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 end-June 2012. One box discusses shifting credit patterns in emerging Asia; a second reports on a change in the treatment of unallocated positions in the BIS locational banking statistics; and a third analyses the use of reference rates in securities and syndicated loan markets.

During the second quarter of 2012, the cross-border claims of BIS reporting banks contracted sharply, after a modest increase in the previous quarter. The decline was the second largest since early 2009, underscoring the continuing subdued activity in international banking markets since the global financial crisis of 2007–09. With reporting banks' cross-border claims on non-banks relatively stable, the large contraction reflected a drop in credit to banks in advanced economies and offshore financial centres, driven by reductions in inter-office positions. The outstanding stock of cross-border claims on borrowers in emerging markets changed little.

The composition of international credit to emerging market economies in Asia-Pacific has shifted significantly in recent years (see Box 1). While banks from the euro area and Switzerland have pulled back, banks in the region have largely filled the gap. These include banks headquartered in Asian offshore centres and Asia-Pacific countries that report in the BIS international banking statistics and also non-reporting banks, which most likely are predominantly Chinese. The estimated intraregional lending accounted for 36% of total international claims on emerging Asia-Pacific in the most recent quarter available, up from an estimated 22% a few years ago.

Notional amounts outstanding of OTC derivatives declined for the second half-year in a row, to $639 trillion. This was mainly driven by lower volumes of interest rate derivatives and credit default swaps (CDS), which more than offset an increase in positions in foreign exchange, equity-linked and commodity contracts.

Reference rates such as Libor and Euribor play a key role in financial markets (see Box 3). At least 14% of outstanding debt securities are linked to an identifiable

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reference rate, mostly Libor (for US dollar- and sterling-denominated securities) and Euribor (for euro-denominated debt). The role of these reference rates is even larger in the syndicated loan market, where well over half of the loans originated in the 12 months to October 2012 are linked to these rates.

The international banking market in the second quarter of 2012

The cross-border claims of BIS reporting banks fell sharply between end-March and end-June 2012, by $575 billion (1.9%) to $29 trillion (Graph 1, top left-hand panel).[2] The decline was driven by a $581 billion (3.1%) contraction in cross-border interbank claims. Lending to banks in Caribbean offshore centres was particularly affected. The $249 billion (18%) fall was the largest absolute decline since the start of the BIS international banking statistics. By contrast, lending to non-banks was relatively stable, increasing by $5.6 billion (0.1%).

The fall in cross-border claims was concentrated in those denominated in US dollars, down by $763 billion or 5.6% (Graph 1, top right-hand panel). This was the largest contraction since the fourth quarter of 2008. Claims in most other main currencies increased, especially those in Japanese yen ($86 billion or 5.7%).

Credit to advanced economies

The BIS locational banking statistics indicate that cross-border claims on advanced economies contracted in the second quarter of 2012, by $318 billion (1.4%). This compared with a slight decrease of $16 billion in the previous quarter and was the second largest decline since the fourth quarter of 2010.

Cross-border claims on non-bank borrowers increased modestly ($26 billion or 0.3%), as increases vis-à-vis the euro area and the United Kingdom were partially offset by reduced claims on non-banks in the United States and Japan (Graph 1, bottom left-hand panel).

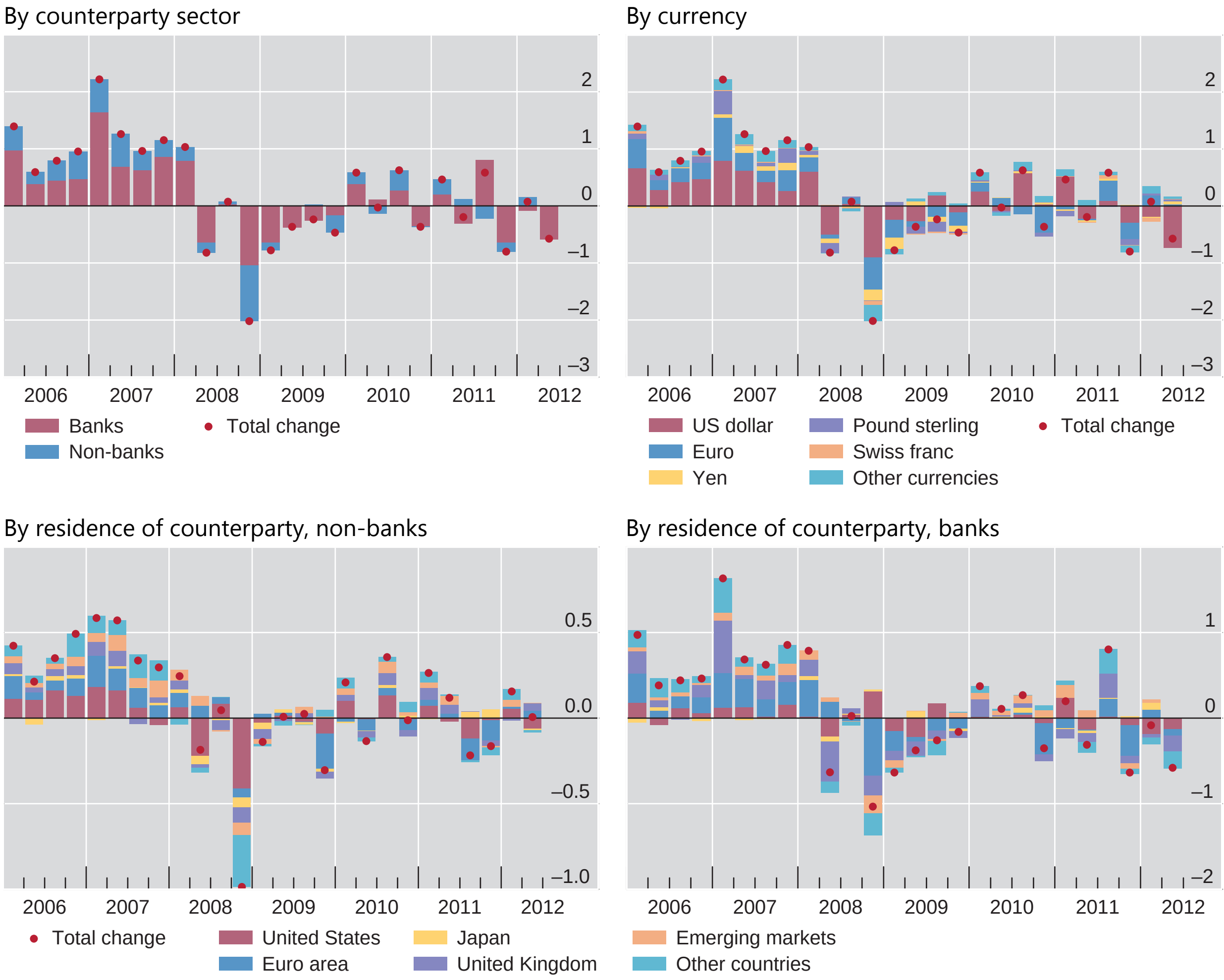
By contrast, interbank claims (including inter-office positions) fell sharply, by $344 billion (2.3%), following a decline of $64 billion (0.4%) in the previous quarter. Cross-border claims on banks in the United Kingdom and the United States contracted the most, by $187 billion (4.8%) and $124 billion (4.5%), respectively (Graph 1, bottom right-hand panel). In both cases, this represented the third consecutive quarterly decline. Interbank claims on banks in the euro area fell by $75 billion (1.3%). This was mostly driven by lower interbank lending to banks in Germany, Spain and the Netherlands.

