

Euro area sovereign crisis drives global financial markets¹

News on the euro area sovereign debt crisis drove most developments in global financial markets between early September and the beginning of December. Amid ratings downgrades and political uncertainty, market participants demanded higher yields on Italian and Spanish government debt. Meanwhile, difficulties in meeting fiscal targets in a recessionary environment weighed on prices of Greek and Portuguese sovereign bonds.

Conditions stabilised somewhat in October on growing optimism that the end-month EU summit would propose comprehensive measures to tackle the crisis. But by November, investors were growing sceptical about the adequacy of some of these measures. Sovereign bond yields then rose across the euro area, including for higher-rated issuers.

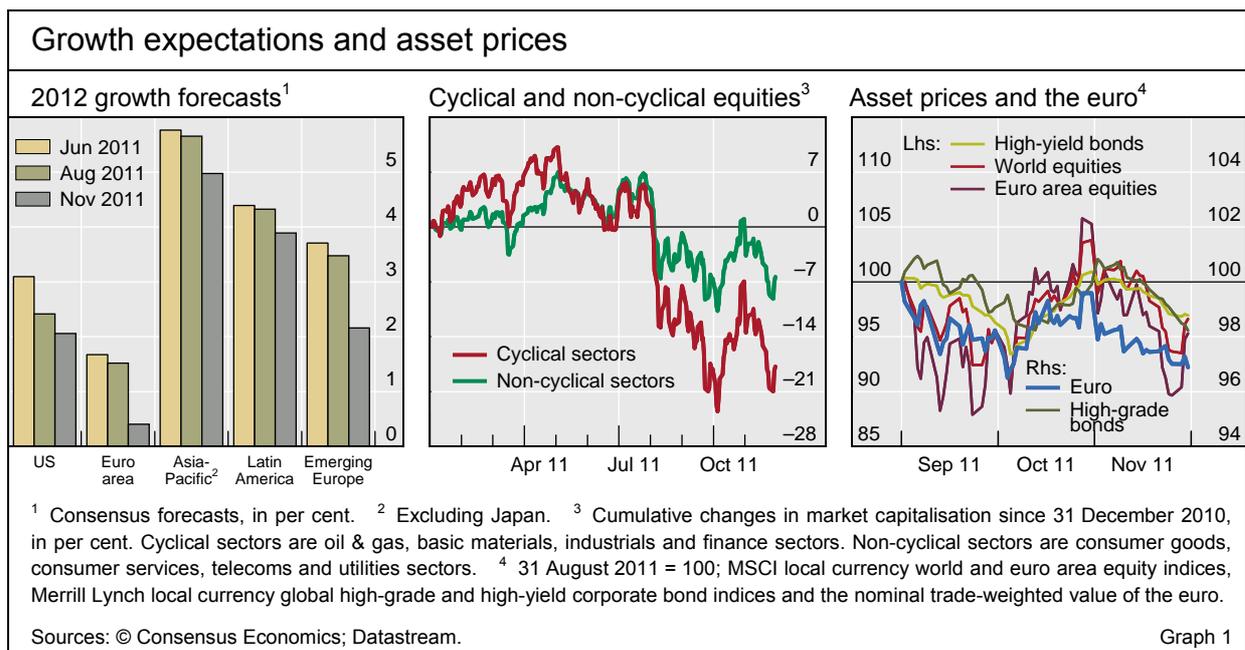
In the meantime, financial institutions with direct exposure to euro area sovereigns saw their costs and access to funding deteriorate. Affected banks took measures to further reduce leverage, selling assets and tightening credit terms. Financial institutions also sold certain types of assets to counter increases in the volatility of their portfolios. This included emerging market securities, whose prices plunged in September and fell again in November, while those of safe haven assets rose in a corresponding flight to quality.

Global growth expectations continued to deteriorate

Alongside developments in euro area sovereign bond markets, declining expectations of global economic growth pulled down growth-sensitive asset prices in September. These revisions were driven by a weakening outlook for the euro area and, to a lesser extent, emerging markets (Graph 1, left-hand panel). They followed previous growth downgrades in August, which had been led by a deteriorating outlook for the United States. By October, many forecasters were expecting the euro area economy to contract in the final quarter of this year and the first months of next year, but still to grow modestly through 2012 as a whole. Among emerging markets, analysts revised down

Growth-sensitive asset prices fall in September ...

¹ The analysis covers the period to 1 December 2011. Questions about the article can be addressed to nick.vause@bis.org or goetz.vonpeter@bis.org; questions about data and graphs should be addressed to magdalena.erdem@bis.org and garry.tang@bis.org.



forecasts for growth in the emerging Europe region most sharply, anticipating a swift deceleration in credit growth. They also cut growth forecasts for emerging markets in the Asia-Pacific region, reflecting some sharp slowdowns in export growth, notably in China, and the devastating flooding in Thailand. Growth-sensitive asset prices consequently fell in September. This included prices of industrial metals and energy as well as equity prices, especially in cyclical sectors (Graph 1, centre panel).

Monetary authorities responded to this further weakening of the global growth outlook with extra stimulus, which provided some support for growth-sensitive asset prices from late September. On 21 September, the Federal Reserve announced plans to buy an additional \$400 billion of US Treasury securities with residual maturities over six years and to sell an equal value of Treasuries with residual maturities of less than three years (see also pages 73–83 of this issue). The difference between 10-year and two-year US Treasury yields fell by 10 basis points on the day of the announcement, mainly due to a decline in the longer-term yield. On 6 October, the Bank of England expanded its Asset Purchase Programme, which invests mainly in gilts, by £75 billion. This was a little earlier and for a larger amount than many had expected. Sterling depreciated by 0.7% in trade-weighted terms on the day of the announcement, while gilt yields were essentially unchanged. The Bank of Japan also added ¥5 trillion of Japanese government bonds to its asset buying plans on 27 October. On 1 November, the Reserve Bank of Australia announced a 25 basis point cut to its main policy rate, as did the ECB two days later. A further ECB rate cut before the year-end of at least 25 basis points was priced into forward contracts. The Brazilian, Indonesian and Israeli central banks also cut policy rates.

... but then gain some support from monetary stimulus

Later in November, a US Congressional committee negotiating budget cuts for the next 10 years failed to reach agreement, adding to near-term growth fears. The lack of agreement set \$1.2 trillion of backstop spending cuts to trigger from 2013. It also left the fiscal stance for 2012 uncertain by failing to

resolve whether temporary payroll tax cuts and enhanced unemployment benefits would be extended beyond the end of this year. According to current plans, the US government would remove more than 2% of GDP of fiscal stimulus in both 2012 and 2013. The S&P 500 equity index fell by almost 2% on 21 November, the day that the committee's negotiating deadline expired.

