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 and OTC derivatives markets, available up to the end of 2012. The box assesses to what extent non-financial corporations have used the low-rate environment of recent years to raise long-term funding.

During the fourth quarter of 2012, the cross-border claims of BIS reporting banks declined, after remaining broadly unchanged in the previous quarter. The contraction was driven by a sharp reduction in cross-border interbank lending, which more than offset higher cross-border credit to non-bank borrowers. Across reporting areas, cross-border claims on advanced economies declined, while those on emerging market economies and offshore financial centres increased.

Developments in the over-the-counter (OTC) derivatives market in the second half of 2012 were consistent with more central clearing, further monetary expansion and some easing of the euro area sovereign crisis. Although the size of the market was little changed overall, these factors affected particular segments. For instance, the outstanding notional amount of interest rate swaps declined as compression of trades with central counterparties accelerated, while that of forward rate agreements rose as central clearing progressed, mechanically increasing contract volumes. Further monetary easing may help to explain marked declines in the notional amounts of derivatives referencing US dollar and Japanese yen interest rates, as well as the sharp increase in the value of foreign exchange derivatives linked to the yen. Finally, a sharp fall in the market value of credit default swaps was consistent with premia declining from extreme levels towards ones at which contracts were more likely to have been signed.

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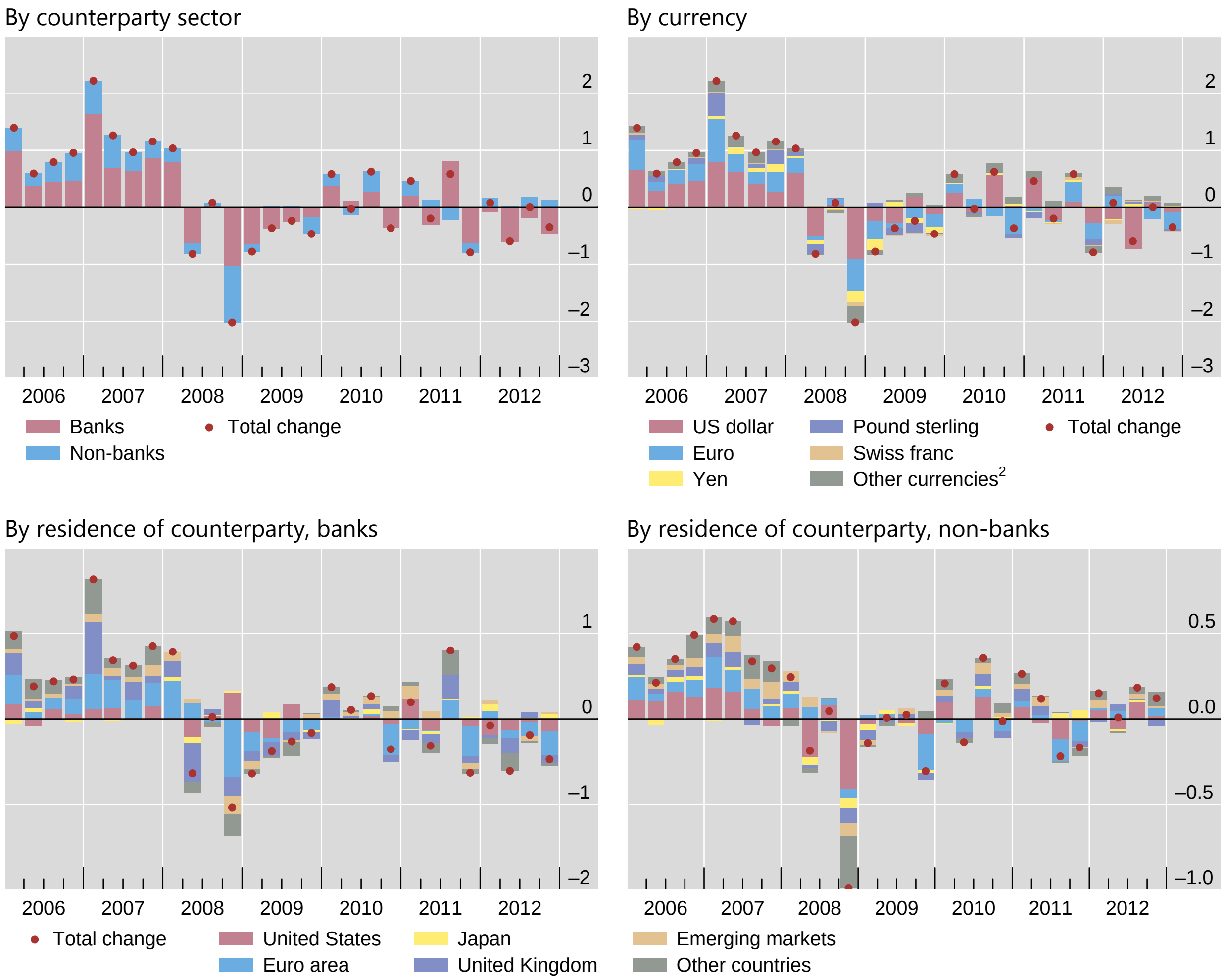
The international banking market in the fourth quarter of 2012