The sharp decline in cross-border claims on banks in advanced economies was mainly the result of reduced inter-office positions, which contracted by the largest amount on record ($467 billion or 4.3%). Inter-office positions vis-à-vis banks

[2] 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.

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.

Source: BIS locational banking statistics by residence.

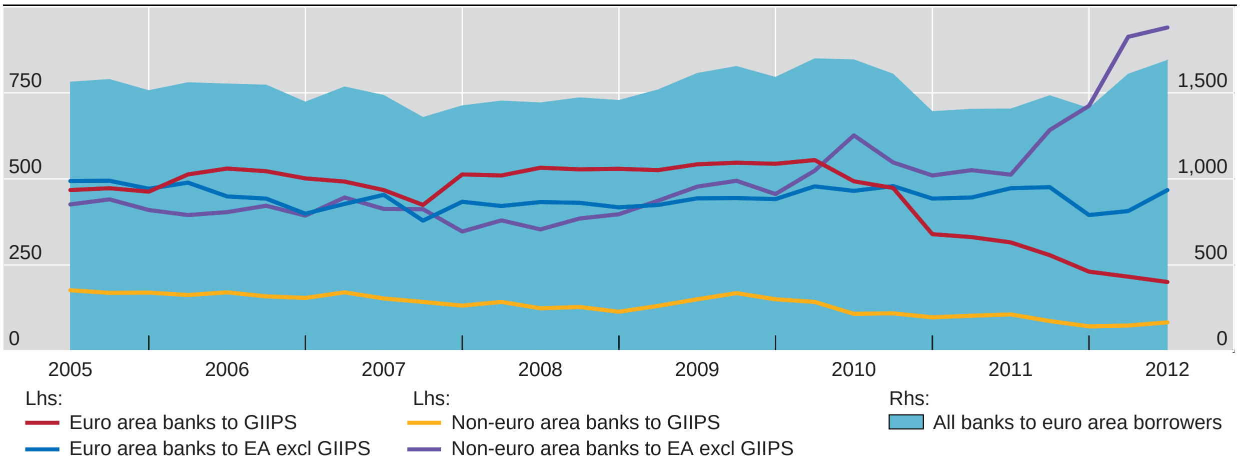
headquartered in the United States and the euro area accounted for the major part of this fall, registering declines of $304 billion (16%) and $241 billion (7%), respectively, from the previous quarter. In the first case, the decline was driven by reduced inter-office claims of US banks located in the United Kingdom and the United States on their related foreign offices, while in the second it was concentrated on reduced inter-office positions within the euro area.

The BIS consolidated banking statistics on an ultimate risk basis,[3] which contain a more detailed counterparty sector breakdown than the locational banking

[3] The BIS consolidated international banking statistics on an ultimate risk basis break down exposures according to where the ultimate debtor is headquartered. These exposures 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 the box on pp 16–17 of the March 2011 *BIS Quarterly Review*). By contrast, the BIS locational statistics only distinguish between exposures vis-à-vis banks and vis-à-vis non-banks.

BIS reporting banks' consolidated exposures to euro area sovereigns[1]

In billions of US dollars — Graph 2



EA = euro area; GIIPS = Greece, Ireland, Italy, Portugal and Spain.

[1] Positions expressed at constant end-Q2 2012 exchange rates based on the assumption that all claims on the public sector in euro area countries are denominated in euros.

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

statistics, indicate a growing bifurcation in reporting banks' exposures to euro area sovereigns (Graph 2). Banks headquartered in the euro area continued to trim their exposures to Greek, Irish, Italian, Portuguese and Spanish public sector borrowers (GIIPS countries), this time by a combined (estimated) $16 billion or 7%, to $201 billion.[4] At the same time, both euro area banks and especially non-euro area banks increased their exposures to the public sector in other euro area countries, with exposures to the public sector in Germany and France growing the most (based on estimated exchange rate adjustments). This development is part of a longer-term trend that became more pronounced with the worsening of the euro area financial crisis in the course of 2011. Around half of the strong expansion in exposures of non-euro area banks to non-GIIPS euro area countries has been driven by UK banks, with mostly US, Norwegian, Swedish and Swiss banks accounting for the rest. This pushed BIS reporting banks' total foreign exposures to euro area sovereigns to $1.7 trillion in the second quarter of 2012. Unfortunately, we are not able to say to what extent these changes in stocks are driven by valuation effects, since reporters tend to price (and thus report) securities that are held to maturity (banking book) at book value, whereas debt securities held for trading purposes (trading book) are valued at market price.

