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Highlights of international banking and financial market activity[1]

The BIS, in cooperation with central banks and monetary authorities worldwide, compiles and disseminates several datasets on activity in international banking and financial markets. The latest available data on the international banking market refer to the fourth quarter of 2008. The discussion on international debt securities and exchange-traded derivatives draws on data for the first quarter of 2009.

The international banking market

In the wake of the failure of Lehman Brothers in mid-September 2008, banks' international balance sheets contracted by record amounts during the fourth quarter. The decline in both interbank claims and claims on non-banks (particularly in the United States) reflected reduced lending, disposal of assets and writedowns (Graph 1, left-hand panel). The fourth quarter fall pushed the year-on-year growth in total international claims down to –4%, from 5% in the previous quarter and a peak of 22% in the third quarter of 2007.

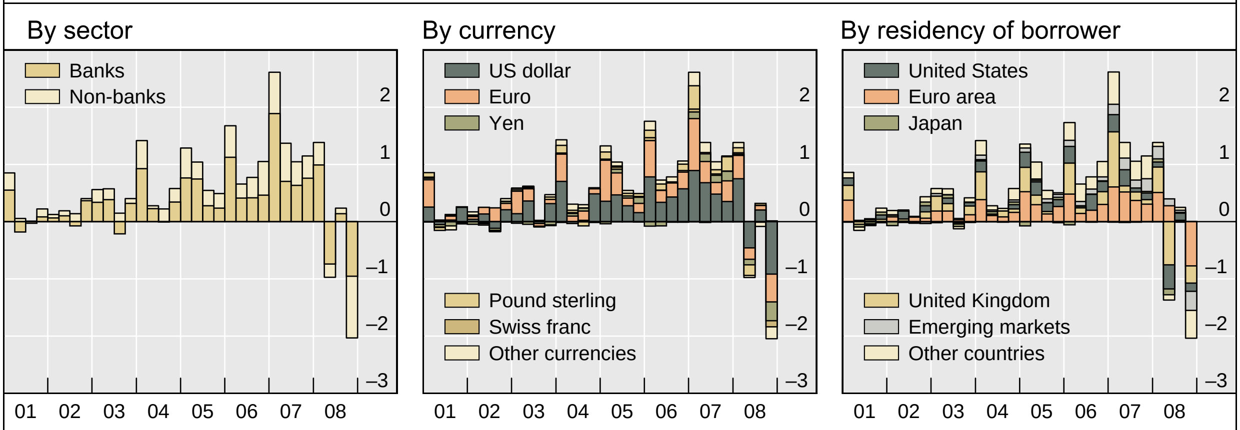
Banks' funding pressures intensified early in the quarter, prompting an unprecedented policy response from governments and central banks. Interbank borrowing contracted in all currencies during the quarter (Graph 1, centre panel), and other sources of bank funding also came under pressure. Residents of reserve-accumulating and oil-exporting countries withdrew a significant amount of deposits placed in commercial banks. For some countries, this was driven by central banks drawing down their deposits of foreign exchange reserves. By the end of the quarter, funding pressures had subsided somewhat, as evidenced by considerably lower Libor-OIS spreads relative to their earlier peak.

Banks trimmed their cross-border credit to emerging markets, but their local operations in many of these countries remained stable. Reporting banks' cross-border claims on all four emerging market regions decreased in the fourth quarter by a combined $282 billion (10%), with claims on Asia-Pacific

[1] Queries concerning the banking statistics should be addressed to Patrick McGuire and Goetz von Peter, and queries concerning international debt securities, exchange-traded derivatives and over-the-counter derivatives statistics to Jacob Gyntelberg.

Changes in gross international claims[1]

In trillions of US dollars



[1] Cross-border claims (including inter-office claims) in all currencies plus locally booked foreign currency claims on residents of BIS reporting countries.

Source: BIS locational banking statistics by residence. Graph 1

dropping the most. In contrast to banks' cross-border claims, their claims extended from their foreign offices to local residents in local currency remained stable overall and actually increased in many countries.

Balance sheets contract amidst funding pressures

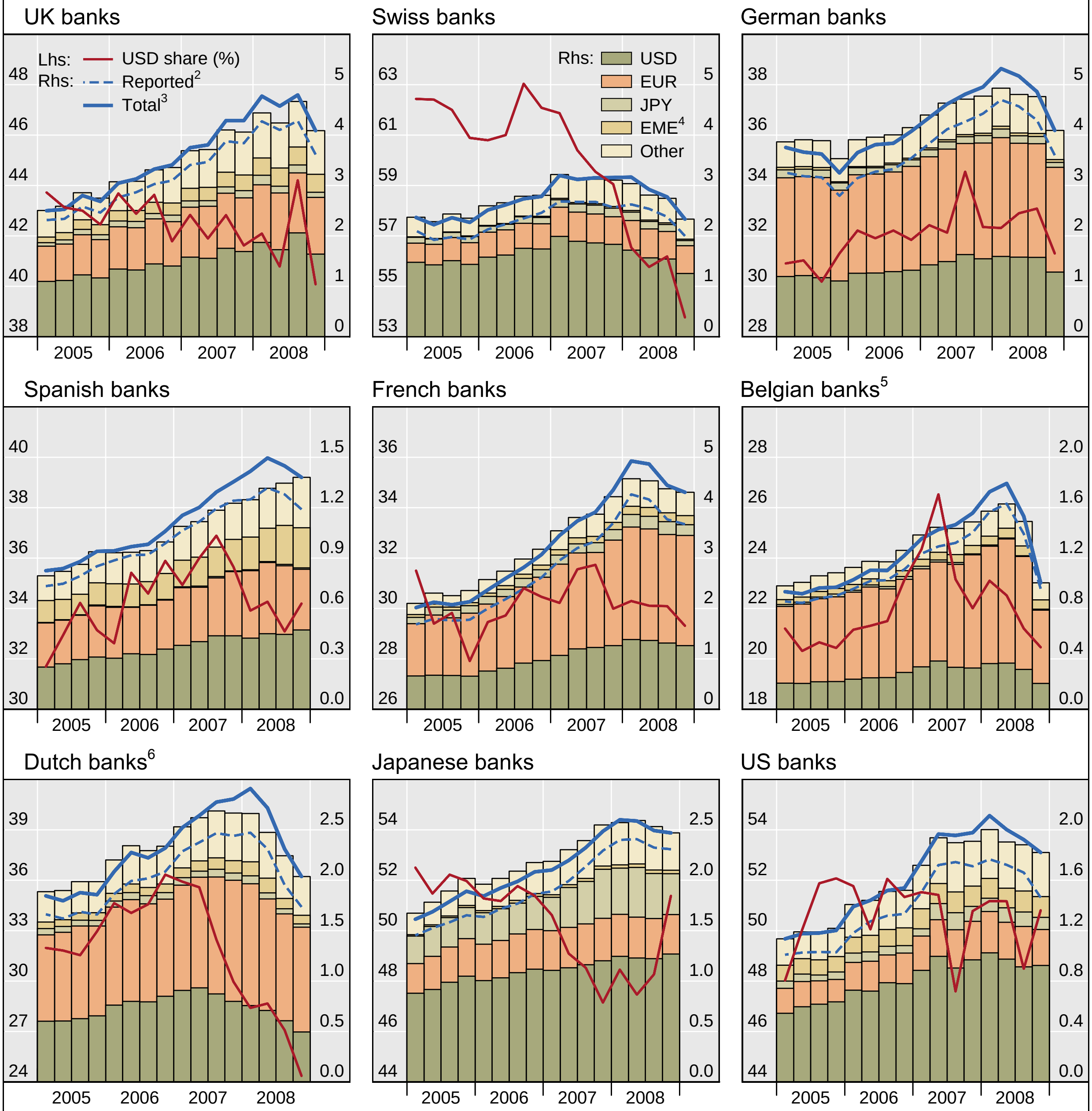
The stresses in the financial system in September 2008 carried over into the fourth quarter, contributing to the largest decline in banks' foreign positions on record. The BIS consolidated banking statistics (ultimate risk basis), which track the outstanding stock of foreign claims[2] of national banking systems,[3] show that, overall, total foreign claims fell by $3.2 trillion (–11%) to $25 trillion in the fourth quarter of 2008. The decrease is partly explained by the significant appreciation of the US dollar against many currencies during the quarter, which leads to a fall in the outstanding stock of non-US dollar positions when expressed in US dollars (Graph 2).[4]

[2] Foreign claims comprise *cross-border* claims and *local* claims, ie positions booked by banks' foreign offices vis-à-vis residents of the host country. Local claims are denominated either in the local currency of the host country (*local-in-local*) or in foreign currencies (*local-in-foreign*). The sum of cross-border and local-in-foreign claims is called *international* claims.

