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Highlights of the BIS international statistics

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 2010. The discussion on international debt securities and exchange-traded derivatives draws on data for the first quarter of 2011. OTC derivatives market statistics are available up to end-2010. There are three boxes in this chapter. The first gives details on breaks in series caused by the transfer of claims to "bad banks" in a number of countries. The second presents data on the maturity structure of EME sovereign debt. The third discusses the statistical implications of central clearing of OTC derivatives.

The international banking market in the fourth quarter of 2010[1]

The aggregate cross-border claims of BIS reporting banks declined during the fourth quarter of 2010, largely as a result of a significant fall in lending to residents of the euro area. By contrast, the cross-border claims of BIS reporting banks on residents of emerging market economies (EMEs) increased for the seventh consecutive quarter. Data from the BIS consolidated banking statistics suggest that most of the growth in the stock of international claims on EME residents that has taken place during the past couple of years can be attributed to increased short-term lending.

Global cross-border lending falls[2]

The aggregate cross-border claims of BIS reporting banks declined during the fourth quarter of 2010. The bulk of the $423 billion (1.4%) contraction was due to a $378 billion (1.9%) fall in interbank lending (Graph 1, left-hand panel). The rest was accounted for by a $45 billion (0.4%) drop in claims on non-banks.

Cross-border lending to advanced economies shrinks …

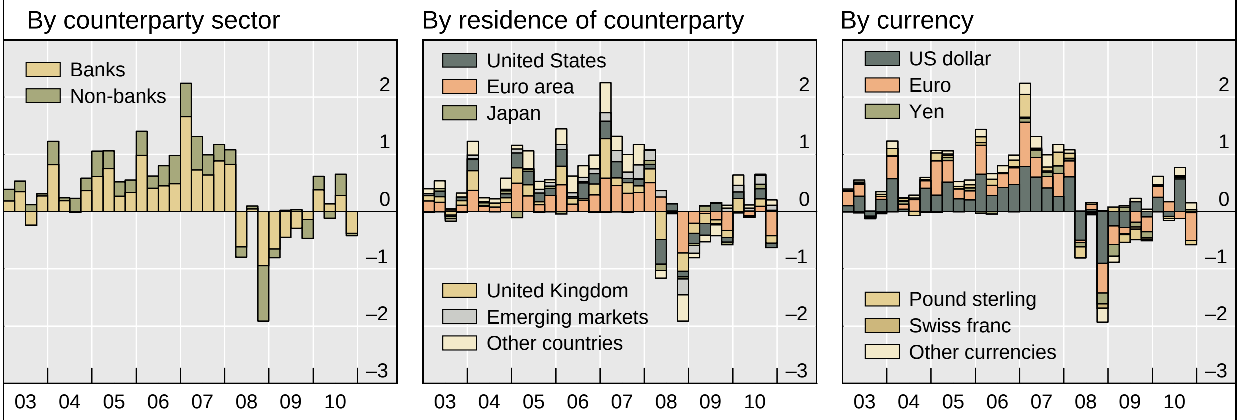
Banks reported declines in their cross-border claims on most major advanced economies (Graph 1, centre panel). Lending to residents of the euro

[1] Queries concerning the banking statistics should be addressed to Stefan Avdjiev.

[2] The analysis in this and the following subsection is based on the BIS locational banking statistics by residence. In this dataset, 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 fluctuation and breaks in series.

Changes in gross cross-border claims[1]

In trillions of US dollars



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

Source: BIS locational banking statistics by residence. Graph 1

area shrank the most (by $422 billion or 4.0%). Nearly half of that decrease ($208 billion) was due to a fall in intra-euro zone cross-border claims. Cross-border lending to residents of the United Kingdom and the United States also declined, by $126 billion (2.5%) and $80 billion (1.5%) respectively. By contrast, claims on residents of Japan increased by $23 billion (3.0%).

The currency composition of the cross-border lending flows in the fourth quarter largely mirrored the counterparty residence breakdown (Graph 1, right-hand panel). Namely, claims denominated in euros shrank the most (by $490 billion or 4.3%). Nearly three quarters of that fall was accounted for by a $359 billion drop in euro-denominated cross-border claims on residents of the euro area. Claims denominated in sterling and US dollars also declined, by $71 billion (4.2%) and $17 billion (0.1%), respectively. Conversely, yen-denominated claims increased (by $31 billion or 2.6%) for the fourth consecutive quarter.

Cross-border claims on emerging markets continue to grow

... while that to emerging markets continues to grow

The cross-border claims of BIS reporting banks on EME residents went up for the seventh consecutive quarter (Graph 2). The $91 billion (3.3%) expansion was the result of a $74 billion (5.2%) rise in interbank claims and a $17 billion (1.2%) increase in claims on non-banks. Cross-border claims rose in all EM regions except emerging Europe, where they contracted for the eighth time in the last nine quarters.

