Highlights of the BIS international statistics[1]

The BIS, in cooperation with central banks and monetary authorities worldwide, compiles and disseminates several data sets on activity in international financial markets. This chapter summarises the latest data for the international banking market (available up to the fourth quarter of 2011) and for the over-the-counter (OTC) derivatives market (available up to the second half of 2011). One box discusses activity in international debt securities markets in the first quarter of 2012, and a second discusses the calculation of uncovered counterparty exposures in global OTC derivatives markets.

During the fourth quarter of 2011, BIS reporting banks recorded their largest decline in aggregate cross-border claims since the drop in the fourth quarter of 2008, which followed the collapse of Lehman Brothers. The latest decline was worldwide but largely driven by banks headquartered in the euro area facing pressures to reduce their leverage. Overall, cross-border lending to non-banks decreased; but the decline of claims on banks was sharper – and the largest in almost three years.

In developed countries as a whole, total cross-border lending to banks and non-banks contracted by $630 billion; the most notable exceptions were Japan and Switzerland, where it increased by $71 billion and $13 billion, respectively. The decline was led by a significant drop in interbank lending arising from the spillover of the euro area sovereign debt crisis to bank funding markets. The reduction was especially marked for cross-border claims on residents of the euro area and was mostly attributable to euro area banks.

In emerging market economies,[2] cross-border claims of BIS reporting banks fell in most regions, overall by $75 billion. The decline was concentrated on Asia-Pacific in general and on banks in China in particular. For China, this was the first overall decrease since the opening quarter of 2009. Among all developing countries, only those in Latin America and the Caribbean saw an increase in cross-border claims.

[1] This article was prepared by Adrian van Rixtel (adrian.vanrixtel@bis.org) for banking statistics and Nicholas Vause (nick.vause@bis.org) for OTC derivatives. Statistical support was provided by Stephan Binder, Serge Grouchko, Branimir Gruić, Carlos Mallo and Denis Pêtre.

[2] “Developing countries” in the Statistical Annex tables.

In the OTC market, the notional amount of derivatives outstanding fell 8%, to $648 trillion, in the second half of 2011, while a rise in price volatility drove up the market value by 40%. Gross credit exposures rose 32%.

The issuance of international debt securities in the first quarter of 2012 made a strong advance over the final quarter of 2011, primarily because of the ECB's offer of three-year collateralised lending to banks (see Box 1).

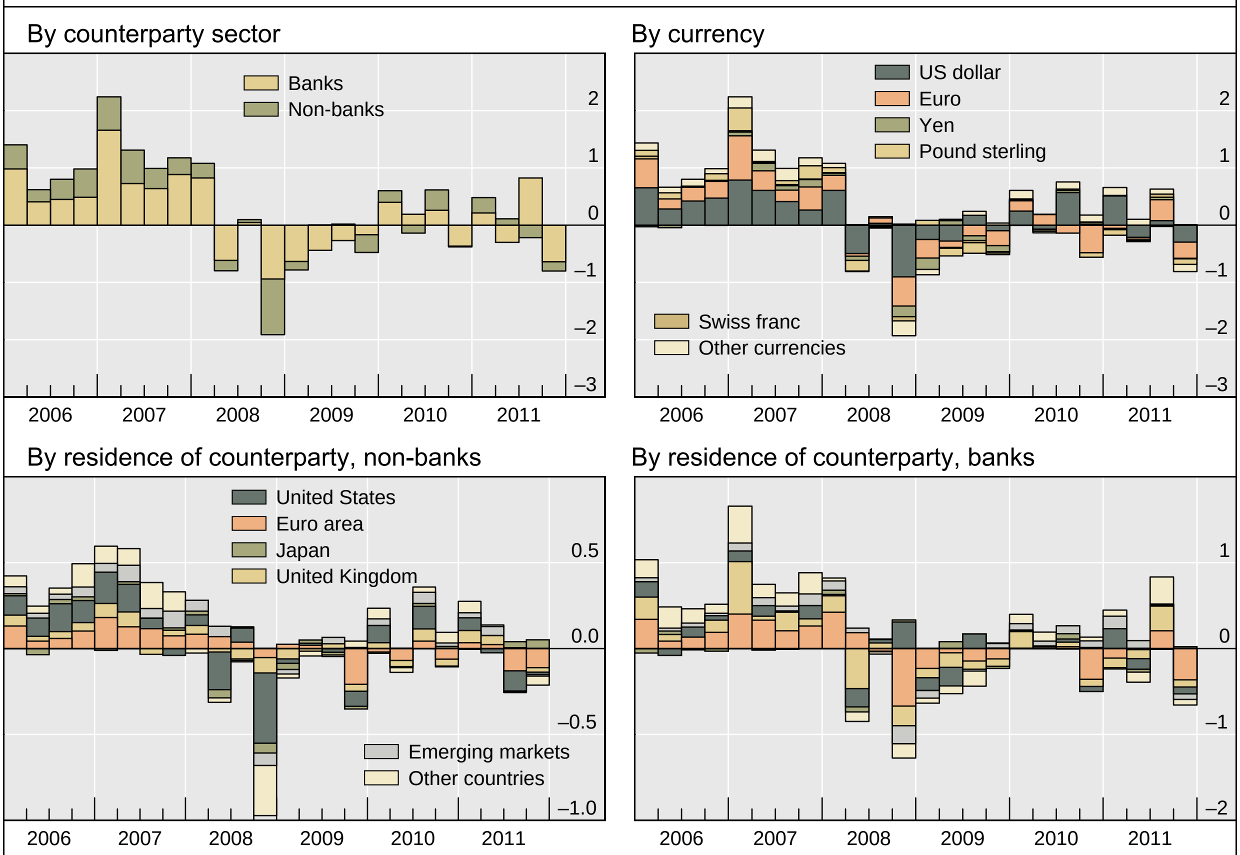
The international banking market in the fourth quarter of 2011

Aggregate cross-border claims decline

The aggregate cross-border claims of BIS reporting banks declined strongly during the fourth quarter of 2011.[3] The overall decrease of $799 billion (2.5%) was driven mainly by a $637 billion (3.1%) fall in interbank lending (Graph 1, top left-hand panel). Claims on non-banks contracted by $162 billion (1.4%). Claims denominated in all the major currencies fell, except for the yen (Graph 1, top right-hand panel).