[3] "National banking system" refers to the set of large internationally active banks *headquartered* in a particular country (eg US banks, German banks, Swiss banks, etc), as opposed to banks *located* in a particular country.

[4] While the BIS consolidated statistics do not include a currency breakdown of banks' foreign assets, a breakdown can be estimated by splicing together the BIS consolidated banking statistics and the BIS locational banking statistics by nationality (see "The US dollar shortage in global banking", *BIS Quarterly Review*, March 2009, for detail). This breakdown is available for banks' total foreign claims (solid blue line in Graph 2), which in this context comprise the foreign claims reported by each banking system (dashed blue line) plus their foreign offices' cross-border claims on residents of the home country.

Foreign claims by currency[1]



[1] Stacked bars are estimated outstanding stocks of foreign claims in trillions of US dollars expressed at constant end-2008 exchange rates. These estimates are constructed by splicing the BIS locational banking statistics by nationality with the consolidated banking statistics (immediate borrower basis), which yields a currency breakdown for banks' total foreign claims. See "The US dollar shortage in global banking", *BIS Quarterly Review*, March 2009, for details. [2] Foreign claims as reported in the BIS consolidated banking statistics (immediate borrower basis); not adjusted for changes in exchange rates. [3] Foreign claims (as reported) plus banks' foreign offices' claims on residents of the home country; not adjusted for changes in exchange rates. [4] Emerging market currencies. [5] The contraction in positions in the last quarter of 2008 in part reflects the restructuring of Fortis. [6] The contraction in positions in the second half of 2008 in part reflects the sale of some business units of ABN AMRO.

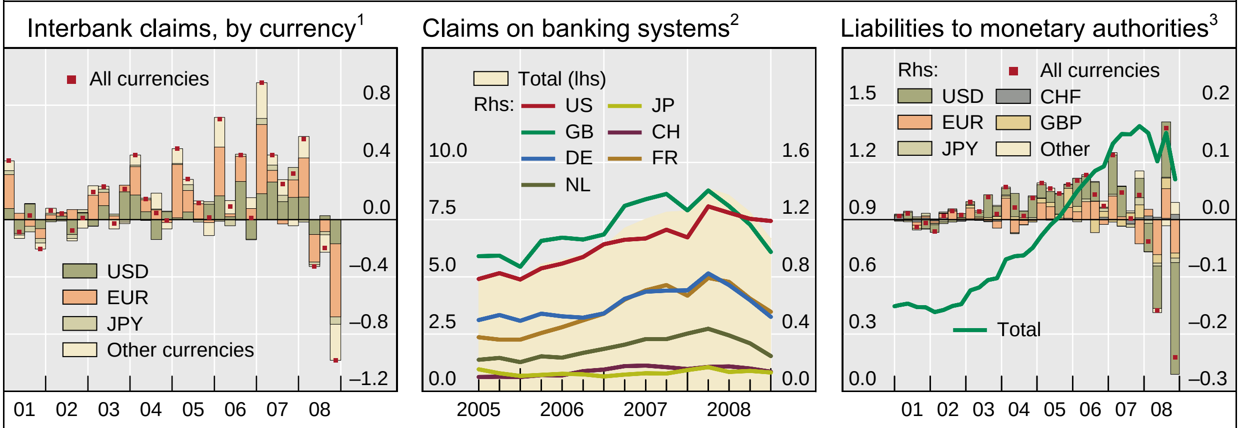
Sources: BIS consolidated statistics (immediate borrower basis); BIS locational statistics by nationality; BIS calculations. Graph 2

Largest contraction on record, despite US dollar appreciation

While most major banking systems reported declines, European banks' positions fell the most. The stacked bars in Graph 2 track the outstanding stock of banks' foreign assets, broken down by currency, expressed at constant end-2008 exchange rates. The actual contraction in foreign claims in the fourth quarter, when adjusted for exchange rate movements, is considerably less than the nominal decrease ($2.5 trillion compared to $3 trillion for the banking

Funding pressures in the second half of 2008

In trillions of US dollars



[1] Exchange rate adjusted changes in international interbank lending to other (unaffiliated) banks. [2] Consolidated foreign claims (ultimate risk basis) of all reporting banks on banks headquartered in the country indicated in the legend; not adjusted for movements in exchange rates. [3] Exchange rate adjusted changes (stacked bars) in international liabilities to official monetary authorities.

Sources: BIS consolidated statistics (ultimate risk basis); BIS locational statistics by residence and nationality. Graph 3

systems included in Graph 2) but is still the single largest quarterly decline on record. German, Swiss and UK banks' foreign claims fell the most in the fourth quarter, primarily their US dollar-denominated claims. Spanish banks' foreign assets actually increased once valuation effects are removed, in part reflecting the acquisition of foreign banks.

Facing funding pressures …

Banks' funding sources showed signs of instability in the wake of the Lehman Brothers bankruptcy. By the end of the fourth quarter of 2008, international interbank claims had shrunk by a record amount ($953 billion, excluding inter-office claims). Euro-denominated claims fell the most, primarily reflecting reduced intra-euro area interbank lending (Graph 3, left-hand panel). By banking system, the BIS consolidated banking statistics indicate that European banks, notably Dutch, Swiss, German and UK banks, reported the largest reductions in their interbank positions. As shown in Graph 3 (centre panel), this resulted in reduced interbank credit to UK banks, followed by German and French banks.

Other sources of funding came under pressure during the quarter as well. Following a surge in the third quarter of 2008, reporting banks' liabilities to official monetary authorities dropped by $265 billion (23%) in the fourth quarter (Graph 3, right-hand panel), primarily reflecting the withdrawal of foreign exchange reserves from UK, German, Swiss and Belgian banks.[5] In addition, residents of Russia, Libya, Nigeria and other oil-exporting countries repatriated deposits placed in commercial banks during the quarter, driving a record reduction in reporting banks' liabilities to emerging Europe and to Africa and the Middle East (Graph 6).

[5] Data from the IMF reported by 63 monetary authorities indicate that many central banks (in particular those of India and Russia) reduced their placements of foreign exchange reserves in commercial banks in the fourth quarter, by a combined $137 billion. These withdrawals occurred even as other central banks took actions to provide banks with funds; US dollar swap lines between the US Federal Reserve, the ECB, the Bank of England and the Swiss National Bank (among others) became unlimited early in the quarter (13 October).