The euro area sovereign debt crisis reaches a decisive stage

From September, growing concerns about euro area debt sustainability overshadowed market participants' preoccupations with a weakening outlook for growth as the main driver of asset prices. Indeed, market prices closely tracked the value of the euro, reflecting the central role of euro area developments throughout this period (Graph 1, right-hand panel).

Markets went through three distinct phases in as many months. In September, European equity markets underperformed other developed market equities on fears of another recession and the possibility of a disorderly default. In October, equity markets recovered on growing optimism that politicians would finally rally behind a comprehensive plan to tackle the crisis. All markets staged a relief rally the day after the euro area summit of 26 October. The third phase, starting 1 November, was a rollercoaster ride on intense political news flow over a proposed Greek referendum and leadership crises in Greece and Italy. Markets failed to recover even as reform-minded governments came to power in both countries. Indeed, bond markets witnessed bouts of intense selling pressure drawing ever wider circles. As a result, measures of volatility in bond and equity markets remained at elevated levels. Towards the end of November, equity and bond markets began to recover some of the earlier losses.

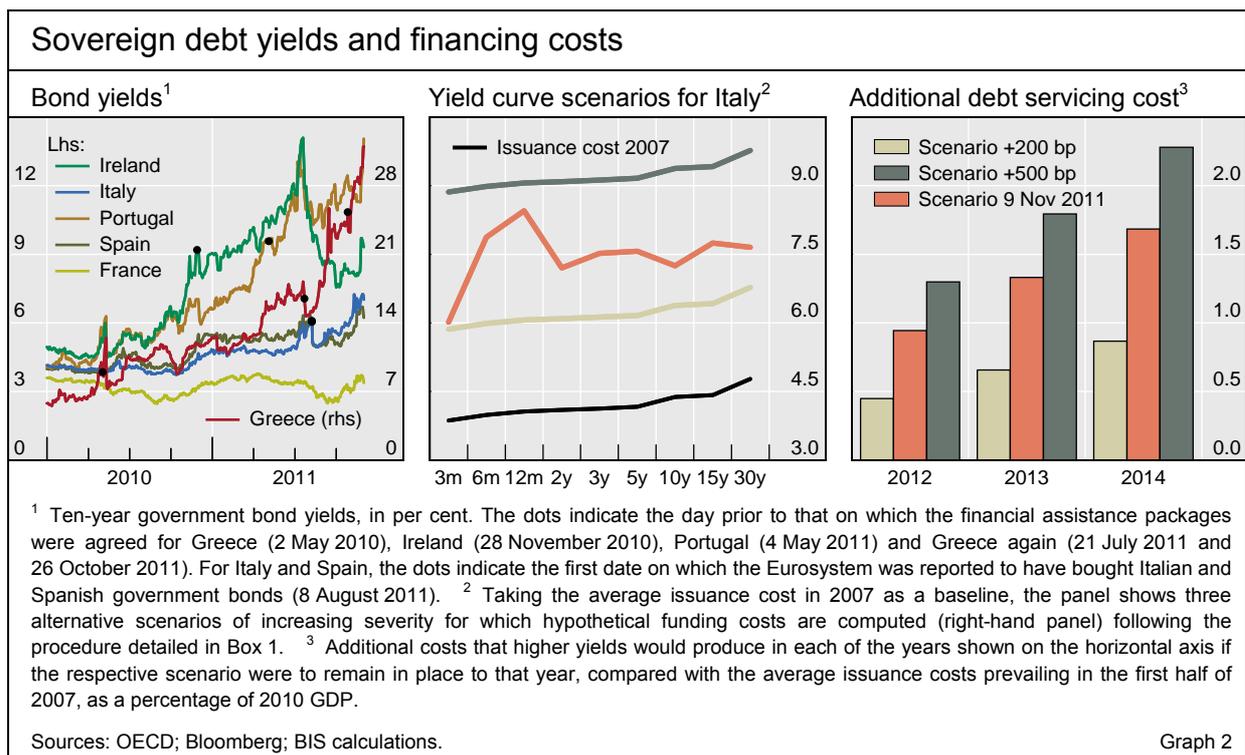
Mounting market
pressure ...

Throughout these months, a run of poor economic data and policy uncertainty put pressure on bonds issued by euro area sovereigns with high debt burdens. Greek and Portuguese bond yields rose further, reflecting difficulties in meeting fiscal targets with their economies mired in recession. Export growth in Ireland, by contrast, brought yields and credit default swap (CDS) premia down to levels prevailing before the country had resorted to multilateral funding in November 2010 (Graph 2, left-hand panel). Amid ratings downgrades and political uncertainty, market participants demanded higher yields on Spanish and Italian debt. Even highly rated sovereigns, notably France, saw their yields increase. Growing concerns over the creditworthiness of Italy eventually led two-year CDS premia to rise above 10-year premia as traders bet on a nearer-term credit event.²

... results in policy
action

The build-up of tensions in bond markets and the associated bank funding problems forced policymakers to seek comprehensive measures for restoring confidence. On 26 October 2011, euro area heads of state agreed to a three-

² Credit events with respect to sovereign debt obligations include the failure to pay, repudiation or moratoriums, or restructuring (ie a reduction in interest or principal payments, their deferral, subordination or re-denomination into another currency).



pronged approach combining debt relief for Greece, leveraging of the European Financial Stability Facility (EFSF) and the recapitalisation of banks (Table 1).³ The summit announcement triggered a sizeable rally in global financial markets on the belief that certain downside risks had been eliminated. While equity and credit markets rallied, the response was more muted in the bond market, as analysts reckoned that the funds to leverage the EFSF would have to come from this same market. Global bank equity and Greek bond prices first strengthened, as the envisaged 50% writedown was smaller than

Measures agreed at the euro area summit on 26 October	
Objective	Measures
Reduce the Greek debt burden	A voluntary bond exchange with a nominal discount of 50% on notional Greek debt held by private investors, with the aim of bringing the debt-to-GDP ratio down to 120% by 2020. To this private sector involvement, euro area member states contribute up to €30 billion, and stand ready to provide additional financing of up to €100 billion.
Secure funding to sovereign issuers	Plans for the EFSF to attach partial risk protection to newly issued government debt covering 20–30% of losses, and leverage up the Fund's capacity to purchase debt beyond €440 billion through co-investment funds raising money from private and public sources.
Restore confidence in the banking sector	Plans to set up a public bank debt guarantee scheme and to require 70 EU banks to: (i) meet a temporary capital buffer against their sovereign exposures being marked to market; and (ii) attain a core Tier 1 capital ratio of 9% by June 2012. Preliminary estimates revealed an aggregate capital shortfall of €106 billion.