Changes in gross cross-border claims[1]

In trillions of US dollars



[1] BIS reporting banks' cross-border claims include inter-office claims.

Source: BIS locational banking statistics by residence.

Graph 1

[3] The analysis in this section is based on the BIS locational banking statistics by residence, in which creditors and debtors are classified according to their residence (as in the balance of payments statistics), not according to their nationality. All reported flows in cross-border claims have been adjusted for exchange rate fluctuations and breaks in series.

Decline in claims on non-banks

Cross-border claims on non-banks (ie entities other than banks) declined in most of the major developed countries (Graph 1, bottom left-hand panel). As in the previous quarter, the bulk of the decrease at non-banks was in the euro area ($110 billion or 3%). Residents of France accounted for $42 billion of this decrease, followed by those of Belgium ($20 billion), the Netherlands ($17 billion), Italy ($12 billion) and Spain ($8 billion). Claims on non-banks also fell considerably in the United Kingdom ($26 billion or 2.4%) and in the United States ($14 billion or 0.6%). In line with the previous quarter, the only major economy with a significant increase in cross-border claims on its non-banks was Japan ($51 billion or 20%).

Sharp drop in cross-border interbank lending

Cross-border claims on banks decline in almost all euro area countries …

Three features characterise the sharp decline in cross-border claims on banks in the fourth quarter. First and foremost, internationally active banks reduced their cross-border lending to banks in the euro area. Second, they also reduced cross-border interbank lending in several other developed countries, albeit by a lesser amount. Third, they cut interbank loans much more than other instruments.[4]

Cross-border claims on banks located in the euro area fell by $364 billion (5.9%), which is equivalent to 57% of the decline in global cross-border interbank lending during the quarter. It was the largest contraction in cross-border claims on euro area banks, in both absolute and relative terms, since the fourth quarter of 2008. Cross-border lending to banks located on the euro area periphery continued to fall significantly. Lending to banks in Italy and Spain shrank, by $57 billion (9.8%) and $46 billion (8.7%), respectively, while claims on banks in Greece, Ireland and Portugal also contracted sharply. Nonetheless, exposures to these five countries accounted for only 39% of the reduction in cross-border interbank lending to the euro area. BIS reporters also reduced their cross-border claims on banks in Germany ($104 billion or 8.7%) and France ($55 billion or 4.2%).

… and the United States and United Kingdom

Cross-border interbank lending to most other major economies also fell during the period but generally to a lesser extent – to banks located in the United States by $80 billion (2.7%); to those in the United Kingdom by $84 billion (2.1%) (Graph 1, bottom right-hand panel); and to those in Australia by $32 billion (11%). Such lending to banks located in offshore centres fell by $54 billion (2.1%).

Sharp decline in interbank loans drives reduction in interbank claims

The strong contraction in cross-border claims on banks was concentrated in *interbank loans*. These declined by $524 billion (3.2%), accounting for 82% of the total global decrease. *Other assets* accounted for 11% of the decline,

[4] BIS locational banking statistics by residence divide the international claims of reporting banks into three instrument categories: *loans and deposits*, *debt securities* and *other assets*. The last category includes equity, participations, derivative instruments, working capital supplied by head offices to branches and residual on-balance sheet claims. For further details, see *Guidelines to the international locational banking statistics*, www.bis.org/statistics/locbankstatsguide.pdf.

and *debt securities* for 7%. In contrast, in the previous quarter, *other assets* was the leading instrument category, possibly because of changes in the market value of derivatives positions. The fall in interbank loans was more pronounced in the euro area (at 6.3%). This development may be seen as part of the marked spillover effects from the euro area sovereign debt crisis to bank funding markets, including short-term interbank markets, in the fourth quarter of 2011. During that quarter, the three-month Libor-OIS spread increased to high levels on the back of higher risk premia and the growing reluctance of market participants to engage in interbank loan transactions. This spread also increased for US dollar and sterling interbank loans, although to a lesser extent. *Interbank loans* declined significantly for banks in the United States ($81 billion or 3.1%) and the United Kingdom ($63 billion or 2%).

Cross-border claims on banks in Japan and Switzerland expand

In contrast, the cross-border interbank market generated modest amounts of new funds, mainly for banks in Japan (Graph 1, bottom right-hand panel) and Switzerland. Claims on banks in Japan rose by $21 billion (3.5%), and claims on those in Switzerland by $14 billion (2.9%); again, in each case, the increase in claims came mainly from the rise in *interbank loans* – $23 billion (4.0%) and $20 billion (4.7%), respectively.

Deleveraging European banks reduce cross-border positions[5]

European banks slash cross-border lending …

In the fourth quarter of 2011, the strains of the euro area sovereign debt crisis started to spread from bank wholesale funding markets to the assets side of the institutions' balance sheets.[6] This raised interest among market observers as to how banks from individual countries were being affected, including their cross-border positions denominated in various currencies. Both dimensions – nationality and currency denomination – may be assessed through the BIS locational banking statistics by nationality.[7] Banks headquartered in developed European economies reduced their cross-border assets by $466 billion (2.3%), the second largest decline in both absolute and relative terms since the fourth quarter of 2008.

This cutback was more marked for euro area banks, at $584 billion (4.7%). Banks with head offices in France lowered their cross-border assets by $197 billion (5.3%), mostly by reducing positions denominated in the euro – after the 7.1% drop in the previous quarter, it was the second largest for French banks in at least 12 years. The cross-border lending of banks in some other major European economies declined significantly as well: ranked by percentage point change, the drop was $35 billion (5.3%) in Spain; $181 billion

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5 The analysis in this section is based on the BIS locational banking statistics by nationality.

6 See "European bank funding and deleveraging", *BIS Quarterly Review*, March 2012, pp 1–12.

7 The BIS statistics by nationality cover activity according to the country of incorporation or the country in which the ultimate parent/company is chartered. The organising principle is thus the nationality of the controlling interest rather than the residence of the operating unit. These statistics also allow for currency breakdowns of international positions, which is not possible with the consolidated banking statistics (which are also organised according to the nationality of reporting banks). For more details, see *Guidelines to the international locational banking statistics*, www.bis.org/statistics/locbankstatsguide.pdf.