Cross-border lending to Asia-Pacific continued to grow (Graph 2, bottom right-hand panel). Once again, most of the lending flows were directed towards China: claims on its residents rose by $46 billion (16%). Banks also reported significant increases in their claims on India ($9.7 billion or 5.5%) and Thailand ($6.0 billion or 18%). Conversely, claims on Korea shrank by $20 billion (9.0%).

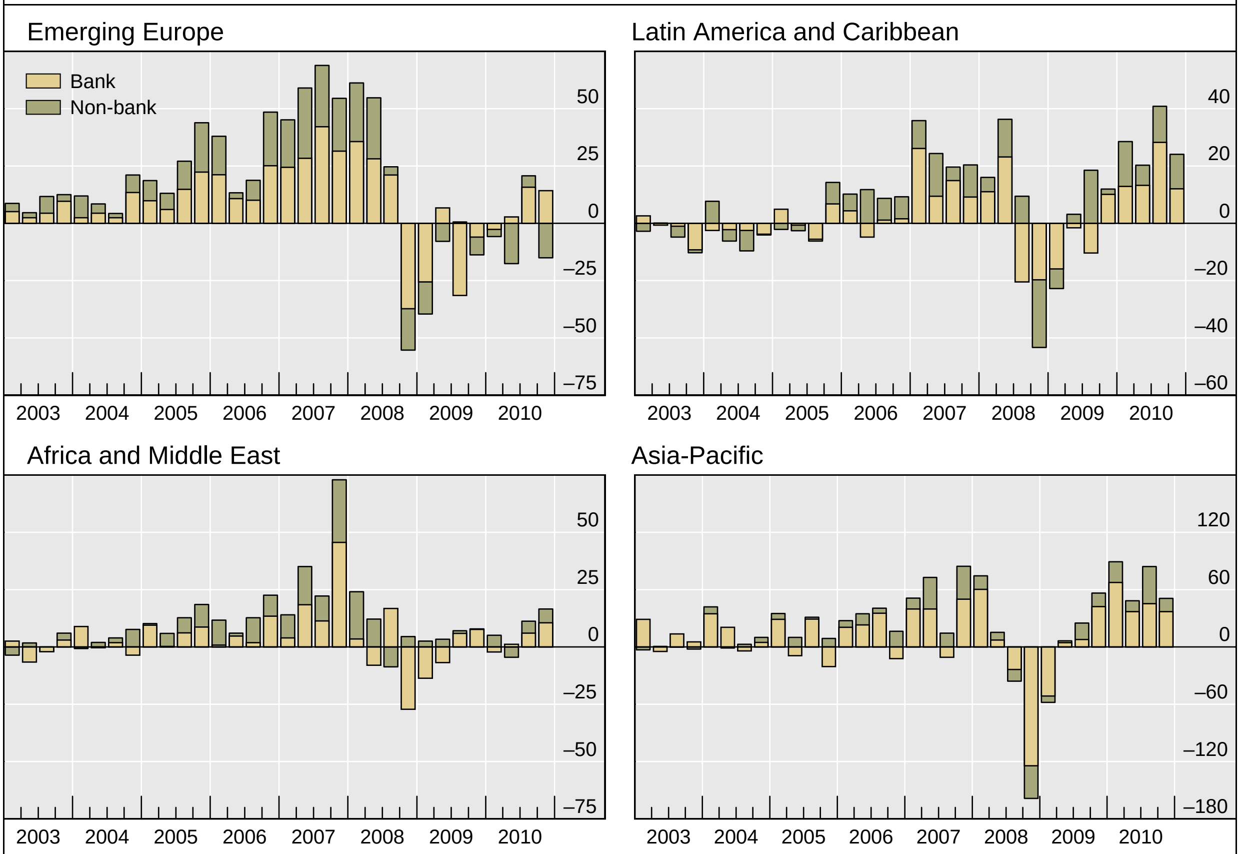
Cross-border claims on residents of Latin America and the Caribbean also continued to expand (Graph 2, top right-hand panel). The $24 billion (4.8%) rise in lending to the region was led by large increases in claims on residents of Mexico ($7.7 billion or 7.2%) and Brazil ($7.6 billion or 3.2%). Banks also reported sizeable growth in their cross-border lending to Colombia ($3.0 billion or 24%) and Uruguay ($2.2 billion or 69%).

Cross-border claims on residents of Africa and the Middle East recorded their largest expansion since the first quarter of 2008 (Graph 2, bottom left-hand panel).[3] The $17 billion (3.4%) overall increase was led by an $11 billion (5.4%) rise in interbank claims. Cross-border lending to residents of Qatar and Saudi Arabia grew the most, by $6.2 billion (11%) and $4.5 billion (5.5%), respectively.