Sources: European Union; European Banking Authority. Table 1

³ A follow-up European summit took place on 8–9 December, after this article went to press.

what bond prices and circulating proposals had indicated. CDS premia initially dropped on the understanding that CDS contracts would not trigger under a voluntary debt restructuring.

The rally proved short-lived, however. Even before the surprise announcement of a Greek referendum plunged markets into pondering endgame scenarios on 1 November, market participants were harbouring doubts about how these measures would be implemented. Although the referendum was cancelled three days later, political uncertainty continued to unsettle markets. On 9 November, dramatic intraday movements in Italian bond yields took market participants by surprise. Following the decision by a UK-based clearing house to raise margin requirements, Italian 10-year bonds lost 5% in value as yields soared to 576 basis points above the German bund.

This episode sparked concerns that a prolonged period of bond market turbulence could end in a self-fulfilling funding crisis in the third largest bond market in the world.⁴ Yet simple simulations (see Box 1) of the debt service costs to the Italian Treasury in different yield curve scenarios (Graph 2, centre panel) suggest that Italy should be able to withstand elevated yields for some time, provided it retains access to the market. Given the relatively high average residual maturity of the Italian public debt (seven years), it would take a long time for elevated yields to translate into significant additional debt service costs. If the yield curve observed on 9 November persisted throughout the year 2012,

Box 1: Simulation of Italian debt service costs

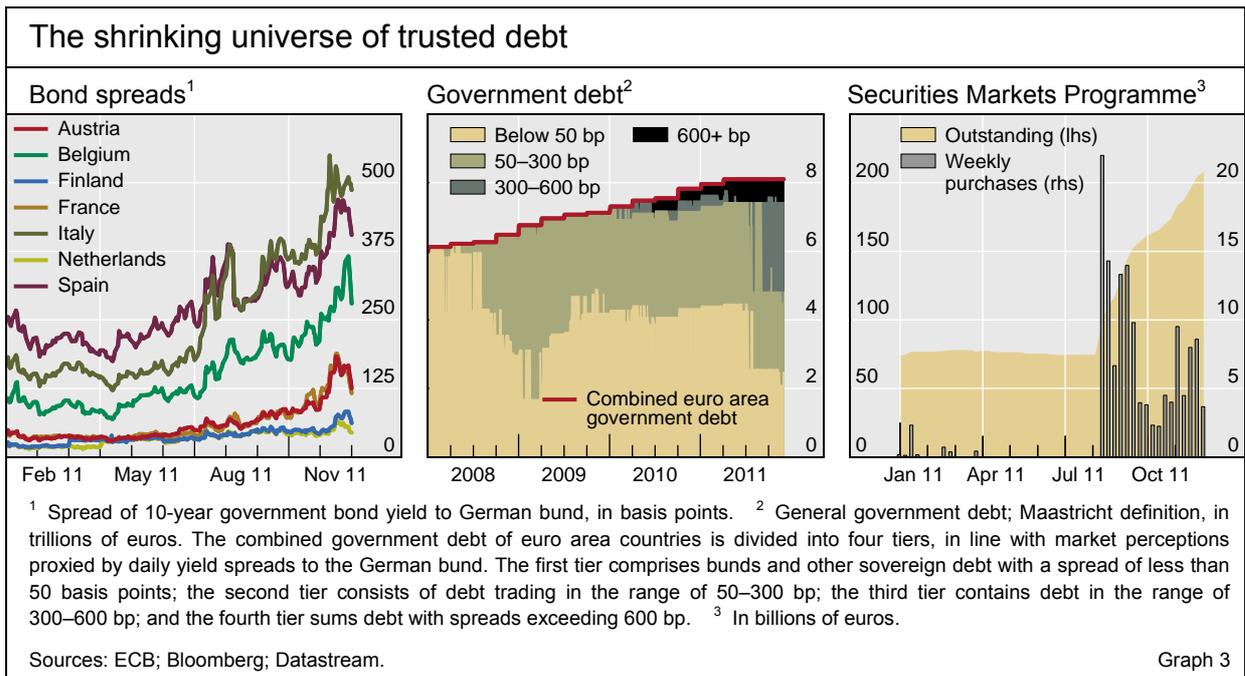
This box describes the estimation of Italian government debt service costs in various yield curve scenarios. The baseline yield curve uses the average issuance cost prevailing in the first half of 2007, before the global financial crisis erupted. Two scenarios shift the entire baseline yield curve up by 200 and 500 basis points, respectively, while an additional scenario uses the Italian yield curve observed on 9 November 2011 (Graph 2, centre panel).

The next step consists in constructing a database of all debt securities outstanding at each point in time. To do so, we first calculate a time path of future interest payments on and redemptions of existing debt, and subtract the government's forecast of future primary surpluses to obtain gross issuance needs. In meeting those needs, we assume that the Italian Treasury maintains the issuance policy followed in the years 2010–11, namely rolling over the same share of total issuance in 2010–11 for every maturity. This presumes that the Treasury does not dynamically adapt its issuance policy by altering maturities in response to changes in the yield curve. Our estimates are thus likely to overestimate debt service costs somewhat.

The yield curves of the different scenarios are then applied to the relevant debt securities over a three-year horizon. Whereas higher yields raise the debt service costs of *newly issued* fixed rate bonds, they affect both existing and newly issued floating rate notes.[Ⓞ] The overall debt service costs for each scenario, aggregated by year, are then expressed relative to the baseline costs, resulting in the *additional* debt service costs shown in Graph 2 (right-hand panel). The simulation is based on the assumption that Italy retains continued market access.

[Ⓞ] Regarding inflation-linked securities, inflation expectations are held constant at current levels, with real yields running parallel to nominal yields in every scenario.

⁴ With €1.9 trillion in outstanding debt and €1.6 trillion in marketable securities, the Italian government bond market is third in size behind those of Japan and the United States.



the additional yearly cost would amount to 0.95% of 2010 GDP (Graph 2, right-hand panel). Even the worst scenario shown here would have to persist for three years until yearly additional costs exceeded 2% of GDP.

Bond market tensions increased further even after new governments took office in Greece and Italy to implement reforms. The rise in spreads accelerated across the board (Graph 3, left-hand panel). This run-up brought some sovereigns' financing costs up to pre-euro levels. Spain issued 10-year bonds at a shade below 7% on 17 November; 12 days later, Italy did so at 7.56%. The Eurosystem continued to purchase limited quantities of government bonds, bringing its bond holdings under the Securities Markets Programme to €207 billion by 1 December (Graph 3, right-hand panel). During some of the more volatile days in November, the run-up in yields was reportedly halted only by official purchases. However, the Eurosystem resisted mounting international pressure to embark on large-scale purchases.