Credit to emerging market economies

The BIS locational banking statistics show that reporting banks' cross-border claims on borrowers in emerging market economies expanded slightly ($6 billion or 0.2%)

[4] This calculation corrects for the depreciation of the euro against the US dollar by assuming that all claims on the euro area public sector are denominated in euros.

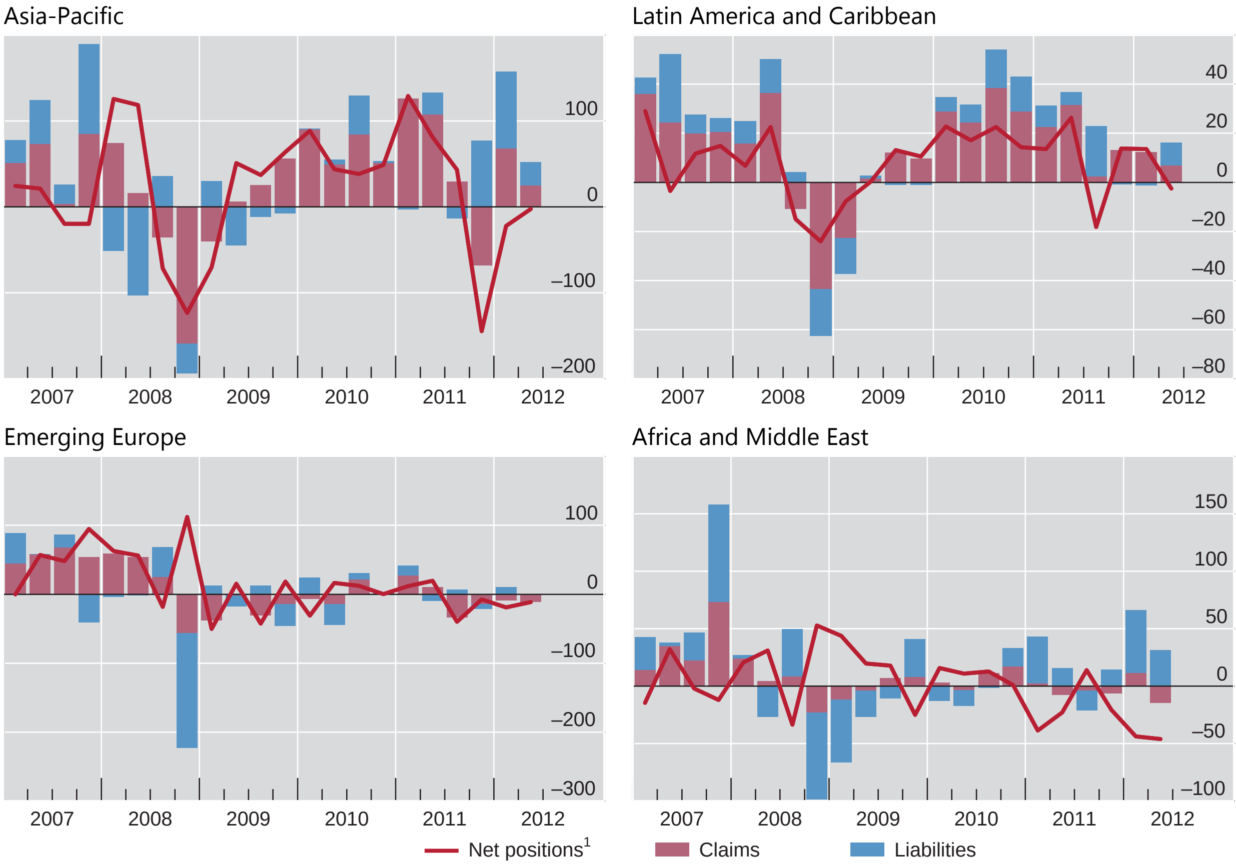
in the second quarter of 2012.[5] The increase affected mostly claims on banks located in these economies ($5 billion or 0.3%). Cross-border liabilities of BIS reporting banks to counterparties in emerging economies increased, especially to banks ($72 billion or 4.6%), indicating that the latter were net providers of funding to banks in other economies.

Cross-border claims on borrowers in Asia-Pacific increased the most ($25 billion or 1.9%), although by considerably less than in the previous quarter (Graph 3, top left-hand panel). Claims on both banks and non-banks in the region increased, by $17 billion (2%) and $8 billion (1.7%), respectively. However, this was outstripped by the increase in the liabilities of BIS reporting banks to counterparties in Asia-Pacific, resulting in a modest net outflow of funds from the region ($2 billion).

Cross-border credit to borrowers in Latin America and the Caribbean grew ($7 billion or 1.1%), while claims on emerging Europe contracted ($11 billion or 1.5%) for the fourth consecutive quarter (Graph 3, top right-hand and bottom left-hand panels, respectively). The expansion in lending to Latin America and the

Changes in cross-border positions on emerging economies

In billions of US dollars — Graph 3



[1] Claims minus liabilities.

Source: BIS locational banking statistics by residence.

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

Caribbean was driven by higher claims on banks ($12 billion or 5.1%), while those on non-banks declined ($6 billion or 1.5%). By contrast, interbank claims on emerging Europe fell by the largest amount in three consecutive quarters ($15 billion or 3.8%).