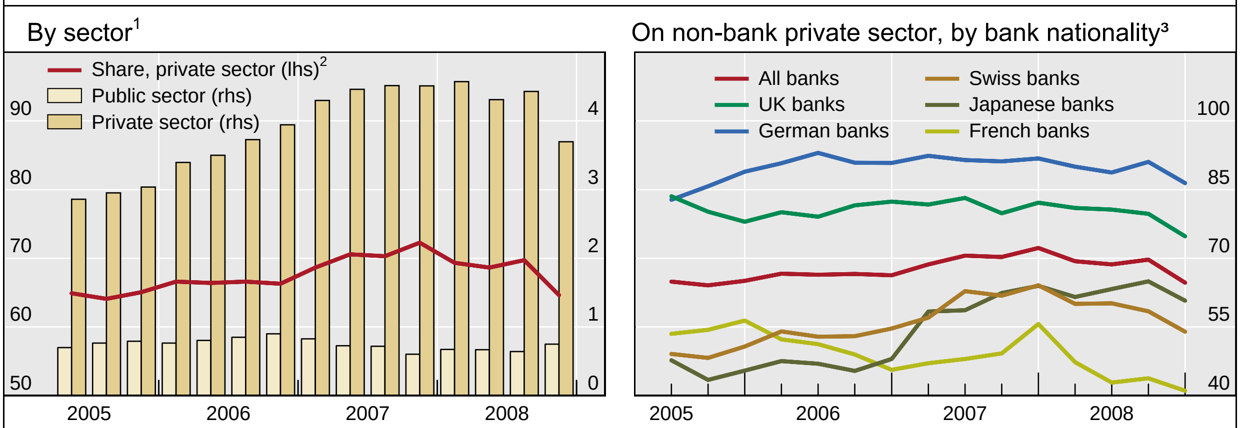
… banks unwind their non-bank positions …

Amidst these funding pressures, outstanding claims on non-banks fell sharply, particularly vis-à-vis non-bank borrowers in the United States.[6] This contraction includes writedowns and mark to market losses, making it difficult to distinguish outright asset disposal from valuation changes. Overall, the outstanding stock of international claims on non-banks declined by $1.1 trillion (Graph 1, left-hand panel). Nearly half of this was accounted for by reduced cross-border claims on US non-banks (–$424 billion, or –15%),[7] followed by reduced claims on non-banks in developed Europe (–$151 billion) and on the Cayman Islands (–$142 billion).[8] Since the start of the crisis, the reduction in claims on US non-banks has led to a reversal in the *net* flow of funds to US borrowers (see box).

… particularly vis-à-vis the United States

The BIS consolidated banking statistics (ultimate risk basis), which contain a finer counterparty sector breakdown, shed more light on banks' exposures to the US *non-bank private* sector (Graph 4, left-hand panel). Non-US banks' foreign claims on these borrowers, which include both their cross-border positions and positions booked by their US offices, have declined by $880 billion since the first quarter of 2008, with the largest fall ($734 billion) occurring in the fourth quarter. Most major banking systems reported a shift out of the US non-bank private sector (Graph 4, right-hand panel), and into holdings of US Treasury and other government securities.

Consolidated foreign claims on US borrowers



¹ Bars indicate BIS reporting banks' combined foreign claims (ultimate risk basis); in trillions of US dollars. Foreign claims include claims booked by offices of non-US banks outside the United States, plus claims booked by these banks' US offices. Since claims on US borrowers are predominantly denominated in US dollars, valuation effects through exchange rate movements are likely to be small. ² Foreign claims on the US non-bank private sector as a percentage of total foreign claims on US borrowers. ³ The lines plot foreign claims on the US non-bank private sector as a percentage of total foreign claims on US borrowers.

Source: BIS consolidated banking statistics (ultimate risk basis). Graph 4

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[6] Claims on non-banks include banks' international retail and corporate lending, and lending to hedge funds, as well as holdings of securities ranging from Treasury and agency securities to structured products.

[7] Debt and equity securities claims on US non-banks dropped for the fourth consecutive quarter, this time by $69 billion, while reduced loan claims made up the difference.

[8] Data on signings of syndicated loans, available up to the first quarter of 2009, show that total signings worldwide fell to their lowest level ($166 billion) since 1995, roughly one third of the volume in the first quarter of 2008. Signings for borrowers in the euro area and the United States fell the most sharply.

Banks also recorded large changes in their off-balance sheet positions. The outstanding stock of (unused) credit commitments fell from nearly \$5 trillion in early 2008 to \$4 trillion by end-year (Graph 5, left-hand panel). At the same time, the face value of guarantees – which include credit protection sold via credit derivatives – contracted by an unprecedented 23% to \$6.3 trillion (Graph 5, centre panel). Although exchange rate effects exaggerate the extent of this contraction, it does indicate that international banks in general, and Italian and Swiss banks in particular, reduced their contingent liabilities arising from third-party defaults, especially vis-à-vis entities in the United Kingdom and the United States.

Derivatives positions surge, reflecting market volatility

By contrast, the market value of banks' derivatives positions grew markedly in the fourth quarter of 2008, reflecting the changes in interest rates and greater market and exchange rate volatility. Banks, in particular Dutch, Swiss and UK institutions, reported a remarkable increase of 47% (\$2.3 trillion) in the positive market value of their derivatives holdings (Graph 5, right-hand panel). This reflects the extent to which these positions moved "into the money" following the coordinated interest rate cuts during the quarter, as well as exchange rate movements and the general rise in volatility in all asset markets.

Capital flows via banks reverse direction during the crisis

The financial crisis has led to significant changes in the flow of funds via banks across countries. The top panels of Graph A map the cumulative net transfer of funds between countries through the international banking system during the six quarters before and after the onset of the crisis. The estimated net capital flows, depicted by the thickness and direction of the arrows, take into account changes on the assets and liabilities side of the balance sheets of banks located in both countries in each bilateral pair.

Prior to the crisis, banks facilitated international capital flows out of surplus regions. This is illustrated by the arrows emanating from Japan and the euro area, as well as from Asian financial centres and oil-exporting countries. Banks routed funds from these regions via offices in the United Kingdom and in Caribbean financial centres, ultimately transferring funds to borrowers in the United States (a cumulative \$492 billion between the first quarter of 2006 and second quarter of 2007).

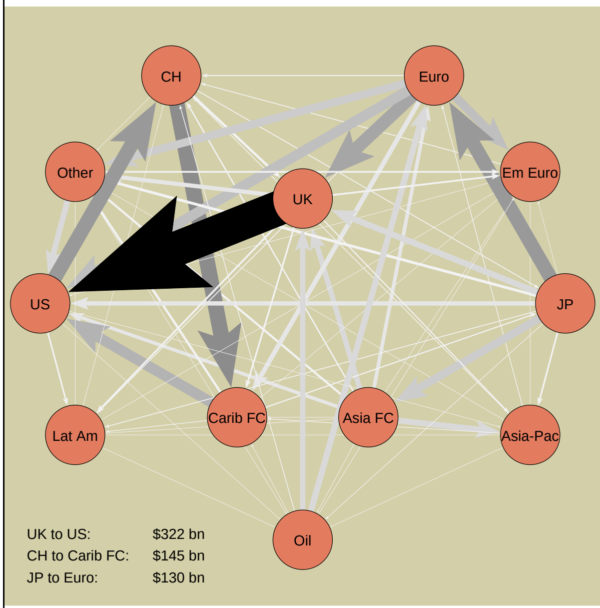
During the crisis, the direction of the bilateral flow of funds between several of the largest economies reversed. Between the second quarter of 2007 and fourth quarter of 2008, the cumulative net flows from the United States to the United Kingdom totalled \$482 billion, and those to Caribbean financial centres \$213 billion. Similarly, flows from oil-exporting countries, which mainly reflected deposits placed with banks in the United Kingdom and euro area, reversed as residents of these countries repatriated deposits.