... but later move to core sovereigns

In repeated rounds of selling, investors tried to offload sovereign bonds previously considered safe. Yield spreads of Austrian and French bonds approached 200 basis points, and even Dutch and Finnish yields broke away from those of German bunds (Graph 3, left-hand panel). The bond market selling pressure thus permeated ever deeper into the core, leaving the bund as virtually the only trusted AAA paper in the euro area (Graph 3, centre panel). The universe of trusted paper thus seemed to shrink just as the demand for safe assets was rising, prompting a flight to safety to assets outside the euro area (Graph 8 on page 14). Even the German bund auction on 23 November was poorly subscribed, raising just 65% of the target amount. Although markets calmed down at end-November, these dislocations in some of the largest euro area bond markets unsettled market participants; they may have inflicted damage to the investor base, given that long-term investors such as insurance companies and pension funds rely on sovereign debt markets for the preservation of capital.

Bank funding and solvency move into focus

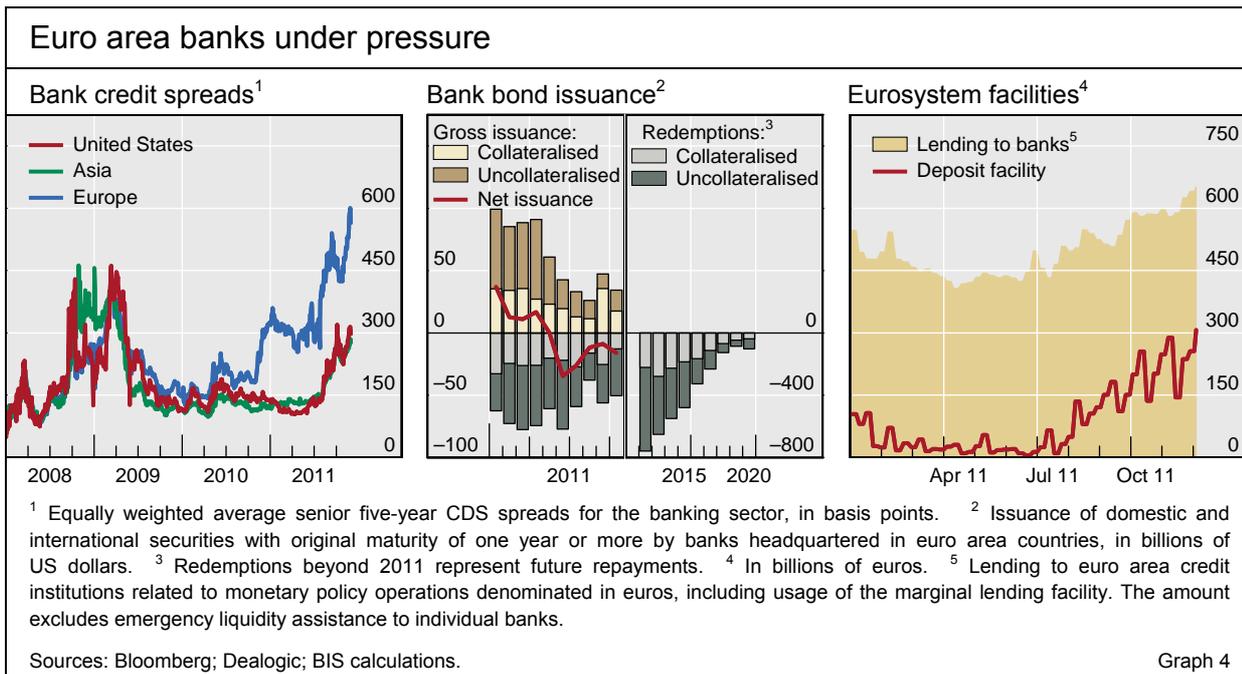
The intensification of the euro area sovereign debt crisis went hand in hand with banking sector weakness. While bank funding problems had manifested themselves throughout the year, policymakers and market participants increasingly turned their attention to issues of bank solvency. This was brought into focus by the rescue of Dexia, a Franco-Belgian bank active in public financing, and the failure of MF Global, a US broker-dealer. Both institutions lost access to funding markets as lenders grew concerned about their prospective solvency due to significant exposures to euro area sovereign debt.

Credit rating agencies downgraded scores of European banks. Some rating actions were motivated by increased sovereign risk, others by an erosion of perceived government support (see Box 2). Several French banks were also downgraded because of their continued reliance on fickle wholesale funding markets. Average credit spreads on European banks thus diverged further from those of their Asian and US counterparts (Graph 4, left-hand panel), surging beyond levels observed following the bankruptcy of Lehman Brothers in 2008.

The downgrades in a volatile market environment exacerbated European banks' funding problems. Banks from southern Europe, with the exception of a few global players, had lost market access early on, and some French banks faced unprecedented scrutiny. Net bond issuance by euro area banks continued to run negative since the middle of the year (Graph 4, centre panel; see also page 20 of this issue). Banks issued collateralised bonds, but the unsecured medium-term segment remained effectively closed. At the same time, US money market mutual funds continued to retreat from funding European banks (–42% since end-May) to avoid indirect exposure to sovereign risk. In November, the cost of swapping euros into dollars reached the highest level since December 2008. Refinancing difficulties may well persist, as

Waves of bank downgrades ...

... compound banks' funding challenges ...



Box 2: Different causes for recent bank downgrades

Nikola Tarashev

Rating agencies have downgraded a large number of banks since the spring of 2011. In explaining these actions, agency reports and market commentary have referred to the link between financial institutions and sovereigns as an important driver of banks' creditworthiness. The purpose of this box is to illustrate that agencies have perceived this link as evolving differently across countries. In certain cases, recent bank downgrades have accompanied sovereign downgrades, which is consistent with an increased interdependence between the financial health of financial institutions and that of their sovereign. By contrast, bank downgrades in other countries reflect policy initiatives to wean banks off government support.

In principle, a sovereign could affect both the *financial-strength* rating of a bank, which captures its intrinsic capacity to remain solvent, and the *all-in* rating, which incorporates also the strength and likelihood of external support.^① A troubled sovereign can put downward pressure on the financial-strength rating of its lenders by increasing their probability of default and impairing their access to funding markets. And the weakened finances of such a sovereign reduce its *capacity* to provide support, pushing banks' all-in ratings down towards the underlying financial-strength ratings. In turn, a reduced *willingness* to put taxpayer money at risk would also reduce rating enhancements due to sovereign support, and thus banks' all-in ratings, even if financial-strength ratings remained the same.

