International financial markets and bank funding in the euro area: dynamics and participants[1]

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1. Introduction

Financial markets are undergoing major and at times very rapid changes, mostly as a result of the financial crisis that began in 2007. It is still too early to say for certain which of these changes will endure and which will disappear – and to what degree – when a new balance is reached. However, we must analyse them in order to be able to design appropriate policies. Among the many forces driving these market developments, we would like to focus on three which have their roots in the crisis.

First are changes in market participants' perception and management of risk. Counterparty and liquidity risk, for example, were undervalued in the years preceding the crisis but are now major concerns for financial institutions. In addition, systemic risk, stemming from the interconnections between the financial system and the real economy, must be internalised.

Second, imbalances accumulated on public and private balance sheets over many years must be corrected. These imbalances are reflected on financial institutions' balance sheets in the form of excessive leverage and excessive maturity and liquidity transformation. While deleveraging is part of the adjustment needed to restore the soundness of the banking sector, at the same time it burdens financial markets with asset sales and contractions in credit, giving rise to vicious cycles that increase systemic risk. Policies to reduce risk and provide protection against contagion are leading to a renationalisation of financial flows and to market fragmentation. Cross-border lending has contracted more rapidly than domestic lending. In particular, markets in the euro area have been segmented increasingly along national borders. As they attempt to protect themselves against the effects of the crisis, some national authorities are building barriers against cross-national liquidity movements that threaten further segmentation along national lines.

Third are regulatory changes. Financial markets are undergoing regulatory changes aimed at making them sounder and more stable. These changes seek to apply the lessons learned from the crisis while preventing collective behaviour from leading to a watering-down of regulations. Much emphasis is being placed on consistency in the adoption of the regulations in different countries and on analysing the unwanted negative effects these measures might have.

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These drivers and their effects on the financial system can be clearly seen in the unfolding crisis in the euro area, particularly in the strains and changes in bank financing. At the most critical points in the crisis, risk aversion and volatility in euro area financial markets increased sharply, with severe contagion effects to international financial markets.

The recent tensions in some countries were driven by the increasing interaction between concerns about the sustainability of public finances and the fragility of financial systems in an atmosphere of low growth. Concerns about government deficits and debts in various peripheral European countries, especially when accompanied by external imbalances, spilled over to euro area banks. And financial systems' fragility generated contingent liabilities in public finances, thus making the fragilities of sovereign debt become increasingly intertwined with the financial crisis, and creating difficulties for bank funding. In addition to this vicious circle, lower economic growth and the inability to provide stimulus due to the lack of fiscal space make deleveraging even more difficult and weaken bank asset quality.

Bank funding had already seen major changes in the years prior to the euro area crisis. During the past few decades, banks loosened the constraints of deposit growth and raised funds from institutional investors in global financial markets.[2] They tapped new sources of funding, such as securitisation. The business model of investment banks relied on wholesale funding from institutional investors, especially at short maturities (Merck et al (2012)). Financial globalisation allowed banks to tap institutional investors beyond national borders, which expanded traditional international funding to international interbank markets (CGFS (2010a), McGuire and von Peter (2009), Fender and McGuire (2010)).

This greater reliance on funding provided through financial markets experienced unprecedented dislocations during the 2007–09 global financial crisis. It set off major adjustments in banks' business and funding models, which in many cases were later reinforced by the euro area financial crisis. In both crises, some banks' access to funding was limited, predominantly because of a deterioration of the quality of their assets, eg mortgage-related financial instruments in the case of the global crisis and sovereign debt in the euro crisis.

This article investigates how bank funding in the euro area in recent years reflected these market developments. In fact, bank funding can be seen as the area where important issues related to the crisis and financial markets come together. It should be emphasised that this analysis simplifies a very complex reality, with profound differences among different financial institutions and countries.

First, adverse feedback effects between the weaknesses of sovereigns and banks disrupted funding markets severely. During episodes of severe sovereign strains, access to short- and longer-term wholesale funding markets became problematic even for euro area banks with the highest credit ratings, forcing them to resort to alternative funding sources and to shrink the size of their balance sheets.

Second, BIS data show that international interbank funding for euro area banks has collapsed from the high levels observed in 2008. This renationalisation applies especially to funding provided by euro area banks to other euro area banks. As a result, a bank's country of origin largely determines its access to various funding instruments and their costs instead of its financial strength. These difficulties have been most pronounced for banks from peripheral countries, which have suffered the most severely from fiscal imbalances.

[2] For further analysis, see Borio (2009), Boot and Thakor (2010), CGFS (2010b) and Song and Thakor (2010).

Third, a particular class of international institutional investors, US money market mutual funds, has on balance over the past year withdrawn large sums of short-term funding from euro area banks. For these institutional investors, however, it is not so much a case of a return to home bias as a shift from euro area and UK banks to other foreign banks.

Fourth, the crisis has led to a growing recourse to funding secured by collateral, such as covered bonds. This development adds to the already growing demand for assets with high liquidity and low credit risk, in the aftermath of the 2007–09 global financial crisis. Meanwhile, changes in regulation are adding to demand for such assets even as the loss of creditworthiness of sovereigns is reducing the number of suppliers. This has raised concerns about a potential scarcity of “safe” assets that can be used as collateral. In addition, the fact that a larger part of bank assets is used as collateral for covered bonds (BIS (2012)) tends to raise the riskiness of unsecured debt, leading investors all the more to demand that debt be collateralised.

Finally, the renationalisation of bank funding has intensified the dependence on ECB liquidity, which has substituted for lost access to euro area cross-border interbank and bond funding.