(4.7%) in Germany; and $32 billion (3.5%) in Italy. In contrast, the cross-border lending of UK banks increased slightly ($7 billion or 0.2%).

… as well as cross-border funding

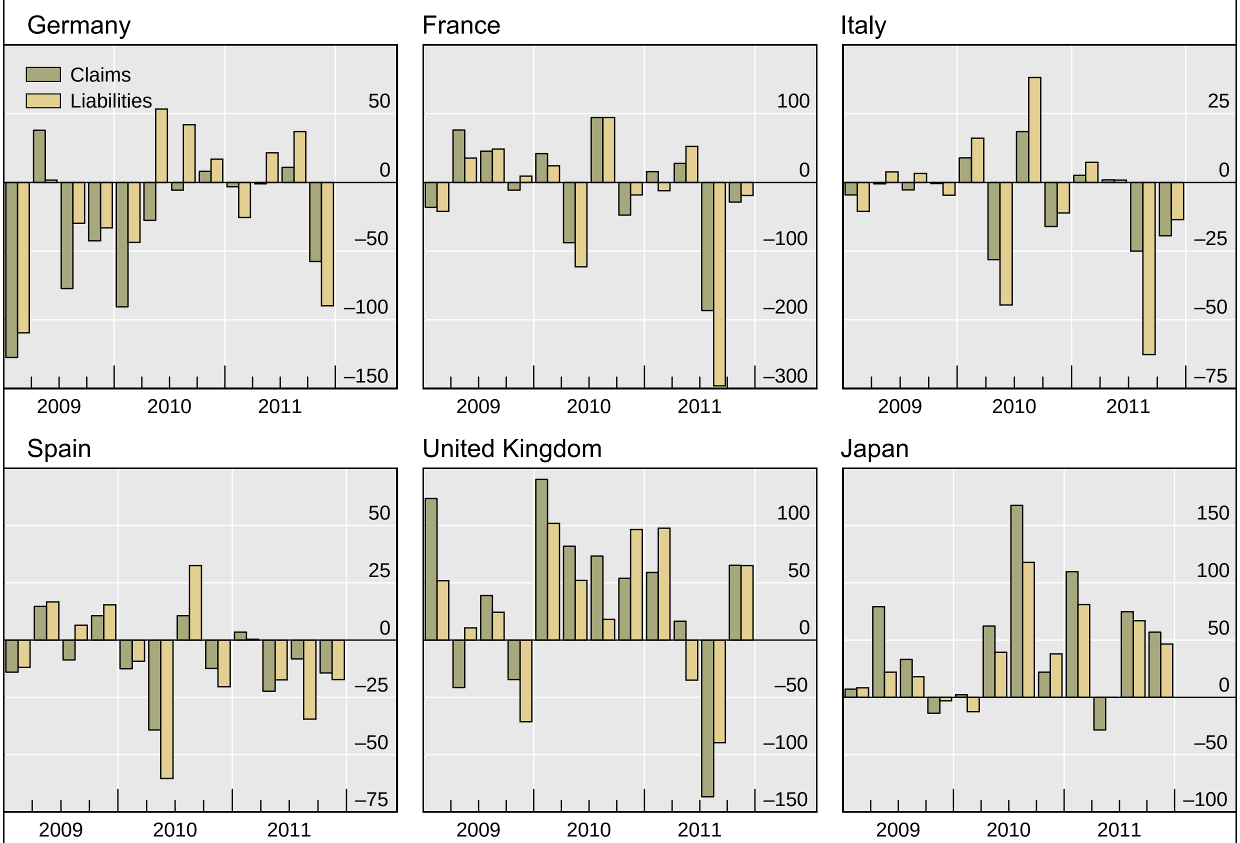
Funding, another dimension of BIS reporting banks' cross-border positions, fell sharply in the fourth quarter of 2011. For banks in the developed European economies, funding dropped $602 billion (3.1%); for euro area banks, the decline was even larger at $681 billion (5.9%). Among banks headquartered in the main European economies, the strongest declines in cross-border liabilities were in Spain ($81 billion or 9.0% – the largest drop in more than 17 years) and Italy ($68 billion or 8.0% – the largest in more than nine years). Those headquartered in France cut such funding by $208 billion (6.2%) and those in Germany by $185 billion (5.8%). In contrast, cross-border liabilities rose for banks headquartered in the United Kingdom and by even more for those in Japan; the gains may be related to perceptions of those countries as safe havens amid the continuing severity of the euro area sovereign and banking crises.

Partial easing of US dollar tensions for French, Italian and Spanish banks

At the same time, although the US dollar segment of the cross-border funding market continued to drop for banks headquartered in France ($19 billion), Italy ($14 billion) and Spain ($17 billion), the decline was markedly slower than in the previous quarter (Graph 2) ($296 billion, $63 billion and $34 billion, respectively). This improvement was supported by the action

Cross-border bank claims and liabilities, denominated in US dollars, by nationality of head office

Exchange rate-adjusted changes in stocks, in billions of US dollars



Source: BIS locational banking statistics by nationality. Graph 2 coordinated by the Federal Reserve with several other main central banks on 30 November to lower the price of dollar funding through US dollar swap arrangements. Federal Reserve data show a strong increase in US dollar swaps with other central banks in December 2011.[8]

Foreign bank lending to the euro area periphery continues to contract[9]

The consolidated foreign claims of BIS reporting banks on counterparties in Greece, Ireland, Italy, Portugal and Spain continued to drop substantially (Graph 3). Calculated at constant exchange rates, foreign claims on residents contracted by $126 billion (5.7%).[10] Foreign claims on the public sector dropped by $54.1 billion (14%) and on banks by $54.5 billion (13%); for the previous quarter, those claims fell $63 billion and $43 billion, respectively. The declines may stem in part from the effect of the euro area sovereign debt crisis on the banking sector. Foreign lending to the non-bank private sector declined by $17 billion (1.3%), a larger drop than in the previous quarter.

