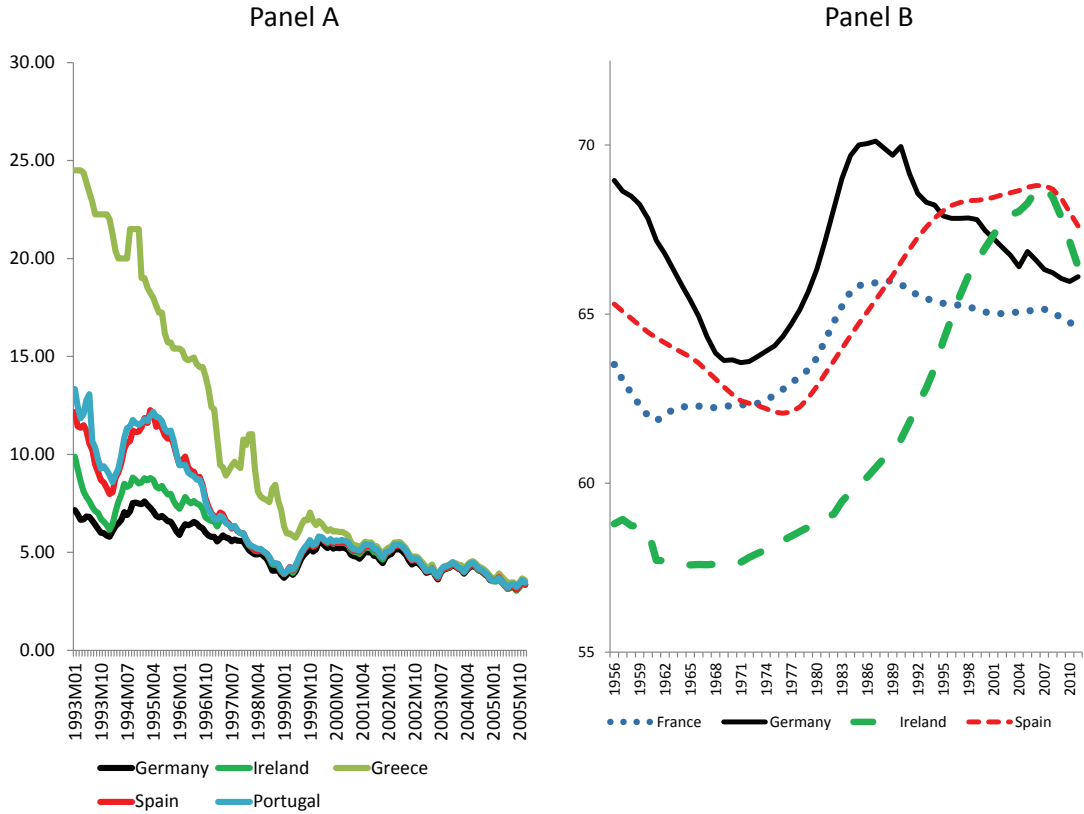
There are two questions that remain to be addressed, though not in this paper. First, what are the causes of these liquidity surges? One possibility is that they are policy induced, when countries repress internal demand and adopt growth models based on exports or perhaps reform their pensions system out of demographic concerns and implicitly encourage more household savings. Another reason may be precautionary motives by some sectors. For instance, it may be that households faced some exogenous shock such as the migration of jobs to another country react by increasing savings or that the non financial corporate sector, faced with permanent financial crises, saves in order to avoid financial constraints.

The second question concerns the recipients of these liquidity flows. Why are some countries more susceptible to these liquidity booms? Much has been made of the USA's exorbitant privilege, the benefit attached to issuing assets denominated in the reserve currency. This, of course, does not explain why, for instance, Spain was the recipient of large capital inflows. Clearly cross sectional differences in the marginal productivity of capital must be a starting point but there is more than that. It may be that Spain was particularly adept at attracting these funds given the fact that it had a large banking sector with big international banks. Another possibility is that capital flew into Spain precisely because there were some governance issues that international investors were not fully aware of. As already mentioned the causality advanced in this paper is the opposite: It is large liquidity flows that cause institutional deterioration.

In the rest of the paper I explore these ideas and give several examples. The next section is concerned with the impact on policy decisions of inflows of uninformed liquidity, emphasizing situations where these inflows affect political games negatively. Clearly access to liquidity has many benefits but here I want to focus on the negative effects of "too much" liquidity. I use several examples from the Eurozone to illustrate these ideas. Section III is concerned with the effects of uninformed liquidity on the private sector and the focus is on the potentially negative effects on the incentives for good origination of too much liquidity. Section IV concludes.

Figure 1: Exogenous factors: Yields and population dynamics

Panel A: Government bonds, 10-year yields. Monthly: 1993M01-2005M12. Source: Eurostat. Panel B: Percentage of the population between 15 and 64 years of age. Annual data: 1956-2011. Source: OECD



II. LIQUIDITY AND THE POLITICAL ECONOMY OF REFORM

As mentioned in the introduction, the years preceding the financial crisis were characterized by ample liquidity and the accumulation of risks, both in public and private balance sheets. In this section I discuss the impact of this liquidity surge on the politics of structural reform. In addition I explore the political economy multiplier discussed in the introduction, the deterioration of governance institutions that accompanies many of

the episodes of excessive liquidity. The examples are all taken from the Eurozone, where some countries, particularly those in the periphery, experienced extremely easy credit conditions. Fernández-Villaverde, Garicano, and Santos (2013) attribute these easy conditions to the Euro and indeed many have argued that the elimination of exchange rate risk and the completion of capital market integration across the Eurozone led to strong capital flows from the core to the periphery.⁹ The Eurozone is an interesting laboratory for these ideas precisely because many expected that the Euro would address many of the political economy problems that were delaying reform. For instance Lucas Papademos, at the time the governor of the Bank of Greece, in a conference in 2001 to mark Greece's entry into the euro declared that

“[A]fter 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 Papademos, Greece Central Bank Governor, at a conference to mark Greece's entry to the Euro, 2001).

Mr. Papademos was thus voicing the hope in many in the European “periphery” that the Euro was to be the means for a transformation from one variety of capitalism, one based on a demand based growth strategy coupled with occasional devaluations, to

⁹For instance Eichengreen (2007, page 375) states that “[t]he advent of the single currency led to explosive growth and consolidation of European securities markets ... No longer worried by the risk of currency fluctuations between member states, investors began searching out attractive corporate debt securities regardless of the national market in which they were issued.”

another based on tight controls over unit labor costs, preferably because of productivity growth, and stable exports. This of course had deep implications for the evolution of the Euro experiment: Whereas many of the discussions on the viability of the Euro were focused on asymmetric business cycle shocks, the relevant asymmetry for many was that of policies in response to shocks.¹⁰

Others of course saw the Euro as mean to achieve an elusive fiscal stabilization, even in the “core.” For instance Jean-Luc Dehaene, the Belgian prime minister (1992-1999) declared in 1992 that¹¹ “[T]he consolidation of public finances is an indispensable element of the integration of Belgium in European Monetary Union. Our country, that lies at the heart of Europe, and whose economy is orientated towards foreign countries and especially towards Europe, our country has to be in the first group of countries that will take part in European Monetary Union before the end of this century.” The Euro was thus seen by many as the panacea that would address long standing policy challenges and this view was based on the Euro as a constraint, as a commitment device.