In what follows, we analyse some of these market trends: first we sketch the adverse feedback between sovereigns and banks. Then we concentrate on the dynamics of several main sources of funding, namely international interbank markets (mostly for loans but also for bond holdings), US money market funds, bond markets and ECB liquidity. The final section concludes.

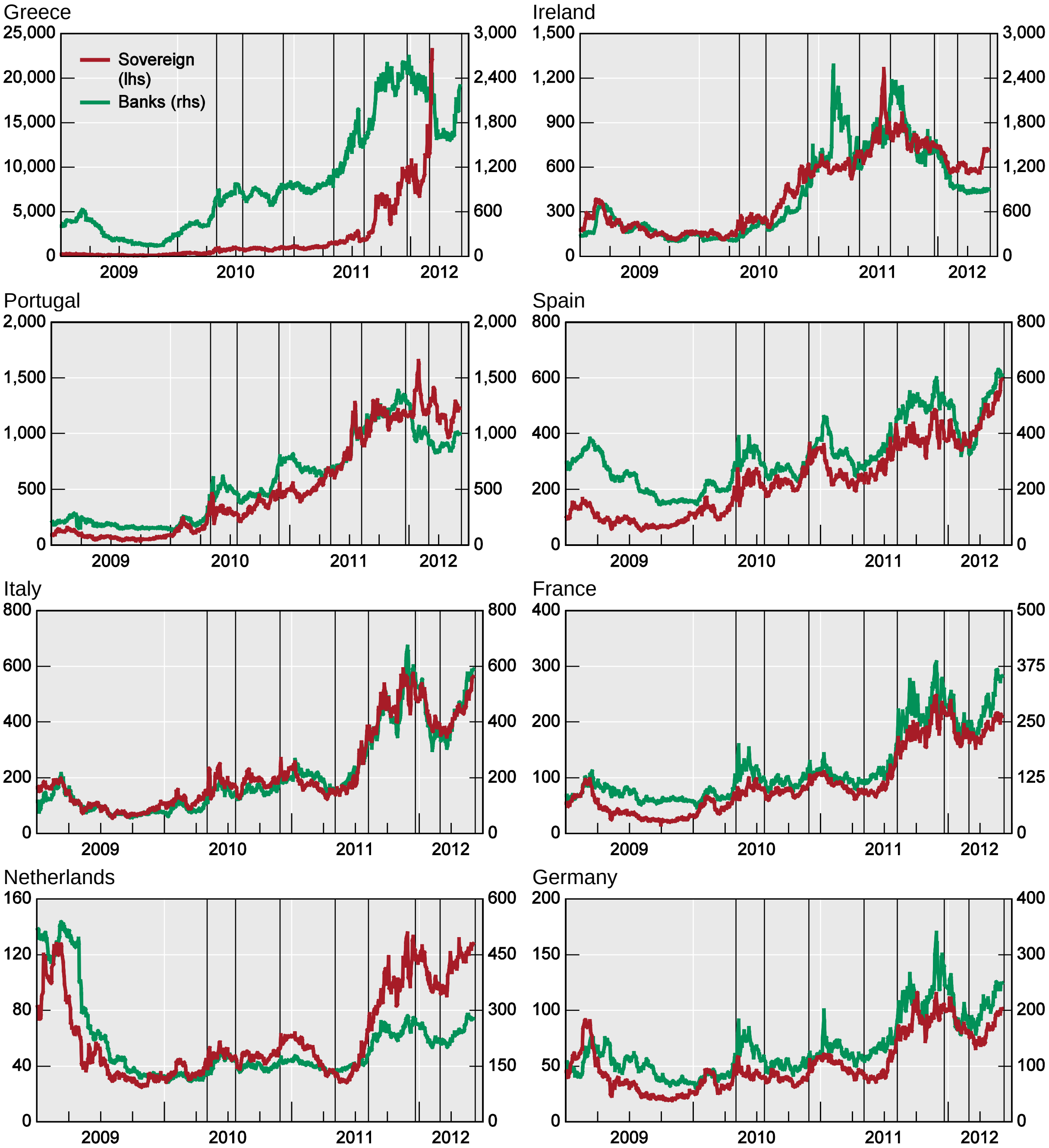
2. Link between sovereigns and banks

Since the first quarter of 2010, sovereign debt tensions and their spillover to banks in general and their funding in particular have dominated, in various stages and to different extents, financial and economic developments in the euro area. These sovereign debt strains came before many European banks had really cleaned their balance sheets of assets that were impaired during the global financial crisis. In the event, government finances and banks’ funding interacted strongly (Caruana (2011), Caruana and Avdjiev (2012)). In particular, sovereign risk affects bank funding through several channels (CGFS (2011)). Many banks hold significant amounts of predominantly domestic sovereign bonds on their balance sheets, which can lead to valuation losses and credit risk concerns when sovereign yields rise sharply. Moreover, sovereign debt serves as collateral for various financial transactions, including private repos. Sovereign tensions result in lower collateral values, owing to larger haircuts or margin requirements, which effectively reduce the ability of banks to obtain funding. In addition, sovereign downgrades spill over to banks, worsening both their cost of and access to funding, while reducing the funding benefits they derive from implicit and explicit government guarantees.

Graph 1

Euro area sovereign and bank CDS premia[1]

In basis points



The vertical lines correspond to the following dates. 2 May 2010: agreement on financial assistance for Greece; 23 July 2010: publication of CEBS stress test results; 28 November 2010: agreement on financial assistance for Ireland; 4 May 2011: agreement on financial assistance for Portugal; 8 August 2011: re-activation by ECB of SMP to purchase Italian and Spanish sovereign debt; 21 December 2011: first ECB LTRO; 29 February 2012: second ECB LTRO; 9 June 2012: announcement that Spain will seek financial assistance for its banking sector.