Foreign claims on euro area peripheral countries decline

BIS reporting banks reduced their exposures to all sectors in each of the five euro area peripheral countries. Although the composition of the contraction varied considerably by country, the pattern from the previous quarter was largely repeated in Greece, Italy and Spain. The overall drop in foreign lending to Greece ($11 billion or 10%) and Italy ($55 billion or 6.8%) involved primarily their public sectors – $7.8 billion (24%) in Greece, and $32 billion (14%) in Italy. The drop in foreign claims on Spain ($48 billion or 7.2%) affected largely its banking sector ($31 billion or 16%).

In contrast, the fourth quarter decline in foreign lending to Ireland ($7.5 billion or 1.7%) was concentrated on recipient banks ($4.9 billion or 6.7%), whereas the non-bank private sector bore the brunt of the contraction in the previous quarter. And the decrease in foreign claims on Portugal ($3.7 billion or 2.0%) involved mainly the non-bank private sector ($2.5 billion or 2.0%), a shift from the third quarter's concentration on the banking sector.

On the lender side, euro area banks accounted for most of the reduction in foreign claims on the five peripheral countries ($105 billion or 6.7%). French banks alone accounted for more than half of that decline ($55 billion or 8.9%). In contrast, US banks modestly increased their foreign claims on the five countries through larger exposures to banks and lower outward risk transfers

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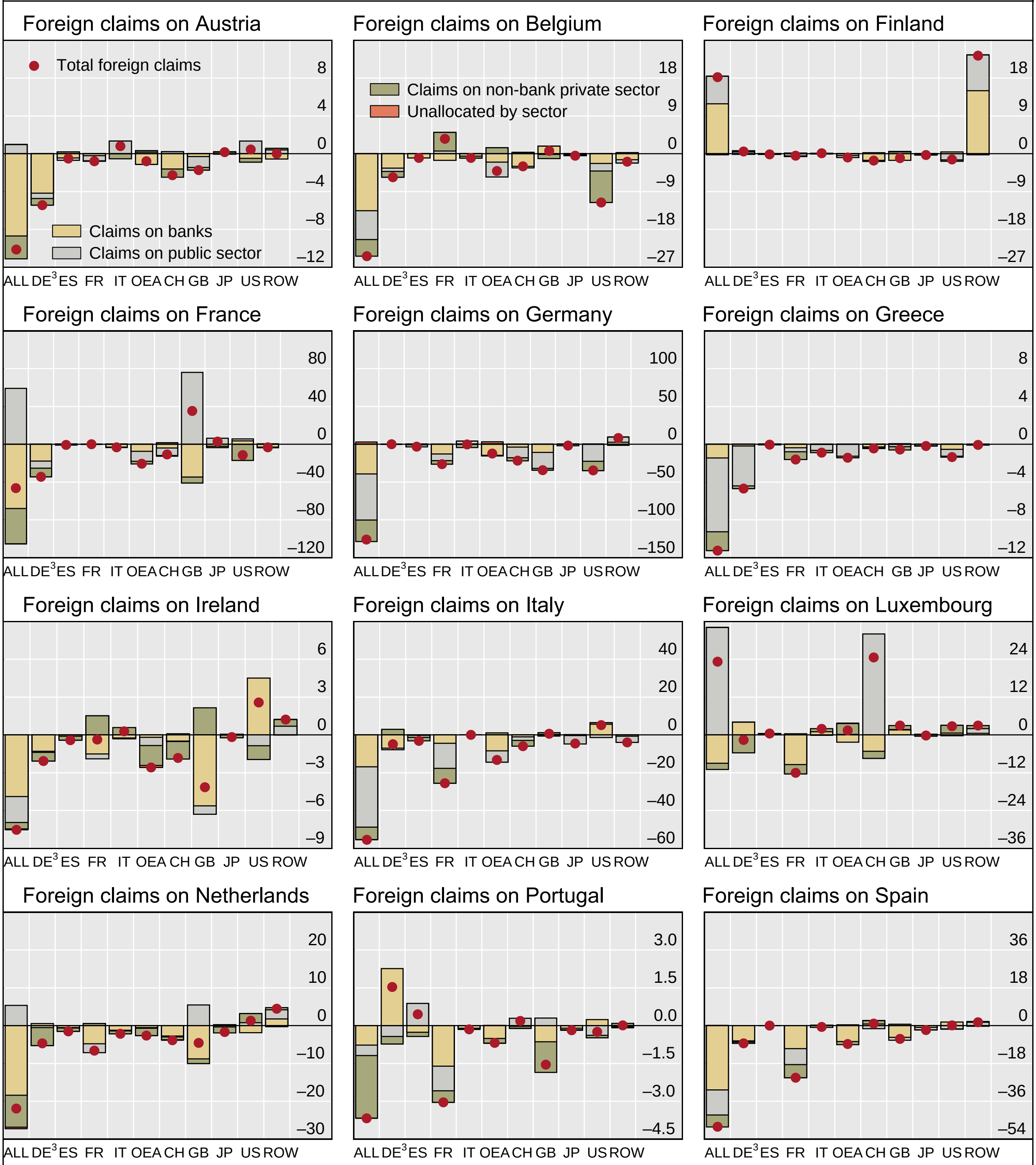
8 According to the data, the swaps rose from $2.4 billion at end-November to $99.8 billion at 28 December and then declined to $26.7 billion on 9 May.

9 The analysis in this section is based on the BIS consolidated international banking statistics on an ultimate risk basis. In this data set, the exposures of reporting banks are classified according to the nationality of banks (ie according to the location of banks' headquarters), not according to the location of the office in which they are booked. In addition, the classification of counterparties takes into account risk transfers between countries and sectors (for a more detailed discussion and examples of risk transfers, see *BIS Quarterly Review*, March 2011, pp 16–17).

10 To adjust for the period's currency fluctuations, we assume that all foreign claims on residents of the euro area are denominated in euros.

Estimated changes in foreign claims[1] on selected countries, Q4 2011

By bank nationality at constant end-2011 exchange rates,[2] in billions of US dollars



ALL = all BIS reporting banks; CH = Switzerland; DE = Germany; ES = Spain; FR = France; GB = United Kingdom; IT = Italy; JP = Japan; OEA = other euro area; ROW = rest of the world; US = United States.