The BIS consolidated statistics on an immediate borrower basis reveal that some banking systems have reduced their foreign claims on emerging market economies, while others continue to expand their positions.[6] These exposures vis-à-vis emerging market economies in the Asia-Pacific region are discussed in more detail in Box 1. Foreign claims include reporting banks' consolidated cross-border claims on the region as well as their local claims booked by their affiliates in borrower countries.

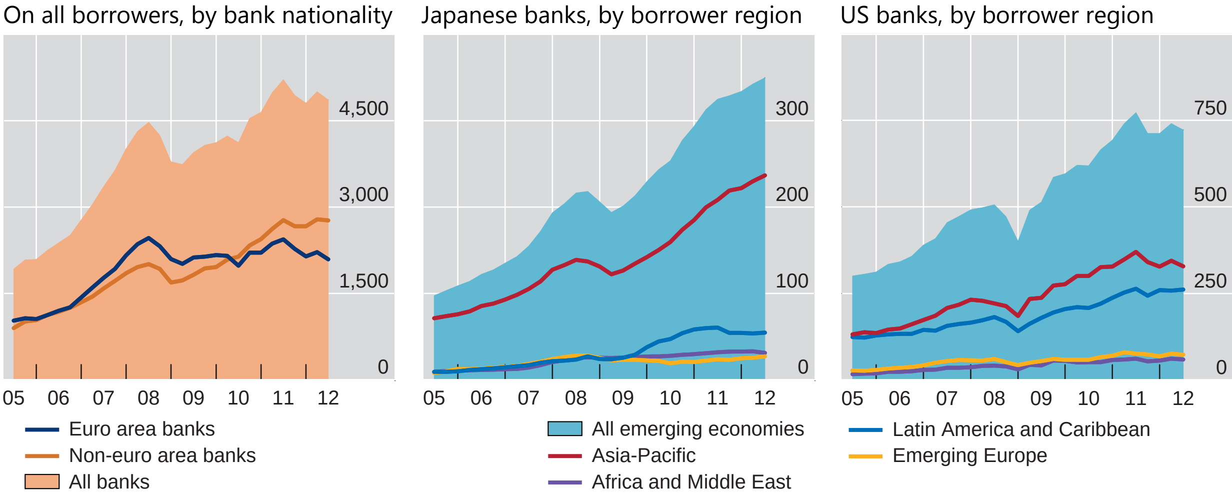
Euro area banks reported a significant $128 billion (5.8%) drop in foreign claims on emerging market economies in the second quarter of 2012 (Graph 4, left-hand panel). This reduction in consolidated exposures was vis-à-vis all regions, with emerging Europe accounting for 57% of the decline.

By contrast, consolidated foreign claims of non-euro area banks on emerging market economies remained relatively stable. Those reported by Japanese banks continued to increase, this time by $7 billion or 2.1% (Graph 4, centre panel). Other banking systems reporting further expansions in consolidated foreign claims on emerging market economies were, for example, Asian offshore centres (Hong Kong SAR and Singapore) and Australian banks. Consolidated foreign claims of US banks on emerging markets fell by $18 billion (2.5%) in the second quarter of 2012, mostly vis-à-vis Asia-Pacific (Graph 4, right-hand panel).

Consolidated claims on emerging economies[1]

In billions of US dollars

Graph 4



[1] Positions are valued at contemporaneous exchange rates, and thus changes in stocks include exchange rate valuation effects.

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

[6] The BIS consolidated international banking statistics on an immediate borrower basis break down exposures according to where the immediate exposure or risk lies. Hence, exposures are allocated to the country of residence of the immediate counterparty. The data cover financial claims and risk transfers reported by domestically owned banks headquartered in the reporting country as well as selected affiliates of other foreign banks.

Box 1: Shifting credit patterns in emerging Asia

Patrick McGuire and Adrian van Rixtel

Unlike in other emerging market regions, international credit to borrowers in Asia-Pacific[①] held up relatively well in the aftermath of the crisis. This occurred despite the pullback by some European banks, mostly from the euro area and Switzerland, which have adjusted their balance sheets in response to the global financial crisis and the more recent stresses in the euro area sovereign debt market (see the special feature by Avdjiev et al in this issue). Total foreign claims on the Asia-Pacific region grew by $613 billion, or 41%, between mid-2008, just before the collapse of Lehman Brothers, and the second quarter of 2012 to stand at $2.1 trillion (Graph A, top left-hand panel). The growth in claims there stands in sharp contrast to developments in other emerging regions. Claims on Latin America rose by a more modest $254 billion (24%) during the same period, while claims on emerging Europe fell by $230 billion (14%).

The expansion in international credit to Asia-Pacific has gone hand in hand with significant changes in the composition of creditor banks in the region. US and UK banks' claims started to grow again from early 2009 onwards, but have levelled off since mid-2011 (Graph A, top left-hand panel, purple and blue lines). For their part, euro area banks on aggregate shrank their positions by around $120 billion (or an estimated 30%) between mid-2008 and mid-2012 (red line).[②] In contrast, Japanese banks (yellow line) expanded their foreign claims on the region by an estimated $100 billion. And, even more significantly, other banks (brown line) expanded strongly vis-à-vis the region: their claims grew from $369 billion in mid-2008 to $770 billion by mid-2012. Overall, UK, US and Japanese banks' shares of total foreign claims on the region have remained relatively stable since the start of the global financial crisis in 2008 (around 23%, 16% and 11%, respectively), while the share of euro area banks declined sharply, from 27% in mid-2008 to 13% in mid-2012. This reduction was mirrored by a rise in the share of banks from other countries (27% to 37%).

Incomplete data make it difficult to identify the nationality of these other banks (Graph A, top right-hand panel). The BIS consolidated statistics show that banks headquartered in Asian offshore centres (Hong Kong SAR and Singapore) expanded their foreign claims on Asia-Pacific, from $119 billion in mid-2008 to $225 billion in mid-2012 (purple line). And banks headquartered in those emerging Asian countries that report in these statistics (Chinese Taipei, India and Malaysia) doubled their intraregional foreign claims during the same period, to $111 billion (red line). For their part, Australian banks' claims on the region have risen almost threefold since mid-2008, to $54 billion (yellow line).