Emerging Europe was the only EM region that saw a decline in cross-border claims on its residents during the period (Graph 2, top left-hand panel). Claims on banks in the area actually rose by $14 billion (3.6%). However, that increase was more than offset by a $15 billion (4.0%) fall in claims on non-banks. Cross-border lending to Hungary shrank the most (by $13 billion or 15%). Claims on residents of Poland also fell considerably (by $4.9 billion or 3.8%). In addition, banks reported declines in their claims on all three Baltic countries – Lithuania ($1.4 billion or 8.3%), Estonia ($0.9 billion or 5.9%) and Latvia ($0.4 billion or 2.4%). By contrast, cross-border lending to Turkey

Changes in cross-border claims on residents of emerging markets[1]

By counterparty sector, in billions of US dollars



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

Source: BIS locational banking statistics by residence. Graph 2

[3] Note that the latest available data on cross-border lending to the residents of Africa and the Middle East refer to the fourth quarter of 2010, ie before some countries in the region began to experience sociopolitical turmoil.

surged by $11 billion (7.8%). The expansion in claims, which was the fifth in a row and the largest on record, occurred despite the fact that the country's central bank decreased overnight borrowing rates during the period in an effort to discourage further capital inflows and simultaneously increased reserve requirements in an attempt to slow down credit growth. BIS reporting banks also increased their cross-border claims on residents of the Czech Republic (by $3.0 billion or 6.7%), Ukraine (by $2.2 billion or 9.3%) and Romania (by $1.9 billion or 3.3%).

Increased weight of short-term claims in bank lending to EMEs[4]

The steady stream of financial flows into emerging market economies that has taken place over the past couple of years naturally raises questions about the share of those flows that is subject to sudden withdrawals. Needless to say, no statistical dataset can explicitly capture the intentions behind investors' actions. Nevertheless, the maturity breakdown of banks' international claims available in the BIS consolidated banking statistics on an immediate borrower basis[5] provides useful information on the percentage of bank capital flows into EMEs with a short investment horizon.[6]

Short-term lending drove most of the recent growth in international claims on EMEs

Most of the growth in the stock of BIS reporting banks' international claims on EME residents that took place from the second quarter of 2009 to the end of 2010 was driven by an increase in short-term lending. Approximately $418 billion (or 79%) of the $527 billion overall expansion can be attributed to a rise in claims with maturities of less than one year. By comparison, that group of claims accounted for roughly 49% of the increase in international lending to emerging markets between the start of 2006 and the middle of 2008.

Graph 3 presents a maturity breakdown of the changes in the stocks of international claims on the four major emerging market regions.[7] Changes in short-term claims were most dominant in Asia-Pacific, where they were responsible for approximately 84% of the overall increase in international claims that took place during the latest seven quarters for which data are available. That group of claims also accounted for considerable shares of the respective

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[4] The analysis in this subsection is based on the BIS consolidated international banking statistics on an immediate borrower basis. In this dataset, the exposures of reporting banks are classified according to the nationality of banks (ie according to the location of banks' headquarters), not according to the location of the office in which they are booked.

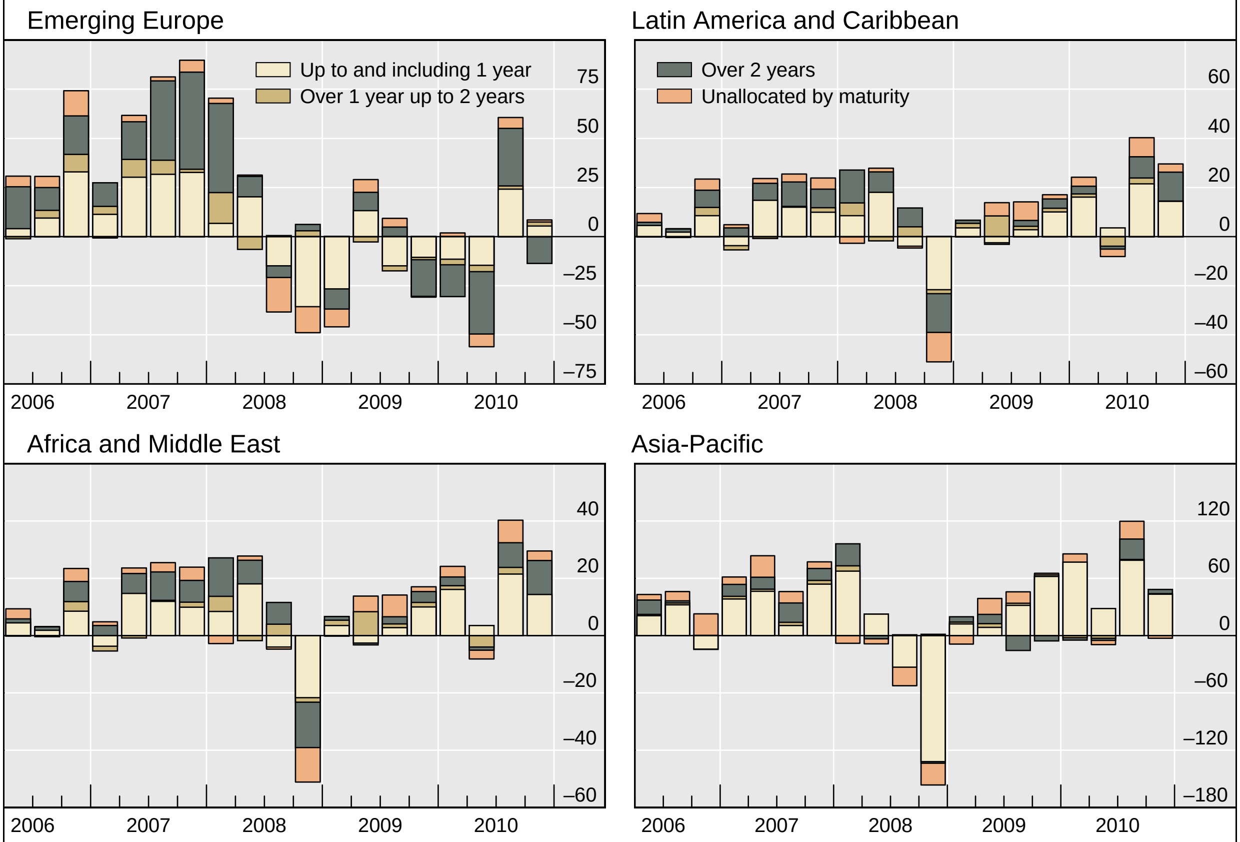
[5] *International claims* consist of cross-border claims (ie claims on entities located in a country other than the country of residence of the reporting banking office) and local claims (ie claims on entities located in the country of residence of the reporting banking office) of foreign affiliates (ie branches and subsidiaries located outside the country in which the reporting bank is headquartered) denominated in foreign currencies (ie currencies other than the official currency of the country of residence of the reporting banking office). International claims do *not* include claims on residents of the country in which the reporting bank is headquartered.

