

# Sovereign creditworthiness and financial stability: an international perspective

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*Financial stability depends critically on the two-way interaction between banks and governments. Sovereign creditworthiness represents the ultimate source of insurance for the financial system and provides a solid basis for the pricing of assets, by supplying a risk-free security. A sound banking sector ensures the smooth flow of credit to the economy as well as solid revenue and financing for the government. Weakness in either sector can give rise to a vicious circle of uncertainty and distress with highly damaging consequences for the economy. An interconnected global economy means that problems can propagate across borders. The policy recommendation is simple: appropriate buffers should be built in good times to cushion the impact of bad times. Fiscal buffers support the risk-free status of sovereign debt, while capital and liquidity buffers underpin the soundness of the financial system.*

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The global economic crisis originated in the financial systems of some advanced economies, but it quickly spread to engulf much of the global economy. Governments have found themselves at the centre of the storm from the beginning. First, they led the efforts to deal with the crisis. Later, many of them took financial hits as a result of it. Most recently, some have become the focal point of a crisis of confidence in their ability to service their debts.

The number of sovereigns that have experienced considerable fiscal difficulties lately is much larger than the number of financial systems that went through significant problems at the start of the crisis. Moreover, concerns about sovereign solvency have seriously affected the health of banking systems, within and across borders. The feedback loop cycles with destructive force.

Why did this happen? Why are governments now battling against bond markets and banks struggling with liquidity and solvency concerns? After all, the ability of the government to build a bridge over troubled waters has always been the ultimate source of the stability of the financial system. Importantly, what are the lessons for policy looking ahead?

The confluence of three *key initial conditions* largely explains the severity and spread of the crisis.

- First, the banking systems of most major developed economies entered the crisis with inadequate capital. Buoyed by exceedingly abundant liquidity in the run-up to the turmoil, financial institutions, large and small, took on greater and greater risks. Neither their internal risk management practices nor external oversight, whether by market participants or public authorities, was able to contain this process. As a result, they went into the crisis poorly capitalised, highly leveraged, and with huge maturity and currency balance sheet mismatches (McGuire and von Peter, 2009). This made them quite vulnerable to the original shocks and exacerbated the perverse feedback effects between banks and sovereigns.

- Second, major sovereigns had not accumulated adequate fiscal buffers during the boom prior to the crisis. Private credit booms had given rise to temporary, unsustainable increases in revenues, over and above the typical cyclical boost driven by the strong economic growth in the 2002–07 period.

This lulled many governments into a false sense of security and encouraged them to live beyond their means. As a result, they were unprepared to deal with the consequences of the serious shocks that hit the international financial system in 2007–08 and the subsequent slowdown in economic activity. To be sure, they were able to quickly provide the fiscal resources that were urgently needed for the immediate recapitalisation of their banking systems, for the working of automatic stabilisers and for discretionary fiscal stimulus. But the small reserves meant that the response proved unsustainable, not least given the longer-term unfunded commitments governments faced. All this jeopardised their risk-free status in the later stages of the crisis.

- Third, the unprecedented degree of interconnectedness in the global financial system complicated matters further. The dense international web of connections among sovereigns and financial institutions around the world intensified and propagated the crisis. The benefits and desirability of global financial integration are indisputable. But greater financial integration inevitably carries greater responsibility. On the fiscal front, it strengthens the need for resilient state finances. On the financial system front, it makes a well capitalised and reasonably liquid banking system vital.

We would also argue that, to a considerable extent, the lack of adequate buffers reflects policymakers' failure to internalise the impact of their decisions on the global financial system. And many of them did not realise that their actions, or lack thereof, would trigger a chain of events that would in turn feed back onto their own economies and financial systems.

We next develop this argument in five steps. In the first section, we review the two-way interaction between government finances and banks. In the second, we trace the evolution of that nexus during the expansionary phase that preceded the crisis, outlining how the above initial conditions came to be. In the third, we investigate how they interacted so as to amplify the unfolding crisis. In the fourth, we use the latest data on bank exposures to sovereigns in order to gauge the degree to which weaknesses in bank balance sheets threaten to extend the life of the malign feedback loop between bank and sovereign risk. In the last section, we present our policy prescriptions.

## 1| THE TWO-WAY INTERACTION BETWEEN GOVERNMENT FINANCES AND BANKS

How did a crisis that originated in the financial sectors of a small number of economies morph into a sovereign debt crisis which has affected a much larger set of governments? In turn, how did financial institutions that survived the first stages of the crisis relatively unscathed become infected once the crisis engulfed sovereigns? The answers to both of these questions are related to the interaction between the three initial conditions discussed above. In this section, we review the main channels in the feedback loop between bank risk (the first initial condition) and sovereign risk (the second initial condition) in the context of a highly interconnected global financial system (the third initial condition).

### 1|1 Transmission of financial sector risk to sovereigns

A remarkable feature of Europe's sovereign debt strains is the role played by governments that had spent years apparently on the right side of the Maastricht criteria, keeping a seemingly prudent lid on both deficits and debt. Nevertheless, in several of those countries, weaknesses in financial sector balance sheets infected the sovereign. These weaknesses can be transmitted from banks to sovereigns through three main channels.

- First, credit booms, while masking weaknesses in financial sector balance sheets, can give a one-off boost to governments' fiscal balances over and above that linked to normal cyclical economic expansions. This makes the government's fiscal position appear much stronger than it actually is. In turn, this may unjustifiably give governments the confidence to pursue policies that result in increases in spending that are unsustainable in the long run. As the recent experience of Spain illustrates, such policies may be difficult to reverse once the credit boom and associated revenues come to an end, leaving scant room to manoeuvre.
- Second, any constraints on lending caused by a deterioration in the balance sheets of banks and other financial institutions result in macroeconomic costs that weaken fiscal accounts further. If financial

institutions fail to build up sufficient capital and liquidity buffers during the boom, credit constraints tighten over and above any perceived deterioration in borrower quality. This can choke off the credit supply and, unless balance sheets are repaired quickly, lead to serious distortions in its allocation. This further dampens economic activity, which, in turn, causes tax revenues to decline and government expenditures to increase. As a result, the public sector deficit widens and the creditworthiness of the sovereign deteriorates. If sovereigns do not respond in a timely manner to the fiscal deterioration caused by a turn in the credit cycle, they may compound the errors arising from complacency during the credit build-up phase.

- Finally, when large systemically important financial institutions face the threat of bankruptcy in the absence of effective resolution regimes, sovereigns may have little alternative but to provide them with financial support in order to preserve financial stability. Regardless of whether the government support takes the form of liquidity assistance, direct injections of capital, asset purchase programmes or debt guarantees, it is bound to increase the explicit or implicit obligations of the sovereign, and thus weaken its balance sheet. This channel has been most prominent in the case of Ireland during the 2008–11 period.

### 1|2 Transmission of sovereign risk to the financial sector

In a number of euro area countries, most notably Greece and Italy, weaknesses in sovereign balance sheets have infected banking systems. In general, a deterioration in the perceived creditworthiness of sovereigns can affect the financial sector through five main channels.