The cross-border claims of BIS reporting banks fell by $345 billion (1.2%) between end-September 2012 and end-December 2012 (Graph 1, top left-hand panel).[2] With this contraction, total outstanding cross-border credit at end-2012 stood at $29.3 trillion, 1.9% lower than in the same quarter one year earlier. The decline in cross-border claims was concentrated on those denominated in euros ($296 billion or 2.9%) (Graph 1, top right-hand panel). Claims in most other main currencies fell modestly, while those in yen increased (by $14 billion or 1.0%).

Changes in gross cross-border claims[1]

In trillions of US dollars | Graph 1



[1] BIS reporting banks' cross-border claims include inter-office claims. [2] Includes unallocated currencies.

Source: BIS locational banking statistics by residence.

[2] The analysis in this section is based on the BIS locational banking statistics by residence, unless stated otherwise. In these statistics, 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.

The overall contraction in credit in the fourth quarter was again driven by reduced *interbank* credit, which has fallen in seven of the last nine quarters of data (Graph 1, top-left hand panel). Cross-border claims on other banks and related offices fell by $467 billion (2.6%) between end-September and end-December 2012.[3] This large contraction underscored the ongoing trend away from cross-border intermediation, particularly in the euro area (blue stacked bars, lower left-hand panel). This development is also evidenced by the decline, on a consolidated basis, in the share of interbank lending in the total amount outstanding of international claims to a historical low of 38% at end-December 2012.[4] This was down from 40% at end-2011 (and 46% at end-2007).

Credit to advanced economies

Cross-border claims on advanced economies contracted in the fourth quarter of 2012, by $472 billion (2.1%). This compares with an increase of $77 billion (0.4%) in the previous quarter.

Borrowers in Europe and the United States were particularly affected by the retreat in international interbank activity in the fourth quarter. Interbank claims (including inter-office positions) on banks in the euro area fell the most, by $284 billion (5.2%), the third consecutive quarterly decline (Graph 1, bottom left-hand panel). This resulted from reduced claims on banks in Germany, France, Finland and Luxembourg. Similarly, cross-border interbank credit to UK banks also fell, by $97 billion (2.6%), after a strong increase in the previous quarter. Elsewhere, cross-border claims on banks in the United States declined for a fifth quarter in a row (by $132 billion or 5.2%). This trend may be related to regulatory changes that contributed to reducing the reliance of US-chartered banks on wholesale funding raised outside the United States.[5] Claims on banks in Japan, which increased by $53 billion (7.7%), were the most notable exception to this pattern.

The decline in global cross-border interbank positions was more pronounced in 2012 than in previous years. Cross-border claims on banks and related offices in the euro area fell by about 8% in 2012, compared with 4% in 2011.[6] In the United States and United Kingdom, cross-border interbank activity shrank in 2012 by 16% and 6%, respectively. These declines compared with an increase of 2% for US banks

[3] By contrast, cross-border claims on non-bank borrowers, including governments and non-bank financial intermediaries, increased by $139 billion (1.2%).

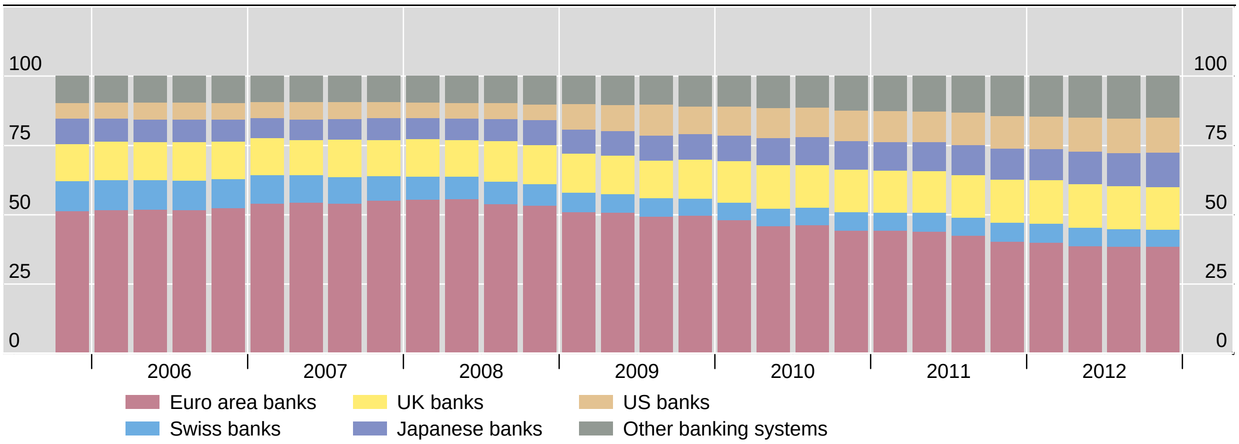
[4] Data according to BIS consolidated international banking statistics on an immediate borrower basis. The consolidated banking statistics exclude positions between affiliates of the same banking group. Banks consolidate their inter-office positions and report only their claims on unrelated borrowers. International claims comprise cross-border claims in all currencies and local claims in foreign currencies, where local claims refer to credit extended by banks' affiliates located in the same country as the borrower.