[1] Foreign claims consist of cross-border claims and of local claims of foreign affiliates; claims of locally headquartered banks are not included, as these are not foreign claims. [2] All claims are assumed to be denominated in euros. [3] Claims of German banks are on an immediate borrower basis, except for their claims on the Greek public sector, which are on an ultimate risk basis.

Source: BIS consolidated banking statistics (ultimate risk basis). Graph 3

(in particular, reduced third-party guarantees on US banks' foreign claims on Ireland), and despite a decline in US bank claims on each of these countries' public sectors.

Cross-border claims on emerging market economies decline[11]

Claims on the residents of emerging market economies from banks located in other countries contracted by $75 billion (2.4%), following a decline of $17 billion (0.5%) in the previous quarter. As it was only the second decline in almost three years, the drop in claims highlighted the scope of the deleveraging in cross-border business activities during the period. The reductions in these claims by banks in the euro area, Asian offshore centres and Japan were especially large and were only modestly offset by slight increases in cross-border lending from other areas, mostly the United Kingdom and the United States.

The contraction was mainly driven by a sharp reduction in interbank claims of $64 billion (3.8%), more than half of which was focused on China. Cross-border claims on non-banks declined by $10 billion (0.7%). Claims on residents in the Asia-Pacific region, emerging Europe, and Africa and the Middle East all fell. The only region with an increase was Latin America and the Caribbean.

Cross-border lending to Asia-Pacific declines …

The largest decline in cross-border credit in developing areas was in the Asia-Pacific region, accounting for 91% of the total reduction for developing countries (Graph 4, top left-hand panel). In fact, it was the first decrease in cross-border claims on the region since the first quarter of 2009. The $68 billion (5.1%) overall decline was due to a $70 billion (7.9%) drop in interbank claims, while lending to non-banks increased modestly by $1.6 billion (0.3%). The decline in cross-border claims in the region originated for the most part from banks in Asian offshore centres, eg in Hong Kong SAR and Singapore, followed by banks in France, Japan and the United Kingdom.

A large drop in cross-border lending to China of $31 billion (6.1%) – the first decline there since the first quarter of 2009 – was the main factor behind the contraction of cross-border claims in the Asia-Pacific region. The contraction for Chinese banks was $37 billion (9.9%), whereas cross-border claims on the Chinese non-bank sector increased by $5.9 billion (4.4%).

Cross-border credit also declined significantly in Chinese Taipei ($8.8 billion or 8.9%), Korea ($7.4 billion or 3.5%), Thailand ($7.2 billion or 14.7%) and India ($7.1 billion or 3.4%); in all these cases, the change was mainly driven by often sharp decreases in interbank claims.

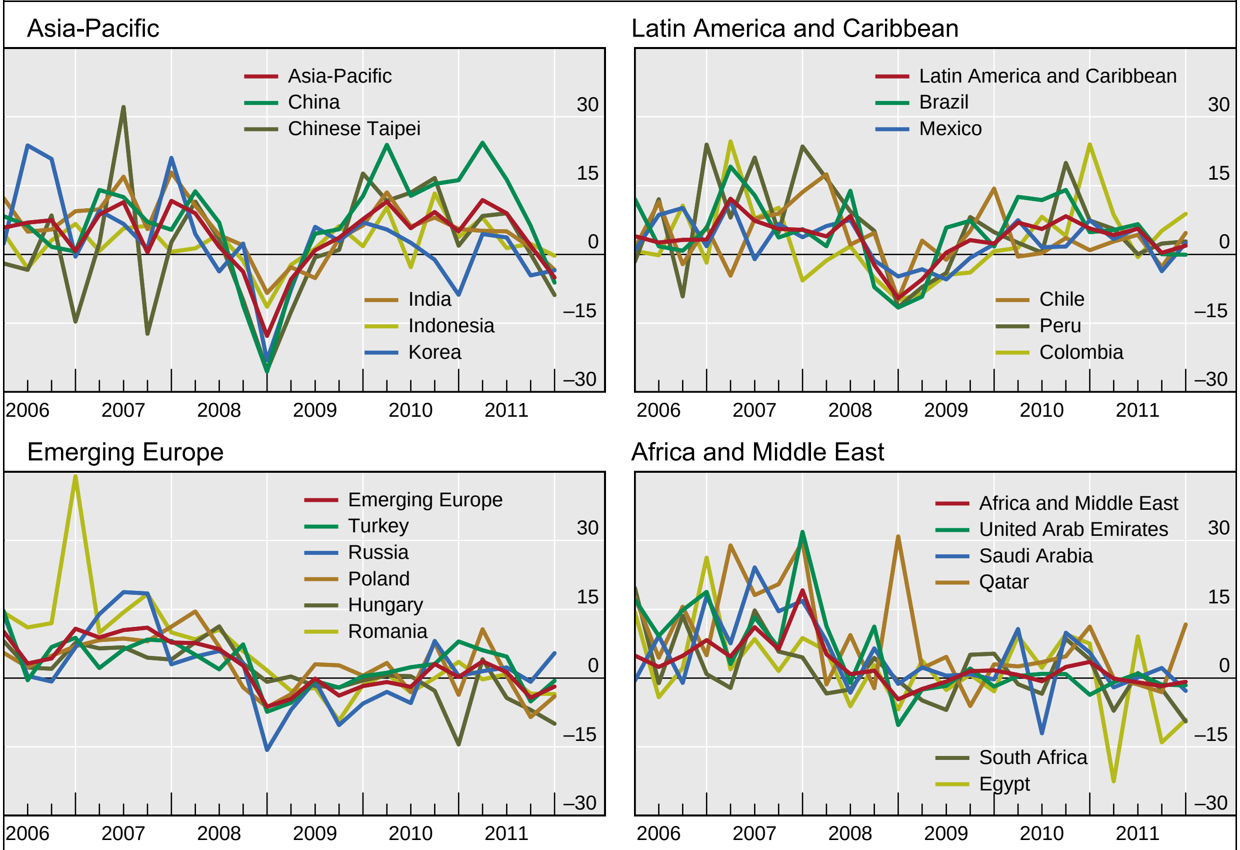
… and also to emerging Europe, and Africa and the Middle East …

Also, cross-border lending to emerging Europe and to Africa and the Middle East declined (Graph 4, bottom panels). Claims on the former fell by $14 billion (1.9%), mainly because of a significant decline in cross-border interbank lending ($11 billion or 2.6%). The contraction in cross-border claims on emerging Europe mostly affected Hungary ($6.9 billion or 9.9%) and Poland ($5.1 billion or 4.0%), and the source of the reduction was in largest part banks in Austria, France and the Netherlands. In contrast, Russia experienced an $8.0 billion (5.4%) increase in cross-border credit evenly split between its bank and non-bank sectors. Africa and the Middle East recorded a decline of

[11] The analysis in this section is based on the BIS locational banking statistics by residence. See footnote 3 for a description of this data set.