Fernández-Villaverde, Garicano, and Santos (2013) argue that the opposite happened, at least until the crisis. For the purposes of this piece, whether the Euro is the primary reason for the non adoption of policy reform or simply the result of global liquidity conditions that would have resulted in the same outcome even in the absence of monetary union is not key. It is enough to accept the evident fact that countries such as Portugal, Greece and Spain experienced remarkable current account deficits and extremely low yields in their sovereign debt. I first discuss the implications for reform and then turn to the issue of the political economy multiplier. I finish this section with a discussion of the case of Germany, which tackled many of the reforms that were delayed in other member nations. As Blanchard (2006) presciently mentioned, Germany offered

¹⁰For an introduction to the varieties of capitalism literature see Hall and Soskice (2001). For an application of this approach see Hall (2012).

¹¹Quoted in Wenzelburger (2011), who also offers a useful primer on the political economy of fiscal consolidation with an eye on the Euro crisis.

a path for many countries suffering similar problems to the ones Germany experienced at the turn of the century.

A. Liquidity inflows, attrition games and fiscal stabilization

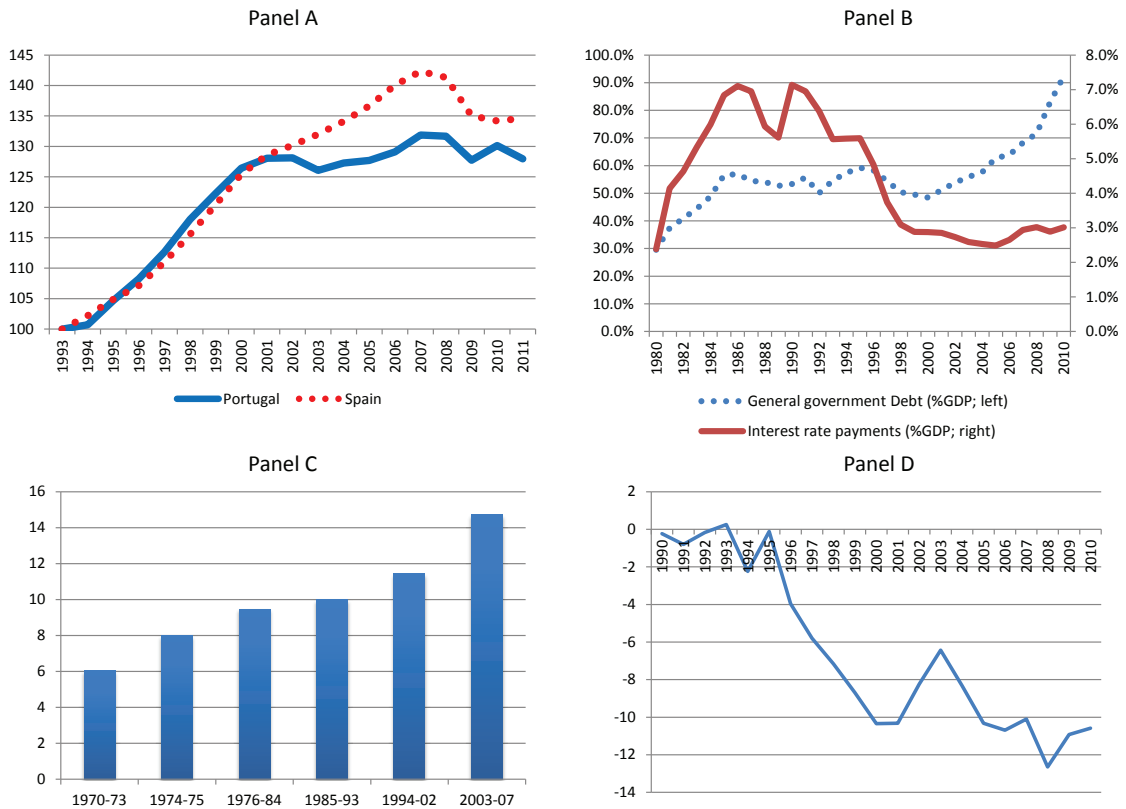
Consider first the case where these uninformed funds flow into sovereign debt to fund government expenditures. Assume that the issuing sovereign, a small open economy, is facing some unsustainable fiscal dynamics that can only be resolved through some tough political choices. It may be that the country in question has an unsustainable pension system or an overly generous unemployment insurance scheme. As political economist have emphasized (see Alesina and Drazen (1991), Casella and Eichengreen (1996), Svensson (1999), among others) fiscal stabilization can be thought of as an attrition game between different interest groups who share differently on the benefits of fiscal stabilization. A sudden inflow of uninformed funds and a drop, say, on the interest rate at which the sovereign funds itself fundamentally alters the nature of the attrition game played by the different parties, delaying fiscal stabilization and potentially increasing the probability of a sudden stop that may produce an even more painful stabilization down the road. Why would politicians reform an unsustainable pension system when the world is happy to fund the government at an ever lower rates?

As it is well known a critical development in financial markets prior to the financial crisis was the remarkable drop in sovereign yields across the Eurozone (see Figure 1 Panel A) . In addition spreads with respect to the reference bond in Europe, the German bond all but disappeared. As Fernández-Villaverde, Garicano, and Santos (2013) argue this had a dramatic effect in dampening the drive for reform in many of the Eurozone countries. Consider for instance the case of Portugal.