The determinants of these flows differ for each bilateral pair. The bottom panels of Graph A break down by sector the cumulative flows for three bilateral linkages with the United States. Negative (positive) values represent flows into (out of) the United States. By far the largest swing since the start of the crisis has been the rapid rise in net flows to the United Kingdom, the result of reduced claims on non-bank entities in the United States booked by banks located in the United Kingdom (blue line, bottom left-hand panel). This is the result of reduced lending and writedowns of positions vis-à-vis US residents by the London offices of the major European-headquartered banks.

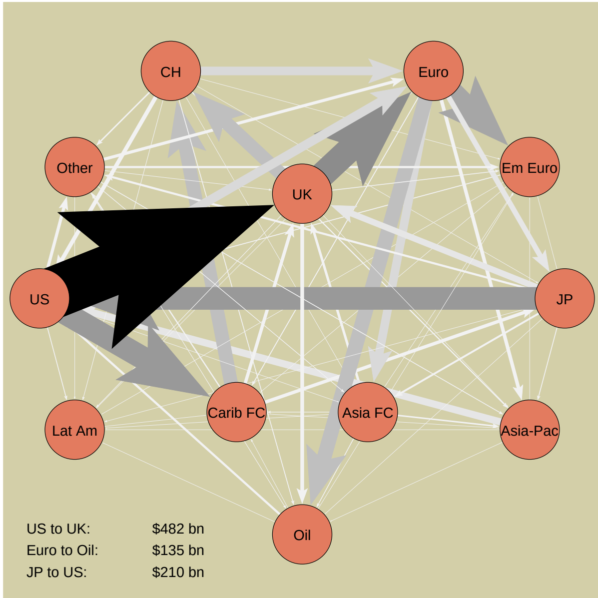
In contrast to the US-UK bilateral pair, the net flow of funds between Japan and the United States overall did not change direction. Throughout the crisis, banks in Japan have continued to channel money to US non-banks (blue line, bottom centre panel). At the same time, interbank flows reversed direction (red line), as Japanese banks transferred a net \$120 billion to their US offices since the start of the crisis. The BIS consolidated banking statistics (immediate borrower basis) show that Japanese banks' locally booked US dollar positions vis-à-vis residents of the United States increased by a similar amount, in part reflecting greater claims on the US public sector.[①]

Net flows of funds through the international banking system[1]

Cumulative net flows Q1 2006 – Q2 2007

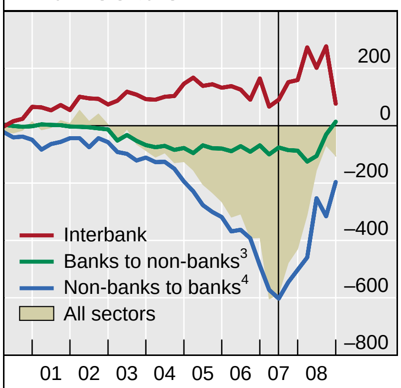


Cumulative net flows Q3 2007 – Q4 2008

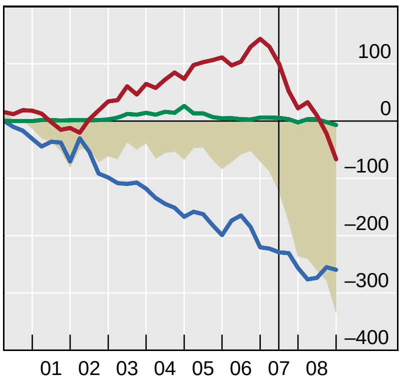


Cumulative net flows, by counterparty sector[2]

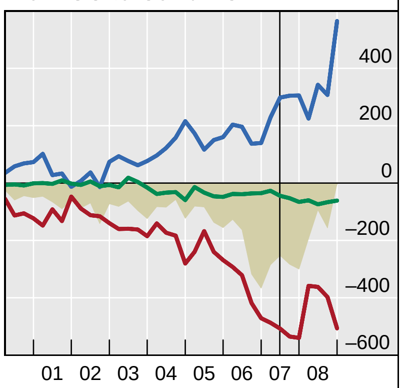
From US to UK



From US to JP



From US to Carib FC



Asia FC = Asian financial centres (Hong Kong SAR, Macao SAR and Singapore); Asia-Pac = China, Chinese Taipei, India, Indonesia, Korea, Malaysia, Pakistan, the Philippines and Thailand; Carib FC = Caribbean financial centres (Aruba, the Bahamas, Bermuda, the Cayman Islands, the Netherlands Antilles and Panama); CH = Switzerland; Em Euro = emerging Europe (Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, Turkey and Ukraine); Euro = euro area member states excluding Cyprus, Malta, Slovakia and Slovenia; JP = Japan; Lat Am = Argentina, Brazil, Chile, Colombia, Mexico and Peru; Oil = OPEC member states (excluding Indonesia) plus Russia; Other = Australia, Canada, Denmark, New Zealand, Norway and Sweden; UK = United Kingdom, Guernsey, the Isle of Man and Jersey; US = United States.

[1] Exchange rate adjusted flows, expressed at constant end-Q4 2008 exchange rates. The thickness of an arrow is proportional to the amount of net bank flows between countries/groups, and is comparable across panels. An arrow points from A to B if net flows in this direction are positive, calculated as changes in net interbank claims (assets minus liabilities) of banks in A on banks in B, plus net claims of banks in A on non-banks in B, minus net claims of banks in B on non-banks in A. (This last component is missed if B is not a reporting country.) See "Tracking international bank flows", *BIS Quarterly Review*, December 2006. [2] Cumulative flows broken down by counterparty sector. Positive (negative) flows indicate funds being sent from (received by) US residents. The vertical black line indicates the approximate start of the financial crisis (end-Q2 2007). [3] Cumulative net flows from banks in the United States to non-banks in the country in the panel heading. [4] Cumulative net flows from non-banks in the United States to banks in the country in the panel heading.

Source: BIS locational banking statistics by residency. Graph A

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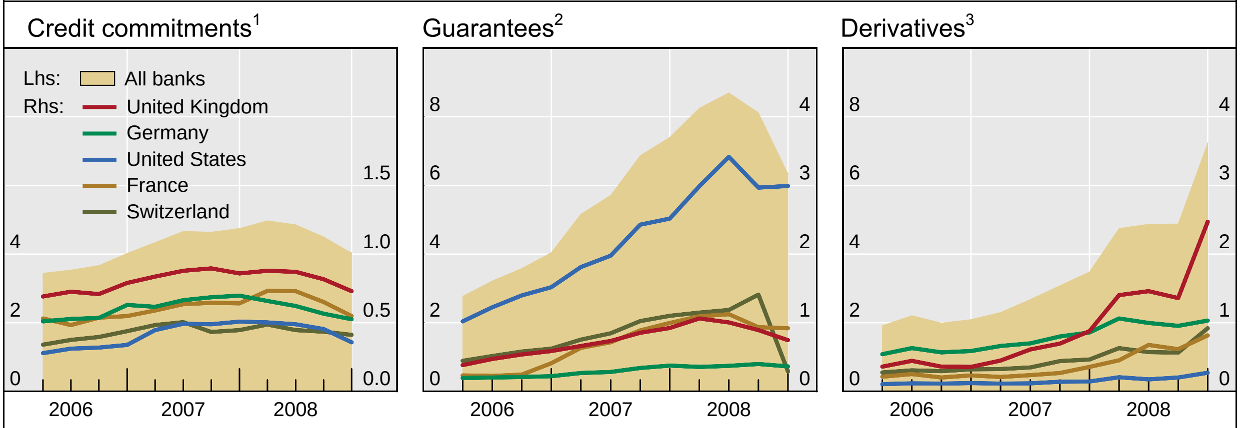
① The consolidated banking statistics (ultimate risk basis) show that $45 billion of the $60 billion increase in Japanese banks' *worldwide* claims on the US public sector in the fourth quarter of 2008 was booked by Japanese banks' offices in the United States.