Growth rates of cross-border claims on residents of emerging markets[1]

By residence of counterparty, in per cent



[1] Quarterly growth rates of BIS reporting banks' cross-border claims (including inter-office claims) in all currencies.

Source: BIS locational banking statistics by residence.

Graph 4

$4.1 billion (0.8%) that was concentrated in South Africa, Israel and Saudi Arabia. Cross-border lending to Qatar rose.

… while cross-border lending to Latin America and the Caribbean increases

In Latin America and the Caribbean, the rise in cross-border lending ($11 billion or 2%) was driven by a $10 billion (4.3%) gain in interbank lending. The main recipient countries were Mexico ($3.0 billion or 2.4%) and Chile ($2.5 billion or 4.7%); the gain in Mexico was more than accounted for by a $4.0 billion or 13% increase in interbank credit. Banks in the United States and Canada were mainly responsible for the growth in cross-border claims on Latin America and the Caribbean, while Japanese banks reduced their exposure.

Box 1: International debt security issuance in the first quarter of 2012

Andreas Schrimpf

Issuance of international debt securities picked up strongly in the first quarter of 2012. The rise was largely driven by the impact of the ECB's three-year collateralised LTROs (longer-term refinancing operations), which helped to avert a funding crisis in the European banking sector. By improving market confidence, the ECB's policy action was influential in reopening the primary markets for debt securities for euro area financial institutions.

Global gross issuance of international debt securities reached $2,562 billion, a 40% increase over the previous quarter (Graph A1, left-hand panel) and the strongest since Q2 2008. With repayments up by only 20%, to $1,865 billion, during the first quarter, net issuance of international debt securities climbed to $696 billion. This exceeds the amount of net issuance during the entire second half of 2011 ($428 billion).

Issuers headquartered in Europe were the most active borrowers during the period, raising $240 billion net, more than doubling the previous quarter's net borrowing. Borrowers of US nationality raised $97 billion net, also a notable increase relative to $57 billion during the final quarter of last year. Borrowers in emerging markets issued $122 billion net in international debt securities, the largest quarterly amount since the inception of the BIS statistics. International institutions (mostly multilateral development banks) also raised significant amounts worth $140 billion net.

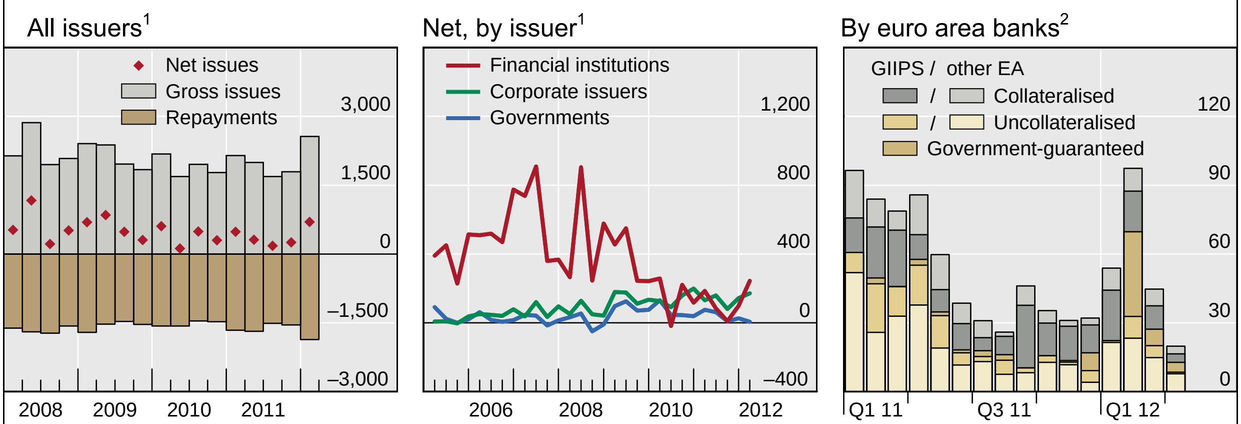
The first quarter saw many financial corporations tapping international debt markets (Graph A1, centre panel). At $385 billion of net issuance, borrowing by financial corporations outstripped that by non-financial firms ($167 billion). European financial firms were particularly active, with $200 billion in net issues of international debt securities. In that market, US financial corporations borrowed much less ($17 billion net), whereas US non-financial corporations continued their trend of strong activity, raising $80 billion net.

Wholesale funding conditions for European banks eased considerably following the first of the ECB's three-year LTROs, in late December 2011. Overcoming their lockout from the market towards the end of 2011, European banks returned with a significant amount of debt issuance to take advantage of more benign market conditions.

Importantly, the composition of the newly issued debt by European banks changed (Graph A1, right-hand panel). For long periods in the second half of 2011, much of the debt issuance by European banks had been confined to covered bonds, as unsecured bond funding was available only for top-rated banks and banks headquartered in jurisdictions with a AAA sovereign credit

Debt securities issuance

In billions of US dollars



[1] International debt securities. [2] Gross issues of bonds by banks headquartered in Greece, Ireland, Italy, Portugal and Spain (GIIPS) or in other euro area (EA) countries. Collateralised debt is mainly covered bonds but also includes smaller amounts of other bonds and asset-backed securities.