After a long period of sustained growth following membership in European institutions the Portuguese economy stagnated dramatically at the turn of the century. Figure 2 shows the evolution of real GDP per capita in Portugal and Spain from 1993

Figure 2: Portugal

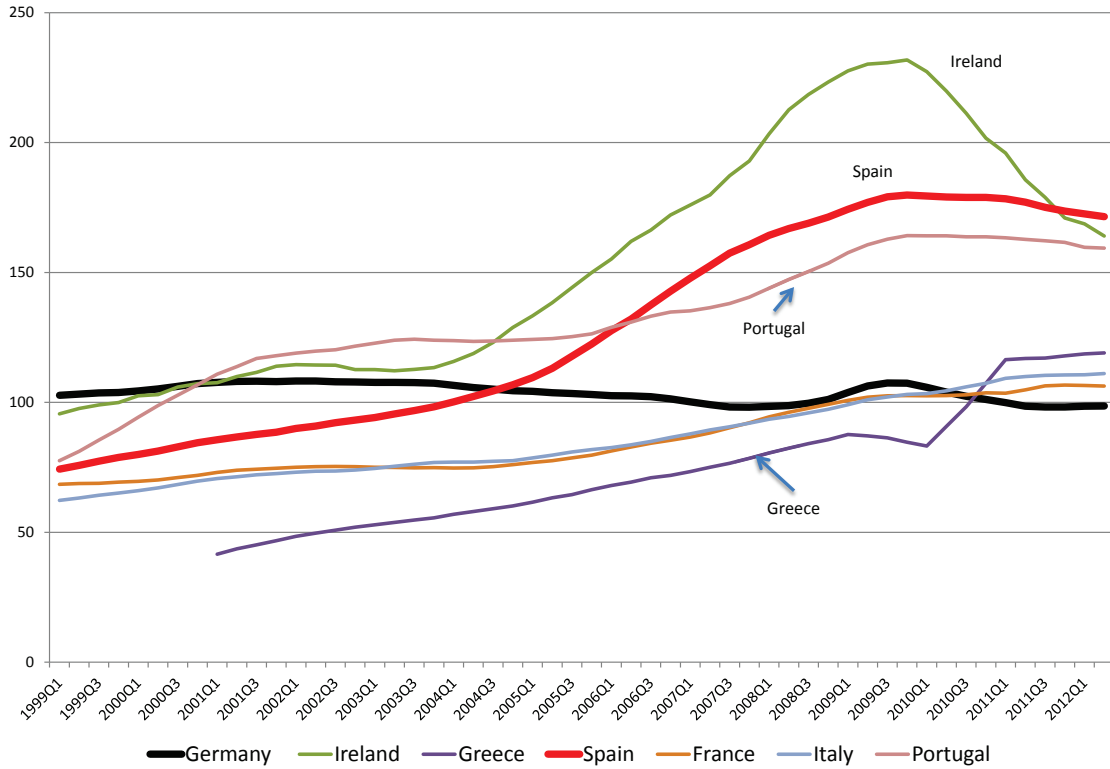
Panel A: Real GDP per capita, Portugal vs. Spain (dotted line). Annual: 1993-2011. 1993=100 Source: OECD. Panel B: General government debt (dotted line; left axis) and interest rate payments (right axis) as a percentage of GDP. Data source: Marinheiro, C. F. (2006), “The sustainability of Portuguese fiscal policy from a historical perspective,” *Empirica*, 33(2-3), 155-179. Annual: 1980 - 2010. Panel C: Social Security Spending as a percentage of GDP; average over selected sample periods. Data source: Pereira, A. and J. Andraz (2011) “Social Security and Economic Performance in Portugal” Panel D: Current account deficit as a percentage of GDP. Data source: IMF



to 2011 (normalized by the 1993 figure). As can be seen Spain and Portugal closely tracked each other until the turn of the century when both economies diverged markedly. Many are the reasons for this stagnation. Both Santos Pereira and Lains (2010) and Blanchard (2006) emphasize the dramatic productivity slowdown Portugal experienced

Figure 3: Private lending

Loans to other residents granted by monetary financial institutions as a percentage of GDP Quarterly: 1999Q1-2012Q2 Source: Eurostat.



during those years. Santos Pereira and Lains argue that the investment phase was hitting the threshold of diminishing returns.¹² In addition growth was also hindered by a difficult adjustment to the euro. Indeed, the investment boom that preceded euro membership led to an output boom and large current account deficits. The slump did not

¹²Eichengreen (2007) argues that the slowdown in the European economy in the 1970s and 1980s is due to the exhaustion of the extensive growth model of Europe after the Second World War, one that emphasized capital accumulation and increased labor participation. It may have been that this extensive pattern may have lasted longer in Portugal, which started the catch up phase later than the European core.

result though in a correction of the large current account deficits. The reason is twofold. First the boom period led to upward pressure on wages which led to overvaluation; this combined with downward nominal rigidities . Both effects combined to maintain the large current account deficits Portugal was experiencing since the mid 1990s (see Figure 2 Panel D).

In addition, and more tellingly, as Kang and Shambaugh (2013 and 2014) emphasize, the distinction between trade and current account balance is an important one when it comes to Portugal. They point that in the case of Portugal (and of Greece as well) trade deficits have been in excess of 5% of GDP since the early 1980s, but that the current account has been close to balance on many occasions due to official transfers and remittances. But these transfers have declined sharply since the mid 1990s: Over this period transfers declined by about 6% of GDP and net income payments increased by 4.5%, which accounts for all the deterioration in the current account over this period. The drop in private transfers is related to Portugal going from being an emigrant nation to attracting inward migrants from Brazil and Eastern Europe. Moreover, as the availability of cheap credit increased there was less need for transfers from the Portuguese abroad (see Kang and Shambaugh (2013, page 13). Declining transfers should have led to a reduction in internal demand and a closing trade deficit. Instead loans replaced transfers in order to maintain living standard in Portugal and thus the growing current account deficits. Indeed commentators of the Portuguese economic situation have emphasized the accumulation of sovereign debt during this period but private lending picked up significantly as well. Figure 3 shows the lending to domestic households and firms by monetary financial institutions for the period that goes from 1999 to 2012. As can be seen Portugal is behind of only Ireland and Spain, the countries that experienced the larger private lending booms. In sum, the Portuguese economy borrowed its way out of adjustment and competitive disinflation for the first years of the euro.

Clearly Portugal, in the absence of the structural reforms that could improve productivity growth and or and borrowing from abroad, was facing a long period of

stagnation and wage disinflation to restore competitiveness. As Fernández-Villaverde, Garicano, and Santos (2013) argue there was no support for reforms aimed at liberalizing product or labor markets.¹³ And why were any expected? The considerable drop in interest rates allowed Portugal to delay the painful adjustment that the economy needed.

Panel B of figure 2 shows the evolution of debt as a percentage of GDP as well as the cost of servicing the debt as a percentage of GDP. The slump resulted Portugal saw a noticeable increase in the level of debt but no comparable increase can be observed in what refers to interest rate payments. This allowed Portugal to increase social transfers as a percentage of GDP which went from an average of 11.4% in the period 1994-2002 to 14.7% in the period between 2003 and 2007 (see Figure 2 Panel C.)