Contingent exposures

In trillions of US dollars



[1] Unused credit commitments booked by banks headquartered in the countries in the legend. [2] Guarantees extended, including credit protection sold via credit derivatives. [3] Contracts bought, recorded at positive market value.

Source: BIS consolidated banking statistics (ultimate risk basis). Graph 5

Emerging markets feel the pinch

Cross-border lending declines sharply ...

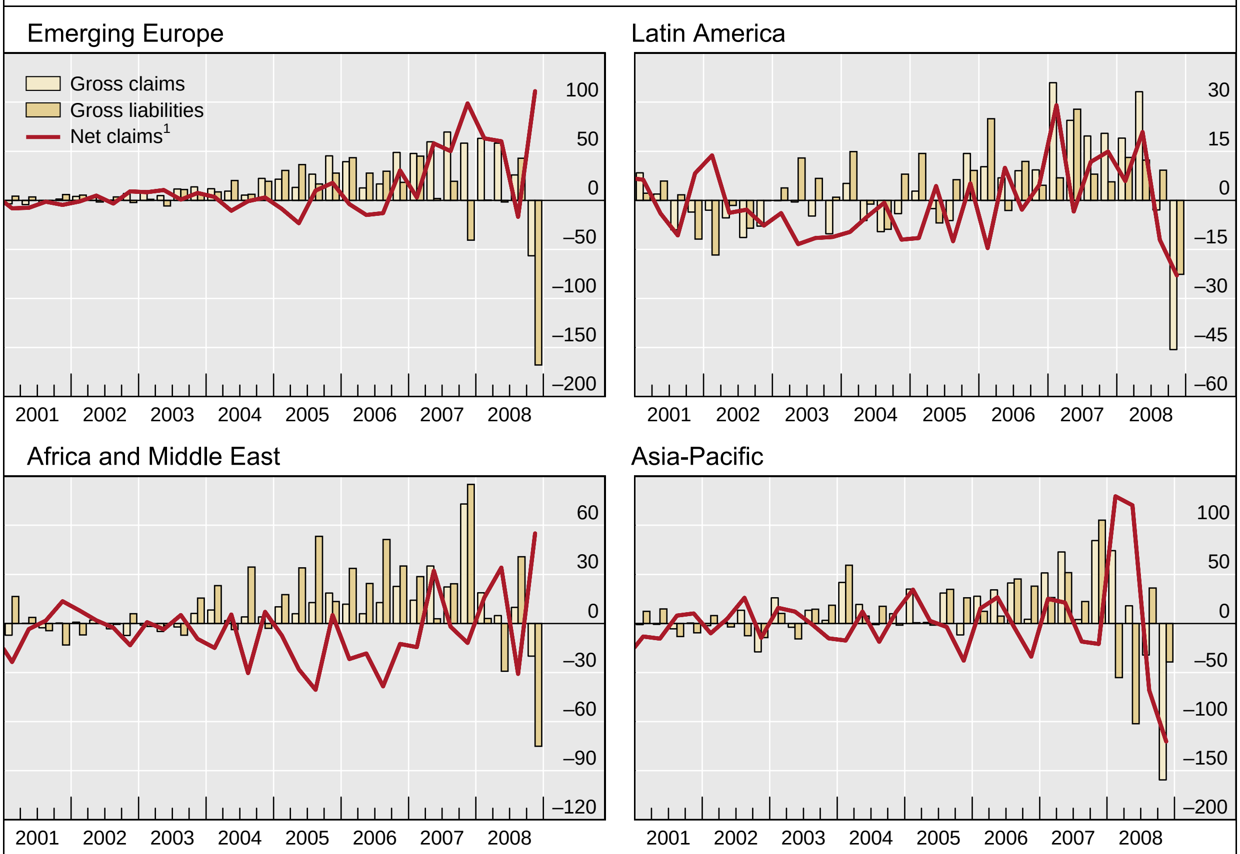
Cross-border credit to emerging markets showed clear signs of strain in the fourth quarter of 2008, although banks' local operations remained relatively stable. Reporting banks' cross-border claims (locational banking statistics) declined by an exceptional $282 billion (–10%), with significant reductions in claims on all four emerging market regions for the first time (Graph 6). Cross-border credit to borrowers in Asia-Pacific decreased the most (by $159 billion or 18%, roughly half the cumulative percentage decline seen during the Asian crisis). Banks' cross-border lending to emerging Europe also fell, mainly due to reduced credit to Russia, Turkey and, to a lesser extent, Poland. Offsetting the decline in lending, residents of many emerging markets drew down their deposits in BIS reporting banks (–$194 billion), driving an overall net inflow to emerging markets (+$23 billion).

Tracking the changes in banks' *foreign* exposures to emerging markets, which include their local positions, is more difficult because of the significant movements in many emerging market exchange rates during the quarter. The BIS consolidated banking statistics indicate that (unadjusted) international claims on emerging markets fell by $268 billion (10%) in the fourth quarter.[9] Across all emerging economies, nearly 80% of this reduction resulted from reporting banks running down their short-term claims (with a residual maturity of one year or less), lowering the share of short-term claims in the stock outstanding to 44%. International claims on Asia-Pacific, a large part of which is denominated in US dollars, fell by $155 billion, primarily vis-à-vis borrowers in China and Korea (Graph 7). By contrast, much of the international bank credit to emerging Europe is denominated in euros, and thus the

[9] In the BIS locational banking statistics, cross-border claims are broken down by currency, and can thus be corrected for valuation effects related to exchange rate movements. In contrast, the BIS consolidated banking statistics do not contain a currency breakdown for international claims.

Changes in cross-border positions vis-à-vis emerging markets

In billions of US dollars



[1] Gross claims minus gross liabilities.