In a sample of some 50 banks, most of the all-in downgrades that the three major rating agencies (Fitch, Moody's and Standard & Poor's) have announced over the last half-year have been for European institutions (Table A). By contrast, there have been no all-in upgrades. Two parallel developments are likely to have contributed to these rating actions. In some European countries, the sovereigns have experienced severe financial difficulties. In others, authorities have made explicit commitments to reduce their support to banks and have backed these commitments with bank resolution schemes.

Downgrades of bank all-in ratings¹

	DE	FR	ES	IT	IE	PT	GR	CH	GB	US
Fitch	0 (8)	0 (3)	4 (4)	7 (8)	0 (3)	3 (3)	3 (3)	1 (2)	2 (6)	0 (6)
Moody's	3 (6)	1 (5)	2 (6)	7 (7)	2 (3)	4 (4)	3 (3)	0 (2)	3 (6)	2 (7)
Standard & Poor's	0 (9)	2 (5)	4 (6)	7 (8)	0 (3)	0 (4)	3 (3)	0 (2)	0 (5)	0 (6)

CH = Swiss banks; DE = German banks; ES = Spanish banks; FR = French banks; GB = UK banks; GR = Greek banks; IE = Irish banks; IT = Italian banks; PT = Portuguese banks; US = US banks.

¹ Sample period: 1 April to 29 November 2011 for ratings by Fitch and Moody's and 1 April to 28 November 2011 for ratings by Standard and Poor's. In parentheses, the total number of banks in the sample for the particular country-agency pair.

Source: Bloomberg.

Table A

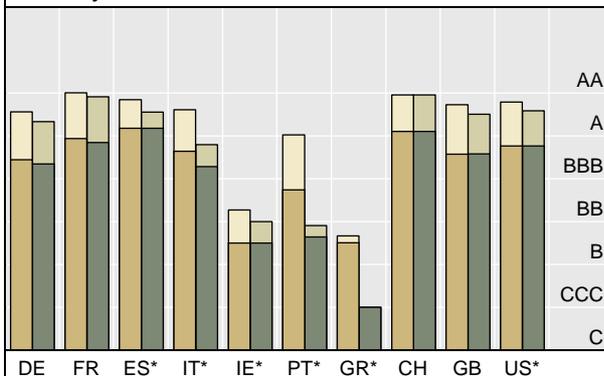
In order to delve deeper into the potential reasons for the recent all-in downgrades, it is necessary to also examine banks' financial-strength ratings and the corresponding sovereign ratings. A consistent set of such ratings is available from Fitch and Moody's only. Taken together, they suggest that the two agencies distinguish three groups of countries according to the evolution of the link between sovereign and bank finances (Graph A).

For countries in the first group, this link has changed little. Over the last half-year, the sovereigns in these countries have maintained their top ratings and, in most cases, stable rating outlooks. Likewise, the all-in ratings of banks from these countries or the rating enhancements due to official support have not changed. France belongs to this group according to both agencies and is joined by Switzerland according to Moody's or Germany and the United States according to Fitch.

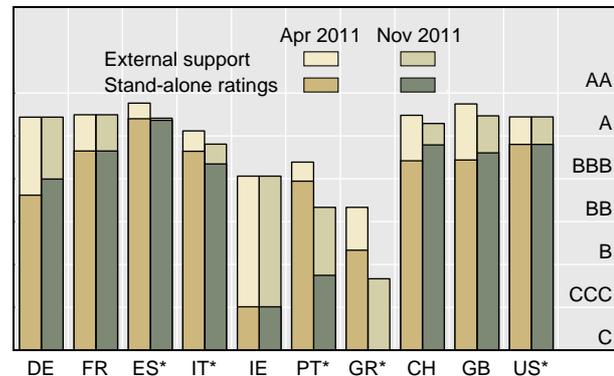
Stand-alone ratings and the importance of external support¹

Asset-weighted averages

Moody's



Fitch



Asterisks flag countries that have been downgraded, or put on a negative watch, by the respective agency over the sample period.

¹ A stand-alone rating plus the enhancement due to external support equals an all-in rating. For comparability, the all-in ratings by Moody's are converted on the Fitch rating scale. For the exact sample period, the number of banks in the sample and the meaning of country codes, see Table A above.

Sources: Bloomberg; The Banker Database.

Graph A

The second group comprises sovereigns that the rating agencies perceive as having financial difficulties, and hence a reduced capacity to provide support to banks. For the countries in this group, rating actions over the last half-year suggest that the prolonged crisis has strengthened the interdependence between sovereign and bank health. At least one agency has downgraded the sovereigns in the group or has assigned a negative outlook to their ratings, which has depressed the perceived official support to banks and thus their all-in ratings.² And in certain cases, exposures to troubled sovereigns have contributed to the downgrade of banks' financial-strength ratings as well. According to both agencies, Greece, Italy, Portugal and Spain belong to this group. They are joined by Ireland and the United States according to Moody's.³

Finally, the two agencies view the countries in the third group as financially stable but with a reduced willingness to provide public support to banks, which suggests a decoupling of sovereign and bank health. These countries have maintained their top sovereign ratings with a stable outlook. At the same time, banks headquartered there have seen their all-in ratings deteriorate, even though their financial-strength ratings have remained stable or improved. The United Kingdom belongs to this group according to both agencies and is joined by Switzerland according to Fitch or Germany according to Moody's.

¹ See F Packer and N Tarashev (2011), "Rating methodologies for banks", *BIS Quarterly Review*, June; and Committee on the Global Financial System (2011), "The impact of sovereign credit risk on bank funding conditions", *CGFS Papers*, no 43, July. ² The only exception stems from the Fitch ratings for Greek banks. Currently at the lowest possible level on a financial-strength basis, these ratings are boosted significantly on an all-in basis by perceived sovereign support. ³ Fitch had downgraded the Irish sovereign and banks *before* the start of the sample period, April 2011.

nearly \$2 trillion of bank debt will come due by end-2014. Some 13% of this amount is government-guaranteed debt, which had been issued mostly in 2009 at maturities that may be difficult to renew on reasonable terms.