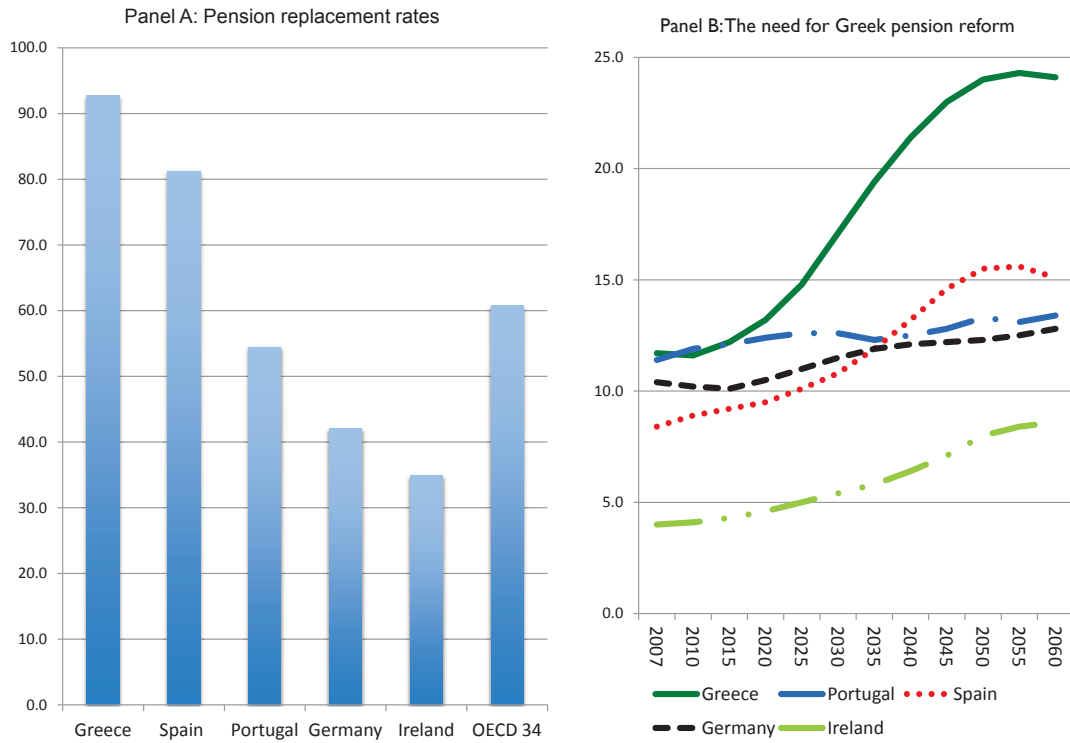
The Greek case is also illustrative. As Portugal, it also developed large current account deficits. In the case of Greece though the large external imbalances were exclusively driven by the public sector; as seen in Figure 3, private sector borrowing was not the problem in Greece. Among the many challenges in the public sector none is more salient than pension reform, which has been recognized as essential in Greece for more than two decades.¹⁴ Several attempts have been made at reforming the Greek public pension system. As Featherstone (2003, p. 8) writes, the “first serious moves for reform came in 1990-92 when Greek public finances were in deep crisis and the EMU tests were being established. Fiscal laxity imperiled Greece’s European membership.” Upon the election of Mitsotaki’s New Democracy government in 1990, a renewed impulse for

¹³Blanchard (2006), though sounding a skeptical note about the short run effectiveness of many of them, offers several proposals, from reducing informality to improving licenses requirements as well as labor market reform to improve the quality of worker-firm matches. Eichengreen (2007, Table 9.6) shows the level of employment protection for several European countries for the period between 1960 and 2003. Portugal is the country where the level of employment protection grew the most, albeit from a very small initial level. By the late 1980s Portugal had the strongest labor protection laws in Europe a position that still had when the slump set in.

¹⁴This description of the several attempts at pension reform in Greece is taken from Featherstone (2005).

Figure 4: Greece

Panel A: Gross pension replacement rates: average earners. Source: OECD, Pensions at a Glance, 2011. Panel B: Projected public pension expenditure as a share of GDP. Source: OECD.



pension reform was initiated. Timid reforms such as the Souflias Law (so named after the National Economy Minister, Georgios Souflias) left structural problems untouched and the government promised a new round of reforms to tackle long-term problems with the pension system. A second attempt under Souflias' successor, Stefanos Manos, was met with widespread opposition and once again many of the structural problems of the system went unaddressed.

The electoral defeat of the Mitsotaki government in 1993 brought back Andreas Papandreou and pension reform was shelved. The new prime minister, Costas Simitis,

brought a renewed sense of urgency to the issue after the election of 1996. Several proposals were floated during this period. Perhaps the most far reaching of them was the one put forth in 2001 by Tassos Yiannitsis, the minister of labor. This proposal contemplated several far-reaching measures: 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. But in the face of massive protests, the proposals were withdrawn. A new reform package, by the new minister Reppas, characterized by creative accounting -no increase in the 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.

Thus, the year 2001 saw the defeat of the last effort at pension reform in Greece even when it was considered to be “extremely urgent” (Borsh-Supan and Tinios, 2001). With a system that was overly generous and on an unsustainable path, Greece’s partners “saw her convergence as being partially dependent on pension reform” (Featherstone 2005). The European Union, rather than imposing real budget constraints, saw itself at that point as simply “facilitating policy learning.”

At the time of the adoption of the Euro, the Greek pension system was seen as a key problem- pensions consumed 12.1 percent of output 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 public-sector employees.

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 reform momentum was gone. As Hall (2012, p. 361) states "successive Greek governments took advantage of lower borrowing costs to expand a public sector closely associated with political patronage and failed to reform a tax system based on non-compliance." The reform that was supposed to be the culmination of the entire process started in 1992 was not taken up again until the recent crisis.

The examples of Portugal and Greece thus seem to suggest that the first phase of the global liquidity surge led to policy non-adoption and a deepening of the imbalances in these two countries, postponing the inevitable reforms and adjustment. The larger topic of course is how debt is encouraged or issued to avoid either difficult political choices or intractable developments such as the increasing skill premium. Rajan (2011) and Streeck (2014) have recently made this case forcefully. Rajan (2011, see Ch. 1) for instance argues, for the United States case, that the political class encouraged the credit boom to the private sector in order to mask the increasing income inequality under the veil of a consumption boom that affected primarily those whose income was falling behind. Streeck (2014, p. xiv) states that "[M]oney, ..., served to defuse potentially destabilizing social conflicts, at first by means of inflation, then through increased government borrowing, next through the expansion of private loan markets, and finally (today) through central bank purchases of public debt and bank liabilities." At the

heart of these developments is the end in the 1970s of what Eichengreen (2007) has termed the extensive growth era, one based on putting more people to work and basic capital formation, and the difficulties of switching to an intensive growth model based on innovation and productivity growth. Perhaps then this crisis was long in coming for countries such as Portugal, Spain or Greece which were late comers to the extensive growth model compared to the core countries of the Euro which were forced to adjust earlier.