Source: BIS locational banking statistics by residence. Graph 6

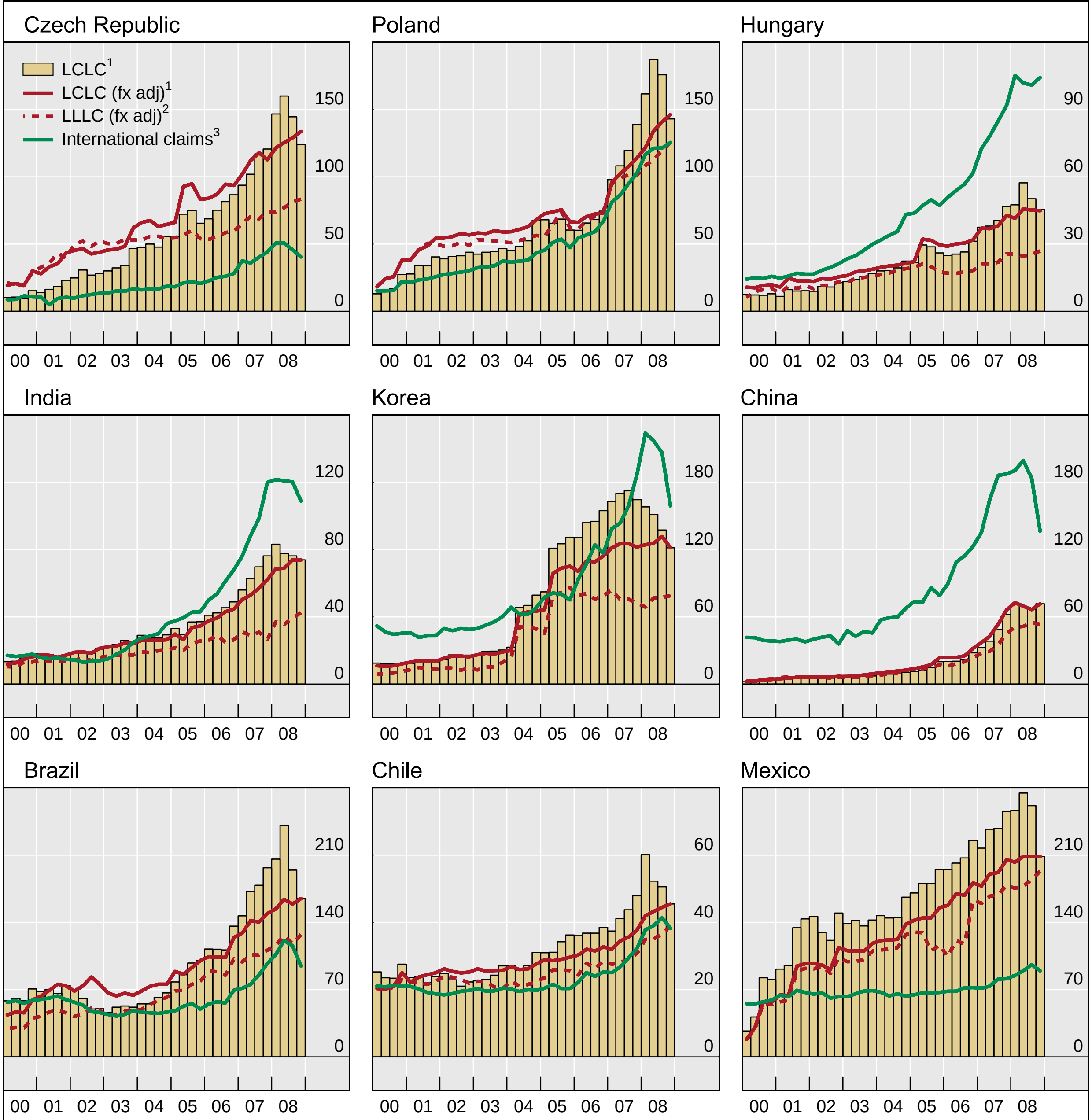
$45 billion contraction in banks' reported international claims overstates the true size of the retreat. A simple correction using the currency shares of banks' cross-border positions suggests that exchange rate movements may have masked a small expansion in international claims on emerging Europe.

… while local positions remain stable

In sharp contrast to cross-border claims, banks' local positions booked by their offices in emerging markets have remained stable throughout the crisis (Graph 7). Indeed, at constant exchange rates, reporting banks' local claims in local currencies continued to rise in many emerging markets. Local-in-local claims tend to be funded locally, and thus may be more stable than cross-border claims (or local-in-foreign currency claims), which are typically funded outside the borrowing country. Local-in-local claims now account for a greater share (57%) of foreign claims on emerging markets than was the case in late 2007 (55%).

International and local claims in local currencies, by borrower country

In billions of US dollars



[1] "Local claims in local currency", or local currency claims extended by banks' foreign offices to residents of the host country. The bars show reported claims whereas the solid red line tracks claims adjusted for exchange rate movements. [2] Local liabilities in local currency, adjusted for exchange rate movements. [3] International claims comprise cross-border claims in all currencies and local claims in foreign currencies extended by banks' foreign offices to residents of the host country; these claims are not adjusted for exchange rate movements, since no currency breakdown is available.

Source: BIS consolidated statistics (immediate borrower basis). Graph 7

Derivatives markets

OTC derivatives

Crisis results in lower notional amounts outstanding …

In the second half of 2008, the financial crisis resulted in a decline in the total notional amounts outstanding of over-the-counter (OTC) derivatives to $592 trillion at end-year (Graph 8, left-hand panel), an indication of reduced market activity. This is the first decline since data collection began in 1998. Foreign exchange and interest rate derivatives markets both recorded their first significant contractions. Against a background of severely strained credit markets and efforts to improve multilateral netting of offsetting contracts, credit default swap (CDS) markets continued to contract, with outstanding amounts decreasing by more than 25%. Facing significant price drops, outstanding commodity and equity derivatives also declined notably.

… and notably higher market values

Despite the drop in amounts outstanding, significant price movements resulted in notably higher gross market values, which increased to $34 trillion at end-2008 (Graph 8, right-hand panel). Gross market values, which measure the cost of replacing all existing contracts, can be used to capture derivatives-related exposures. The higher market values were also reflected in gross replacement costs after taking into account bilateral netting agreements, also referred to as gross credit exposures, which grew by nearly one third to $5 trillion.

The market for interest rate derivatives contracted for the first time in the second half of 2008, with notional amounts outstanding of these instruments falling to $419 trillion (Graph 9). Nonetheless, declining interest rates resulted in almost a doubling of the gross market value. The gross market value of interest rate swaps, by far the largest market segment, reached $17 trillion. The most significant increase took place in the US dollar swap market, where the gross market value nearly tripled.

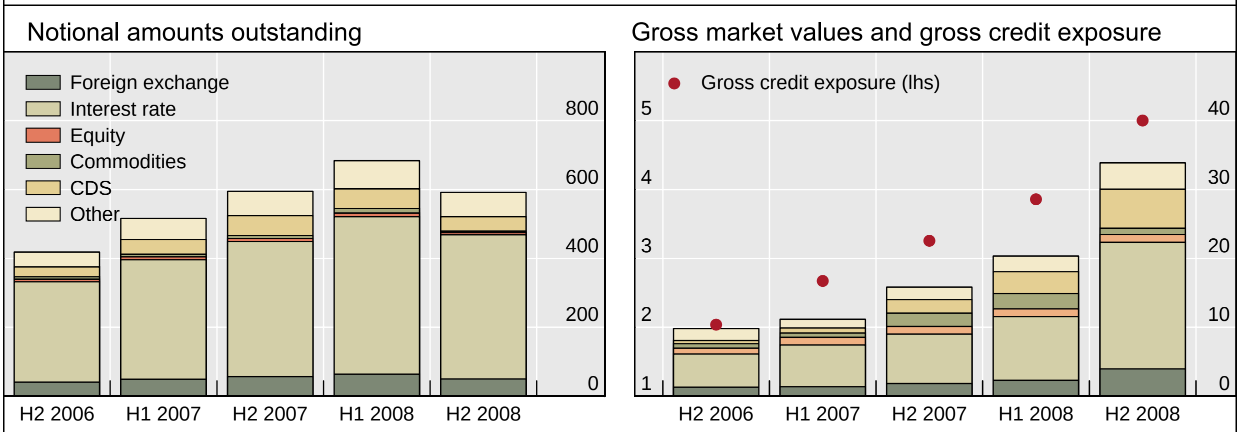
Credit market strain and netting of contracts …

…lead to drop in outstanding CDS contracts

Amounts outstanding of CDS contracts fell to $42 trillion against a background of severely strained credit markets and increased multilateral netting of offsetting positions by market participants. This was a continuation of the developments which began in the first half of 2008. Single-name contracts outstanding declined to $26 trillion while multi-name contracts, including CDS indices and CDS index tranches, saw a more pronounced decrease to $16 trillion (Graph 10, left-hand panel). The composition of market activity across counterparties also changed in the second half of 2008. Outstanding contracts between dealers and other financial institutions as well as between dealers and non-financial institutions saw large declines relative to the inter-