[1] Five-year on-the-run sovereign CDS premia and simple average of five-year on-the-run CDS premia across major banks. For Greece, Alpha Bank, National Bank of Greece, EFG Eurobank Ergasias; for Ireland, Allied Irish, Anglo Irish, The Governor and Company of the Bank of Ireland, Irish Life&Permanent PLC; for Portugal, Banco Comercial Português, Banco BPI, Caixa Geral de Depósitos, Banco Espirito Santo; for Spain, Banco de Sabadell, Banco Bilbao Vizcaya Argentaria, Banco Popular Español, Caja de Ahorros y Pensiones de Barcelona, Caja de Ahorros y Monte de Piedad de Madrid, Caja de Ahorros Valencia, Castellón y Alicante, Banco Santander; for Italy, Banca Monte dei Paschi di Siena, UniCredit SpA, Intesa Sanpaolo; for France, BNP Paribas, Crédit Agricole, Société Générale; for Germany, Commerzbank, Deutsche Bank; for the Netherlands, Aegon, Fortis Bank, ING, NIBC Bank, Rabobank, SNS Bank.

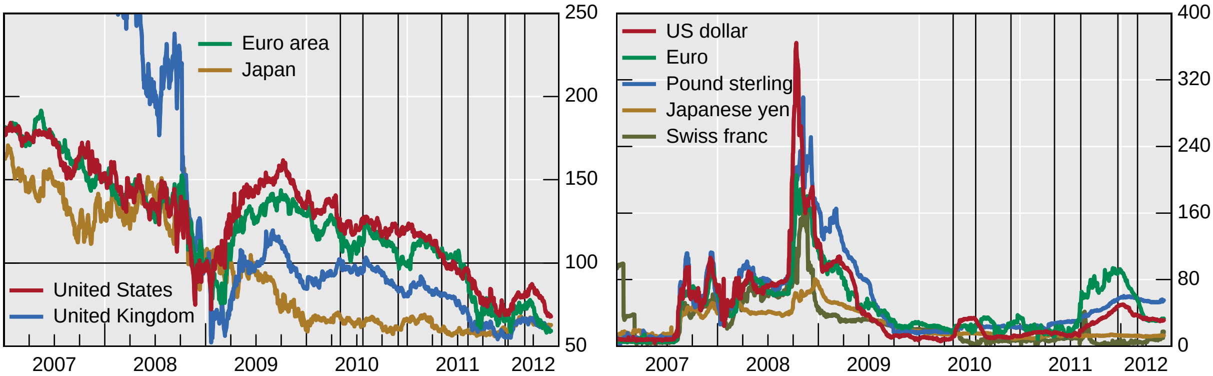
Sources: Markit; BIS calculations.

Signs of the strong link between sovereigns and banks started to become more pronounced early in 2010. Tensions in international financial markets were driven by growing concerns about the sustainability of public finances in view of persistent government deficits and high levels of public debt in peripheral European countries in general and in Greece in particular. Specifically, this was the case when the tensions were compounded by countries' extensive reliance on foreign funding and that funding had to compete with the refinancing of high public debt. These concerns spilled over to banks and, in most euro area countries and most periods, were reflected in marked increases in bank CDS spreads in parallel to the sovereign ones (Graph 1). In this context, interbank funding costs, not only for euro borrowing but also for that in US dollars and sterling, increased sharply (Graph 2, right-hand panel). Again, euro area banks experienced strains in US dollar short-term funding markets (Fender and McGuire (2010)). International spillovers of the euro area financial crisis were also visible in the frequent and often sharp declines in stock prices of US and UK banks in parallel to those of euro area banks (Graph 2, left-hand panel). Weak economic growth and loss of competitiveness pointed to lower government revenues and loan losses, and the anticipation of these feedback effects pressured banks further.

Graph 2

Indicators of bank stress

Banking sector stock indices relative to broad indices[1, 2] Three-month Libor-OIS spreads[3]



[1] Simple average across major banks; for the United States, Bank of America, Citigroup, JPMorgan Chase, Goldman Sachs, Morgan Stanley; for euro area, Banco Santander, BNP Paribas, Crédit Agricole, Deutsche Bank, ING Group, Société Générale, UniCredit SpA; for the United Kingdom, Barclays, Lloyds, HSBC, RBS; for Japan, Mitsubishi UFJ, Mizuho, Sumitomo Mitsui. [2] 1 January 2009 = 100. [3] In basis points.

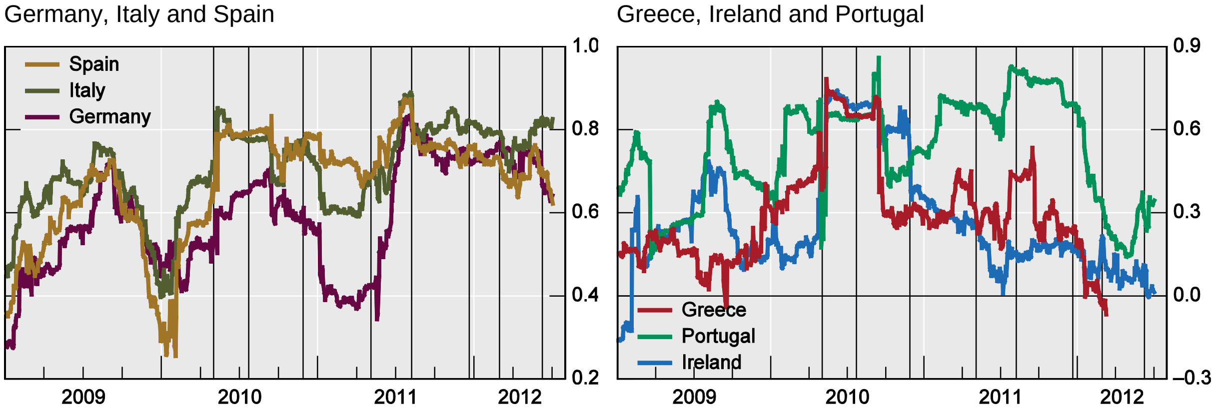
Sources: Bloomberg; Datastream; BIS calculations.