[6] The maturity breakdown of international claims in the BIS consolidated banking statistics on an immediate borrower basis is based on their *remaining* maturity (ie the time to final maturity of claims at the time of reporting).

[7] The BIS consolidated banking statistics do not include a currency breakdown. As a result, the changes in the outstanding stocks of international claims reported above have not been adjusted for exchange rate fluctuations.

Changes in international claims on residents of emerging markets

By maturity, in billions of US dollars



Source: BIS consolidated banking statistics (immediate borrower basis). Graph 3

increases in international lending to residents of Africa and the Middle East (71%) and Latin America and the Caribbean (50%). By contrast, the impact of these short-term claims on fluctuations in the overall stock of international claims on residents of emerging Europe was significantly smaller.

BIS reporting banks' foreign claims on residents of the euro area[8]

In an effort to provide more comprehensive data on the consolidated foreign claims and other potential exposures (on an ultimate risk basis) of reporting banking systems, the BIS has decided to start publishing a new table (Table 9E) in the Statistical Annex.[9] The new table is an extended version of Table 1 on page 15 in "Highlights of the BIS international statistics" in the March 2011 *BIS Quarterly Review*. More specifically, it contains bilateral sectoral breakdowns of the foreign claims of major reporting banking systems

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

[9] Available at http://www.bis.org/statistics/consstats.htm.

on the residents of a wide range of countries. It also provides detailed bilateral information on other potential foreign exposures of the same reporting banking systems.

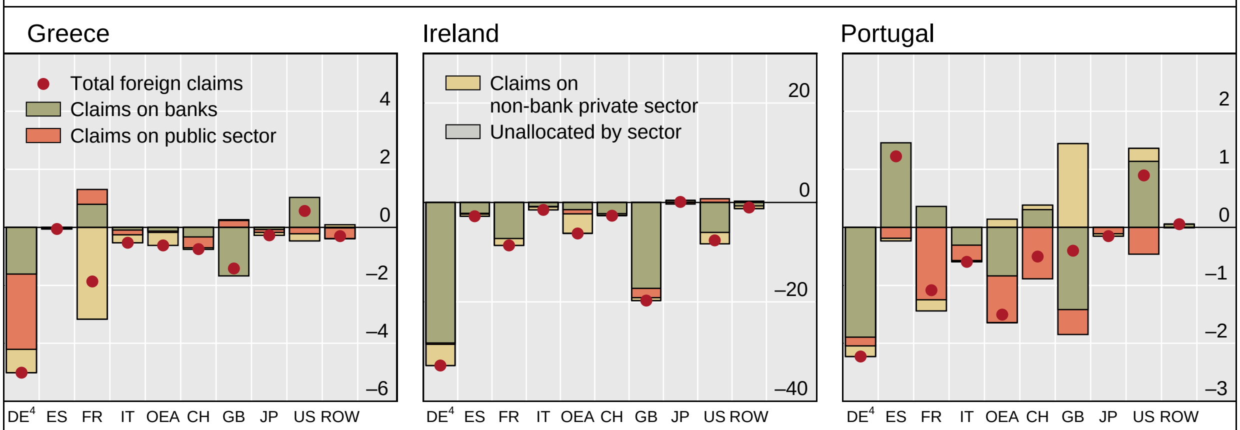
Exchange rate adjusted consolidated foreign claims on the euro area decline

BIS reporting banks' total consolidated foreign claims[10] on residents of the euro area stood at $7,601 billion as of the end of the fourth quarter of 2010. According to our estimates, at constant exchange rates,[11] that group of claims fell by $291 billion (3.5%) during the quarter.[12] Foreign claims on Germany shrank the most (by $87 billion or 4.8%), mainly as a result of considerable declines in claims on the country's banking and public sectors ($54 billion or 8.5% and $45 billion or 8.6%, respectively).