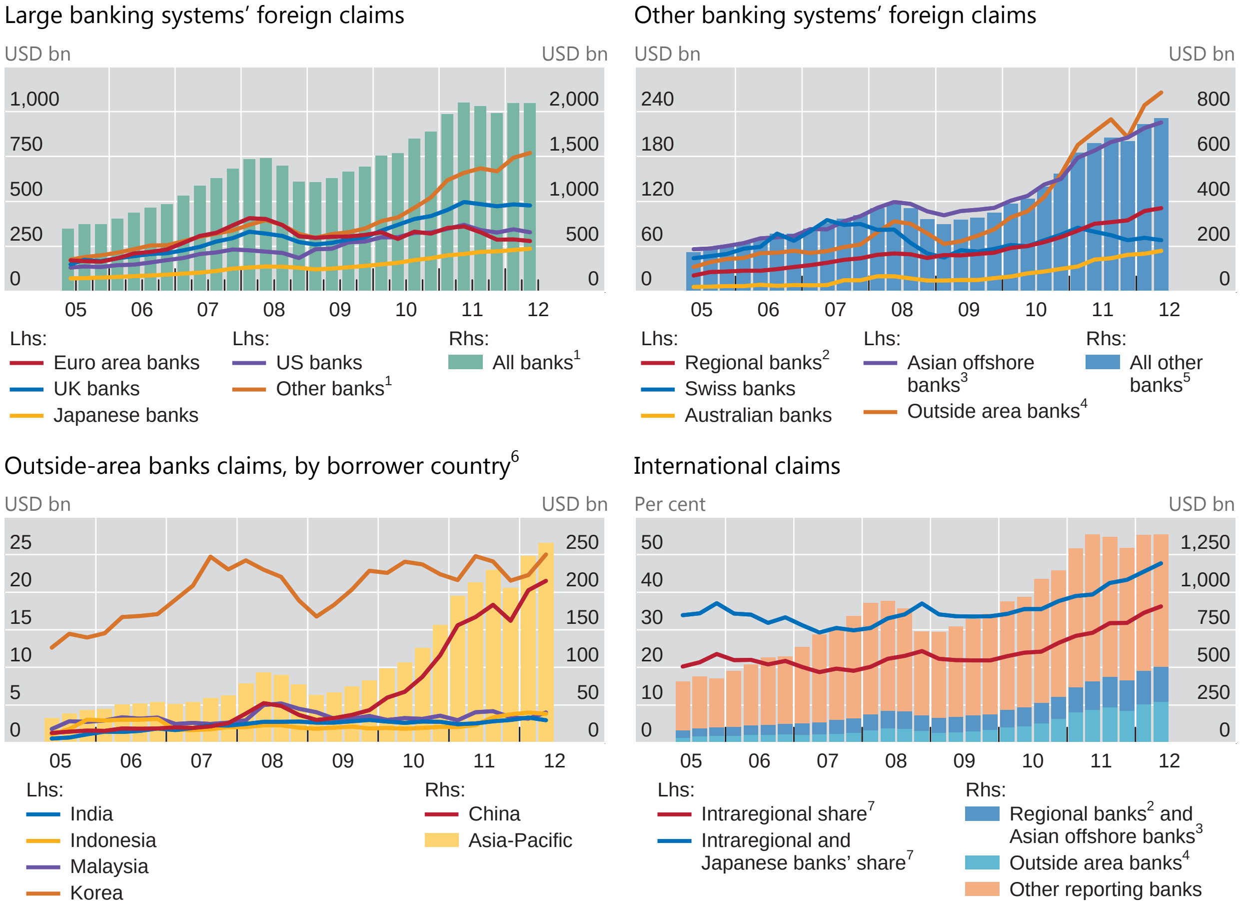
But the consolidated statistics also indicate rapid growth in cross-border credit provided by banks that are not headquartered in one of the BIS reporting countries (brown line).[③] While the nationality of these "outside area" banks is not known, it is likely that banks headquartered in the region account for the bulk of these other claims, as explained below.[④] In total, outside area banks' international claims on emerging Asia-Pacific rose to $265 billion by mid-2012 (Graph A, top right-hand panel), primarily to borrowers in China (bottom left-hand panel). Moreover, the data also indicate that these creditor outside area banks were primarily located in Asia; the offices of outside area banks not located in Asia (excluding Japan) accounted for a mere $85 billion (32%) compared to a relatively large $180 billion booked by such banks located in Asian offshore centres.

Evidence marshalled from other sources sheds more light on the identity of these outside area banks. Data from Bankscope, for example, show that the (unconsolidated) total assets of Chinese banks' foreign offices in Asia (excluding Singapore) grew by $135 billion (74%) from 2007 to 2011, consistent with the rapid growth in outside area banks' international claims on emerging Asia-Pacific during the same period (Graph A, bottom left-hand panel).[⑤] In addition, Asian banks (including Hong Kong and Singapore banks, but excluding Japanese banks) accounted for a growing share of total syndicated lending to emerging Asia-Pacific. New signings, as reported by Dealogic, show a marked uptick in participation by Asian banks: their new syndicated loans topped $223 billion in 2011, up by 80% from 2007. As a result, Asian banks' share of total signings to Asia-Pacific increased from 53% to 64%.