- The first channel involves direct portfolio exposures. The higher bond yields (lower bond prices) associated with higher sovereign risk can hurt financial institutions through their holdings of domestic and foreign sovereign debt. In most economies, banks tend to have a strong home bias in their government bond portfolios. Not surprisingly, holdings of domestic government bonds as a percentage of bank capital tend to be larger in countries with high public debt. To be sure, accounting practices typically shield banks from the immediate impact of declines in the market prices of sovereign

bonds. For example, across EU countries, most of the domestic sovereign exposure (85% on average) is held in the banking book (CGFS, 2011). But accounting is one thing, and market participants' assessments are another.

Financial institutions are vulnerable not only through their exposure to the domestic public sector, but also through that to foreign public sectors (recall the third initial condition). As we demonstrate below, many internationally active banks' foreign exposures to the public sectors of the countries currently at the centre of the European sovereign debt crisis (i.e. Greece, Ireland, Italy, Portugal and Spain) were quite sizeable at their peak in 2009.

- The second channel works through funding conditions. Sovereign securities are used extensively by banks as collateral to secure wholesale funding from central banks, private repo markets and covered bond markets. Increases in sovereign risk reduce the availability or eligibility of collateral, and hence banks' funding capacity. There is evidence that in 2010 30% of the spread at launch on bank bonds reflected the conditions of the sovereign, and this figure was as high as 50% for countries for which sovereign strains were most pronounced (CGFS, 2011).

- The third channel is more subtle and relates to the perceived ability of the sovereign to provide a backstop to banks under strain. A government that is perceived by market participants to be in a weaker fiscal position provides less credible and valuable guarantees or financial support to banks in its jurisdiction. This increases the credit risk of these financial institutions. Despite efforts to reduce the safety net through the implementation of orderly resolution mechanisms, as of the second quarter of 2011, rating agencies still reckoned that the prospect of government support justified higher ratings by two to five notches (Hannoun, 2011).<sup>1</sup> Nevertheless, over the second half of 2011 deterioration in the creditworthiness of sovereigns in Greece, Italy, Portugal and Spain led to a decline in the perceived official support for banks in those jurisdictions and, consequently, to a fall in their all-in ratings (Tarashev, 2011).

- The fourth channel relates to the possibility of government debt crowding out private sector debt. Banks have to compete with the sovereign when raising funds from investors. Sovereign distress increases the cost and/or reduces the availability of bank funding through debt. Even though this effect is not limited to banks, it affects them more strongly, given their sizeable funding needs. If the sovereign loses its riskless status, the likelihood of crowding out increases, as the two forms of debt become closer substitutes in investors' portfolios.

- Finally, a loss of market confidence in sovereign debt may trigger fiscal consolidation. This is unambiguously beneficial in the long term. In the short term, however, the net effect is not as easy to predict. On the one hand, fiscal consolidation may weaken aggregate demand and economic activity, weighing further on credit quality and bank profitability. On the other hand, if confidence has deteriorated far enough, fiscal consolidation may actually buoy economic activity.

## 2 | DEVELOPMENTS IN THE PRE-CRISIS PERIOD (2002-07)

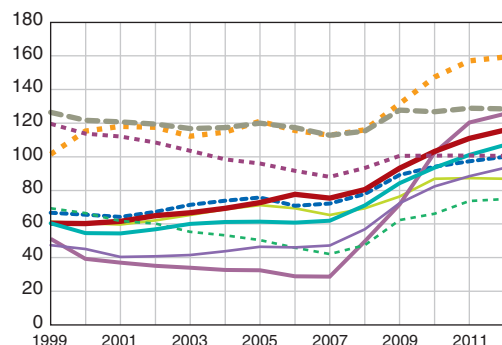
Just as in the run-up to other financial crises, in the 2002–07 period there were no signs that market participants saw the build-up in risks. The debt-to-GDP ratios of most governments in the developed world were within what are typically considered sustainable ranges (Chart 1a). Sovereign bond markets (Chart 1b) and credit rating agencies (Chart 1c) generously rewarded governments' behaviour. Banks, especially large and internationally active ones, would report higher profits year in and year out. Equity investors cheered enthusiastically, and, despite banks' ever increasing leverage, credit rating agencies and financial market participants regarded them as safe (Chart 2). Vulnerabilities kept growing below the radar. Governments cheered alongside market participants. Complacency was the order of the day.

<sup>1</sup> Furthermore, over the past couple of years governments have started providing significant implicit support to non-systemically relevant medium-sized and smaller banks. As of the end of July 2011, the implicit support for these banks in four large EU economies was of similar magnitude to the implicit support provided to large banks (CGFS, 2011).

**Chart 1**  
Sovereign credit risk indicators

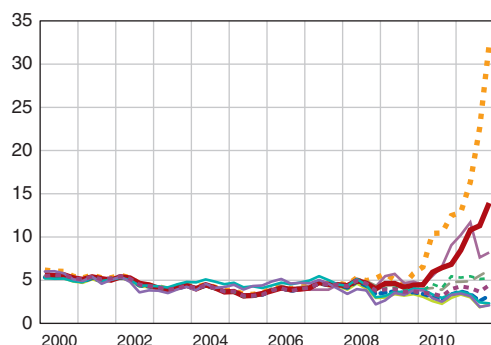
a) General government gross financial liabilities<sup>a)</sup>

(as a percentage of nominal GDP; annual data)



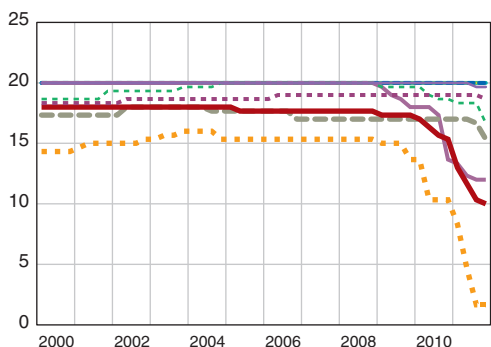
b) Ten-year government bond yields

(in %; quarterly data)



c) Sovereign credit ratings<sup>b)</sup>

(quarterly data)



--- Belgium	--- Italy
--- France	--- Portugal
--- Germany	--- Spain
--- Greece	--- United Kingdom
--- Ireland	--- United States

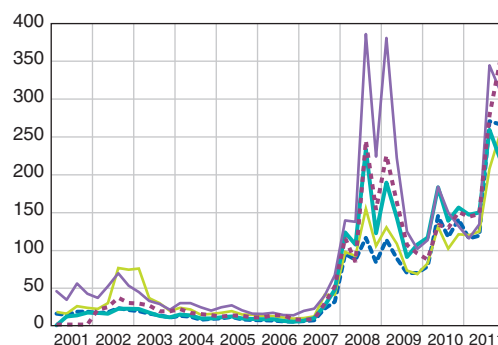
a) Belgium includes the debt of the Belgian National Railways Company (SNCB) from 2005 onwards.

b) Average of Fitch, Moody's and Standard & Poor's foreign currency long-term sovereign ratings. Vertical scale is calibrated so that 20 represents the highest possible rating category and each unit represents one notch.