[5] Under the Dodd-Frank Wall Street Reform and Consumer Protection Act, the assessment base for the Federal Deposit Insurance Corporation's reserve fund has widened from insured deposits to assets less tangible equity. This extension has succeeded in reducing the reliance of US-chartered banks on wholesale funding, with domestic deposits replacing wholesale funds raised outside the United States. For more details, see L Kreicher, R McCauley and P McGuire, "The 2011 FDIC assessment on banks' managed liabilities: interest rate and balance sheet responses", *BIS Working Papers*, no 413, May 2013.

[6] Annual percentage changes are calculated as the four-quarter sum of exchange rate- and break-adjusted changes divided by the outstanding stock at the end of the previous year.

International banking activity

As a percentage of all BIS reporting banks' foreign claims[1] Graph 2



[1] Foreign claims comprise cross-border claims and local claims of banks' foreign offices on residents of the host country.

Source: BIS consolidated banking statistics (immediate borrower basis).

in 2011, while cross-border interbank activity in the United Kingdom was broadly unchanged in 2011.

The decline in positions booked by banks headquartered in the euro area was particularly noteworthy. On a consolidated basis, their share in the total amount outstanding of BIS reporting banks' foreign claims fell to a historical low of 38% at the end of 2012, from 40% at end-2011 (Graph 2).[7] This share has declined steadily from the record high of 55% in the second quarter of 2008. It stood at 50% at end-2009, before the euro crisis started to develop in the first half of 2010. US and Japanese banks in particular, but also UK and other banks, have filled the gap left by the retreat of euro area banks.[8] Indeed, US and Japanese banks' share of total foreign claims of all BIS reporting banks rose to 13% and 12% at end-2012, up from 10% and 9% at end-2009, respectively (Graph 2).

Credit to emerging market economies

The BIS locational banking statistics show that reporting banks' cross-border claims on borrowers in emerging market economies expanded by $43 billion (1.4%) in the fourth quarter of 2012.[9] The increase mostly affected claims on banks (up by $32 billion or 2.0%); those on non-banks expanded by $10 billion (0.7%). While the pace of expansion was higher than in the earlier quarters of 2012, it remained well below that of 2010 and 2011. Claims on emerging markets grew by 3% in 2012, as against 8% in 2011 and 17% in 2010.

[7] Foreign claims comprise cross-border claims and local claims (in all currencies) booked by banks' foreign offices.

[8] The international retreat of euro area banks has been analysed for the Asia-Pacific region in P McGuire and A van Rixtel, "Shifting credit patterns in emerging Asia", *BIS Quarterly Review*, December 2012, pp 17–18.