Combined, the rise of intraregional lending and the growth in positions from smaller banking systems have filled the gap left by euro area and Swiss banks (Graph A, bottom right-hand panel). Euro area and Swiss banks' claims fell from 38% of total international claims on Asia-Pacific in mid-2008 to 19% in mid-2012. In contrast, estimated intraregional lending, which includes the claims of reporting Asian banks (ie banks headquartered in Chinese Taipei, Hong Kong SAR, Malaysia, Singapore and India) on borrowers in the region, plus

Credit to emerging Asia-Pacific

Graph A



[1] Including outside area banks (or banks located in the BIS reporting area but headquartered outside). [2] Banks headquartered in those emerging economies that report in the BIS banking statistics (Chinese Taipei, India and Malaysia). [3] Banks headquartered in Hong Kong SAR and Singapore. [4] Banks located in the BIS reporting area but headquartered outside (eg a Peruvian bank in Australia). [5] All banks excluding those in the top left-hand panel. [6] International claims (all cross-border claims and locally extended claims in foreign currency). [7] The intra-regional share is the sum of regional banks and Asian offshore banks plus outside area banks (assuming these are banks headquartered in Asia) all divided by total international claims on the region.

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

the claims of outside area foreign banks (under the assumption that they are Asian banks) on these same borrowers, accounted for a combined 36% of total international claims on the region in mid-2012, up from 22% a few years earlier (brown line). If the positions of Japanese banks are added to intraregional credit, the share of international credit provided by these banks to Asia-Pacific grew from 33% to 48% (blue line).

① Following the classification of the BIS international banking statistics, the emerging Asia-Pacific region does not include Hong Kong SAR, Macao SAR and Singapore, which are classified as Asian offshore financial centres. ② When estimated exchange rate adjustments are taken into account, the fall of euro area banks' foreign claims on emerging Asia-Pacific countries is around the same (27%). ③ In the BIS consolidated banking statistics (immediate borrower basis), reporting central banks provide data to the BIS on the worldwide consolidated positions of banks headquartered in the respective country, and information on the cross-border positions of the offices of banks located in the country which have a parent institution from a non-BIS reporting country. An example of the latter would be the cross-border positions of the offices of a Peruvian bank in Australia: Peru is a non-reporter, and thus Peruvian banks' global consolidated positions are not picked up, but Australia provides the cross-border positions of the offices of Peruvian banks in Australia. This information helps the BIS to better track global lending and the extent to which banks from non-reporting countries account for cross-border credit. Unfortunately, no information about the nationality of these so-called "outside area" foreign offices is available. ④ Figures for foreign claims of outside area foreign banks in the top right-hand panel of Graph A are actually those for international claims, as data on local currency claims of these banks on residents in the region are not available. ⑤ This includes Chinese banks in Hong Kong SAR, India, Macao SAR, Malaysia and Thailand, although their operations are highly concentrated in Hong Kong. According to Bankscope, Chinese banks' unconsolidated total assets booked by their subsidiaries in Hong Kong increased by around $120 billion from 2007 to 2011, to $295 billion.

Box 2: A reallocation of external positions in the BIS locational banking statistics

A change in the treatment of external positions has been implemented in the BIS locational banking statistics by residence. It takes effect with the publication of this issue of the *BIS Quarterly Review*, and has been applied retroactively; it therefore affects the historical time series for some aggregate figures.

This change was introduced in preparation for the Stage 1 and Stage 2 statistical enhancements that were approved by the Committee on the Global Financial System (CGFS) in January 2012.[①] As part of these enhancements, banks will begin reporting in the locational banking statistics all financial claims and liabilities, including local currency positions vis-à-vis residents of the reporting country. Thus positions that banks could previously not allocate, especially own issues of debt securities, will be reported more comprehensively.

The change involves a reallocation of BIS reporting banks' positions (assets and liabilities) that had previously been treated as "external" (ie cross-border) to a new category called "unallocated by counterparty country". This category captures positions for which the reporting bank does not know the residence of the counterparty. In the past, these unallocated positions had been treated as external positions (that is, it was assumed that the counterparty was not in the same country as the reporting bank), and thus were included in aggregates of total external claims and liabilities. The change thus affects figures for reporting banks' total external positions vis-à-vis *all* countries.[②] However, the change does not affect the data for reporting banks' external positions vis-à-vis *individual* countries.

The effect of the change can be understood more clearly with reference to Table 6A in the Statistical Annex, which contains BIS reporting banks' external claims on individual counterparty countries. The change enters in two ways. First, positions unallocated by counterparty country have been singled out in a separate memo item for both total assets and liabilities (last line in Table 6A). Second, since these unallocated positions are no longer treated as external positions, they are excluded from *total* external positions (first line in Table 6A). On the assets side, reporting banks' unallocated positions amounted to $488 billion (1.5% of total assets) at end-Q2 2012.[③] On the liabilities side, these positions were a much larger $3 trillion (9.3% of total liabilities), reflecting the fact that banks generally cannot identify the holders of their debt securities liabilities, which trade on secondary markets, and thus cannot allocate these positions to a particular counterparty country or sector.

① See "Improving the BIS international banking statistics", *CGFS Papers*, no 47, November 2012, available at www.bis.org/publ/cgfs47.htm. ② Such aggregates appear in one form or another in Tables 1, 2A–D, 3A–B, 5A–B, 6A–B and 7A–B, available at www.bis.org/statistics/bankstats.htm. ③ In calculating these shares, total assets (liabilities) are taken to be the sum of external (cross-border) claims (liabilities) in all currencies, claims (liabilities) on residents in foreign currencies (Table 4) and claims (liabilities) unallocated by counterparty country.

The OTC derivatives market in the first half of 2012

Positions in the OTC derivatives market continued to decline in the first half of 2012. Notional amounts outstanding – or the face value – of all contracts fell to $639 trillion at the end of June 2012 (Graph 5), 10% lower than the high recorded 12 months previously and 1% lower than at end-2011.[7] Gross market values, which measure the cost of replacing existing contracts, dropped by 7% to $25 trillion. Gross credit exposures, which measure reporting dealers' exposure after taking account of legally enforceable netting agreements and thus provide a measure of counterparty risk in the OTC derivatives market, declined to $3.7 trillion.