It is important to understand that this thesis is not without controversy. Tompson (2009, p. 41) in his large cross sectional study on the political economy of reform, while acknowledging that exogenous fiscal pressure can be a driver for reform, argues “that one of the most robust findings to emerge from the recent econometric work on the political economy of structural reform is that sound public finances tend to be associated with more reform.” The reason is that debt capacity allows for compensation of interest groups hurt by the reform.¹⁵ Whether the possibility of issuing debt accelerates or delays reforms thus remains an open question.

In the next section I explore a different potential role for politicians in credit booms, one in which they take actions to entrench themselves and weaken governance institutions.

B. Liquidity inflows, inference and the political economy multiplier

In addition the inflow of uninformed funds complicates problems of inference. Liquidity affects inference in two different ways. First when there is uncertainty about the benefits that different interest groups will enjoy in the presence of reform,¹⁶ price distortions driven by the inflow of uninformed funds may bias different groups against

¹⁵See for instance Table 1.A.1.1 in Tompson (2009, p. 33). See also Hoj, Galasso, Nicoletti and Dang (2006).

¹⁶See Fernández and Rodrick (1991) and Rodrick (1993) for an early application of this idea to the problem of trade reform.

the wisdom of these reforms. For instance it may be that a government is proposing adjustments in the pension system to guarantee their long run sustainability. Opponents to such reforms can point at the lower yields on government debt as proof that there is no day of fiscal reckoning in sight and thus forcefully oppose any need of reforms. Low yields on sovereign debt thus may strengthen the bargaining power of some groups at the expense of others. In addition there may be behavioral biases associated with updating and too much weight is placed on price signals relative to what is prescribed by Bayesian updating; alternatively there may be some costs of monitoring that leads to a lower monitoring intensity during booms.

A second inference problem affects the evaluation of managers and policy makers. First, the asset appreciation and economic boom that inflows produce get politicians reelected, independently of their merits. But perhaps more harmful is that politicians elected under these circumstances may use these situations as an opportunity to entrench themselves in their position weakening governance institutions, for instance building a client network of political appointees that can deliver future elections or even changing laws to guarantee the political control of otherwise independent agencies and entities. The pernicious effects of these actions is not easily seen during good times, when voters experience the benefits of ample liquidity in the form of employment booms and easy credit conditions. It is here that there is an important political economy multiplier as the inflow of uninformed liquidity, in addition to the delay of structural reforms and fiscal stabilization already discussed, depreciates governance institutions which limit policy actions when the crisis comes. In addition it makes it more likely that the wrong individual is in place when that happens.

An interesting example of this is Spain. As it is well known Spain experienced a remarkable real estate bubble during the early years of the euro. As shown in Figure 3 shows the growth in private credit was second only to Ireland. As Greece and Portugal, Spain developed significant current account deficits, the byproduct of the striking investment boom during those years, but unlike them the driver of those large current

account deficits was the private sector rather than the public one. The banking system played a critical role in channeling these inflows into many activities, but in particular real estate development projects.¹⁷ The Spanish banking system presented a unique peculiarity that was to prove crucial in the development of the Spanish crisis: A significant fraction of the credit was granted by the *cajas* sector, the notorious private savings and loans, which at the peak comprised 50% of the Spanish credit market, and that were controlled by the local political elites of Spain.

The *cajas* were private entities with ill defined property rights that made them subject to political capture. The 1985 law that regulated the governance of the *cajas* enshrined the principle of local political representation and both municipal and regional governments made their presence felt in the governing bodies of the *cajas*. Local governments, which are granted ample powers under Spanish laws, were quick to regulate them to further increase their control over them. Liberalization of the Spanish credit market and the loose monetary conditions that accompanied the introduction of the euro allowed them to grow and feed, and be fed by, the real estate bubble. They were attractive targets for political capture precisely because they were seen as the instrument to fund the many real estate projects that create the short-run prosperity that helps local governments officials be reelected. It is not surprising thus that many of the *cajas* were run at some point or another by prominent local politicians or even national ones and that most of them had to be restructured by the Bank of Spain at some point or another during the crisis. In addition, local governments were quick to alter the legal environment of the *cajas* sector to further

The case of the region of Valencia is a perfect example of this political economy multiplier. The prosperous region of Valencia was one of the epicenters of the real estate bubble and the Spanish banking crisis. The region of Valencia was home to three important financial institutions, Caja del Mediterráneo (CAM), Bancaja, and Banco de

¹⁷For a thorough account of the evolution of the Spanish banking system in the years prior to the financial crisis see Santos (2014).

Valencia, which was a century old bank controlled by Bancaja since the mid 90s. In 1997, as the cycle of prosperity got going in earnest, the regional government took the fateful step of changing the law regulating the cajas to increase the ceiling of political appointees that could serve in the governing bodies of the cajas. The law opened the possibility for the first time for the direct appointment by the local government of 28% of the board; this together with the municipal appointments, another 28%, made sure that the presence of political appointees in the board well exceeded the 40% mandated in the national 1985 law that was supposed to establish the governance parameters of the entire cajas sector. In addition the law transferred supervisory responsibilities over the cajas to the Instituto Valenciano de Finanzas, a body with no experience whatsoever in banking supervision and which was also subject to capture by the same local political elites. This reform was supported both by the governing party at the time in the region (the conservative party, or PP) and the opposition party (the socialist party or PSOE), which had engaged in similar maneuverings in the region of Andalusia. The 1997 law was sponsored by the then economics minister of Valencia, José Luis Olivas, who in 2004, stepped down as president of the region to head both Bancaja and Banco de Valencia until their nationalization during the crisis. The same politicians thus that were supposed to supervise this important segment of the Spanish credit market changed the legal environment under which the cajas operated to further guarantee their political control. Moreover when the crisis hit the same politicians that had presided over the enormous accumulation of risks in these entities were entrusted to address the crisis they themselves had generated; Mr. Olivas for instance only stepped down in 2011.

It is thus unsurprising that Spain was unable to address its banking crisis without recourse to its partners in the Eurozone. The cajas sat at the lethal intersection of politics and the credit market and this created enormous problems when handling the crisis. The Spanish banking crisis only abetted when Spain entered into a Memorandum of Understanding (MOU) with its Eurozone partners. Spain was to receive a €100bn credit line and conduct a serious stress test under the stern supervision of the ECB, the

European Commission and the IMF. The MOU required Spain to entirely reform its supervision and resolution toolbox; in addition it effectively terminated the cajas. The handling of the Spanish banking crisis had been transferred to a third, international, party. By then the lethal mix of politics and the cajas did not leave much room for any other alternative.