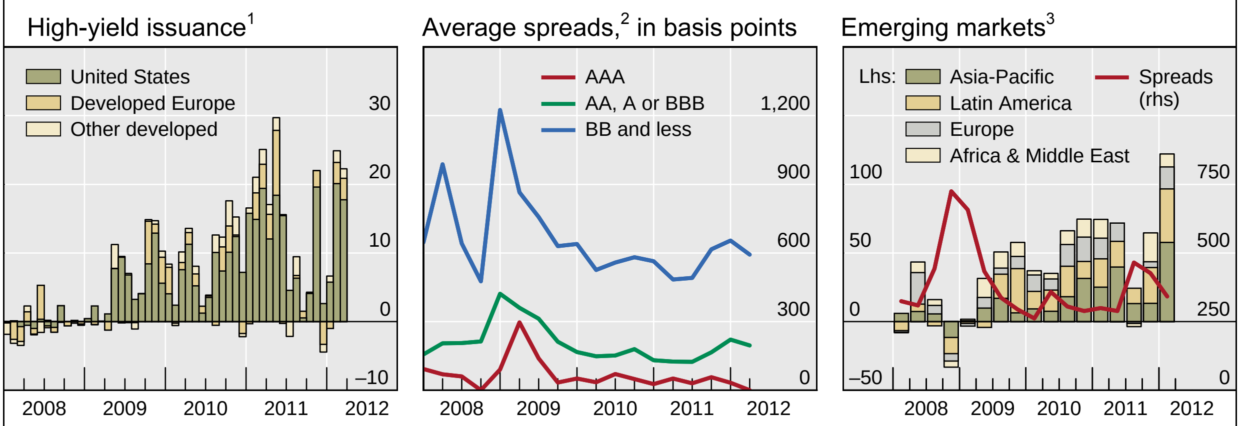
Sources: Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; BIS. Graph A1 rating. It was primarily high-rated European banks (such as ABN AMRO, Rabobank, Nordea and SEB) that reopened the market for senior unsecured bonds at the beginning of January. Lower-tier names and banks headquartered in peripheral countries followed suit and began to issue senior unsecured bonds.

Nevertheless, issuance in the senior unsecured segment was still fairly concentrated in banks from core euro area countries. Debt issuance by banks in non-core countries to a large extent still consisted of covered bonds and government-guaranteed bonds.

As investors demanded lower risk compensation and as sentiment improved after the ECB's first three-year refinancing operation, issuance activity in the high-yield bond market segment again picked up to satisfy investors' increased risk appetite (Graph B1, left-hand panel). Spreads in the high-yield segment had moved up towards the end of 2011 in the face of the uncertainty around the euro area sovereign debt woes, but they came down somewhat as sentiment improved at the beginning of the year (Graph B1, centre panel). Activity in the high-yield bond market was dominated by US corporations, which issued high-yield debt securities worth $44 billion after repayments, most of it in February and March.

Emerging market borrowing was also very strong (Graph B1, right-hand panel). Borrowers from Asia and the Pacific tapped international debt markets with $58 billion of net issues, most of it attributable to borrowers in China ($33 billion) and Korea ($9 billion). Borrowing from issuers headquartered in Latin America also rose, to $39 billion of net issues, mostly because of activity by entities from Brazil ($28 billion) and Mexico ($7 billion).

International debt securities



[1] Net issues by non-financial corporations headquartered in developed countries, in billions of US dollars. [2] Weighted average, rating at issue. [3] Net issues, in billions of US dollars. Spreads are based on the Quarterly JPMorgan EMBI Global Composite index, in basis points.

Sources: Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; BIS. Graph B1

Over-the-counter derivatives in the second half of 2011

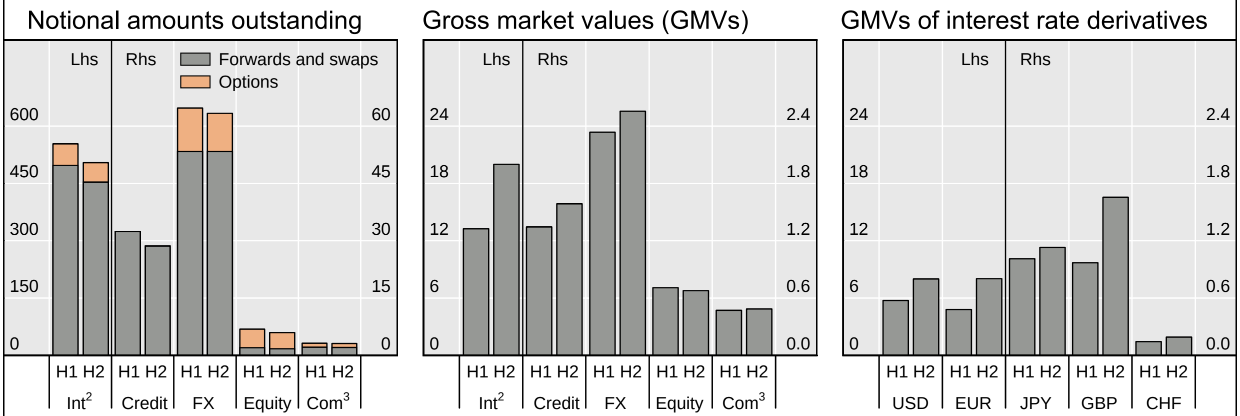
OTC derivatives positions declined, yet rose in value

The notional amount of outstanding over-the-counter (OTC) derivatives fell by 8%, to $648 trillion, in the second half of 2011. But with an increase in price volatility, their market value rose by 40% (Graph 5, left-hand and centre panels).[12] Gross credit exposures also increased significantly, by 32%.

[12] The reporting population increased in the middle of 2011 to include derivatives dealers in Australia and Spain. Excluding those dealers, reported outstanding notional amounts fell to $635 trillion at the end of 2011, and gross market values increased to $26.6 trillion rather than $27.3 trillion. Reported positions with counterparty groups changed more significantly, as positions with the additional dealers moved from being positions with "other financial institutions" (or "banks and security firms" in the case of the credit derivatives statistics) to positions with "reporting dealers".

Over-the-counter derivatives in 2011[1]

In trillions of US dollars



[1] As of the end of the indicated periods. Note that Australia and Spain joined the reporting population between end-H1 and end-H2 2011. [2] Interest rate contracts. [3] Commodity contracts.