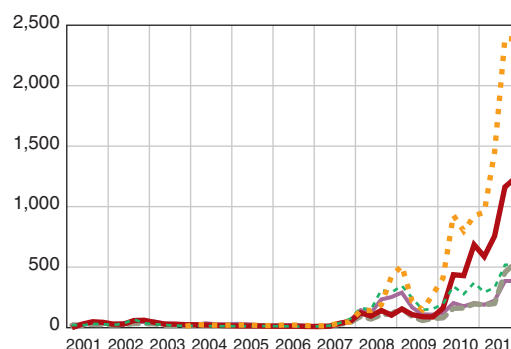
Sources: OECD, Economic Outlook; Bloomberg; BIS calculations.

**Chart 2**  
Bank CDS spreads for selected banks nationalities<sup>a)</sup>

(in basis points; quarterly data)



--- Belgium	--- France	--- Germany
--- United Kingdom	--- United States	



--- Greece	--- Ireland	--- Italy
--- Portugal	--- Spain	

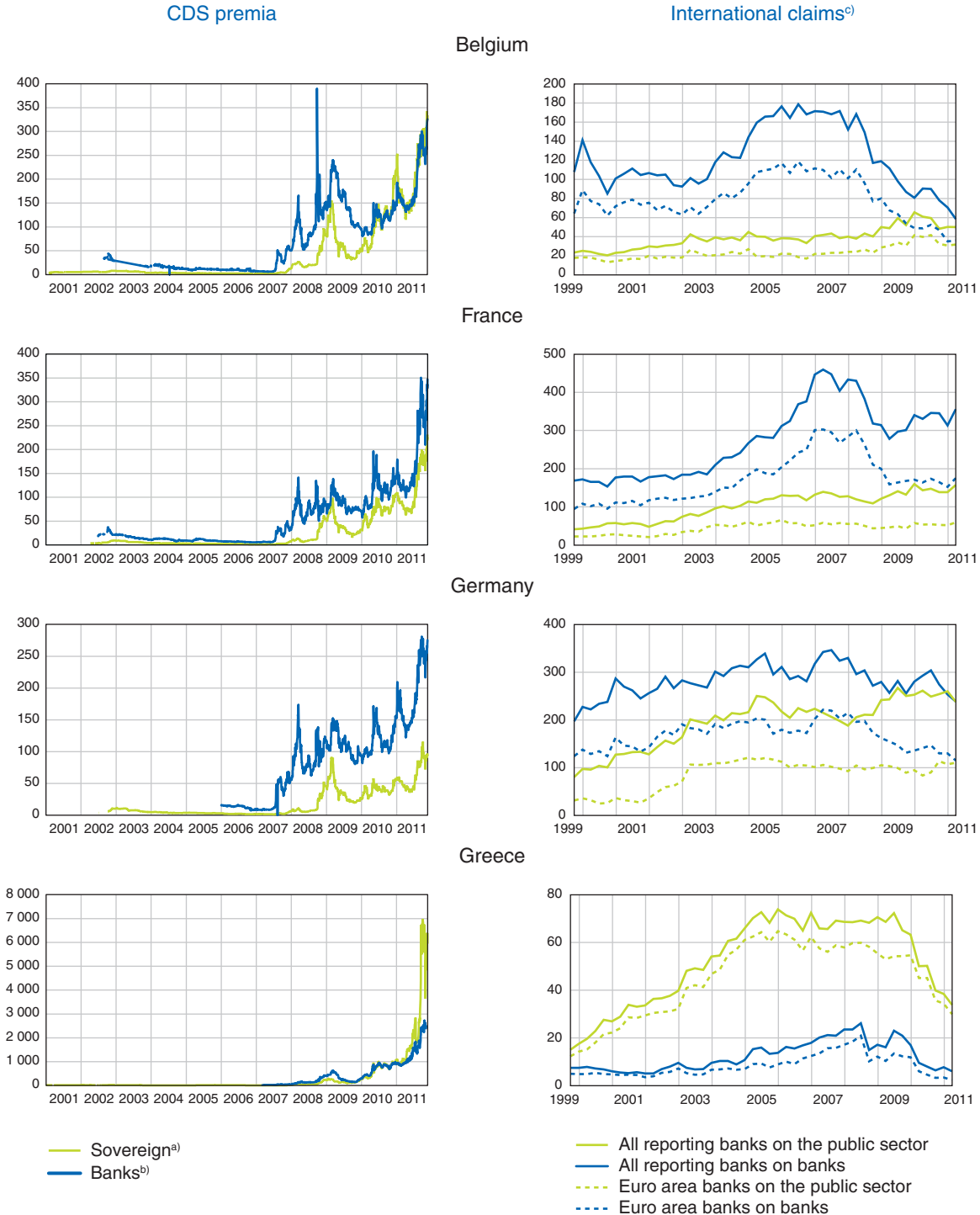
a) Equally weighted average of senior five-year CDS spreads for a sample of domestic financial institutions.

Source: Markit.

Global financial integration played a crucial role in facilitating this leveraging process. On the demand side, in some countries (e.g. Greece and Italy), the main borrowers from abroad were governments that needed to finance their excessive spending. In others (e.g. Spain and Ireland), banks drew on international credit and in turn financed private credit booms in their home economies.

On the supply side, internationally active banks (particularly those headquartered in the euro area) readily accommodated the credit demands of borrowers regardless of their geographical location. Not surprisingly, euro area banks turned into the main suppliers of credit to the euro area sectors whose indebtedness increased the most during the last decade (Chart 3, right panels). More specifically, euro area banks were the main foreign bank lenders