As of the end of 2010, BIS reporting banks had total consolidated foreign claims of $810 billion on residents of Greece, Ireland and Portugal, the three euro area countries that have received external support from the EU and the IMF. Our estimates indicate that, at constant exchange rates, foreign claims on that group of countries shrank by $97 billion during the fourth quarter (Graph 4).

Estimated changes in foreign claims[1] on Greece, Ireland and Portugal during Q4 2010, by bank nationality[2]

At constant end-Q4 2010 exchange rates,[3] in billions of US dollars



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

[1] Foreign claims consist of cross-border claims and local claims of foreign affiliates. [2] Claims of banks headquartered in the respective country are not included, as these are not foreign claims. [3] All claims are assumed to be denominated in euros. [4] Claims of German banks are on an immediate borrower basis.

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

[10] *Foreign claims* consist of cross-border claims (ie claims on entities located in a country other than the country of residence of the reporting banking office) and local claims (ie claims on entities located in the country of residence of the reporting banking office) of foreign affiliates (ie branches and subsidiaries located outside the country in which the reporting bank is headquartered). Foreign claims do *not* include claims on residents of the country in which the reporting bank is headquartered.

[11] In order to adjust for the currency fluctuations that took place during the period, we make the (admittedly imperfect) assumption that all foreign claims on residents of the euro area are denominated in euros.

[12] All flow figures in have been adjusted for breaks in series. See Box 1 on page 19 for a detailed discussion of the more significant breaks in series that occurred during the period.

Box 1: Breaks in series in the BIS international banking statistics in the fourth quarter of 2010

Stephan Binder

A break in series refers to a change in reporting methodology or in reporting population during a given period. Reporting banks provide pre- and post-break values for the outstanding stocks of claims as of the end of each period in which such a break occurs.[①] The end-of-period stocks of claims published by the BIS are based on the latest reported post-break values. The changes in the stocks of claims that took place during a period are adjusted for breaks by subtracting the difference between the post- and pre-break values from the difference between the unadjusted stocks of claims as of the end of the current and the previous period. Such adjustments are crucial for understanding the extent to which changes in the stocks of outstanding claims relate to normal business activities of reporting institutions.

Breaks in series had a large impact on the BIS international banking statistics in the fourth quarter of 2010. Some of the largest breaks were reported by German and Irish banks. A large share of these breaks occurred due to transfers of assets and other potential exposures from BIS reporting banks to asset management companies ("bad banks").[②] In general, such asset management companies do not report in the BIS international banking statistics since they are considered to be non-banks. As a consequence, transfers of assets from BIS reporting banks to bad banks result in declines in the foreign exposures reported in the BIS international banking statistics. These are not recorded as changes in stocks, but as breaks in series. In the last quarter of 2010, significant breaks due to such transfers were recorded in both the BIS consolidated and locational banking statistics.

In the BIS consolidated banking statistics, German banks reported a break in series of –$24 billion in foreign claims on an immediate borrower basis and –$18 billion in foreign claims on an ultimate risk basis. In the BIS locational statistics, banks located in Germany reported a break of –$112 billion in unconsolidated cross-border claims. Most of the latter break was due to transfers of inter-office cross-border assets to the domestic asset management company FMS Wertmanagement. Such inter-office positions are excluded from the BIS consolidated banking statistics. That explains the different break sizes in the locational and the consolidated positions reported by Germany.

Another large break was reported by Ireland. The restructuring of a large international banking group and the closure of domestic offices by a foreign bank were jointly responsible for a break of –$174 billion in Irish banks' consolidated foreign claims on an immediate borrower basis and –$170 billion in their consolidated foreign claims on an ultimate risk basis.[③] In the BIS locational statistics, banks resident in Ireland reported a break of –$140 billion in unconsolidated cross-border claims.

Finally, in the case of France, there was a significant break in series that resulted from a change in the methodology used by the reporting central bank. A French bank controlled by a foreign non-bank financial company, whose accounts are prudentially supervised by the competent foreign authority, was reclassified from a consolidated domestic bank to an unconsolidated foreign bank in the French data. This reclassification had no impact on the aggregate BIS consolidated banking statistics. However, it did generate a break in the time series of French domestic banks equal to –$330 billion in foreign claims on an immediate borrower basis and –$336 billion in foreign claims on an ultimate risk basis.