The significance of the strong interconnection between sovereigns and banks in the euro area financial crisis is shown by the overall increasing trend in the predominantly positive 90-day moving correlations between sovereign and bank CDS spreads for most countries (Graph 3). The co-movement between these spreads increased across euro area countries after the nationalisation of Allied Irish Bank in January 2009, which subsequently contributed to a more pronounced transmission of sovereign risks to banks (Mody and Sandri (2011)). It was particularly high for most euro area countries during crisis periods involving various peripheral countries, such as Greece, Ireland and Portugal, joined later in the crisis by Spain and Italy. At the same time, correlations between sovereign and bank CDS spreads of these countries declined sharply after they received supranational support.[3]

[3] Greece, Ireland and Portugal received support through joint EU-IMF programmes in May 2010/March 2012, November 2010 and April 2011, respectively; the ECB re-activated its Securities Markets Programme (SMP) for Italian and Spanish sovereign debt in August 2011; Spain received limited official funding to support the recapitalisation of its banking sector in June 2012.

Graph 3

Correlation between sovereign and bank CDS spreads[1]



[1] Ninety-day moving window of the correlation between daily changes in sovereign and bank CDS. See Graph 2 for sample of banks.

Sources: Bloomberg; Markit; BIS calculations.

Cross-border holdings of government debt by banks have played an important role in the development of the euro area financial crisis. Traditionally, domestic banks in key euro area countries held a larger share of their respective governments' debt than banks in the US or UK (but a smaller one when compared with Japanese banks). The introduction of the euro reduced this home bias by fostering portfolio diversification, which led to a significant increase in cross-border euro area sovereign bond holdings among euro area countries. In fact, owing to EMU, euro area investors increased the share of their investments in debt securities issued by euro area countries more than investors from all other countries (De Santis and Gérard (2009)). Still in 2007, the share of sovereign debt held by domestic banks remained large, particularly for the peripheral countries (Greece, Ireland, Italy, Portugal and Spain). Moreover, there are indications that during more recent crisis periods the home bias of banks from peripheral countries increased again (Merler and Pisani-Ferry (2012)). Holdings by euro area monetary financial institutions (MFIs) of other euro area countries' sovereign debt as a ratio of their total bond holdings have been on a declining trend since 2006 and have now returned to levels observed in 1998 (ECB (2012b)).

All in all, the euro area crisis has demonstrated that sovereign debt holdings can impede banks' efforts to regain the trust of their peers and market participants at large. The high degree of international integration between government debt markets and banking systems in the euro area has played an important role in the propagation of the crisis (Bolton and Jeanne (2011)). Exposures to sovereigns in the euro area's periphery spread bank distress to countries with stronger state finances. And for many banks headquartered in the periphery countries, exposures to own governments are much higher than common equity. They are also sizeable in the case of large national banking sectors in other euro area countries. Thus, getting sovereign finances in order is a necessary condition for a healthy banking system.

3. International interbank lending

Since the onset of the financial crisis in August 2007, euro area banks have seen their access to international interbank funding reduced, in some cases substantially. This has been mainly concentrated in intra-euro area interbank markets: international lending by euro area banks to other euro area banks has declined sharply, as funding within the euro area has again become segmented along national lines. Overall, between end-2008 and end-2011, international interbank lending from one euro area bank to another shrank drastically, thereby reversing an equally dramatic surge between 2003 and 2008 (Graph 4). This withdrawal of international funds from intra-euro area interbank markets was not offset by an increase in funding provided by non-euro area banks.

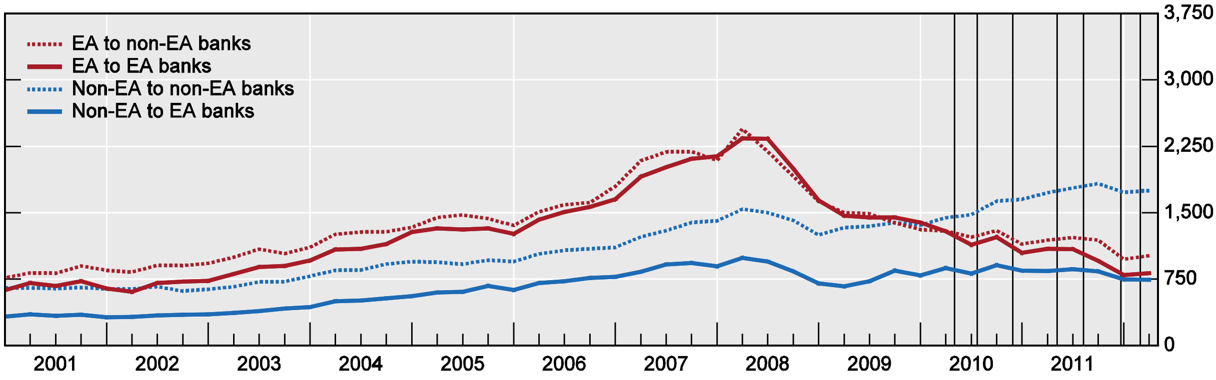
The decline in international interbank lending within the euro area was concentrated in funds provided through both loans and deposits and debt securities (Graph 5).[4] Debt securities contracted most in proportional terms, but international loans and deposits also fell sharply from the historic high recorded at end-June 2008. The dynamics of the movement in international funds provided between banks in the euro area followed the development of the euro area crisis closely. For both loans and deposits and debt securities, it fell sharply during episodes of severe market stress, such as the first half of 2010 and the second half of 2011, while it recovered during periods of subdued tensions, most notably the first half of 2011.