Global OTC derivatives

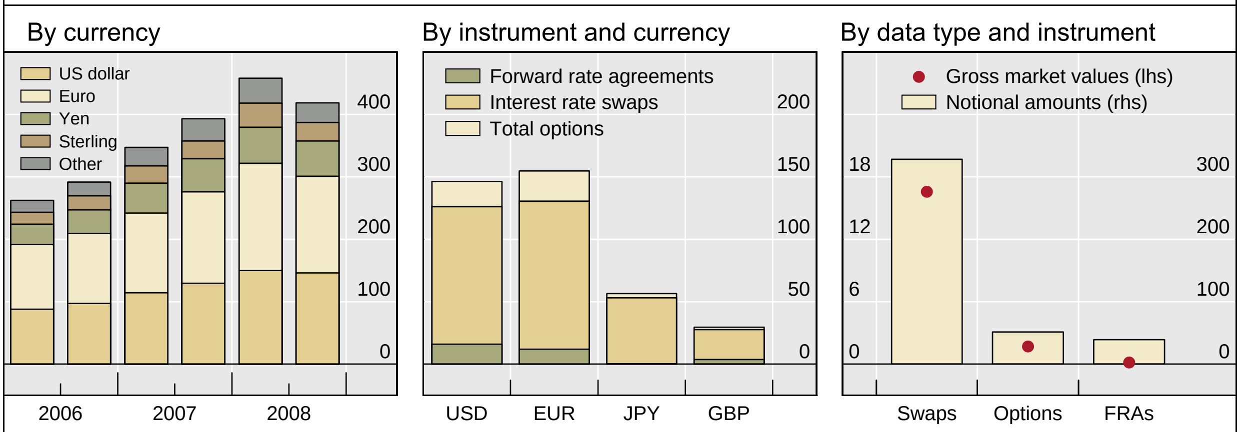
By data type and market risk category, in trillions of US dollars



Source: BIS. Graph 8

Interest rate derivatives

In trillions of US dollars



Source: BIS. Graph 9

dealer market (Graph 10, centre panel). Despite the lower outstanding amounts, the gross market value of CDS contracts also increased significantly as a result of the credit market turmoil (Graph 10, right-hand panel).

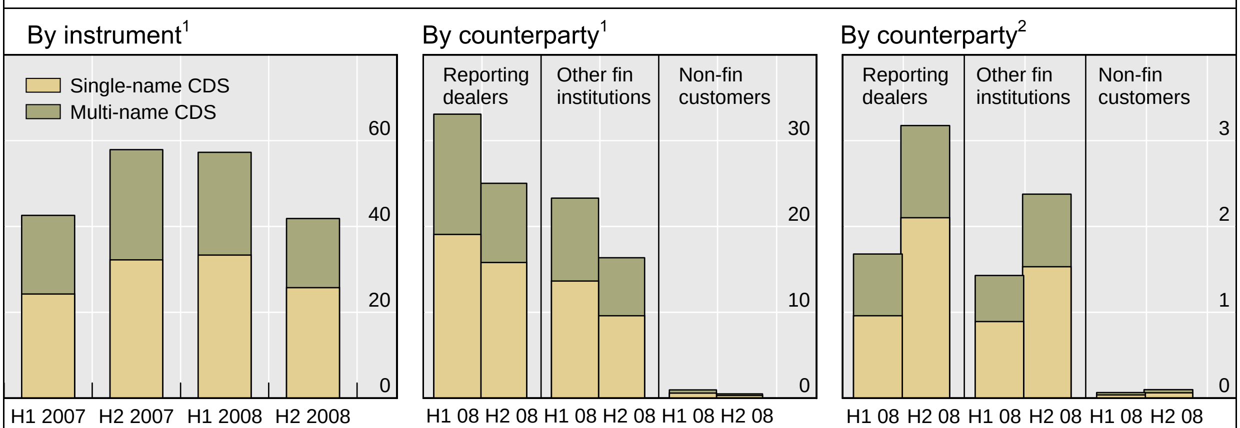
Notional amounts outstanding of foreign exchange derivatives decreased to $50 trillion, while their gross market value rose to $4 trillion. The dollar and the euro remained the most important vehicle currencies, followed by the yen and the pound sterling.

Amounts outstanding of commodity derivatives fell by two thirds to $4.4 trillion. The continued declines in commodity prices during the second half of 2008 also had a substantial impact on the gross market value of commodity contracts, which fell to $1.0 trillion.

Outstanding equity derivatives decreased to $6 trillion, well below the levels seen in recent years and a notable change of pace from the increase in the first half of 2008. Reflecting lower outstanding positions and significantly lower equity prices, the gross market values of outstanding equity derivatives saw only a moderate decline.

Credit default swaps

In trillions of US dollars

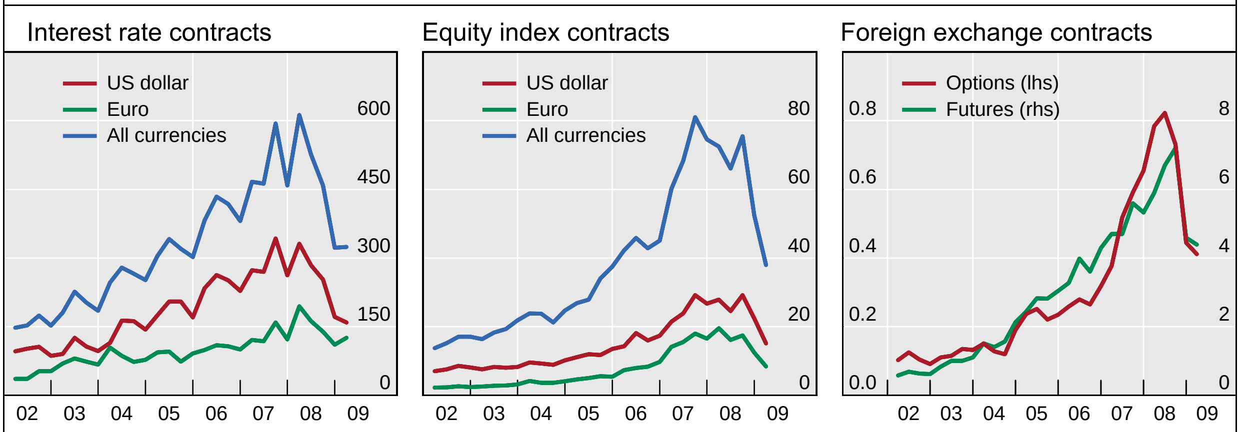


[1] Notional amounts outstanding. [2] Gross market values.

Source: BIS. Graph 10

Turnover of exchange-traded derivatives[1]

Quarterly data, notional amounts



[1] Futures and options, in trillions of US dollars.

Sources: FOW TRADEdata; Futures Industry Association; BIS calculations. Graph 11

Exchange-traded derivatives

Turnover continues to decline

The first quarter of 2009 saw a continued but limited decline of activity on the international derivatives exchanges (Graph 11). Total turnover based on notional amounts decreased further, to $367 trillion from $380 trillion in the previous quarter.[10] Consistent with a gradual return of risk appetite, however, trading activity on a monthly basis did start to increase towards the end of the quarter.

Overall turnover in interest rate derivatives remained largely unchanged at $324 trillion compared to the previous quarter (Graph 11, left-hand panel). The moderate change in overall turnover nonetheless reflects differences across regions, with turnover in North America declining notably relative to the previous quarter, while European turnover increased.

In contrast to interest derivatives markets, equity derivatives turnover fell for all contract types and all major currencies, including the euro. Against a background of negative economic growth and uncertainty about growth recovery, activity in equity index derivatives declined significantly to $38 trillion (Graph 11, centre panel).