[①] Historical lists of breaks in series are available at http://www.bis.org/statistics/bankstats.htm for each of the datasets. [②] A "bad bank" is a financial institution created to hold non-performing assets and other potential exposures. [③] These figures represent preliminary estimates. Revisions are likely to follow.

Most of that contraction was due to an $83 billion (15%) decline in foreign claims on residents of Ireland. Claims on banks in the country fell the most (by $66 billion or 42%). Internationally active banks also reported declines in their foreign claims on the Irish non-bank private and public sectors ($14 billion or 3.7% and $2.6 billion or 10%, respectively).

Foreign claims on Greece and Portugal also declined during the period, although by much less than those on Ireland. Nearly half of the $10.3 billion (6.0%) fall in claims on residents of Greece was due to a $5.0 billion (5.8%) decrease in reporting banks' foreign claims on the country's non-bank private sector. By contrast, a $4.6 billion (9.3%) fall in foreign claims on the public sector of Portugal was the main driver of the $4.3 billion (1.9%) overall decline in foreign claims on that country.

International debt securities issuance in the first quarter of 2011[13]

Rising issuance in the international debt securities markets ...

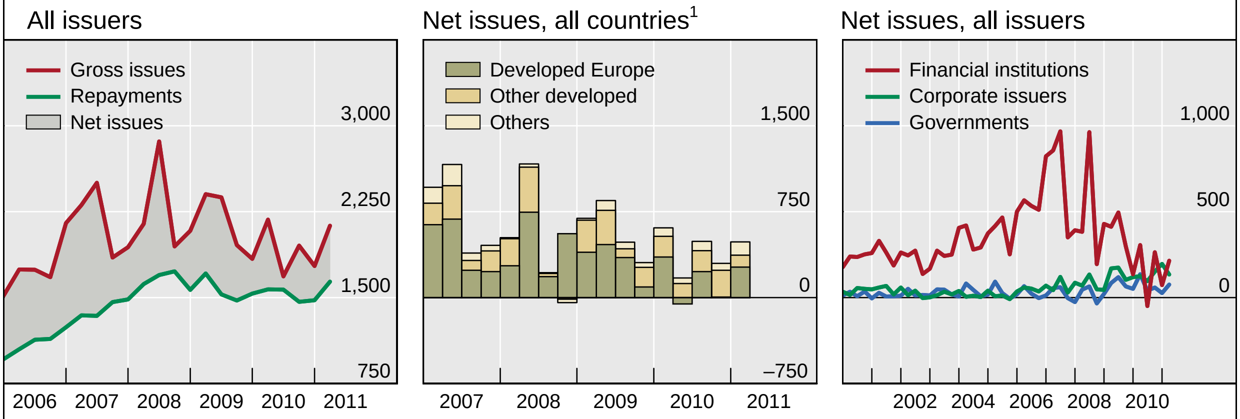
Activity in the primary market for international debt securities increased in the first quarter of 2011. Completed gross issuance rose by 20% quarter-on-quarter to $2,127 billion (Graph 5, left-hand panel), reflecting a seasonal pickup[14] as well as some increase in the underlying market activity reflecting generally benign market conditions. With somewhat higher repayments, net issuance picked up to $487 billion, from $299 billion in the previous quarter.

... especially by borrowers in advanced European economies

The rise in market activity was largely due to stronger borrowing by residents of developed European economies, where net issuance rebounded to $265 billion (Graph 5, centre panel). This was far higher than the $4 billion

International debt securities issuance

In billions of US dollars



[1] By residence of issuer.

Sources: Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; BIS. Graph 5

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[13] Queries concerning international debt securities should be directed to Andreas Schrimpf.

[14] See J Amato and J Sobrun, "Seasonality in international bond and note issuance", *BIS Quarterly Review*, September 2005, pp 36–9, for an analysis and discussion of seasonal factors in debt securities issuance patterns. As noted by the authors, issuance by European residents, which accounts for a large share of the overall figure, is typically strongest in the first quarter of the year. On an annual basis, completed gross issuance in the first quarter of 2011 actually declined slightly (by 2%) relative to the first quarter of the previous year.

raised in the fourth quarter of 2010, but still short of the levels seen before the financial crisis. Net issuance by residents of other developed economies shrank to $106 billion, from $235 billion in the previous three months. Robust net borrowing activity was observed in EMEs, residents of which raised $51 billion net of repayments. International financial institutions tapped the market to raise $62 billion, the highest amount ever.

Financials raise large amounts

Financial borrowers were the most active in the first quarter of 2011. They accounted for the largest share of net issues ($215 billion), followed by non-financial corporate borrowers ($135 billion) and governments ($76 billion). From a longer perspective, net issuance by financial institutions seems to have stabilised after the sharply lower and highly volatile issuance activity in the aftermath of the financial crisis of 2007–08 (as depicted in Graph 5, right-hand panel). Net issuance by financial institutions resident in EMEs has rebounded sharply from its lows during the crisis and, at $21 billion in the first quarter of 2011, has almost regained the level of $23 billion last seen in the fourth quarter of 2006.