The recent measures taken by the ECB, the expansion of the range of acceptable collateral and the new sovereign bond-buying programme (Outright Monetary Transactions, OMT) have reduced redenomination risk, one factor that had increasingly been contributing to market fragmentation. Sustaining the improvements achieved with regard to risk premia will require swift progress both at the country level and through institutional advances in the euro area.

Graph 4

International interbank lending[1]

In billions of US dollars



[1] Consolidated international claims of BIS reporting banks to other banks located inside and outside the euro area.

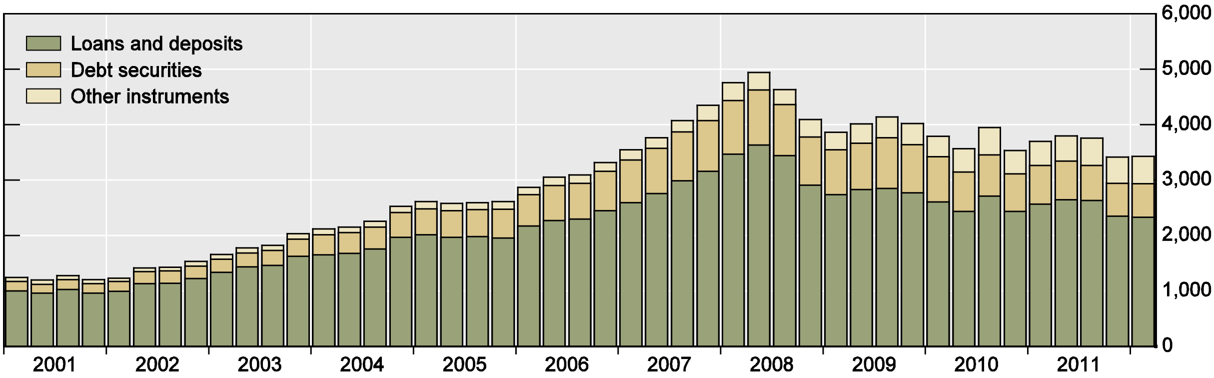
Source: BIS international banking statistics.

[4] International interbank lending in the euro area consists of cross-border claims and local claims in foreign currencies of banks in the euro area to other banks in the euro area. Graph 5 is based on the BIS locational banking statistics by residence, which are non-consolidated. This means that international claims include those vis-à-vis banks' own offices in other countries (inter-office accounts).

Graph 5

International interbank lending within the euro area, by instrument[1]

Amounts outstanding, in billions of US dollars



[1] International claims of banks in the euro area vis-à-vis other banks in the euro area. International claims are defined as cross-border claims plus local claims in foreign currencies. The locational banking statistics are structured by the residency of banking offices. Domestically owned and foreign-owned banking offices in the reporting country record their positions on an unconsolidated basis, including those vis-à-vis their own offices in other countries. These statistics are non-consolidated.

Source: BIS locational banking statistics.

4. The role of US money market funds

So-called prime US money market funds (MMFs) are important participants in international financial markets, as they channel funds from US households and firms to non-US banks. These funds invest in short-term instruments and try to offer more attractive returns to retail and corporate investors than bank deposits do. Before the crisis, US MMFs became one of the main funding sources of the shadow banking system, by purchasing asset-backed commercial paper (ABCP) from structured finance vehicles and other short-term debt issued by US investment banks and non-bank mortgage lenders. Competition to offer investors higher yields has long led MMFs to hold short-term debt and certificates of deposit issued by European and other banks headquartered outside the United States. US MMFs became the largest single supplier of dollar funding to non-US banks, providing around one trillion US dollars to European banks in mid-2008 (Baba et al (2009)). In the aftermath of the 2007–09 global financial crisis, they increased their exposures to euro area banks further, while those to US banks fell strongly (Graph 6, left-hand panel) as US banks were downgraded, and changed their funding models.

Since early 2010, following the intensification of the euro area financial crisis, however, US MMFs have sharply reduced their exposures to euro area banks in general and to peripheral countries' banks in particular (Graph 6, right-hand panel). This has been driven not only by heighted assessment of underlying risk, but also by managers of MMFs seeking to reassure uninsured investors. After the run by institutional investors on prime MMFs in September–October 2008 and amid ongoing discussion of whether the systemic threat of such runs had been removed by subsequent Securities and Exchange Commission reforms, such funds appear to have been particularly quick to reduce exposures to euro area banks.