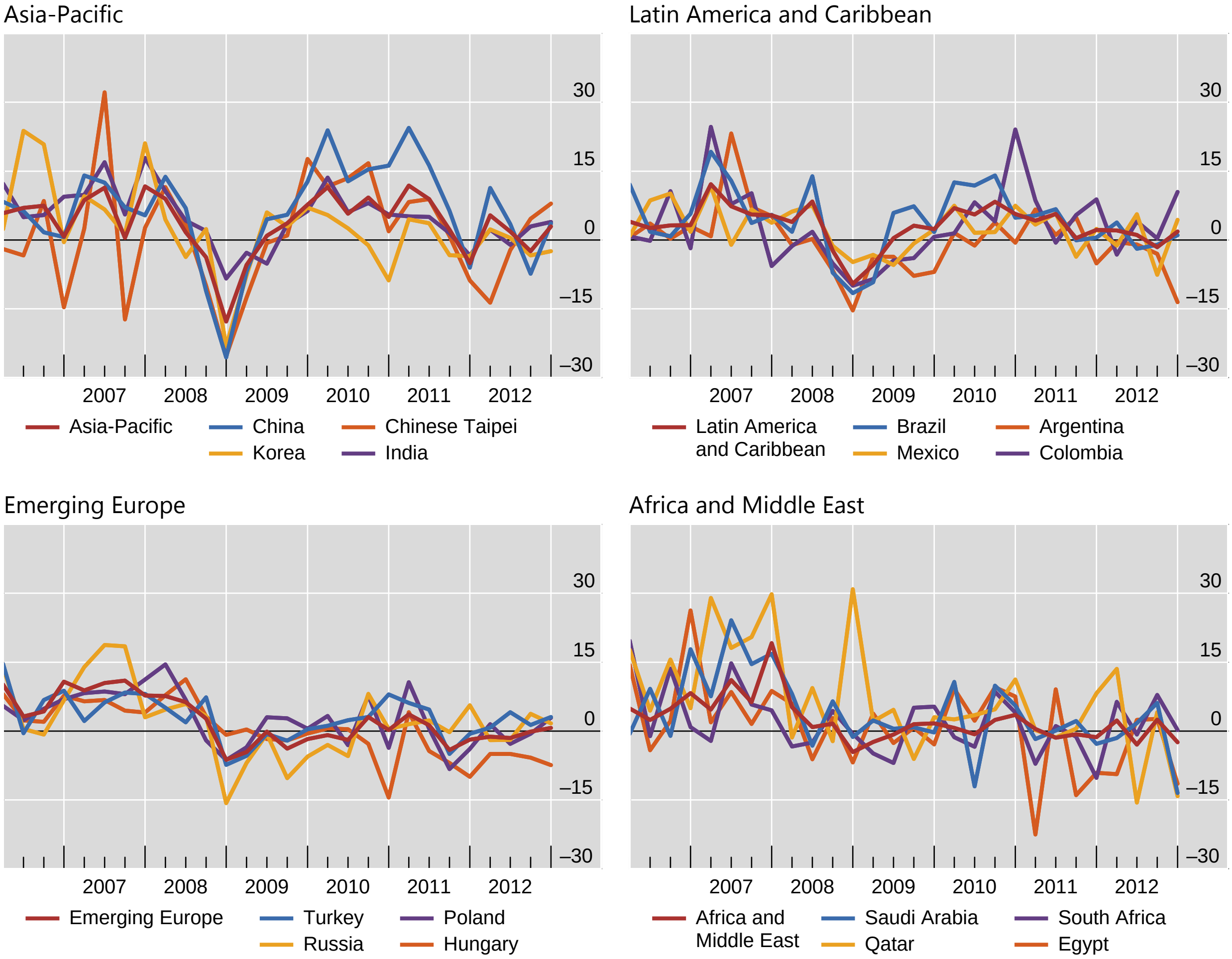
[9] The BIS locational banking statistics by residence are described in footnote 2.

Cross-border claims on the Asia-Pacific region increased the most (by $39 billion or 2.9%), after a decline in the previous quarter (of $33 billion or 2.4%) (Graph 3, top left-hand panel). Claims on both banks and non-banks rose, by $27 billion (3.3%) and $12 billion (2.3%), respectively. Borrowers in China accounted for around half of the increase in cross-border credit to the region, the majority of them banks ($13 billion or 3.7%). The remainder of the increase reflected lending to India, Chinese Taipei and Indonesia.

Cross-border credit to borrowers in Latin America and the Caribbean grew (by $11 billion or 1.8%), while claims on Africa and the Middle East contracted (by $12 billion or 2.4%) (Graph 3, right-hand panels). The expansion in lending to Latin America and the Caribbean was mainly driven by higher claims on non-banks in the region ($9 billion or 2.4%), above all in Mexico and Brazil. Cross-border claims on Argentina fell sharply, by $2.1 billion (14%), representing the fifth consecutive decline. The contraction in cross-border credit to Africa and the Middle East was the second largest since the fourth quarter of 2008. It was concentrated on Saudi Arabia