Turnover in AUD and NZD futures increases as carry trade returns

Foreign exchange derivatives turnover also continued to slide (Graph 11, right-hand panel). The decrease in activity among the main currencies was most pronounced for the yen and US dollar segments. Turnover in Australian and New Zealand dollar futures, possibly driven by renewed interest in FX carry trades, increased substantially relative to the previous quarter.

[10] Data on fourth quarter 2008 notional amounts outstanding and turnover have been revised. As a result, most levels have declined compared to data published in the March 2009 *BIS Quarterly Review*.

The international debt securities market

Reflecting a gradual return of confidence in credit markets, borrowing via international debt securities issuance increased in the first quarter of 2009. Against a background of significant gross issuance, net issuance increased to $670 billion, up from $519 billion in the fourth quarter of 2008 (Graph 12, left-hand panel). Net bond and note issuance rose by 17% to $740 billion, while money market borrowing remained in negative territory with net repayments of $71 billion.

Higher issuance as confidence returns

By nationality, borrowing via bonds and notes was dominated by the United States (Graph 12, centre panel). US borrowing increased dramatically to $252 billion after very limited issuance in previous quarters. In contrast, UK net issuance dropped from $285 billion to $90 billion. This pattern was also reflected in the currency composition of issuance. US dollar-denominated issuance rose sharply to $344 billion from $61 billion in the previous quarter. In contrast, net sterling issuance fell from $234 billion to $104 billion. Borrowing in euros contracted to $279 billion, compared to $344 billion in the fourth quarter of 2008. The yen saw $8 billion in net repayments.

US borrowing increases dramatically …

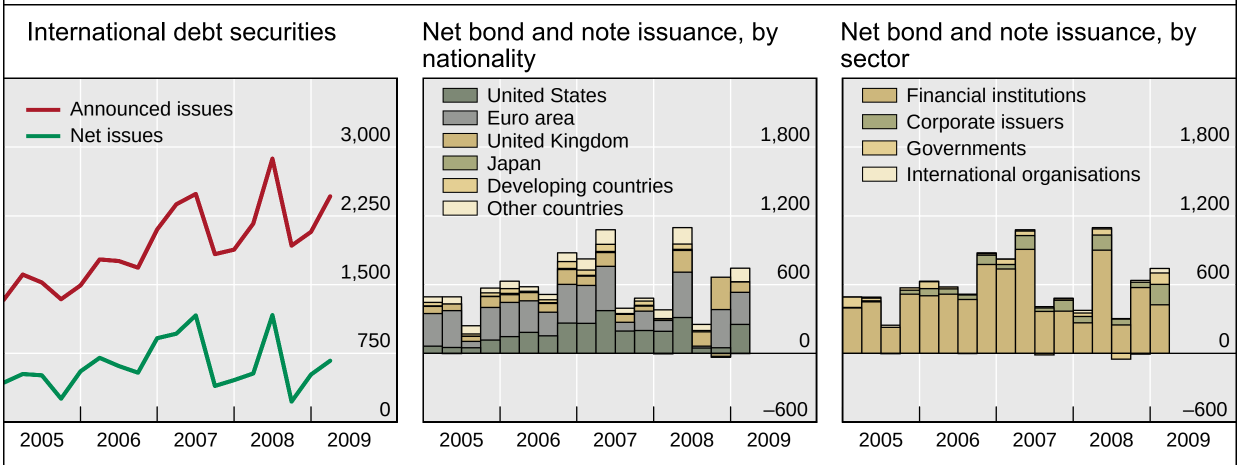
By sector, governments recorded the largest relative borrowing increase, from –$6 billion to $98 billion in the first quarter (Graph 12, right-hand panel). Among European governments the most active borrowers were Finland, Greece, Ireland and Spain. Governments from several other European countries, including Austria, Belgium, Denmark and Portugal, also tapped markets. Borrowing by corporations increased significantly from $45 billion to $179 billion. US corporates alone issued $119 billion, compared to $48 billion in the previous quarter.

… as corporate borrowers return to market

Financial institution borrowing, despite the continued support of government guarantee schemes, fell to $423 billion from $575 billion. Following significant mortgage bond issuance in the previous quarter, net issuance by financial institutions dropped significantly in Germany, Italy and the United Kingdom. International organisations' net issuance increased to $40 billion, reflecting gross issuance of $62 billion and repayments of $22 billion, after

International debt securities issuance

In billions of US dollars

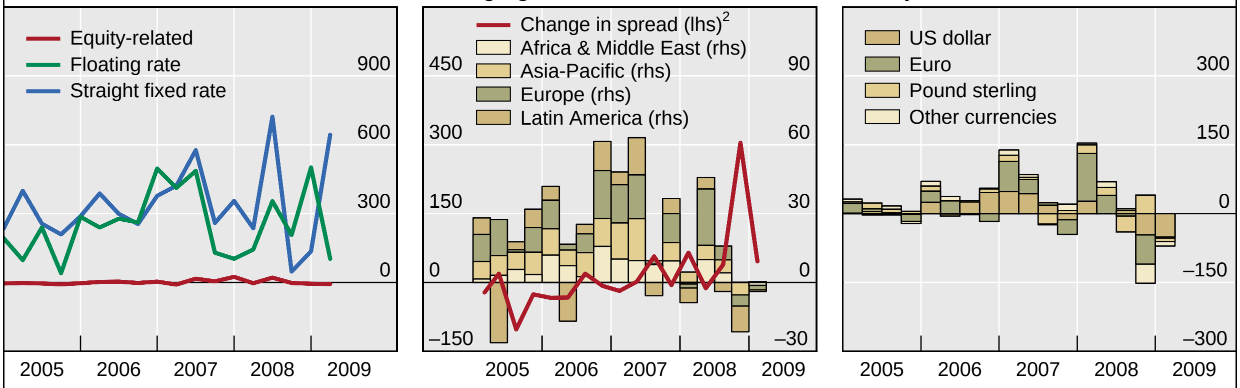


Sources: Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; BIS. Graph 12

International debt securities issuance

Net issuance, in billions of US dollars

Bonds and notes | Emerging markets[1] | Money market instruments



[1] Bond and note issuance, by nationality. [2] Quarterly change in spread of JPMorgan EMBI Global Composite index, in basis points.

Sources: Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; BIS. Graph 13

having been very limited in previous quarters. The main issuers were the European Investment Bank and the World Bank.

Fixed rate bonds dominate

With overall bond and note issuance being dominated by fixed rate issues, there was also a notable shift from floating to straight fixed rate borrowing relative to the previous quarter (Graph 13, left-hand panel). Both governments and corporate borrowers actually repaid floating rate debt while at the same time borrowing at fixed rates. This is consistent with borrowers seeking to lock in low interest rates. In contrast, around 80% of funding in the previous quarter was floating rate.

Emerging economies continue to repay debt …

Despite credit markets becoming more stable, emerging economies still repaid a net \$4 billion in bonds and notes in the first quarter of 2009, after having repaid a net \$22 billion in the previous one (Graph 13, centre panel). Both Indonesia and Korea were significant net borrowers. The Indonesian government issued \$3 billion, \$1 billion in the five-year and \$2 billion in the 10-year segment. For Korea, the positive net issuance mainly reflected two \$2 billion bond issues by the Export-Import Bank of Korea and the Korean Development Bank.

… and money markets continue to contract

Borrowing via international money market instruments, which include euro commercial paper and other short-term instruments such as certificates of deposit, continued to decline. Net repayments in the money market were \$71 billion in the first quarter, compared to \$111 billion in the previous one (Graph 13, right-hand panel). In terms of currency, the largest net repayments were in the US dollar- and sterling-denominated segments. In contrast, there was net borrowing in euro- and yen-denominated commercial paper and in money market instruments denominated in Swiss francs. For other money market instruments, only international organisations were net borrowers.