... prompting further liquidity support from the Eurosystem

Continued bank funding problems on the back of stress in sovereign debt markets put the Eurosystem into the limelight. The euro area central banks continued to provide ample liquidity to the financial system. With banks increasingly reluctant to lend to each other, part of the interbank market effectively moved onto the Eurosystem's balance sheet. Utilisation of its

deposit facility reached nearly €300 billion on 7 November while lending to banks amounted to twice that level (Graph 4, right-hand panel). Banks headquartered in France, Ireland and Italy accounted for over half of the Eurosystem's lending to banks. French banks borrowed €141 billion, making up for some of the lost wholesale market funding. Italian banks' uptake jumped to €111 billion by end-October, raising the dependence on ECB funding to 2.8% of their combined balance sheet. Further measures to alleviate funding strains included emergency liquidity assistance, the reintroduction of one-year refinancing operations, and a second covered bond purchase programme of €40 billion.

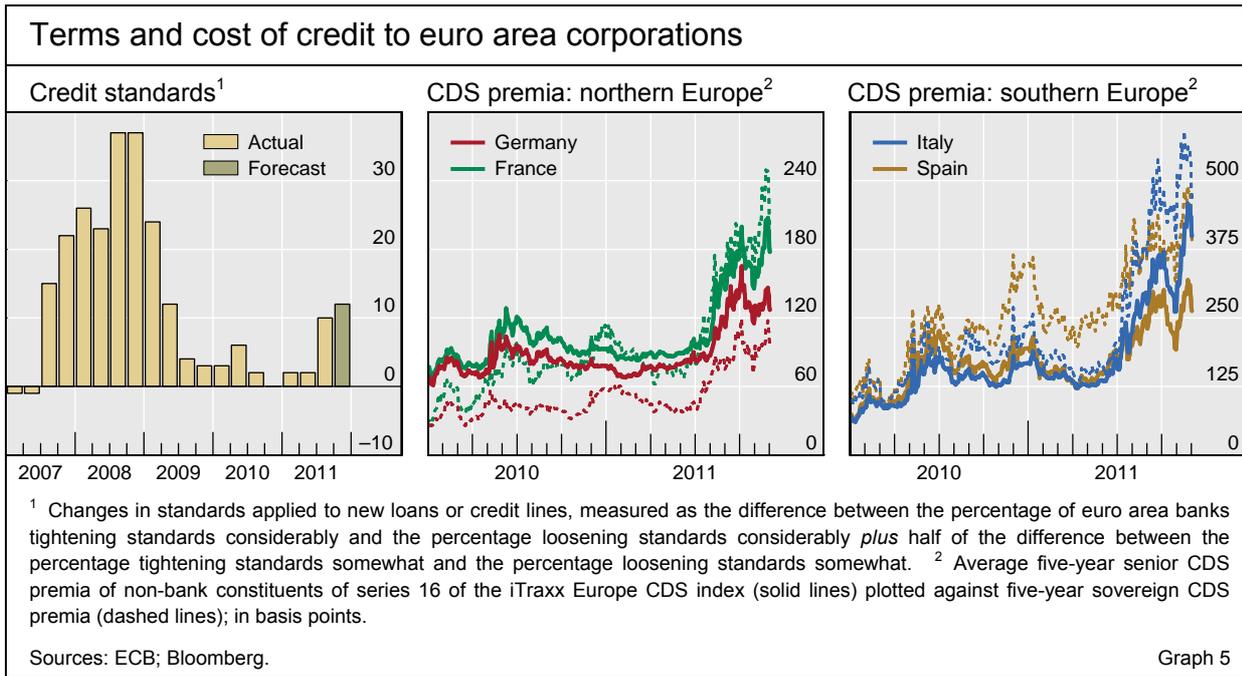
Coordinated central bank action to provide international liquidity triggered a market rally on 30 November. The Federal Reserve and the ECB, together with the central banks of Canada, Japan, Switzerland and the United Kingdom, agreed to halve the cost of US dollar swap lines to 50 basis points over overnight index swaps (OIS), and to establish contingent swap lines in each other's currencies. Market participants cheered at this display of concerted action. The major equity indices gained 3–4% on the same day, and euro area bonds yields and sovereign CDS premia tightened considerably. FX swap spreads above 50 basis points came down immediately. In particular, the premium paid by financial institutions for swapping euros into dollars dropped from 151 to 119 basis points.

The wide range of liquidity measures bought time but did not alleviate banks' medium-term funding challenges, underscoring the current focus on plans to strengthen the banking sector. While guarantee schemes for newly issued bank debt may remain national in scope, the European Banking Authority (EBA) published capitalisation targets for 70 European banks with the aim of promoting recapitalisations worth €106 billion (Table 1). As capital ratios can also be met by shedding risky assets, market participants grew concerned that times of funding strains and elevated value-at-risk would favour the shrinking of bank balance sheets, with possible macroeconomic implications inside and outside Europe.

Pressures lead banks to shed assets

Euro area banks already tightened terms and raised interest rates on loans to corporations and households throughout the review period. Recent releases of the Eurosystem's bank lending survey indicate that many euro area banks tightened credit standards in the third quarter of the year and planned to continue to do so in the fourth quarter (Graph 5, left-hand panel). The prevalence of tightening, however, was not as widespread as at the peak of the 2008 financial crisis, and the volume of euro area bank loans to the private sector did not contract in October. The surveys indicated that a key factor behind the tightening was the deterioration in banks' own funding conditions. In syndicated lending, for example, the share of euro area banks in global new loans fell to 18% in October, from 26% a year earlier. Moreover, the average interest rate on all new loans from euro area banks to corporations increased fairly steadily, by 1 percentage point in the year to end-September. Banks in Greece and Portugal raised interest rates by around 2 percentage points. The average interest rate on new unsecured loans to households also increased by about 1 percentage point. Increases in corporate CDS premia, which have

The cost and terms of credit deteriorate



risen in parallel with sovereign CDS in recent months, suggest that corporate borrowing costs have increased further since the end of September (Graph 5, centre and right-hand panels).

Global spillovers

Securities dealers' funding costs rise ...

As the market values of euro area sovereign and bank debts fell and became more volatile, funding costs rose for financial institutions with exposures to these assets. This was especially the case for securities dealers, who tend to be highly leveraged and reliant on wholesale funding. Furthermore, some securities dealers may have had significant derivatives exposures to sovereigns. Traditionally, these have not been collateralised. Short-dated CDS premia increased sharply for US and European dealers in September and November (Graph 6, left-hand panel). The November increase came after the failure of MF Global highlighted the importance of sovereign risks.

... which affects terms for securities financing and trading

As their own funding conditions deteriorated, securities dealers tightened terms on securities financing and reduced their market-making activities. A Federal Reserve survey of 20 large securities dealers, published in October, already showed that financing asset-backed securities, corporate bonds and equities had recently become more expensive and required more collateral (Graph 6, centre panel). It also showed that liquidity had deteriorated in these markets (Graph 6, right-hand panel). Market contacts reported that liquidity declined as market-makers sought to reduce inventories, the values of which had become significantly more volatile. But this reinforced volatility, as trades moved prices by more than previously.