**Chart 3**  
**CDS spreads and international claims on selected countries**



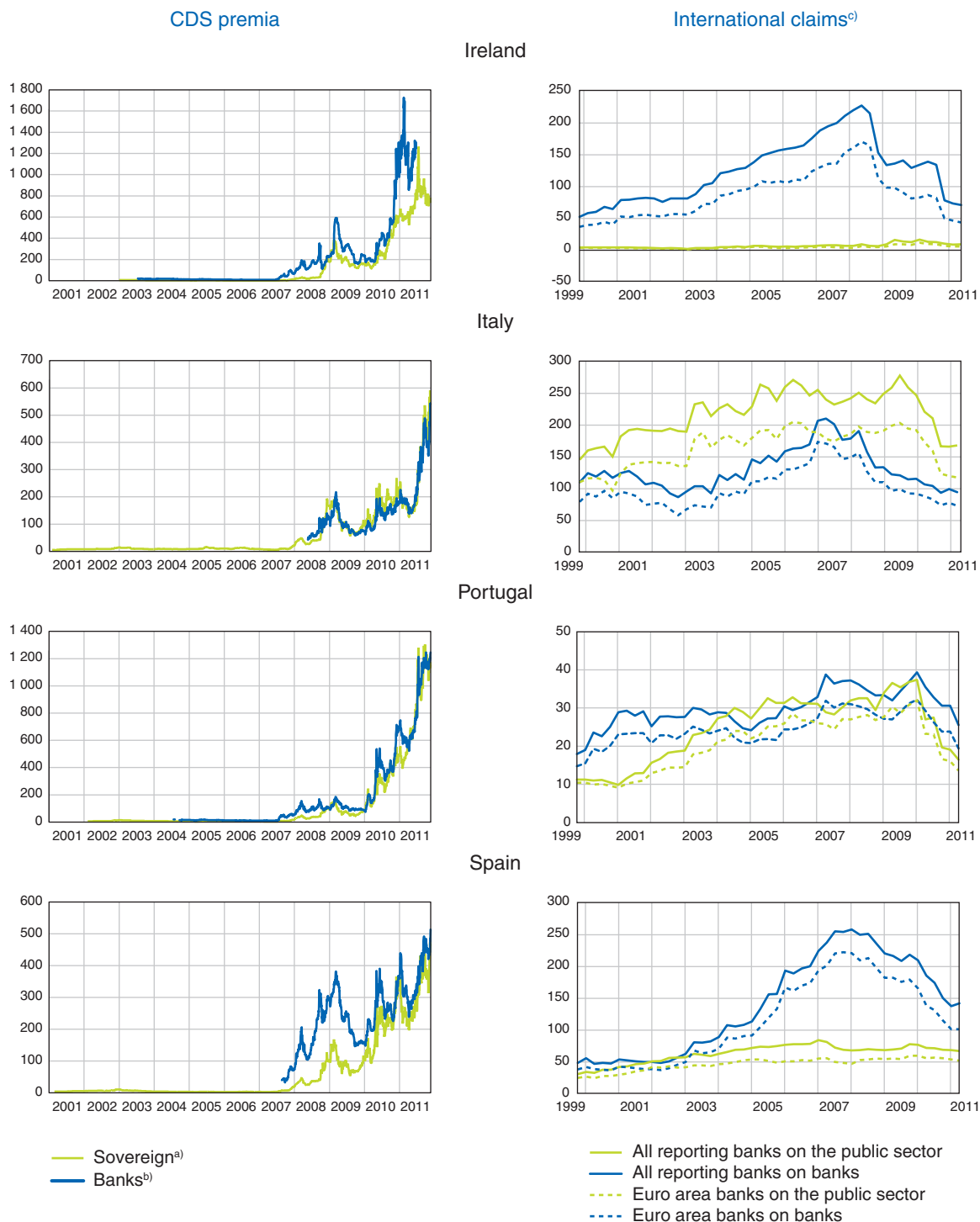
a) Five-year on-the-run CDS spreads; in basis points.

b) Equally weighted average of senior five-year CDS spreads for a sample of domestic financial institutions; in basis points.

c) By counterparty sector, in billions of euros. All claims are assumed to be denominated in euros. International claims consist of cross-border claims and local claims denominated in foreign currencies. Local claims denominated in local currencies are not included.

Sources: Markit; BIS consolidated banking statistics (immediate borrower basis); BIS calculations.

**Chart 3**  
**CDS spreads and international claims on selected countries (cont'd)**



a) Five-year on-the-run CDS spreads; in basis points.

b) Equally weighted average of senior five-year CDS spreads for a sample of domestic financial institutions; in basis points.

c) By counterparty sector, in billions of euros. All claims are assumed to be denominated in euros. International claims consist of cross-border claims and local claims denominated in foreign currencies. Local claims denominated in local currencies are not included.

Sources: Markit; BIS consolidated banking statistics (immediate borrower basis); BIS calculations.

to the Greek and Italian public sectors and to the Spanish and Irish banking sectors. Furthermore, euro area banks proved more eager than their peers to finance riskier foreign sovereigns (Chart 4). They had significantly larger shares of foreign claims on the public sectors of the riskier euro area sovereigns (Italy, Spain and Greece) than banks from the rest of the world, who lent primarily to the more solid euro area sovereigns (Germany and France).

Banks were equally complacent about rollover risk in the interbank market. Many became too dependent on cheap, but unreliable, short-term funding and failed to build adequate liquidity buffers. Not surprisingly, under stress, unsecured funding dried up and banks turned increasingly to collateralised borrowing, both short-term (e.g. the repo market) and long-term (e.g. covered bonds). The ECB Euro Money Market Surveys reported a halving in overall volumes in unsecured transactions between early 2007 and early 2010, with longer maturities more than proportionally reduced. Secured transactions rose from less than two thirds of all cash transactions to more than three quarters (CGFS, 2011).

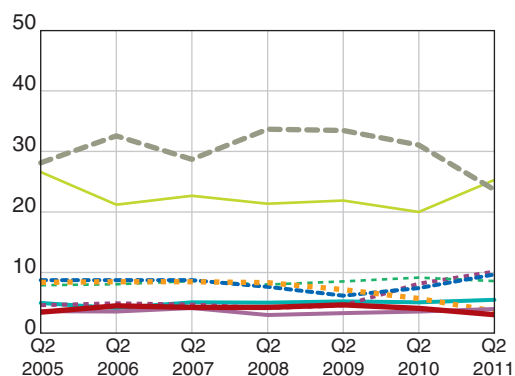
As hubris became pervasive, underneath the surface trouble loomed. First, in some economies private credit-to-GDP ratios and property prices had soared far above their long-term trends. This should have been a crucial warning signal for financial institutions around the world since, as Drehmann *et al* (2011) have shown, the former of these two variables is the most reliable single indicator of the build-up of systemic risk in a given economy and a helpful predictor of impending systemic banking crises (Caruana, 2010). However, financial institutions, unperturbed by such signs of impending danger, kept increasing their leverage. Thus, the first initial condition for the spread of the crisis was in place.

Second, two temporary factors flattered the fiscal balances of most sovereigns in the developed world. For one, the expansionary phase of the business cycle boosted the public sector's accounts (Chart 5). The average overall fiscal balance for the 2005–07 period exceeded its cyclically adjusted counterpart in all but seven OECD economies. In some countries (e.g. Estonia, Sweden, Iceland, Ireland and Hungary) the difference surpassed a full percentage point. In addition, and not accounted for in traditional cyclically

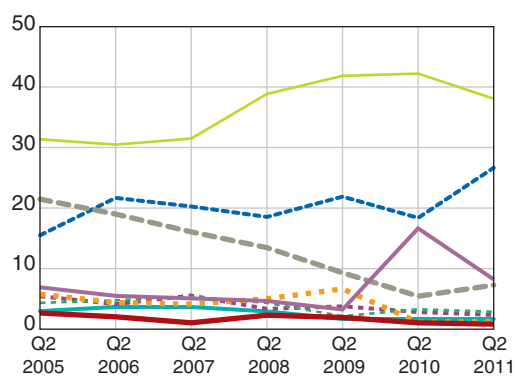
**Chart 4**  
BIS reporting banks' foreign claims on selected euro area public sectors