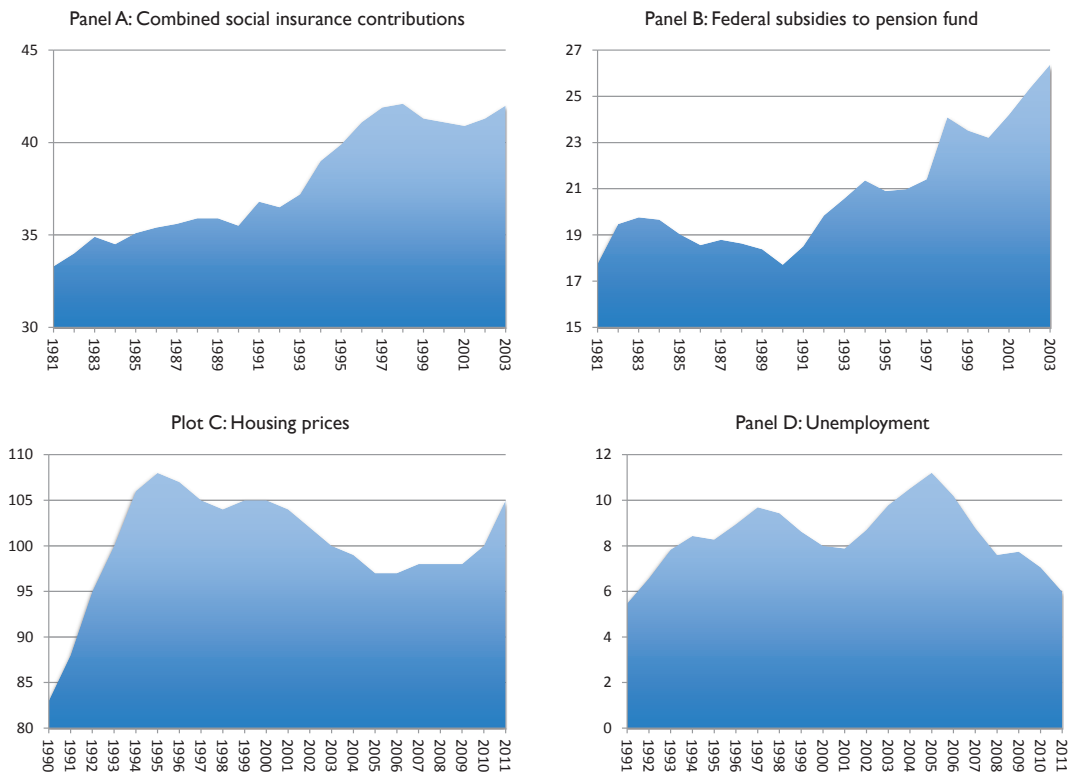
The problems of inference in the Spanish case were complicated further by the fact that the real estate appreciation had, originally, some sound foundations. Panel B of Figure 1 shows the proportion of the population between 15 and 64 years of age in four countries in the Eurozone. There was a significant increase in the working age population in both Spain and Ireland, precisely the countries that experienced the strongest cycles of real estate appreciation in the Eurozone. The baby boom happened in Spain, and in Ireland, about a decade and half later than in other core countries in the Eurozone. For instance, France and Germany had peaks on this metric in the mid 1980s whereas Ireland and Spain had them in the mid 2000s. Clearly this has two opposing effects: There is an increase in the demand for housing and in the availability of labor supply for the construction sector to produce the new houses needed. Importantly, Spaniards access housing through ownership rather than rentals; thus, so the rather loose argument goes, demographic shocks can induce an increase in real estate prices. Spain had indeed one of the highest ownership rates amongst large economies in the eve of the euro and it increased even more after the euro was launched. In addition, Spain had very high levels of youth unemployment during the crisis in the first half of the 1990s so the potential for household formation was certainly enormous. There were thus solid reasons to expect some of housing appreciation in Spain. This only made the governance problems developing in the cajas sector even more difficult to detect.

*C. Constraints at work: The case of Germany*¹⁸

¹⁸This section is taken, with minor variations, from the working paper version of Fernández-Villaverde, Garicano and Santos (2013).

Figure 5: Germany

Panel A: Combined social insurance contributions (unemployment, health care, and pension) as a percentage of gross wages. Annual: 1981-2003. Source: Streeck and Trampusch (2005), Table 1. Panel B: Federal subsidies to the pension insurance fund as a percentage of the total revenue of the the fund. Annual: 1981-2003. Source: Streeck and Trampusch (2005), Table 2. Panel C: Residential property prices; all dwellings; index 100 in 2010; Bundesbak calculations based on data provided by Bulwiengesa AG. Annual: 1990-2011. Source: BIS. Panel D: Unemployment rate. Annual: 1991-2011. Source: IMF



In the years after the introduction of the Euro, Germany undertook painful reforms of its welfare state. Why did Germany take on the reforms that many of the peripheral countries rejected? The answer is in Figure 1: Neither the Euro nor the global credit boom changed financial conditions in Germany. The Euro meant the convergence of the other countries' interest rates toward "German" levels, but Germany's rates were, obvi-

ously, already at German levels. Thus, for Germany, the euro implied tighter budgetary and fiscal constraints and not looser financial conditions that Portugal and Greece, for example experienced. Absent the leeway provided by the financial boom, politicians had no choice but to act.¹⁹

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 (Figure 5, Panel D.) In addition, the demographic factors that were so helpful in Ireland and Spain were not present in Germany (Figure 1, Panel B.) 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) and thus, while Spain and Ireland were enjoying real estate booms, Germany’s prices were actually declining (Figure 5, Panel C.)

This mediocre economic performance, the negative demographic trends, the eastward enlargement of the European Union, and the costs of the reunification shock put the German welfare state under severe strain.²⁰ The consequent higher social security taxes and non-wage labor costs endangered German competitiveness. As documented in Figure 5, panel A, the combined social insurance contributions increased considerably as a percentage of gross wages during the years preceding the introduction of the Euro.

¹⁹Deeg (2005) argues that the reform process has been more sustained and consistent than it is typically thought, dating back to the early 90s; he offers a sweeping account of the many reforms Germany has undertaken since reunification. In particular he notes that “the 1992-93 recession was in many ways the key catalyst of the growth of firms level pacts and deviations from collectively bargained agreements.” When the present crisis hit Spain hard in 2012 this was one of the first measures adopted by the new cabinet.

²⁰For a case study of the integration of East Germany in the German pension system see Hegelich (2004).

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. First, wage rigidities led to unemployment in times of economic crisis.²¹ According to Manow and Seils (2000), the independence of the Bundesbank and the political fragmentation associated with federalism prevented the expansionary demand policies needed to sustain employment. This left the German welfare state as the only mechanism of adjustment. Given the rigidities of the real wage bargaining system, the increases in labor taxation needed to fund social schemes (see Figure 5, Panel A) translated into higher labor costs and thus higher unemployment. Shortfalls in the social program funds (pensions, health care, and unemployment) could only be met through recourse to the general budget, but this conflicted with the constraints on fiscal policy already mentioned.