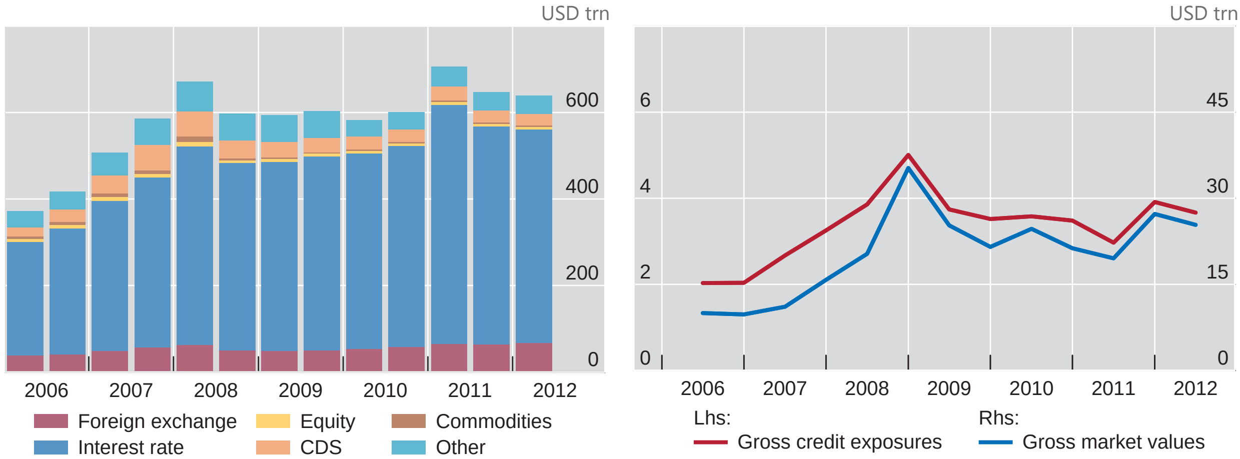
Smaller positions in the interest rate and credit default swap (CDS) segments more than offset slight increases in foreign exchange and equity-linked contracts.

7 The decline relative to June 2011 is even larger if one corrects for the expansion in the reporting population. Australia and Spain joined the previous reporters Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States in December 2011, adding approximately $13 trillion to notional amounts outstanding.

Global OTC derivatives

By data type and market risk category | Graph 5

Notional amounts outstanding | Gross market values and gross credit exposure



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

Notional amounts outstanding of interest rate contracts and CDS fell by 2% and 6%, respectively, to $494 trillion and $27 trillion. In contrast, the volume of foreign exchange contracts outstanding rose by 5% to $67 trillion, and that of equity-linked contracts by 6% to $6.3 trillion. Positions in commodity contracts declined slightly (3%) to $3 trillion.

Within the interest rate segment, the trend away from inter-dealer positions towards positions with other financial institutions – a category that includes banks and securities firms which are not reporting dealers as well as central counterparties, hedge funds, special purpose vehicles, insurance companies, mutual funds and other financial companies – continued. Notional amounts of inter-dealer positions fell by $18 trillion (12%) to 28% of the total, while those with other financial institutions rose by $6 trillion (2%) to 64%. In the mid-2000s, before the financial crisis, inter-dealer positions and positions with other financial institutions were of similar size, each accounting for 40–45% of the market total. Positions with non-financial customers accounted for the remaining 10–15% of the market, but this share has since fallen, to just 8% in mid-2012. This is partly related to the increased use of central counterparties.

Interest rate contracts have become increasingly short-term in recent years. Notional amounts of contracts with maturities of more than five years fell by 9% in the first half of 2012 to $117 trillion, or 24% of total interest rate contracts. By contrast, the volume of contracts with a maturity of up to one year went up by 4% to $207 trillion, or 42% of the total. In the mid- and late 2000s, longer-term contracts accounted for up to 35% of all interest rate contracts.

Notional amounts outstanding of CDS continued the decline that started in early 2008. In the first half of 2012, they fell another 6% to $27 trillion, less than half the amount at the end of 2007. Gross market values fell by 25% to $1.2 trillion, more than reversing the increase in the previous half-year.

Box 3: The importance of reference rates

Christian Upper

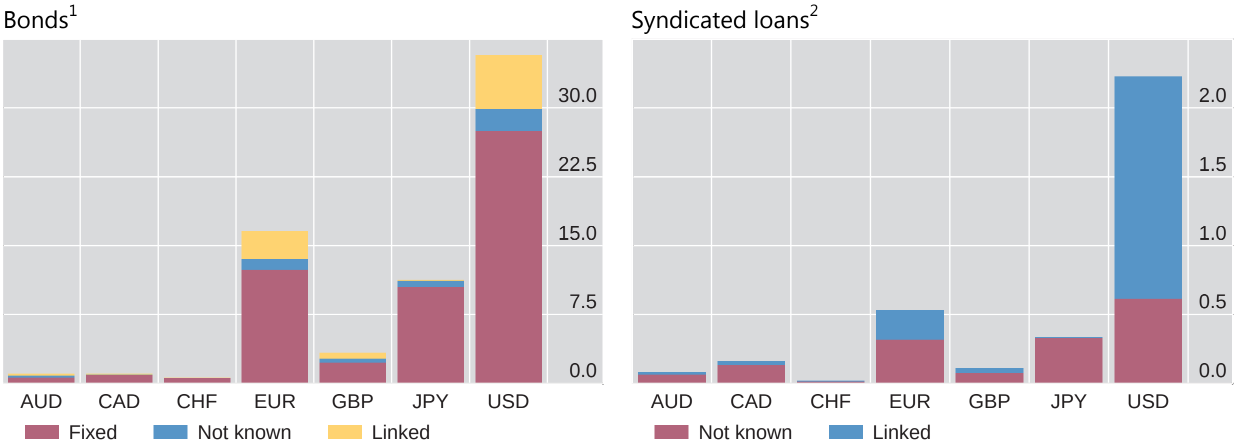
Libor, Euribor and similar rates have become the key reference or benchmark rates used in contracts such as interest rate derivatives, floating rate loans and mortgages, with hundreds of trillions of dollars outstanding. Libor was introduced in 1986 as an alternative to Treasury bill (T-bill) and bilaterally negotiated interest rates in floating rate loans and interest rate swaps. This private sector initiative filled an important gap: T-bill rates had become poor proxies for marginal funding costs for the larger globally active banks owing to the flight to quality following the Latin American debt crisis.① Furthermore, bilaterally negotiated benchmarks were cumbersome to use. Thanks to the great convenience of having a single benchmark for trading interest rate risk, the use of Libor and similar benchmarks grew rapidly. However, since 2008 the reliability and integrity of Libor and other reference rates have been called into question by evidence that some contributors misstated their borrowing costs.②