(as percentage of their foreign claims on all euro area public sectors, by nationality of banks; quarterly data)

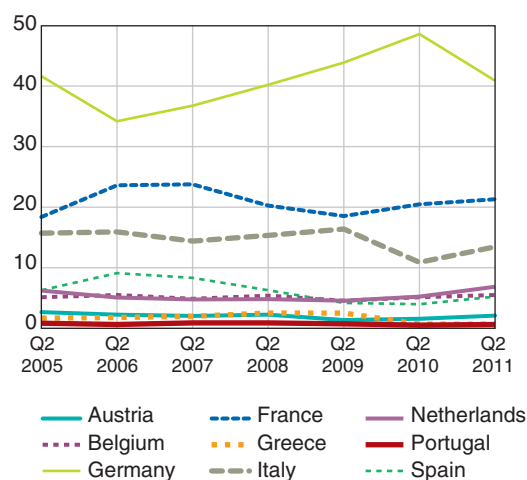
a) Euro area banks



b) European non-euro area banks



c) Non-European banks

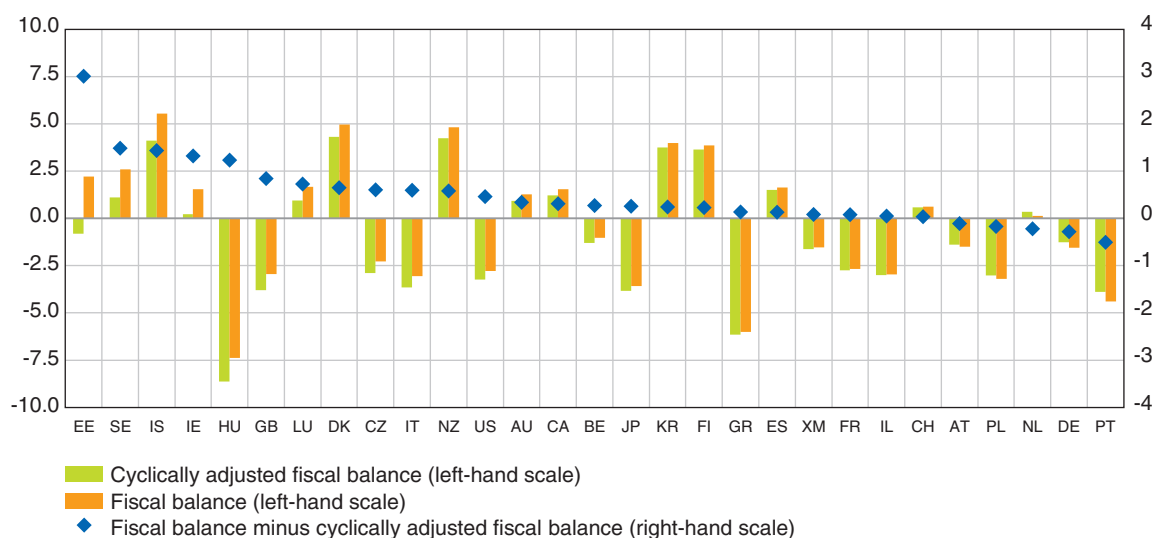


Source: BIS consolidated banking statistics (ultimate risk basis)



**Chart 5**  
**General government fiscal balance, selected countries**

(Average for 2005–07; as a percentage of GDP)



AT = Austria; AU = Australia; BE = Belgium; CA = Canada; CH = Switzerland; CZ = Czech Republic; DE = Germany; DK = Denmark; EE = Estonia; ES = Spain; FI = Finland; FR = France; GB = United Kingdom; GR = Greece; HU = Hungary; IE = Ireland; IL = Israel; IS = Iceland; IT = Italy; JP = Japan; KR = Korea; LU = Luxembourg; NL = Netherlands; NZ = New Zealand; PL = Poland; PT = Portugal; SE = Sweden; US = United States; XM = euro area.  
Sources: OECD, Economic Outlook; BIS calculations.

adjusted figures, the credit- and asset price-intensive boom made matters worse. All this encouraged the authorities to spend more freely. Thus, the second initial condition for the crisis was in place.

As Governor Honohan of the Central Bank of Ireland so aptly put it (2010):

*“The tax revenue generated by the boom came in many forms: capital gains on property, stamp duty on property transactions, value added tax on construction materials and income tax from the extra workers – immigrants from the rest of Europe, from Africa, from China, flooded in as the construction sector alone swelled up to account for about 13 per cent of the numbers at work (about twice the current level, which is closer to what would be normal).”*

With the benefit of hindsight, it is clear that both financial stability and fiscal authorities could have been more aware of the build-up of risks – and they would have been, if the experience of previous crises had been heeded. This would have prevented them from adopting policies that were both unsafe and unsustainable. Furthermore, it would have allowed them to detect and react to the first signs of impending trouble much more promptly than they actually did. More concretely, financial stability authorities could have been more alert to the risk that

the capital banks had set aside to address sovereign exposures would be insufficient (i.e. that the first of the initial conditions for the spread of a crisis was in place). For their part, fiscal authorities could have taken appropriate actions as soon as the early signs of problems in the financial system began to emerge. This would have put them in a much better position to deal with a major financial crisis (i.e. it would have ensured that the second of the initial conditions for the spread of a crisis was not in place).

### 3 | BANKS AND SOVEREIGNS DURING THE CRISIS (2007-PRESENT)

The first signs of stress in the financial system surfaced in the summer of 2007. In the immediate aftermath, there was little evidence that market participants were aware of the potential for the development of the malign feedback loop between bank and sovereign risk described in Section 1. Data on bond yields (Chart 1b) and CDS spreads (Chart 2 and left panels of Chart 3) for banks and sovereigns between July 2007 and August 2008 confirm this: investors worried mainly about the health of certain financial institutions and little about sovereign creditworthiness.

Indeed, even though sovereign CDS spreads for most developed countries did inch up slightly during the initial phase of the crisis, the increases in the CDS spreads of banks in the same countries were orders of magnitude greater (Chart 6a). For example, while the average bank CDS in Ireland increased by more than 350 basis points between June 2007 and September 2008, the corresponding sovereign CDS rose by less than 30 basis points during the same period. The picture was similar in most other developed economies, with especially large discrepancies in the cases of the United States, Spain and Australia.<sup>2</sup>

The situation changed drastically in September and October 2008, when a large number of sovereigns in the developed world provided support to their financial institutions in the form of asset purchase programmes, debt guarantees and direct equity injections. The financial support programmes were often sizeable, with upfront costs reaching up to 55% of GDP (Borio *et al.*, 2010). Had sovereigns built adequate fiscal buffers during the expansionary phase of the economic cycle, the financial assistance would have reduced the tensions in the financial system without significantly affecting their creditworthiness. But this was not the case (Chart 6b). As a result, while the CDS spreads of financial institutions declined, those of the respective sovereigns rose considerably (Ejsing and Lemke, 2009).