Robust borrowing in the non-financial corporate sector

Robust non-financial corporate borrowing reflected the favourable market conditions in this particular segment of the international debt securities market (Graph 5, right-hand panel). The increase in corporate bond issuance was particularly strong in the United States, where net issuance by corporations has exceeded that by financial institutions in most quarters since mid-2008.

Issuance by European financials bounces back

Financial institutions resident in developed European economies expanded their funding via international debt securities. Completed gross issuance by these institutions increased by 28%. Net issuance stood at $171 billion, after net repayments of $33 billion in the fourth quarter of 2010. Financial institutions located in France raised $66 billion, those in the United Kingdom $40 billion and those in the Netherlands $34 billion (Graph 6, left-hand panel). Spanish ($30 billion) and Italian financial institutions ($19 billion) responded to more favourable market conditions by raising more funds in the international debt securities market. High redemptions by Irish financial institutions ($131 billion) more than offset gross issuance of $61 billion, resulting in net repayments amounting to $70 billion, thus continuing a trend towards net repayments over the previous year. Greek financial institutions borrowed $3 billion, an amount well below their average net borrowing over the past year.

Strong quarter of covered bond issuance

Covered bond markets witnessed strong issuance activity during the first quarter of 2011. Estimated net issuance rose to $64 billion, the largest amount since the fourth quarter of 2008. However, there was some dispersion across countries: French, Italian and Spanish institutions raised $26 billion, $18 billion and $10 billion respectively, whereas German institutions made net repayments of covered bonds worth $27 billion.

Box 2: Maturity structure of domestic central government debt in emerging market economies

Agustín Villar

The Committee on the Global Financial System (CGFS) has collected figures on the maturity structure of domestic central government debt outstanding in emerging market economies (EMEs). They show that the average maturity of such debt outstanding remained stable in most countries between 2008 and 2010 (Table A), notwithstanding the fact that the global financial crisis deeply affected financial markets for issuers, including sovereign borrowers. The distribution of the average (remaining) maturity of the domestic central government debt stock across countries shows three countries with an average maturity greater than 10 years, 10 countries with an average maturity between five and 10 years, and 10 countries with an average maturity of less than five years.

Maturity of domestic central government debt outstanding[1]

Average original and remaining maturity in years[2]

	2005		2008		2009		2010	
	At issue	Re-maining	At issue	Re-maining	At issue	Re-maining	At issue	Re-maining
Latin America	3.4	3.9	14.7	4.8	13.2	4.5	13.2	4.6
Of which:								
Argentina	1.1	12.0	17.9	10.5	16.2	10.0	16.2	9.5
Brazil	…	2.3	…	3.3	…	3.4	…	3.4
Mexico	…	3.4	…	6.5	…	6.4	…	7.2
Asia, larger economies	10.1	7.0	11.5	7.6	11.0	7.5	10.3	7.6
Of which:								
India	14.0	10.0	14.9	10.6	13.8	10.5	11.2	9.8
Korea	6.1	4.1	7.5	4.5	7.6	4.6	8.1	5.0
Other Asia	8.0	5.5	7.6	4.4	7.6	4.3	7.7	4.3
Of which:								
Malaysia	8.6	5.0	9.7	5.3	9.2	5.3	8.7	4.5
Central Europe	6.6	4.0	8.4	4.4	7.7	4.2	7.7	3.9
Of which:								
Czech Republic	8.6	5.7	9.3	5.8	9.6	5.9	9.4	3.4
Hungary	…	4.1	7.1	3.8	5.3	2.7	6.4	2.9
Poland	6.2	3.6	8.6	4.2	7.9	4.1	7.5	4.3
Other	7.3	4.3	8.0	4.1	8.5	4.5	9.3	5.1
Of which:								
Turkey	3.3	1.8	3.9	1.9	4.0	1.9	4.2	2.5
South Africa	16.0	8.1	18.3	9.9	18.0	10.6	18.0	10.6
Total	8.2	5.0	10.0	5.4	9.7	5.2	9.5	5.4
Memo:								
Hong Kong SAR	*6.4*	*4.0*	*6.7*	*3.5*	*6.6*	*3.4*	*6.4*	*3.5*
Singapore	*6.2*	*3.6*	*7.0*	*3.6*	*6.2*	*3.2*	*6.3*	*3.3*
Industrial countries	*10.4*	*5.9*	*11.0*	*5.0*	*10.4*	*5.1*	*10.5*	*5.3*

[1] This table updates Table D4 in *CGFS Papers* no 28, June 2007. It includes bonds, notes and money market instruments. Regional totals are based on the countries listed in Table D4 and weighted by the corresponding amounts outstanding. [2] These estimates should be regarded as indicative and may not be strictly comparable across countries. The detailed country data are available on the BIS website (www.bis.org/statistics/secstats.htm).