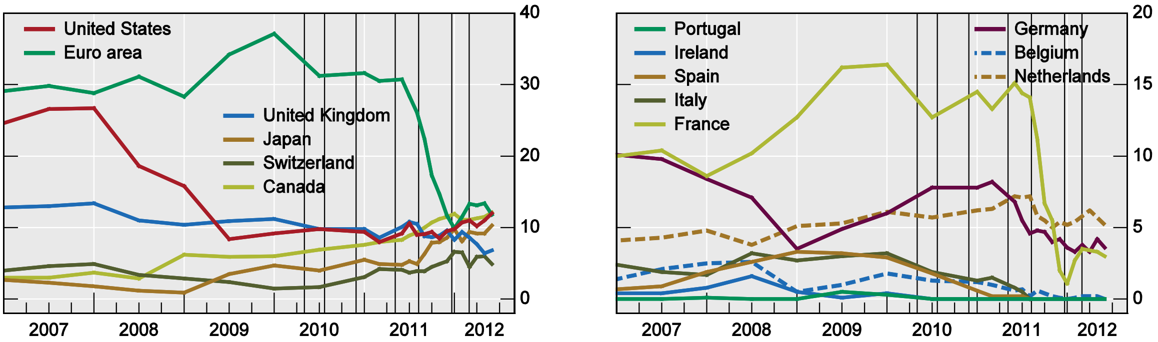
With the intensification of the crisis in the summer of 2011, the joint exposures of US MMFs to the five peripheral euro area countries, which were never large, became negligible. Strikingly, they also reduced their short-term investments in core euro area banks, which were large. This reduction was the most pronounced for French banks, driven by concerns about their exposures to peripheral sovereign debt, but also affected German, Dutch and Belgian banks (Graph 6, right-hand panel). In the first half of 2012, euro area exposures of US MMFs stabilised but remained at very low levels. Rather than retreating from international exposures, these funds increased their investment in debt instruments issued by Canadian, Japanese and Swiss banks, as well as Scandinavian banks (not shown in Graph 6).

Graph 6

US MMF exposures[1]

As a percentage of their assets under management

US MMF exposures to banks in advanced economies | US MMF exposures to banks in the euro area



[1] Claims of the 10 largest US prime money market funds.

Source: Fitch Ratings.

5. Bond markets: preference for secured funding can lead to scarcity of collateral

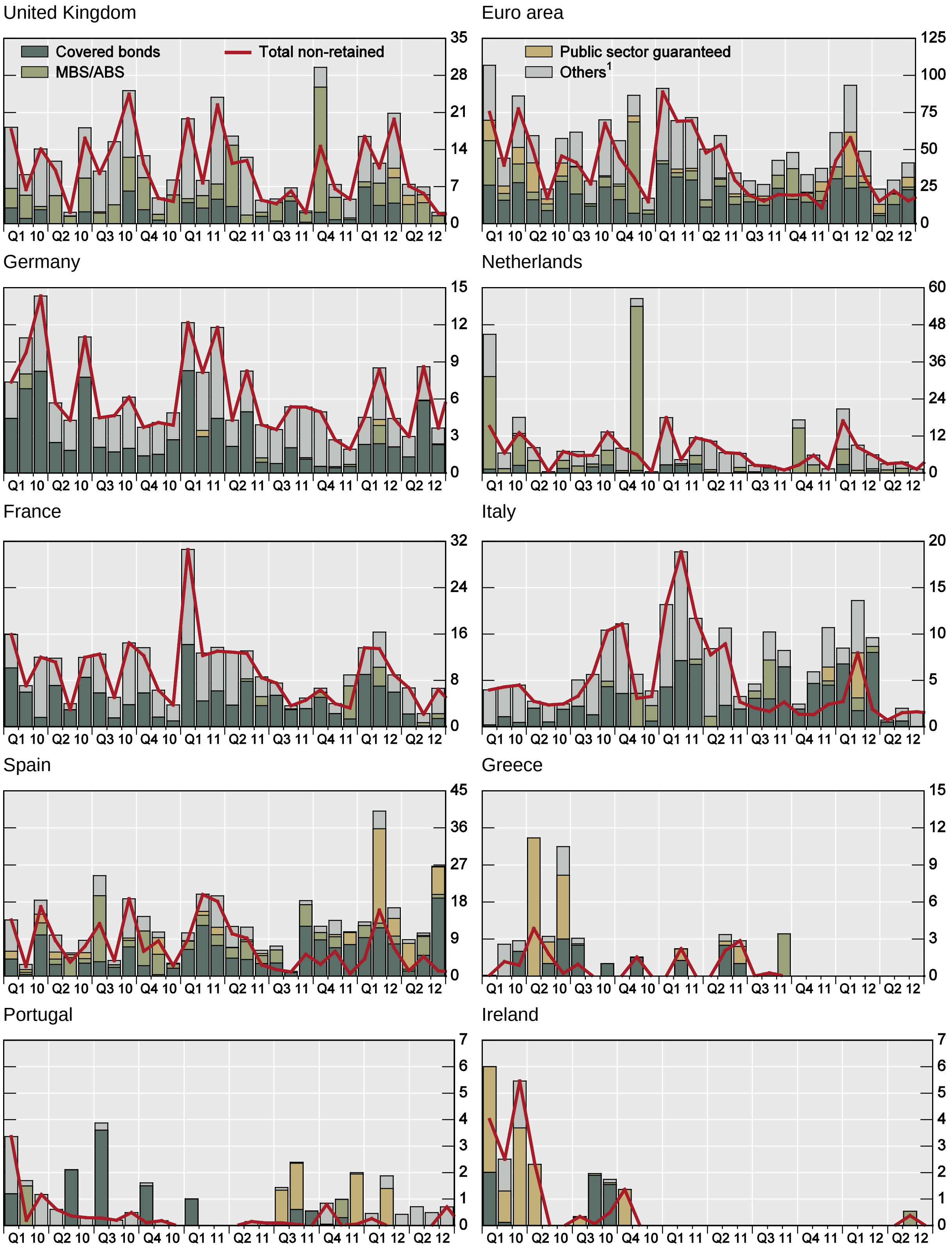
Institutional investors in bank bonds have reduced holdings of euro area bank bonds as well. The euro area financial crisis has impaired access to these markets, most notably during episodes of rapidly increasing market tensions and for banks from peripheral countries.[5] Banks from Greece, Ireland and Portugal have been virtually shut out of primary bond markets, while those from Italy and Spain have enjoyed only intermittent and unreliable access to them (Graph 7). At the same time, funding stress frequently affected core countries' banks as well. Banks from Germany, France and the Netherlands issued very modest amounts of bonds in months of severe market turmoil linked to the euro area crisis. Moreover, during these episodes, market strains spilled over to banks outside the euro area, such as UK banks (Graph 7). Overall, gross bond issuance by euro area banks has declined with the worsening of the crisis, by 15% in 2011 from 2010 and by 22% in the first half of 2012 from the same period one year earlier.