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

In per cent | Graph 3



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

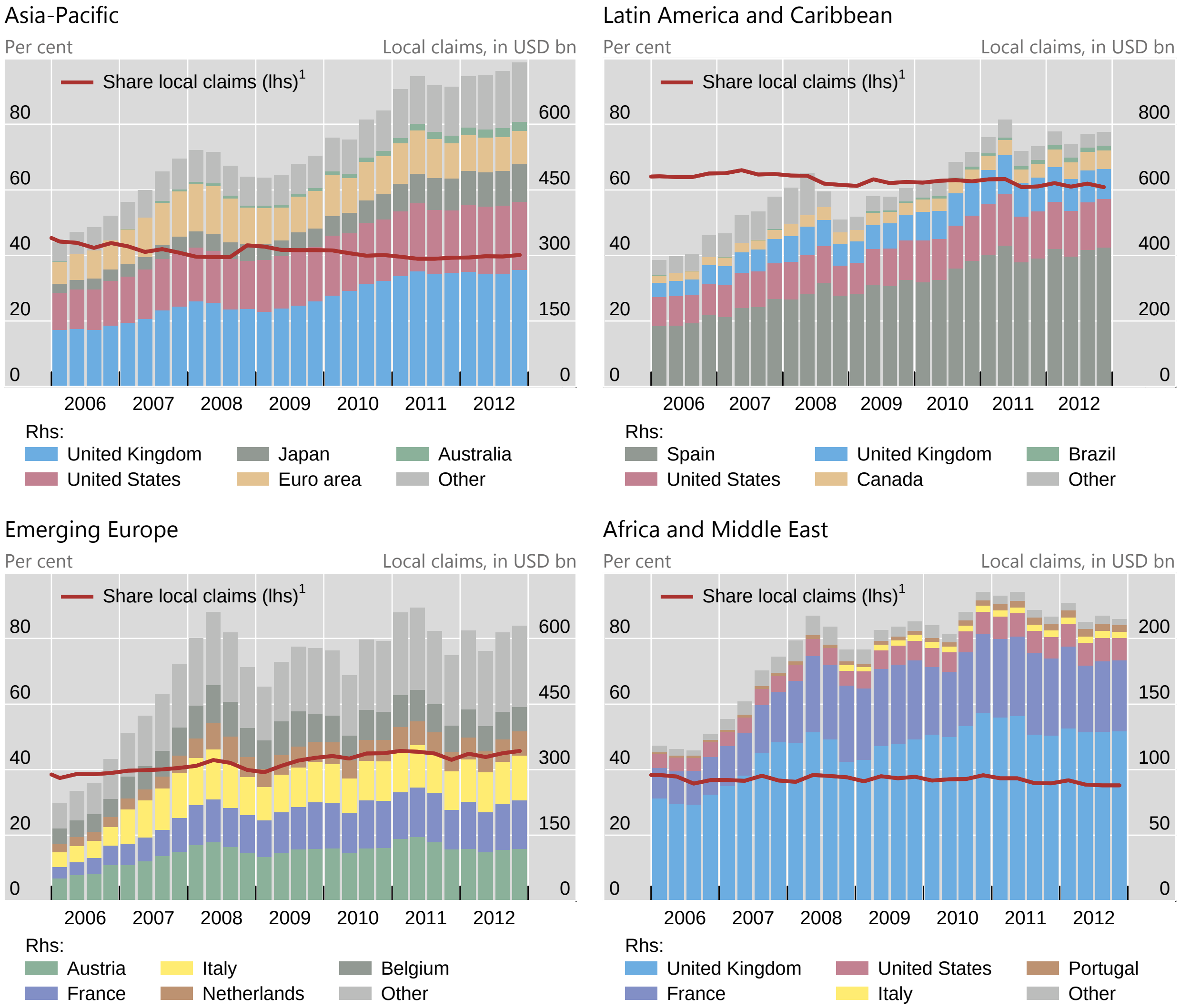
Source: BIS locational banking statistics by residence.

and Qatar (Graph 3, bottom right-hand panel) and affected both bank and non-bank sectors.

Cross-border claims on the emerging economies of Europe increased in the fourth quarter by $4.9 billion (0.7%), following five quarters of decline (Graph 3, bottom left-hand panel). This turnaround was led by higher claims on Poland and the Czech Republic, while the upward trend in claims on Russia and Turkey continued. At end-2012, Russia and Turkey combined accounted for 47% of the amount outstanding of all cross-border credit to emerging Europe, up from 44% at end-2011. Cross-border claims on Hungary fell again (by $3.8 billion or 7.4%), bringing the overall contraction in 2012 to 21%. In percentage terms, the drop in

Local operations in emerging market economies, by region

Ranked by the five largest foreign banking systems in terms of size of local claims | Graph 4



[1] "Share local claims" is measured as claims of banks' foreign offices denominated in local currency on residents of the various regions as a percentage of total foreign claims on that region. Foreign claims comprise cross-border claims and local claims of banks' foreign offices on residents of the host country. The five largest foreign banking systems are the five reporting banking systems with the largest local claims on the regions for which data are publicly available.

Source: BIS consolidated banking statistics (immediate borrower basis).

claims on that country was second only in Europe to the 31% fall experienced by Greece in 2012.

In addition to greater cross-border lending, BIS reporting banks also expanded their local operations in emerging market economies in 2012. On a consolidated basis, credit provided by foreign banks' offices in emerging markets increased to $2.4 trillion at end-2012, from $2.2 trillion at end-2011 (unadjusted for exchange rate movements). This expansion was mainly driven by higher local claims in Asia-Pacific and emerging Europe (Graph 4, left-hand panels).

The growth of both cross-border and local positions left the share of locally extended credit in total foreign claims on emerging market economies relatively unchanged at 46% overall, although the relative importance of local claims varied considerably across regions. It was stable at around 60% in Latin America and the Caribbean and increased to around 46% in emerging Europe (Graph 4, top right-hand and bottom left-hand panels). In contrast, Asia-Pacific and Africa and the Middle East saw modest reductions to around 40% and 35%, respectively.

The pattern of local claims on residents of emerging market economies also varied greatly from the perspective of the reporting banking systems. At the end of 2012, UK banks provided the bulk of local credit in Africa and the Middle East (60%), as did Spanish banks in Latin America and the Caribbean (55%) (Graph 4, right-hand panels). Emerging Europe and the Asia-Pacific region displayed a more varied pattern in terms of foreign banks' local activities, with the largest players holding smaller market shares (19% for Austrian banks and 36% for UK banks, respectively). Banks headquartered in emerging markets have gained importance in local banking operations in countries of the same region. For example, Brazilian banks were among the five largest foreign banking systems as measured by the size of local operations in Latin America and the Caribbean in the fourth quarter of 2012.