That said, the same period saw the first signs that market participants were beginning to factor in the effects of the indirect channels in the feedback loop described in Section 1. In particular, in September and October 2008 not all the changes in sovereign and bank CDS spreads were negatively correlated. Some countries, such as Greece and Italy, experienced relatively large increases in their sovereign CDS spreads without any noticeable declines in those of their banks.

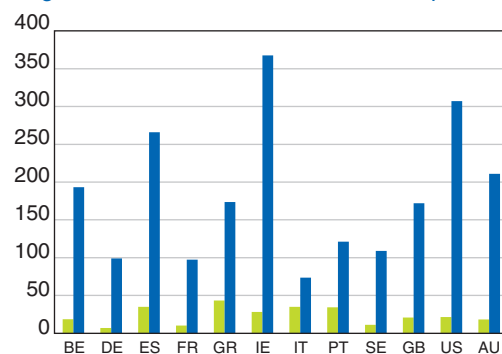
Despite these early signs, not all investors were differentiating among sovereigns based on the health of their balance sheets. In the first year after the Lehman Brothers bankruptcy, some banking systems, most notably those in the euro area, started rebalancing their foreign portfolios towards the public sector indiscriminately. In particular, and in contrast to banking systems in the rest of the world, they substantially increased the foreign portfolio's share of claims on both relatively safe sovereigns, such as the United States, and relatively risky ones, from countries that would subsequently be at the epicentre of the

<sup>2</sup> For further discussion, see Acharya *et al.* (2011).

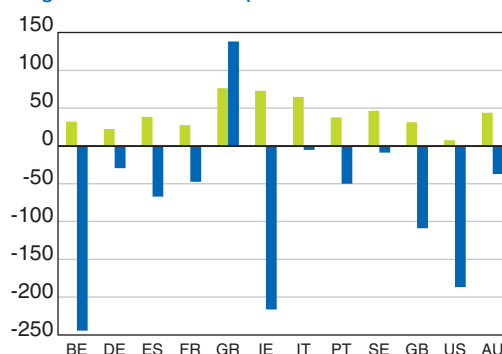
**Chart 6**  
Sovereign and bank CDS spreads for selected nationalities

(in basis points)

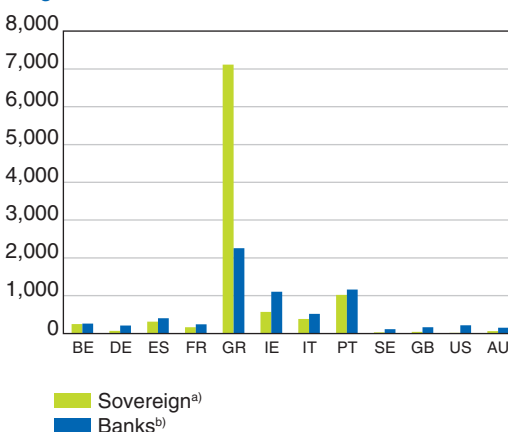
a) Changes between 1 June 2007 and 25 Sep. 2008



b) Changes between 26 Sep. and 31 Oct. 2008



c) Changes between 1 Oct. 2009 and 30 Nov. 2011



AU = Australia; BE = Belgium; DE = Germany; ES = Spain; FR = France; GR = Greece; IE = Ireland; IT = Italy; PT = Portugal; SE = Sweden; GB = United Kingdom; US = United States.

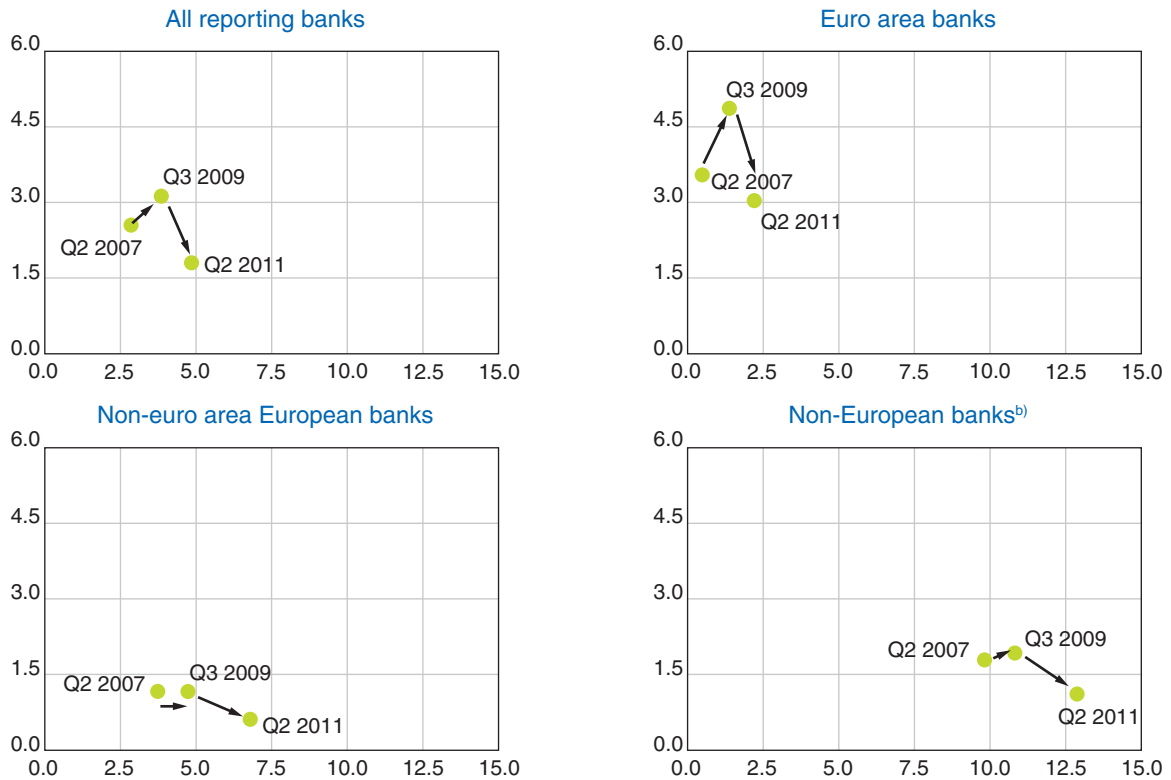
a) Five-year on-the-run CDS spreads.

b) Equally weighted average of senior five-year CDS spreads for a sample of domestic financial institutions.

Source: Markit.

**Chart 7**  
**Consolidated foreign claims on the public sectors of the GIIPS<sup>a)</sup> countries and the United States**

(by bank nationality, as a percentage of banks' total foreign claims; x-axis: US public sector; y-axis: GIIPS public sectors)



a) GIIPS = Greece, Ireland, Italy, Portugal, Spain.

b) Excluding US banks.

Source: BIS consolidated banking statistics (ultimate risk basis).

European sovereign debt crisis: Greece, Ireland, Italy, Portugal and Spain (Chart 7).