This box provides evidence on how widely reference rates such as Libor and Euribor are used. We estimate that 14% of all outstanding bonds pay interest that is linked to an identifiable reference rate, and 79% pay a fixed rate; the rate on the remaining 7% cannot be identified with the available data (Graph B). The proportion of variable rate bonds linked to an identifiable reference rate varies across currencies, ranging from 1% for the Japanese yen to 19% for sterling. In the syndicated loan market, the proportion of debt whose interest payments are linked to identifiable reference rates is much higher. At least 54% of the loans originated between October 2011 and September 2012 are linked to Libor, Euribor or a similar reference rate. For the remaining loans, we do not have any information on whether they are linked to a particular reference rate.

Although several benchmark rates are available for most currencies, the vast majority of bonds and syndicated loan contracts are linked to a single benchmark. For instance, 98% of all euro-denominated floating rate bonds and 91% of the syndicated loans with identified benchmarks in that currency are linked to Euribor (Graph C). Euro Libor exists, but seems to be little used in debt markets. By contrast, the US dollar market is dominated by Libor, with 99% of floating rate bonds and syndicated loans with identifiable benchmarks linked to this particular rate. It is interesting to go beyond the top currencies and look at smaller markets. Some, such as the Swiss franc market, are dominated by Libor, which even serves as policy rate for the Swiss National Bank. By contrast, both the Australian and Canadian dollar markets are dominated by local benchmark rates.

Benchmark rates for bonds and syndicated loans

In trillions of US dollars — Graph B

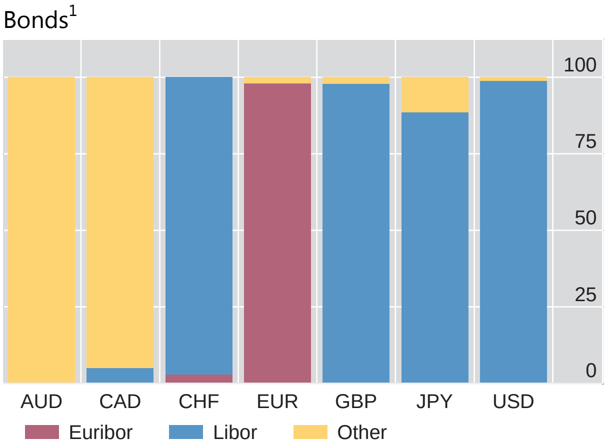


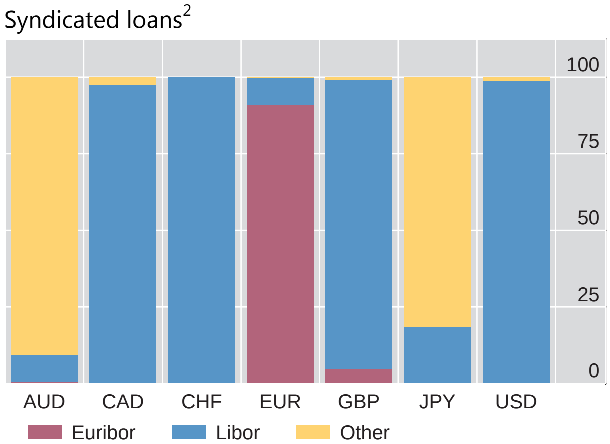
[1] Securities outstanding at end-September 2012 for which the base rate is specified (ie linked or fixed) or unspecified (not known) by Dealogic. [2] Syndicated credit facilities signed between 1 October 2011 and 30 September 2012 for which the reference rate is specified (ie linked) or unspecified (not known) by Dealogic.

Sources: Dealogic; BIS calculations.

Benchmark rates for bonds and syndicated loans

In per cent Graph C





[1] Securities outstanding at end-September 2012 for which the reference rate is linked to Euribor, Libor or some other rate. [2] Syndicated credit facilities signed between 1 October 2011 and 30 September 2012 for which the reference rate is linked to Euribor, Libor or some other rate.

Sources: Dealogic; BIS calculations.

① See R McCauley, "Benchmark tipping in the money and bond markets", *BIS Quarterly Review*, March 2001, pp 39–45. ② See United Kingdom Financial Services Authority, Final Notice to Barclays Bank Plc, 27 June 2012, for a particularly well documented case. Similar allegations have been made in other jurisdictions and have led to prosecution. See *The Wheatley Review of Libor: final report*, September 2012, available at www.hm-treasury.gov.uk/wheatley_review.htm, for the UK authorities' response.

The decline in open positions in the CDS market mainly affected contracts referencing non-financial firms. Notional amounts of such contracts fell by 10% to $10 billion. CDS referencing sovereign debt or debt issued by financial institutions remained relatively stable at $3 trillion and $7 trillion, respectively.