Sources: Central banks of the G10 countries, Australia and Spain; BIS. Graph 5

The bulk of these changes were in the interest rate market segment. Here, notional amounts outstanding declined by 9%, to $504 trillion. This corresponded closely to cuts to positions in dollar, euro and sterling contracts and to positions with residual maturities of one year or less. Market participants may have perceived little near-term risk of changes in short-term interest rates in these currencies and therefore elected not to replace maturing short-dated contracts. Such a perception would be consistent with the declines in probabilities of near-term increases in policy rates implied by market prices and the proximity of these rates to zero, which limited the scope for cuts. The increase in the market value of outstanding interest rate derivatives was also concentrated in dollar, euro and sterling contracts, for which replacement values increased by 39%, 67% and 71%, respectively (Graph 5, right-hand panel). For each of these currencies, swap rates of all maturities fell to low levels by historical standards. This suggests that swap rates moved further away from those prevailing when many outstanding contracts were signed, thus raising their cost of replacement.

This was reflected in interest rate derivatives …

The pattern of lower outstanding notional amounts but higher market values was also visible in the credit derivatives market segment. The volume of outstanding positions, which fell by 12%, to $29 trillion, resumed the downward trend that began at the end of 2007. The trend largely reflects the application of portfolio compression services to both bilateral and centrally cleared trades. Even after such compression, outstanding positions with central counterparties (CCPs) still increased from 9% to 11% of the market.[13] The market value of outstanding positions increased by 18%, as credit default swap premia increased for many sovereigns and other reference entities.

… and credit derivatives

[13] After halving the volume of contracts with CCPs, since central clearing replaces original contracts between two counterparties with two contracts, one between the first original counterparty and the CCP and another between the CCP and the second original counterparty.

Box 2: Uncovered counterparty exposures in global OTC derivatives markets

Jacob Gyntelberg and Nicholas Vause

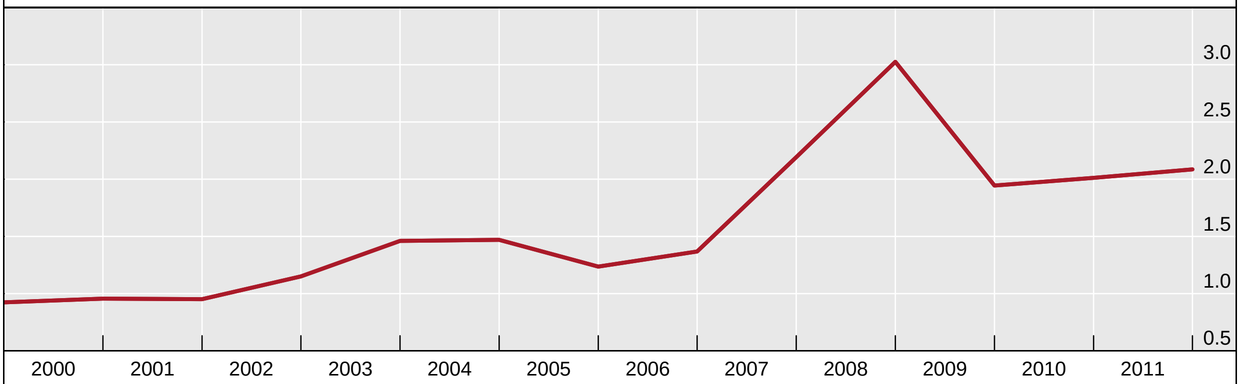
Uncovered credit exposures between counterparties to bilateral trades in the over-the-counter (OTC) derivatives market were at least $2.1 trillion at end-2011 (Graph A2). While this is lower than the estimated $3.0 trillion at the end of 2008, just after the peak of the financial crisis, the volume of uncovered positions appears to have increased in both 2010 and 2011.

We estimate the uncovered credit exposures by subtracting the volume of collateral posted in the OTC derivatives market from the counterparty credit exposures as indicated by the BIS Semiannual Survey. Counterparty credit exposures, in turn, refer to the sum of all positive market values of bilateral positions between market participants after netting offsetting trades covered by netting agreements. These "gross credit exposures" increased from $3.5 trillion to $3.9 trillion during 2011. They were $5.0 trillion at the end of 2008.

Collateral posted against counterparty credit exposures was no more than $1.8 trillion at end-2011, $1.5 trillion at end-2010 and $2.0 trillion at end-2008. We derive these estimates from the amount of "collateral in circulation" reported in the 2012 Margin Survey of the International Swaps and Derivatives Association (ISDA), which was $3.6 trillion at the end of 2011. However, we adjust this figure to account for the fact that it counts each unit of outstanding collateral at least twice: it is the sum of collateral posted and received by market participants (see Appendix 2 of the ISDA survey), and it counts the same unit of collateral multiple times if counterparties post it against different credit exposures. The result of the multiple counting is an overstatement of the counterparty exposures effectively backed by collateral.

Uncovered counterparty exposures in global OTC derivatives markets

In trillions of US dollars



Sources: ISDA; BIS semiannual OTC derivatives statistics. Graph A2

Market values of foreign exchange derivatives also increased …

In contrast, the outstanding volume of foreign exchange derivatives changed little, although their market value also increased notably. The gross market value increased by 9%, largely as a result of changes in the values of contracts between the G3 currencies, with the euro depreciating by 5% against the dollar and 8% against the yen in the second half of 2011. In a smaller segment of the market, the gross market value of contracts referencing the Swiss franc fell by 30%, reflecting the Swiss National Bank's decision to try to cap the value of the franc against the euro. This caused the franc to depreciate sharply to just below the cap, reversing a strong appreciation over the preceding several months. Hence, current and expected future values of the exchange rate probably moved back towards the fixed rates locked into many outstanding contracts, thus reducing their cost of replacement. The outstanding volume of foreign exchange contracts referencing the Swiss franc also fell notably, by 16%, perhaps as some market participants who would have incurred losses if the franc appreciated against the euro decided to no longer hedge this risk.

… but were little changed for equity and commodity derivatives

In the smaller equity and commodity segments of the OTC derivatives market, outstanding notional amounts fell somewhat, while market values changed little. The outstanding volume of equity derivatives fell by 13%, reflecting similar proportionate declines in both options and forward and swap positions. The overall decline in commodity derivatives positions was 3%, again with similar proportionate reductions in options and forward and swap positions.