[5] These episodes were: May and November–December 2010, with the crises involving Greece and Ireland, respectively, and their subsequent bailouts; the sharp intensification of the crisis in the second half of 2011, when the crisis spread to Italy and Spain; and the second quarter of 2012, when Spain became the focus of market stress.

Graph 7

Gross bond issuance by banks

In billions of euros



[1] All bonds and Medium Term Notes issued except covered bonds, public sector guaranteed bonds and MBS/ABS.

Source: Dealogic.

The crisis has led to major changes in the composition of gross bond issuance by instrument, especially for banks from peripheral countries. The euro area financial crisis has reinforced the trend towards greater recourse to secured longer-term funding, such as covered bonds (Romo González and Van Rixtel (2011), ECB (2012a)). The share of covered bonds in total gross bond issuance by euro area banks has increased from 26% in the first half of 2007 to 40% and 45% in the first half of 2010 and 2012, respectively. For many banks from peripheral countries, most notably from Spain and Italy, this instrument has become the main source of long-term wholesale funding, as their access to unsecured markets has been partially or fully closed (Graph 7). Covered bond issuance has been spurred as well by more structural factors, such as favourable regulatory treatment, for example under Basel III and Solvency II and in various "bail-in" proposals, and legislative initiatives in several countries.[6]

Growing issuance of covered bonds has added to the concerns about the scarcity of collateral, or more precisely of "safe" assets that can be used as collateral. Covered bond issuance by banks results in a balance sheet in which a substantial proportion of their assets is encumbered, ie pledged with priority to investors in covered bonds. The intensification of the crisis has led banks to overcollateralise to a larger degree, which has reduced even more the unencumbered assets available to serve as collateral for new covered bonds. Asset encumbrance also reduces access to unsecured senior debt issuance, because as the pool of encumbered assets underlying covered bonds grows, holders of unsecured bank debt have a claim on fewer assets in the event of the bank's insolvency. This substantially reduces their attractiveness as investments (Oliver-Wyman (2011), BIS (2012), ECBC (2012), ECB (2012a)).

Concerns about collateral scarcity seem to be an important driver of the increasing trend of so-called "retained issuance" by peripheral countries' banks. As the access of many of these banks to primary bond markets has become impaired, they have started to retain larger parts of their gross bond issuance instead. These banks mainly use this paper as collateral in ECB liquidity operations. In the first half of 2012, significantly larger shares of gross bond "issuance" by Italian, Portuguese and Spanish banks were retained (Graph 7). In contrast, issuance by German, French and Dutch banks has remained targeted to primary public markets and thereby to outside investors. This difference in bond issuance patterns between peripheral and core countries again underscores the renationalisation of funding markets.

Strained access to bond financing has led to a revival of the issuance of government guaranteed bonds. The intensification of the crisis in the second half of 2011 propelled the re-activation or prolongation of programmes in all peripheral countries, as well as in Germany.[7] Government guaranteed issuance had become a very important source of longer-term bank funding in 2008 and 2009 at the height of the global financial crisis, and generally has been assessed positively, although not as being without some costs (CGFS (2011), Muller et al (2011)).[8] The reactivation of the programmes in Italy and Spain allowed solid

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6 From the investor side, market reports suggest that institutional investors such as insurance companies and pension funds have increased their demand for covered bonds. Banks have been reducing their purchases of bank debt across the euro area, as is suggested by Graph 5.

7 Italy, Spain and Germany re-activation authorised on 15 December 2011, 9 February 2012 and 5 March 2012, respectively; Portugal, Greece and Ireland prolongation authorised on 21 December 2011, 6 February 2012 and 1 June 2012, respectively.

8 Government-guaranteed issuance of bank debt has several drawbacks. It distorts competition, as the modalities of the programmes differ across countries (also related to differences in the strength of the incumbent sovereigns). Moreover, it may encourage moral hazard and excessive risk-taking. Finally, it entails a burden for taxpayers, as it creates contingent fiscal liabilities.

issuance in the first quarter of 2012 (Graph 7), indicating that the worsening of their fiscal positions had not reduced the value of these explicit guarantees substantially.