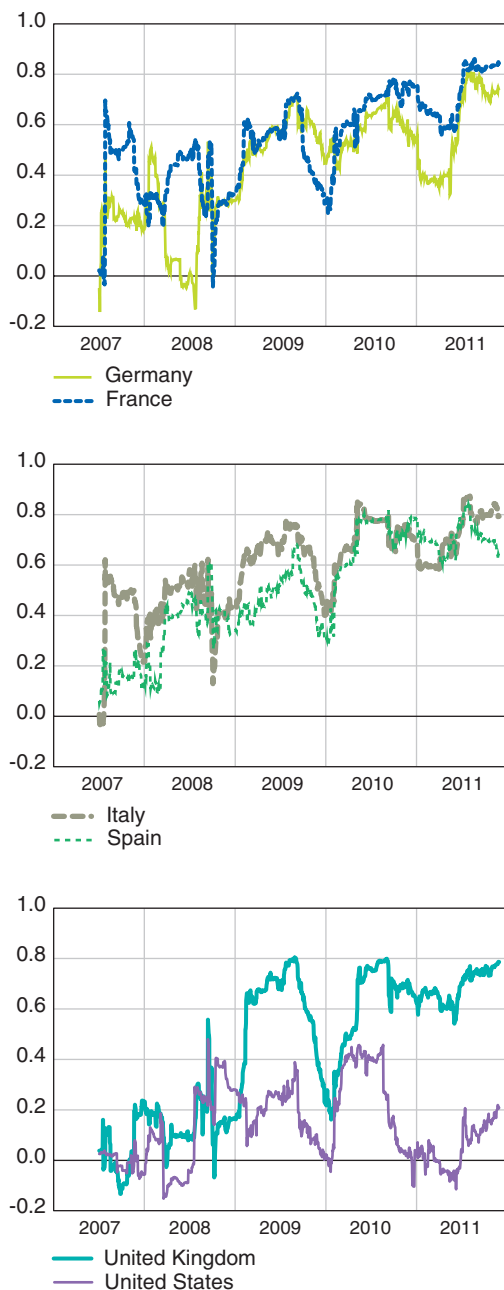
After the fourth quarter of 2009, when the first serious signs of fiscal problems in the euro area began to emerge, investors became much more aware of the possible channels for risk transfer between banks and sovereigns. As a result, they started to price their joint credit risks accordingly. Bank and sovereign CDS spreads became much more positively correlated with each other, both at low (Chart 6c) and high frequencies (Chart 8), and within and across countries. Against this backdrop, internationally active banks, including those headquartered in the euro area, started to rebalance their foreign portfolios away from the riskier sovereigns in the euro area, such as Greece, Ireland, Italy, Portugal and Spain, and towards perceived safer sovereigns, such as the United States (Chart 7) and Germany (Chart 4).

## 4 | WHERE DO WE STAND NOW?

The BIS consolidated international banking statistics can shed light on the degree to which the direct exposures of banks to sovereign debt are still a factor in the European sovereign debt crisis.

The combined foreign claims of BIS reporting banks on the public sectors of Greece, Ireland, Italy, Portugal and Spain fell from EUR 568 billion at the end of the third quarter of 2009 to EUR 335 billion at the end of the second quarter of 2011 – a decline of roughly 41% (Chart 9). There are three possible drivers of this decline. First, banks may have marked the value of some of the government debt on their trading books down to its market value or provisioned against future losses on their government debt holdings in the banking book. Second, banks may have let a portion of the government debt on their balance sheets mature without replenishing it. Third, banks

**Chart 8**  
Correlations between sovereign and bank CDS spreads for selected nationalities<sup>a)</sup>

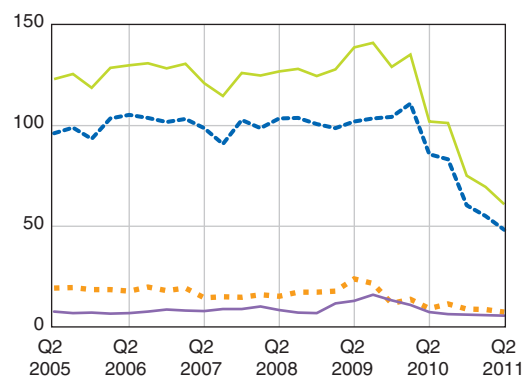


a) 90-day rolling window correlations between daily changes in five-year on-the-run sovereign CDS spreads and daily changes in equally weighted averages of senior five-year CDS spreads for a sample of domestic financial institutions. Source: Markit.

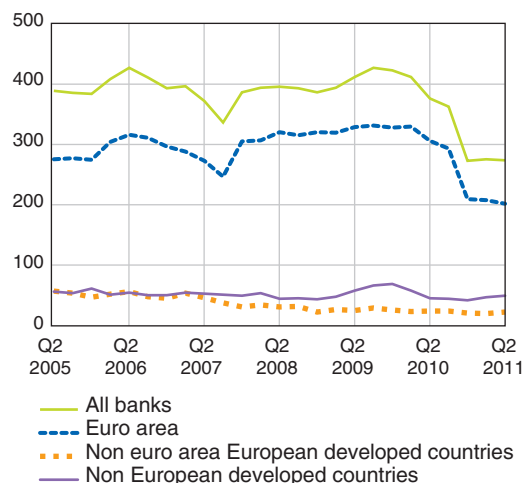
**Chart 9**  
Foreign claims on selected countries' public sectors

(in billions of euros, by bank nationality)

a) Greece, Ireland, Portugal



b) Italy, Spain



Source: BIS consolidated banking statistics (ultimate risk basis).

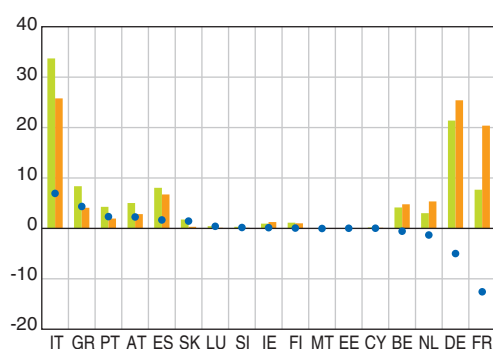
may have sold some of their foreign government debt securities, including to the home banks of the sovereign and to the ECB.

It is impossible to quantify the exact contributions of each of the above factors using the breakdowns currently available in the BIS consolidated banking statistics. However, a substantial part of the decline in claims on the public sectors of Greece, Ireland and Portugal (EUR 79 billion or 56%) may well be accounted for by ECB purchases under the Securities Markets Programme made between the end of the first quarter of 2010 and the end of the first quarter

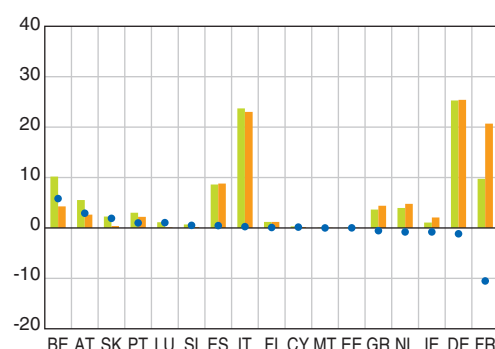
**Chart 10****Weights in the euro area foreign public sector portfolios of euro area banks versus shares of outstanding euro area government debt**

(in percentage points)

a) Q2 2008



b) Q2 2011



■ Weights in the euro area foreign public sector portfolios of euro area banks  
 ■ Shares of outstanding euro area government debt    • Difference

AT = Austria; BE = Belgium; CY = Cyprus; DE = Germany; EE = Estonia; ES = Spain; FI = Finland; FR = France; GR = Greece; IE = Ireland; IT = Italy; LU = Luxembourg; MT = Malta; NL = Netherlands; PT = Portugal; SI = Slovenia; SK = Slovakia.