Reunification and the opening of Eastern Europe to German capital increased the pressure on an overstretched welfare state and the arrival of the Euro tightened the constraints further. But even with reunification, a unique catalyst for change, reforms were slow in coming.²² As mentioned, delays in the reform of the welfare state meant

²¹There were though some salient case of wage adjustment in the face of labor force competition from Eastern Europe. For instance, and as told by Eichengreen (2007, page 411) in the Summer of 2004 workers at two Siemens plants in Germany agreed to work five additional hours per week to without extra pay in order to prevent reallocation of the plants to Hungary. A similar pattern was to repeat with Spanish autoworkers when the crisis hit Spain. Perhaps the salience of the competitive forces plays an important role when it comes to downward nominal rigidities.

²²Hassel (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

that shortfalls in the different social security schemes were increasingly covered by federal subsidies. For instance, federal subsidies to the pension insurance fund were 18.5 percent of total fund revenues, but reached 26.4 percent in 2003 (see figure 5, panel B). 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 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 monetary union 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.²³ Unpopular reform was the only road left open.

In particular, Schröder launched the Agenda 2010, the core of which was the Hartz 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.”

²³For 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.” New York Times, June 30, 2001.

I-IV reforms that constitute the greatest overhaul of the German welfare state since World War II.²⁴ 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.²⁵ 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 “kicked the can” further down the road to avoid these reforms? As 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 Kluge, 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.

It is important to clarify that no claim is being made that Germany’s economic performance during the Great Recession is linked to the effectiveness of the Hartz reforms.²⁶ There is considerable evidence that this is not the case. For instance, Dustmann, Fitzen-

²⁴For a survey of the political economy of the Hartz reforms see Tompson (2009, Ch. 10). 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. For an assessment of these reforms in the context of Germany’s recent economic performance see Dustmann, Fitzenberger, Schonberg and Spitz-Oener (2014).

²⁵See Bruttel and Sol (2006) for the historical evidence on the adoption of “work first” approaches.

²⁶For the remarkable performance of the German labor market during the Great Recession see Burda and Hunt (2011).

berger, Schonberg and Spitz-Oener (2014) argue that the reforms implemented following the reunification, the enlargement of European institutions to eastern Europe and the recession of 1992 and 1993 were more central to Germany’s good performance during the Great Recession. In particular these authors as well as Deeg (2005, p. 340) argue that the additional flexibility in collective bargaining agreements (the “hardship and opening clauses”) which essentially allowed firms to deviate from them to pay lower wages, are central in understanding the greater flexibility of the German labor market: Whereas in 1993 about half million workers were employed by firms which concluded such clauses in 1999 that number was nine million, or one in five workers.²⁷ Perhaps unsurprisingly the Spanish labor market reform of 2012, as the Spanish crisis got going in earnest, started precisely with the weakening of the collective bargaining agreements that had been key in the labor markets until then. In addition the evaluation of the effectiveness of the Hartz reform is difficult as some of Germany’s trading partners, such as Spain, were undergoing a strong consumption and import boom as the reforms were being implemented (whether there is a casual link between both events is something that remains to be explored.)

III. LIQUIDITY AND ORIGINATION INCENTIVES IN THE PRIVATE SECTOR

A. Uninformed funds and origination incentives

The previous section emphasized the impact that large surges in liquidity may have on the political economy of reform. Liquidity surges also have implications for the private sector. Here the source of liquidity may be rather different. For instance

²⁷There has been a substantial increase in wage inequality in Germany over the last two decades. Card, Heining and Kline (2013) investigate the sources of this increasing cross sectional dispersion in German wages. In particular as one of the reasons for increasing inequality the fact that many new establishments drop out of the collective bargaining agreement and pay as a result lower wages.

Pozsar (2011) refers to institutional cash pools as the “short-term cash balances of global non-financial corporations and institutional investors such as asset managers, securities lenders and pension funds.” He notes the striking growth of these institutional cash pools since the early 90s. Taking as a proxy for these institutional cash pools the cash in the balance sheet of S&P500 corporations, the cash collateral of securities lenders and the cash holdings of long-term mutual funds, he estimates that the total size of these funds was \$2.2tr at the peak in 2007, whereas it was only \$100bn in 1990.

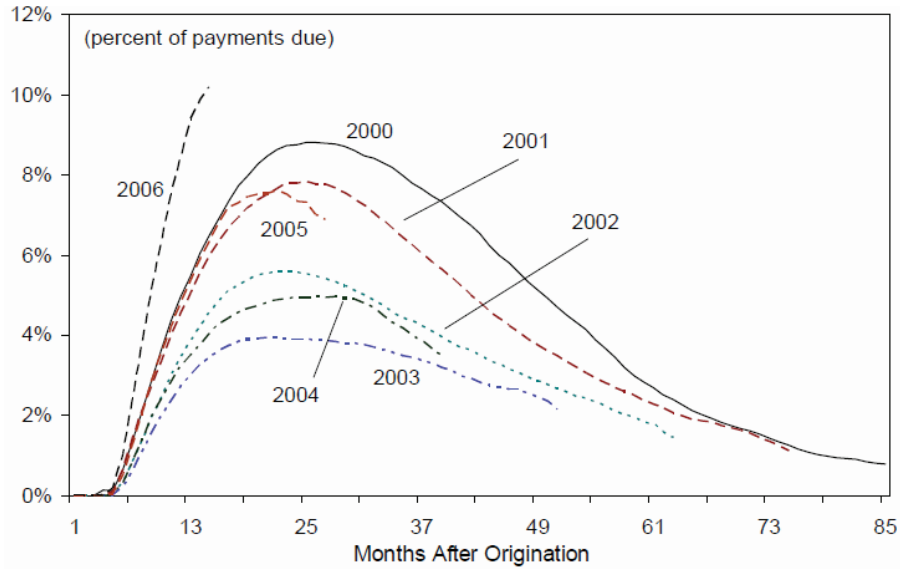
Interestingly, 90% of institutional cash pools are subject to written cash covenants stating explicitly that the objectives of asset managers should be first and foremost safety of principal. Clearly the banking sector cannot supply enough federally insured deposits to satisfy the demand for safety of these institutional cash pools. An alternative of course could have been short term government guaranteed securities, such as bills and agencies but in these markets institutional cash pools had to compete with increasing foreign holdings of these instruments. As a result at the 2007 peak Pozsar (2011) estimates that there was a \$1.6tr shortage of deposit like instruments for these institutional cash pools.