The OTC derivatives market in the second half of 2012

The over-the-counter (OTC) derivatives market shrank slightly in the second half of 2012. The notional principal of outstanding contracts fell by 1% to $633 trillion, while the cost of replacing them at prevailing market prices (their gross market value) declined by 3% to a little under $25 trillion.[10] Credit exposures related to these contracts (after legally enforceable netting but before collateral) were fairly steady, ending the period at 14.7% of gross market value.

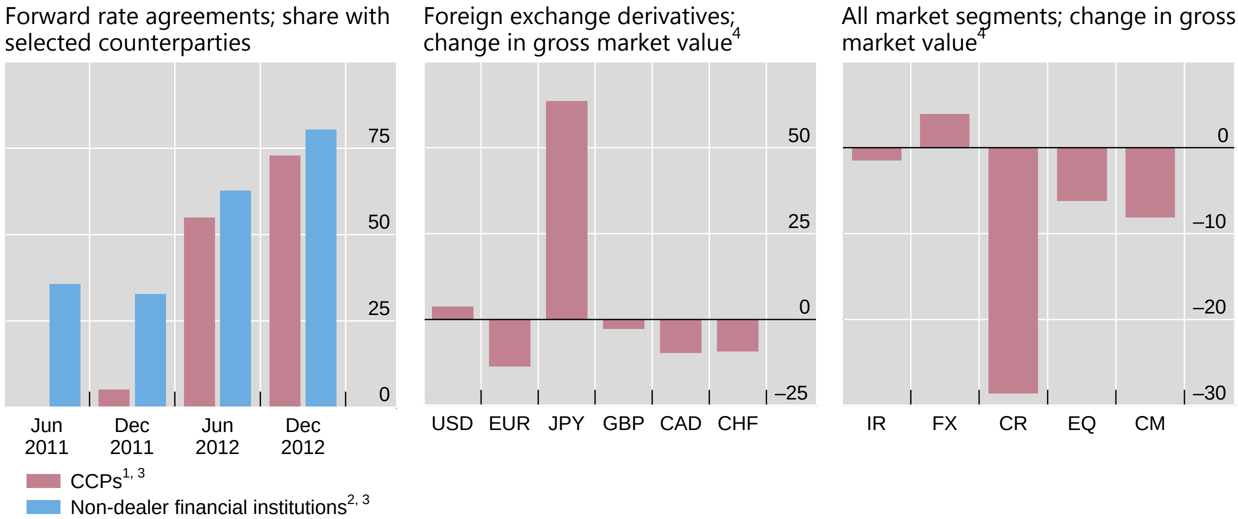
In the important interest rate segment of the market, offsetting changes in swaps and forward rate agreements (FRAs) that related to different aspects of central clearing left outstanding notional amounts little changed overall (–1%). Swap positions fell by $9 trillion to $370 trillion, as compression of trades with central counterparties (CCPs) accelerated.[11] Meanwhile, FRA positions rose by $7 trillion to $71 trillion, as more of these derivatives were cleared centrally, which

[10] As the US dollar depreciated against other currencies on average during this period – by 3% on a trade-weighted basis – reporting in this currency slightly understates the underlying contraction in both volume and value terms.

[11] See http://www.trioptima.co.uk/resource-center/statistics/triReduce.html.

OTC derivatives

In per cent | Graph 5



CAD = Canadian dollar; CHF = Swiss franc; EUR = euro; GBP = sterling; JPY = yen; USD = US dollar. CM = commodity contracts; CR = credit default swaps; EQ = equity-linked contracts; FX = foreign exchange contracts; IR = interest rate contracts.

[1] Share of notional amounts reported to the Global Trade Repository that are with central counterparties. [2] Share of notional amounts reported to the BIS that are with non-dealer financial institutions (including CCPs). [3] Not adjusted for the doubling of contract volumes when bilateral positions are moved to CCPs. [4] Change between end-June 2012 and end-December 2012.

Sources: Central banks of the G10 countries, Australia and Spain; DTCC; TriOptima; BIS.

mechanically increases contract volumes.[12] This was reflected in a $17 trillion increase in FRA positions with non-dealer financial institutions – the counterparty category that includes CCPs (Graph 5, left-hand panel).

Despite the stability of positions in interest rate derivatives overall, there were significant reductions in certain currencies and maturity ranges, possibly reflecting lower hedging demand. Notably, positions referencing US dollar and Japanese yen interest rates each declined by 9%, while those maturing within a year fell by 8%. It may be that market participants allowed many of their dollar and yen interest rate hedges to mature, as they perceived little risk to the outlook for short-dated interest rates in these currencies. During the period, the Federal Reserve announced that it expected to keep its policy rate at exceptionally low levels for an extended time and the Bank of Japan expanded its asset-buying plans on three occasions, which was also consistent with an extended period of near zero policy rates.