Risky asset prices consequently move in step with the euro crisis

As funding and market liquidity fluctuated with the state of the euro area sovereign debt crisis, risky asset prices moved in step. Both equity and bond prices fell in September, increased in October and declined again in November, as did the trade-weighted value of the euro (Graph 1, right-hand panel).

Emerging markets were adversely affected by the euro area crisis, with investors withdrawing over \$25 billion from emerging market funds in August and September, notably from equity funds. Emerging market equity prices fell sharply in September, even more sharply than developed market equity prices, after the volatility of investor portfolios escalated (Graph 7, left-hand panel). This suggests that risky assets may have been sold to reduce portfolio volatilities, with relatively little regard for their fundamental prospects. Indeed, economic forecasts for emerging markets in Latin America and the Asia-Pacific region were little changed in September, but prices still fell sharply.

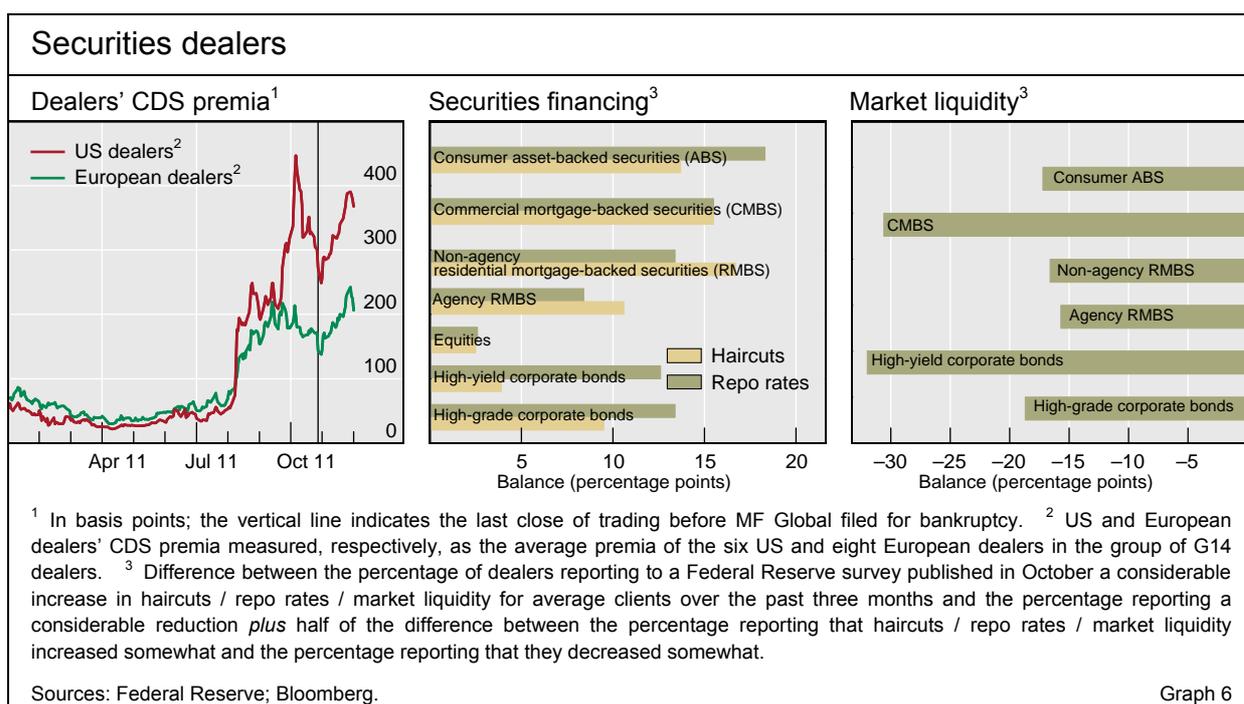
Emerging market asset prices fall as international investors withdraw ...

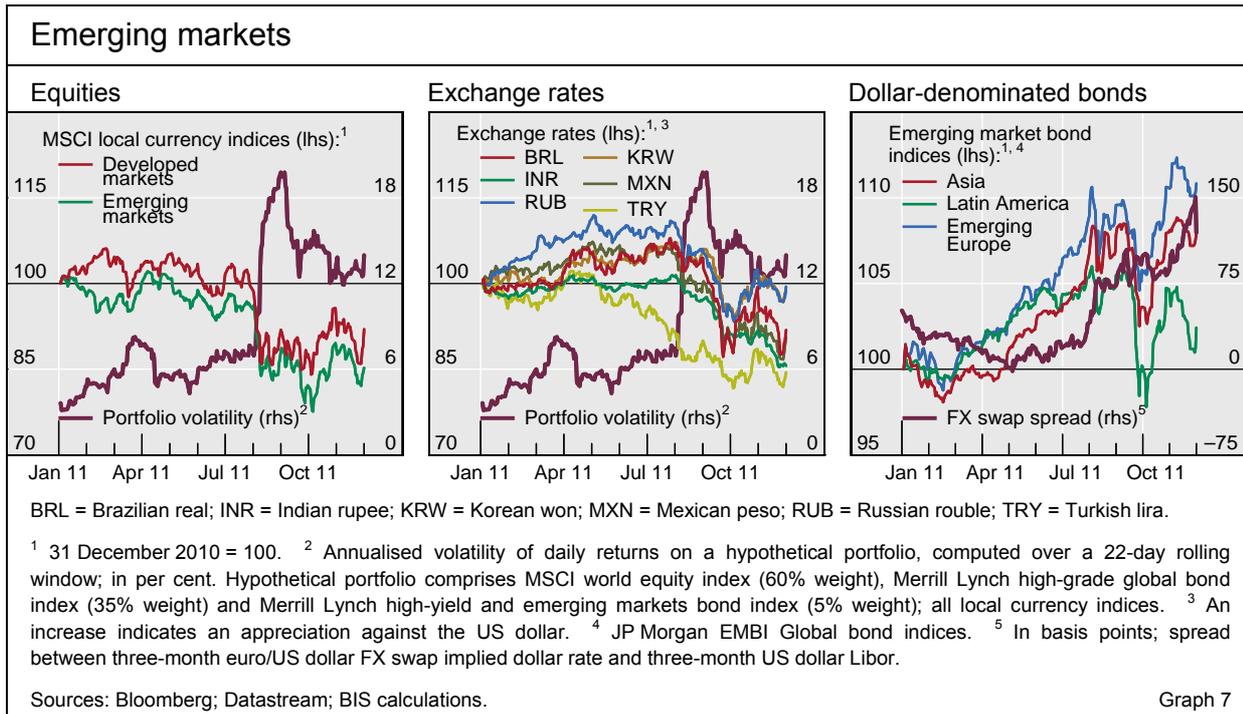
Withdrawals from emerging market funds appeared to reflect asset repatriation by euro area investors. The \$25 billion withdrawal from emerging market funds coincided with over €85 billion of portfolio inflows to the euro area from a reduction of overseas assets. Balance of payments statistics show that a large share of these went to France. Repatriation is also suggested by some of the sharpest falls in local currency bond indices occurring in emerging markets where international investors are well represented, such as Indonesia, Mexico and South Africa. Conversion of emerging market assets into euros would have put downward pressure on emerging market exchange rates, which fell sharply in September (Graph 7, centre panel). Several central banks, including those of Brazil, Hungary, Indonesia, Korea, Russia and Turkey, reportedly intervened in the currency markets to support their exchange rates.