6. The provision of ECB liquidity

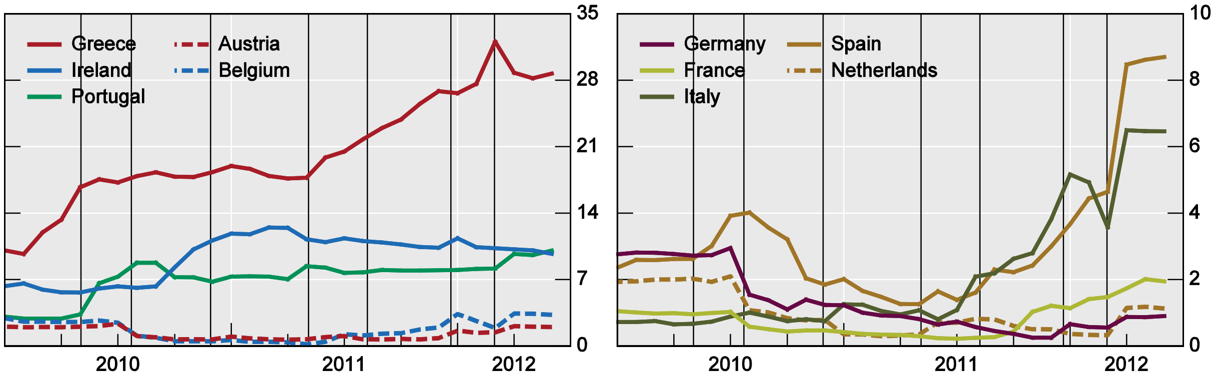
With the development of the crisis, some euro area banks have resorted to central bank funding on a massive scale. The ECB has conducted a wide range of open market operations, amounting to an unprecedented €1.1 trillion at the end of June 2012. This liquidity was absorbed predominantly by banks from countries either under joint EU-IMF programmes or experiencing severe sovereign tensions, showing the distinct segmentation of bank funding according to bank nationality. It was augmented by Emergency Liquidity Assistance (ELA) especially in Greece and Ireland, where national central banks took on the risk of funding local banks through their "lender of last resort" function.[9]

All in all, the worsening euro area financial crisis has substantially increased the dependence of several national banking systems on central bank liquidity, as a result of the increasing renationalisation of market-based bank funding. This trend has been the clearest for Greece, with almost 30% of total bank assets financed by ECB liquidity, while for Ireland and Portugal the proportion has reached about 10% (Graph 8, left-hand panel). The sharp deterioration of the crisis from March 2012 onwards that was concentrated on Spain and spilled over to Italy led to significant increases in the dependence of their banking systems on ECB liquidity as well (Graph 8, right-hand panel).

Graph 8

Reliance on ECB funding[1]

As a percentage of banking sector assets



[1] Including Emergency Liquidity Assistance (ELA); data deducted from national central banks' balance sheets.

Sources: ECB; IMF; Bloomberg; national data.

7. Policy implications

The severe funding dislocations that were observed during the most intense episodes of the euro area crisis led to unprecedented challenges for policymakers and forced them to take exceptional measures on a large scale. Although the dynamics of the crisis are still evolving, we would like to emphasise several implications for policy.

[9] The granting of ELA by euro area national central banks requires prior approval of the ECB Governing Council and is provided for the sole responsibility and at the exclusive risk of the central bank of the country concerned.

First, recent experience has again demonstrated how quickly and profoundly bank funding can dry up when there is a lack of confidence in the markets. Funding structures that seem stable in normal times can turn highly unstable during episodes of financial market stress. Financing obtained from foreign sources tends to be particularly unstable, and may be especially sensitive to shocks in recipient countries. A case in point is the sharp reduction in international interbank exposures within the euro area in recent years. This has demonstrated again the benefits of stable funding structures, which facilitate the lengthening of maturities, and of considerable diversification between domestic and foreign sources based mainly on deposits and equity and less on short-term wholesale funding. The Basel III Framework promotes the latter shift. It ensures that banks rely on their own capacity to build liquidity buffers and raise stable funding, thereby reducing funding liquidity risk. Banks with strong capital and liquidity buffers are much better equipped to withstand disruptions in funding.

Second, the strong link between sovereigns and banks has underscored the importance of fiscal prudence and, in the European case, the need for greater financial integration in the euro area. This is particularly true for those dependent for funding on foreign capital, which can suddenly leave, shifting the burden to domestic banks and investors. It is easier to build up fiscal buffers in good times than to restore confidence in a crisis. Financial cycles are longer and more difficult to assess than normal business cycles, and more room for manoeuvre is required to deal with them.

Third, because recourse to secured funding encumbers a larger part of a bank's assets, in the event the bank fails fewer assets are available to holders of the bank's unsecured debt, which reduces its attractiveness to investors. Thus, heavier asset encumbrance may increase concerns of collateral scarcity and potentially may impair both the access to and cost of unsecured funding. Scarcity of collateral is worsened if formerly "safe" assets that could be used as collateral become seen as risky assets. Quite apart from the usual macroeconomic reasons for appropriate fiscal policy, financial markets require sovereigns that are considered practically risk-free. For this reason, in financial systems that tend to operate on the basis of collateral, confidence in the sustainability of public debt has an added value. Its absence leads to difficulties and higher funding costs for the economy as a whole.

Finally, the increased fragmentation of financial markets, especially in the euro area, and the reliance of peripheral banking systems in the euro area on ECB liquidity require action on several fronts. Within each country, public debt must be made more sustainable, structural reforms must facilitate growth and the financial system must be repaired. For the euro area as a whole, institutional improvements must continue, and there must be greater financial and fiscal integration, mainly with regard to the three aspects of the banking union: common supervision, system-wide deposit insurance and a single resolution system. The recent ECB measures provide more time for these reforms to be implemented, but they are not a substitute for the reforms, so swift progress is still needed.

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