Positions in foreign exchange derivatives were also little changed overall (+1%), even though those referencing Swiss francs continued to fall. Swiss franc positions decreased by 5% during the period, taking to 21% the cumulative decline since shortly before the Swiss National Bank started to cap the value of the franc relative to the euro. The cumulative decline in option positions on the Swiss franc was particularly large, at 46%.

In contrast, the market value of foreign exchange derivatives rose somewhat overall (by 4%), reflecting strong growth in contracts referencing Japanese yen. The

[12] See "Central clearing and OTC derivatives statistics", *BIS Quarterly Review*, June 2011, p 26.

Have corporations used low interest rates to lock in cheap funding?

Non-financial firms significantly stepped up their bond issuance after the global financial crisis. Net sales of bonds and notes by non-financial corporations increased from an average of under $30 billion per year between 2001 and 2006 to almost $70 billion in 2010–12 (Graph A, blue line in the left-hand panel).① At the end of March 2013, 12-month cumulative net issuance fell just short of $100 billion, the highest level on record. A significant proportion of non-financial corporate issuance is by firms below investment grade. In the 12 months to end-March 2013, firms rated BBB– or below raised $29 billion (gross) in the bond market (Graph A, shaded areas in left-hand panel), or 19% of total non-financial corporate gross issuance. In absolute amount this is the most ever, but in relative terms it falls short of the 25% share taken by high-yield debt in late 2006-early 2007 and the 23% in early 2011.

The surge in non-financial issuance mirrored a decline in financial issuance. Net sales of bonds and notes by financial institutions worldwide peaked at just over $400 billion in the 12 months ending in May 2006 and then fell to a range of $150–200 billion annually between 2008 and 2012. In the 12 months up to March 2013, net issuance by financial institutions stood at a mere $32 billion, the lowest level in more than a decade.

The rise in bond issuance by non-financial companies during and shortly after the financial crisis was, at least in part, a reaction to the reduced availability of bank finance, but this factor appears to have lessened in importance more recently. Syndicated lending, a close substitute for bond issuance, contracted sharply in 2008 and 2009 but began to increase again in late 2010 (Graph A, right-hand panel). The number of newly signed facilities peaked in late 2011, but the continued growth in lending to lower-rated firms suggests that this is likely to be the result of lower demand for such funding by investment grade corporates rather than a lower supply of funds.

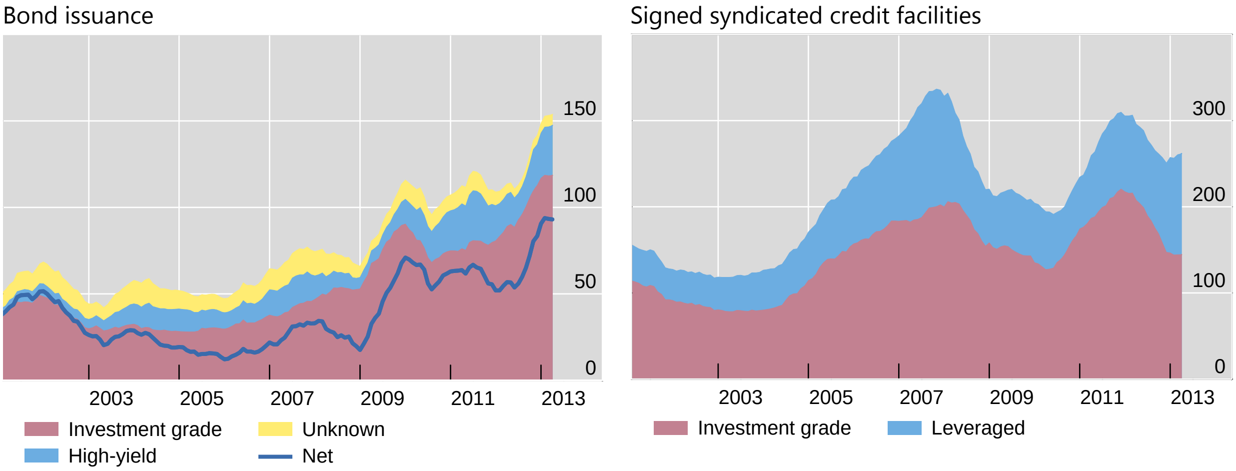
Although firms borrowing in the syndicated loan market tend to be smaller than firms issuing corporate bonds, there is some overlap between the two markets. Hence, a possible reason for the shift from syndicated lending to bond issuance could be that firms are taking advantage of low interest rates to lock in favourable funding conditions. Corporate bond yields shot up during the crisis but quickly fell back to unprecedentedly low levels (Graph B). Syndicated loans tend to pay floating rates, whereas coupons on corporate bonds are mostly fixed, allowing issuers to lock in low rates. The bulk of non-financial issuance was long-term, which is in line with this hypothesis. Well over one third of all bonds issued in 2010 and thereafter carried original maturities of 10 years or more, and almost one half had maturities from five to 10 years. That said, this maturity distribution is by no means

① Data on volumes cover both international and domestic issues syndicated by international banks.