... and repatriate funds to the euro area

Dollar funding concerns may also have motivated some investors to sell emerging market assets. As the cost of dollar funds via the currency swaps market increased, prices of dollar-denominated emerging market bonds fell (Graph 7, right-hand panel). They fell sharply in September and to a lesser extent in November. Market analysts also reported a decline in the supply of trade finance and export credit guarantees from euro area banks to emerging markets, much of which are denominated in dollars. Some of this business,

Dollar funding concerns exacerbate sales of emerging market assets





however, has been taken on by local lenders and the large international commercial banks.

Some analysts have further concerns about credit withdrawal from emerging Europe

In addition, analysts were concerned that any reduction in euro area bank lending to firms and households in emerging markets could exacerbate slowdowns in economic growth. They perceived emerging European economies as most vulnerable, with around 80% of foreign bank claims belonging to Austrian, French, Greek, Italian and other euro area banks (see also box on pages 16–17). For some countries in the region, these claims amount to over 100% of GDP. Some euro area banks, including Commerzbank and Unicredit, have already announced that they plan to scale back new loans to much of the region. Furthermore, the Austrian bank regulator has stipulated that any new loans to the region from local subsidiaries of Austrian banks must be matched by increases in local deposits. Analysts noted that this could restrict credit supply and exacerbate any downturn in emerging Europe. Croatia, the Czech Republic, Hungary and Romania have the greatest volumes of outstanding credit from Austrian banks.

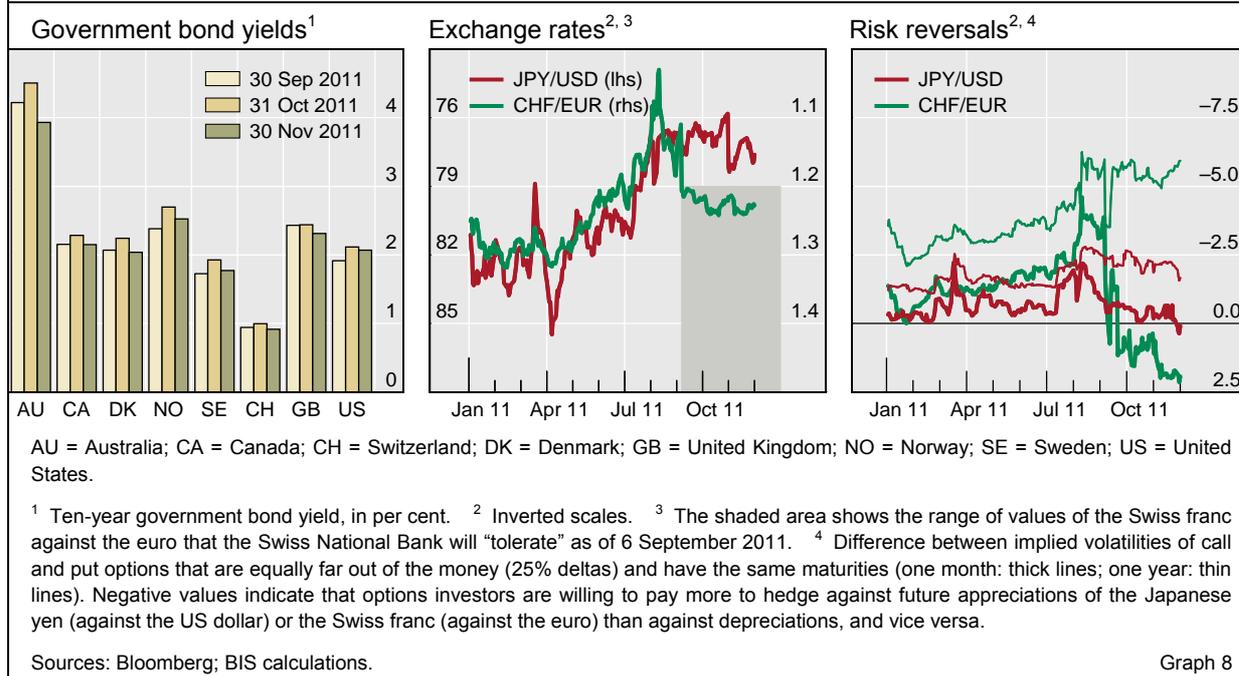
Prices of safe haven assets vary inversely with the euro crisis ...

As demand for risky assets ebbed, flowed and again ebbed in September, October and November respectively, the demand for safe haven assets followed the opposite pattern. Safe havens included North American, Australian and some northern European government bonds. Yields on these securities declined in September, rose in October and declined again in November (Graph 8, left-hand panel). Yields on three-month US and German government bonds and two-year Swiss government bonds fell below zero in November, as did yields on 10-year US and UK inflation-linked government bonds.

... and some safe haven currencies appreciate further, prompting intervention

Safe haven flows also continued into Japanese assets, putting further upward pressure on the yen (Graph 8, centre panel). In response, the Japanese authorities intervened in the currency markets in a reported record amount for one day on 31 October. Since a recent series of interventions

Flight to quality and exchange rate intervention



began in August, the balance of risks to the near-term future value of the yen suggested by the difference between premia on options offering protection against either appreciation or depreciation of the yen over a one-month horizon has neutralised from a skew towards appreciation. The corresponding difference between premia on Swiss franc options collapsed after the Swiss National Bank announced in early September that it intended to prevent its currency from appreciating beyond a certain level against the euro. The balance of risks to both the yen and the Swiss franc over 12 months, however, remained skewed towards appreciation (Graph 8, right-hand panel).