Source: BIS consolidated banking statistics (ultimate risk basis).

of 2011 (EUR 78 billion). This factor, of course, cannot explain the decrease in claims on the public sectors of Italy (EUR 144 billion or 42%) and Spain (EUR 10 billion or 12%), as ECB purchases of these debts only began in the third quarter of 2011.

Despite the overall decline in exposures to the riskiest euro area sovereigns observed in 2010-11, banks still own sizeable amounts of domestic and foreign sovereign debt. As of June 2011, BIS reporting banks' exposures to foreign public sectors ranged from close to 80% of Tier 1 capital for Italian, US and German banks to over 240% for Swiss, Belgian and Canadian banks. Foreign exposure vis-à-vis the countries most severely affected by the sovereign debt tensions (i.e. Greece, Ireland, Italy, Portugal and Spain) was significantly smaller, but often substantial. For instance, German, French and Belgian banks' combined exposures were equal to approximately 38% of their Tier 1 capital.

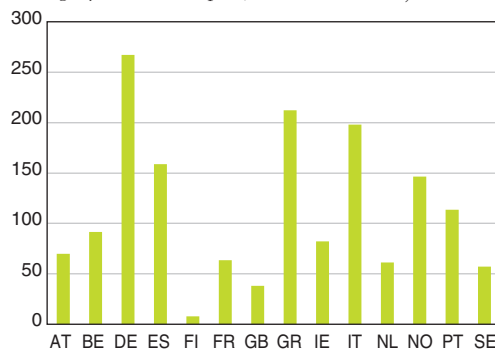
Furthermore, the foreign public sector portfolios of euro area banks remain geared towards the riskier euro area sovereigns (Chart 10b). Relative to the average shares of euro area government debt outstanding, euro area banks continue to underweight the safest sovereigns (i.e. Germany and France) and overweight some of the riskier ones (Belgium, Portugal, Italy, Spain).

3 For further discussion, see Bolton and Jeanne (2011).

Nevertheless, their bias towards overweighting the debt of riskiest euro area public sectors has decreased since mid-2008, when Italy, Greece, Portugal and, to a somewhat smaller extent, Spain loomed larger (Chart 10a).<sup>3</sup>

**Chart 11**  
**Bank exposures to domestic public sectors, by bank nationality**

(as a percentage of core Tier 1 capital, end-December 2010)



AT = Austria; BE = Belgium; DE = Germany; ES = Spain; FI = Finland; FR = France; GB = United Kingdom; GR = Greece; IE = Ireland; IT = Italy; NL = Netherlands; NO = Norway; PT = Portugal; SE = Sweden.

Note: Exposures to domestic public sectors are based on data released by the European Banking Authority (EBA) as a part of the stress test results published in July 2011. Inclusion of banks in the EBA stress test varied by country and, as a result, comparisons of exposures across countries should be interpreted with caution. Source: EBA.

In addition, European banks continue to hold large amounts of debt issued by their own sovereigns. Data released by the European Banking Authority in July 2011 as part of its EU-wide stress test results suggest that the domestic sovereign debt holdings of many European banking systems exceeded 100% of their Tier 1 capital as of the end of 2010 (Chart 11). This was true for banks in countries with solid public finances (Germany and Norway) as well as banks in countries experiencing serious fiscal problems (Greece, Italy, Spain and Portugal).

## 5 | A WAY FORWARD

The global financial crisis has once again highlighted the fact that global financial stability depends critically on the two-way link between banks and sovereigns. On the one hand, the fiscal soundness of sovereigns is one of the most important prerequisites for the smooth and efficient functioning of the international financial system. On the other hand, a solid global financial system is crucial for the fiscal health of sovereigns around the world. Weaknesses in either of the two sectors can spread to the other via a number of channels, setting off a dangerous chain reaction. With the global financial system becoming more and more integrated, such a chain reaction can quickly extend across national borders. In order to prevent this from happening, appropriate buffers should be built up in good times – fiscal buffers would ensure that the risk-free status of the sovereign is maintained, while capital and liquidity buffers would underpin the soundness of the financial system.

The main conclusion that policymakers should draw from the crisis is that the interconnectedness of the global financial system makes the prudential approach to policymaking, as it relates to both government finances and financial stability, more important than ever before. What policymakers do in any given jurisdiction affects economic and financial developments elsewhere. As a result, when making their decisions, they should also take these spillover effects into consideration. And they should do so even from a narrow national perspective: any action they take is likely not only to affect the global financial system, but also to set off a chain reaction that may eventually come back and burn them.

The most urgent task facing policymakers today is restoring the risk-free status of sovereigns, together

with the confidence it engenders. We are used to living in a world in which the obligations of most governments in the developed world are regarded as risk-free. As a result, the usual practice has been to assign a risk weight of zero to sovereign debt. However, if the deterioration in the credit quality of sovereigns is not stopped and reversed, it will be impossible to avoid the difficult task of reassessing sovereign risk.

Contrary to what is sometimes stated, both Basel II and Basel III require banks to analyse and to discriminate among sovereign risks. The internal ratings-based approach for calculating the amount of capital to be held against credit risk does not imply a zero risk weight. Instead, it calls for a granular approach that allows for a meaningful differentiation of sovereign risk. Moreover, the 3% leverage ratio in Basel III in effect sets a floor on the capital backing of sovereign holdings. That said, assessing sovereign risk and the capital that needs to be held against it is not easy, given the lack of defaults among the better sovereign credits.

This makes it even more critical that governments earn back investors' confidence in the risk-free status of their debt. This complex task calls for a sustained effort, a multi-pronged approach and a strategy that bridges the seemingly contradictory short and long-run goals.

In the long run, a key role for the government budget is to provide a countercyclical policy instrument, be it through automatic stabilisers or discretionary actions, such as providing support for the financial system. A precondition for implementing such a policy is for the government to remain creditworthy at times of stress. This requires it to build up financial buffers in good times. Fiscal profligacy in a boom is doubly damaging. It feeds excesses in private sector behaviour and undermines the capacity of the government to act as a stabiliser during the bust.

In the short run, governments need to address the high levels of indebtedness by designing credible plans for fiscal consolidation and structural reforms that convince market participants that adjustment will occur and that sustainability will follow. Financing backstops will be needed during the adjustment phase. In this process, time is of the essence, and it is vital that the necessary measures are adopted in the correct sequence.

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