Financing of non-financial corporations[1]

In billions of US dollars

Graph A



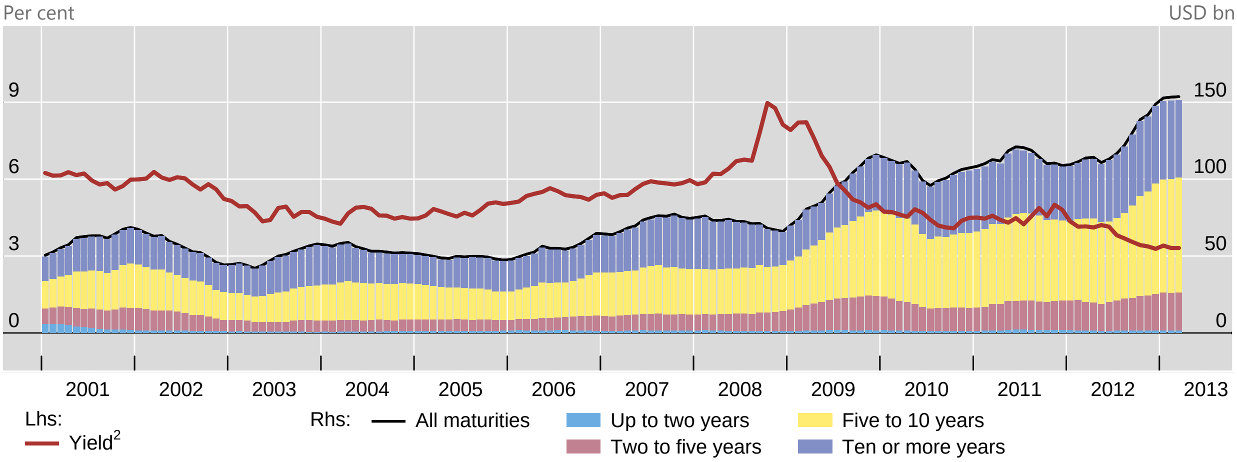
[1] Twelve-month moving average.

Sources: Dealogic; BIS calculations.

unusual, and the proportion of very long-term corporate bonds is actually lower than it was in the years shortly before the crisis, when it fluctuated around 40%. This gives only partial support to the hypothesis that the non-financial corporate sector has taken advantage of the low interest rates to lock in cheap long-term funding.

Bond issuance by original maturity[1]

Graph B



[1] Issued by non-financial corporations on any market; 12-month moving average. [2] Yield to maturity; Bank of America Merrill Lynch Global Broad Market Corporate High Yield Index.

Sources: Bank of America Merrill Lynch; Dealogic; BIS calculations.

gross market value of contracts linked to the yen increased by 63%, mainly due to the revaluation of forwards and swaps (Graph 5, centre panel). This coincided with the yen depreciating by 9% against the dollar and 8% on average against trade partner currencies as market participants increasingly anticipated the end-year change of government and Japan's subsequent monetary expansion.

In the credit default swap (CDS) market, outstanding contract volumes continued to decline. They fell by 7% to $25 trillion – far below the end-2007 peak of $58 trillion. Trade compression continued to eliminate redundant contracts, and fewer new trades were signed than in the previous half-year. Single-name positions fell by 8%, while those referencing multiple names declined by 5%. Outstanding credit protection on financial and non-financial debt as well as mortgage and other asset-backed securities dropped, while it was relatively steady on sovereign debt.

The market value of outstanding CDS contracts fell even more sharply than for notional amounts. It declined by 29% overall, with similar reductions across single-name and multi-name contracts (Graph 5, right-hand panel). CDS premia for many euro area debtors fell towards historical averages in the second half of 2012 as the severity of the sovereign debt crisis in the region eased. This suggests that, in many cases, default risk expectations returned towards those prevailing when contracts were signed, reducing the market value of these contracts.

The share of CDS cleared centrally remained low. It inched up from 14% to 15% for multi-name contracts, while staying at 8% for single-name contacts.[13] This was

[13] Calculated as $0.5x/(y–0.5x)$, where x is the volume of contracts with CCPs and y is the total volume of contracts, since central clearing has the effect of doubling contract volumes.

despite a G20 target for all standardised OTC derivatives to have been cleared centrally by the end of 2012.

In the equity segment of the market, notional amounts changed little (–1%). Here, positions in forwards and swaps rose by 9%, while those in options declined by 5%. Options with dealers as buyers accounted for the vast majority of the fall in option positions. In contrast, dealers maintained their sold-option volume and, hence, the corresponding premium income. The market value of outstanding option contracts also declined (by 10%), but rose for forwards and swaps (by 6%).

Both the notional amount and market value of outstanding commodity derivatives declined. The notional amount fell by 14% and the gross market value by 8%.