As it is by now well understood these institutional cash pools flowed into privately insured money market instruments, such as repos and ABCP, as well as unsecured private money market funds.

Bolton, Santos, and Scheinkman (2014) emphasize the “uninformed” nature of these institutional cash pools. The prime consideration was safety and thus the demand for short term debt-like contracts, where the logic of Dang, Gorton and Holmstrom (2012) apply. In their model an increase in the size of these institutional cash pools lowers the yields of the assets they hold. As a result some of the agents present in those markets before the increase in the size of the cash pools may find it profitable to invest in information acquisition, find better investment opportunities and increase the return on their investments. Because now there is more capital in the economy bundled with knowledge, incentives for good origination improve and this translates into a net social gain. This is the sense in which additional liquidity “from below,” that is uninformed

Figure 6: Subprime mortgage origination standards

Subprime ARMs 60-day delinquencies by mortgage vintage year Source: IMF



liquidity, induces competition among managers to find good investment opportunities which may result in a more information intensive allocation of capital.²⁸

But consider now the case where this uninformed liquidity keeps coming, flooding markets and compressing yields across many different markets. In this case origination incentives may in fact deteriorate because what is the point of generating good assets when the market pays the same for a good and a bad asset.

Bolton Santos and Scheinkman (2014) thus argue that the the growth of institu-

²⁸Chemla and Hennessy (2013) develop a model where moral hazard at origination is solved through skin in the game but that the optimal amount of equity retention depends on the informativeness of the price.

tional cash pools may have had a non linear effect on the incentives to generate good mortgages during the real estate cycle in the United States. Figure 6 shows some evidence of this effect regarding subprime mortgage loans in the United States. The plot is taken from the August 2007 IMF Country Report and shows the fraction of subprime mortgages that were at least 60 days delinquent by vintage. As can be seen origination standards improved considerably between 2000 and 2003, but deteriorated markedly after that. This occurred even when prices kept rising through this period. Keys, Piskorski, Seru and Vig (2013, Figure 4.4) further add to this evidence by showing that the percentage of incomplete documentation loans, a measure of poor origination standard, was flat between 1998 and 2002 but that in 2003 started increasing dramatically almost doubling with respect to the levels observed at the turn of the century. Moreover these authors document that though loan-to-value (LTV) ratios of mortgage loans remained relatively stable between 2002 and 2006, the combined loan-to-value ratio (CLTV), which measures the debt from both the first and second liens, showed a dramatic increase during this period, again signalling a deterioration of origination standards.

B. Leverage and the joint distribution of funds and knowledge

In addition these institutional cash pools, as already mentioned, found their way to repo markets, providing a significant source of leverage to the broker dealers. This is important for two reasons. First, the fact that there is a significant increase in the flow of uninformed funds does not mean that all the funds are invested by uninformed managers. A significant fraction of these uninformed funds, as it was indeed the case, found their way to agents, such as broker dealers, that are in principle better informed about risks in the market. The manager of one of these institutional cash pools must be indifferent between investing the marginal dollar in an ABCP vehicle or in a repo transaction through some MMMF. In this sense the distribution of knowledge and capital is endogenous and it is this distribution what ultimately determines incentives to originate

good assets.

The second reason is that the flow of these uninformed funds increases the leverage of presumably informed investors, potentially increasing the fragility of the system. The reason is that as already discussed origination incentives eventually deteriorate but, as shown in Bolton, Santos and Scheinkman (2014), the leverage ratio is a monotonically increasing function of the level of uninformed funds. Origination quality and leverage correlate negatively when the pool of uninformed funds gets sufficiently large.

C. Fluctuations in the market price of risk: A different interpretation

So far I have emphasized quantities: An exogenous surge in uninformed funds flows into sovereign debt markets or securities issued by the private sector and this induces particular political economy problems or alter incentives for good origination through changes in yields. There is an alternative story. There is abundant evidence from the asset pricing literature showing significant variation in discount rates. In particular discount rates seem to be countercyclical: High in the trough of the business cycle and low at the peak.

It may be then that all is occurring is that the premium that uninformed investors require to invest in a certain class of securities fluctuates whereas the discount rates of marginal investors in more informationally intensive markets are more stable, founded as they are in better knowledge. As a result, spreads across all these markets fluctuate and with these fluctuations incentives for good origination vary as well.

IV. CONCLUSIONS

Credit booms affect incentives differently depending on whether it is the public or the private sector the recipient of the credit. If it is the public sector it is natural to focus on the political economy consequences of the credit boom whereas if it is the private sector it is natural to focus on the incentives for good origination. This piece builds on

Fernández-Villaverde, Garicano and Santos (2013) and Bolton, Santos and Scheinkman (2014) to argue for particular channels through which credit booms affect incentives in either sector.

In the private sector credit booms affect incentives for good origination through changes in the joint distribution of knowledge and capital. Bolton, Santos and Scheinkman (2014) argue that changes in this distribution can have non linear effects on incentives for good origination and in addition lead to leverage and fragility in a particular segment of the financial services sector (the informationally intensive sector of the financial services industry.)

In the public sector the relevant incentives effects are those of politicians and interest groups. A possible framework to understand the way in which credit booms interact with, for instance, the political economy of reform or fiscal stabilization is the attrition game of Alesina and Drazen (1991). These authors though do not investigate the relation between attrition games and credit booms. Intuitively, credit booms can potentially have two opposing effects on political economy games. On the one hand they can relax constraints and postpone resolution of the attrition game; on the other they can facilitate the issuance of debt to share with future generations the transitional costs associated with reform. Fernández-Villaverde and Santos (2014) model this trade-off explicitly to shed light on what determines whether, for instance, a credit boom is “taken advantage of” to fund structural reforms or simply leads to policy non-adoption. I have argued that, at least in the case of the first global liquidity phase some countries in the Eurozone periphery avoided necessary reforms and simply levered to delay the inevitable.

In addition there is a “political economy multiplier.” Politicians and managers can take actions behind the veil of the credit boom to entrench themselves and weaken governance institutions. Politicians and managers thus can take complementary actions that reinforce the dark side of credit booms. For instance in the case of Spain local politicians reinforced the credit bubble through changes in the governance in the “cajas”

sector, the private but politically control savings and loans of Spain. This had disastrous consequences when the crisis hit and made for an impossible domestic resolution of the Spanish banking crisis.

If this is the case credit booms can have long lasting effects beyond the asset price correction and misallocation of capital that accompanies them. They transform institutions and the long run growth rates of the affected economies, potentially for the worse. Perhaps some of the political developments in the European periphery are thus not entirely detached from the incredible credit cycle during the first years of the euro. The usual policy of “cleaning up after the party is over” may have then long run costs that should be internalized by policy makers, costs that are directly linked to this political economy multiplier.

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