Sources: CGFS Working Group Survey; BIS. Table A

Two countries that saw a notable shortening of maturities were the Czech Republic and Hungary. In the Czech Republic, the average maturity of domestic central government debt outstanding fell from 5.8 to 3.4 years between 2008 and 2010. In Hungary it fell from 3.8 to 2.9 years over the same period. This coincided with significant increases in gross government debt, from 30% to 40% of GDP in the Czech Republic and from 72% to 80% of GDP in Hungary.[①]

The amount of EME domestic central government debt outstanding grew to almost $4.3 trillion at the end of 2010 (Table B). More than half of the increase took place in 2009, a year of exceptional government debt issuance in Asia, Latin America and other EMEs as governments tried to pursue a countercyclical fiscal policy. Notwithstanding this government activism, domestic central government debt expanded by less than the overall stock of domestic debt. Other sectors of the economy, including central banks through their issuance of money market instruments, increased their issuance even more than governments, whose share of outstanding domestic debt fell to 48.4% in 2010, from 51.5% in 2007. In Asia, the corporate sector was the most dynamic borrower in domestic debt markets.

Changes in stocks of domestic debt securities:[1] all issuers

In billions of US dollars

	2008	2009	2010	2010 stocks	Annual growth[2]	
					FX-adjusted	At current exchange rates[3]
Asia	574.3	732.5	510.8	5,926.0	13.7	14.1
Of which: central govt	123.2	328.8	192.6	2,384.0	11.9	12.2
Latin America	180.5	119.3	129.0	2,050.0	8.6	9.0
Of which: central govt	53.7	98.4	34.6	1,203.4	6.8	8.6
Central Europe	25.2	39.6	25.3	352.6	9.7	4.8
Of which: central govt	17.1	17.0	8.6	267.1	5.5	0.5
Other EMEs	25.3	66.3	64.6	486.3	14.5	10.5
Of which: central govt	21.3	59.8	56.3	412.3	14.8	9.5
Total	805.2	957.8	729.8	8,815.0	12.4	12.0
Of which: central govt	215.2	504.0	292.2	4,266.8	10.2	9.8

This table updates Table C3 in *CGFS Papers* no 28, June 2007, and includes money market instruments. The detailed country data are provided on the BIS website (www.bis.org/statistics/secstats.htm).

[1] Bonds, notes and money market instruments issued by residents and targeted at resident investors. The changes in stocks have been calculated in original local currencies by country and converted into US dollar amounts at quarterly average exchange rates, to arrive at net changes which exclude the effect of movements in the US dollar on the outstanding stock of debt. [2] Arithmetic mean of 2008–10 growth rates. [3] In US dollar terms.

Sources: National data; BIS. Table B

[①] IMF, *Fiscal Monitor*, "Shifting gears: tackling challenges on the road to fiscal adjustment", April 2011.

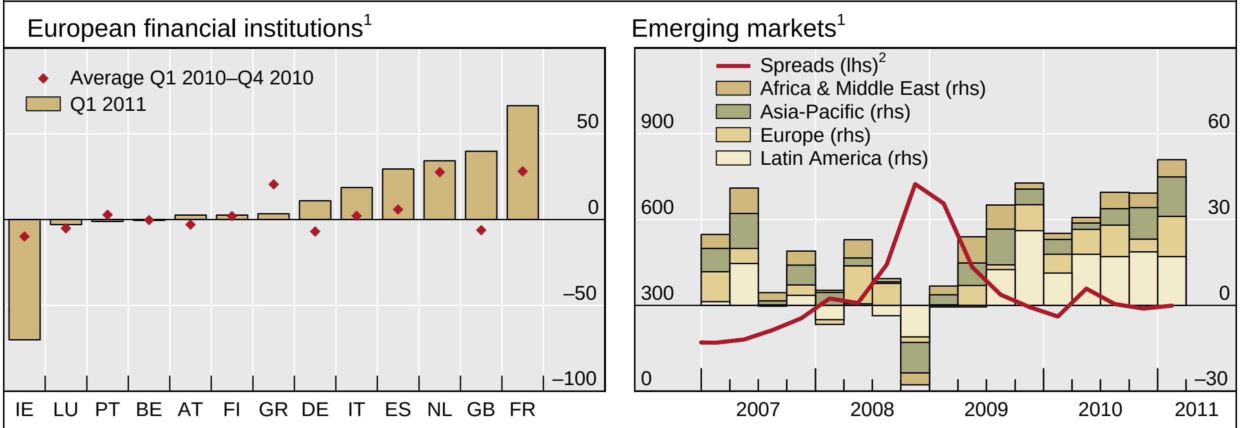
Emerging economies continue to borrow

Issuance by borrowers in EMEs remained fairly robust (Graph 6, right-hand panel).[15] Among the emerging market regions, the strongest net issuance in the first quarter of 2011 was by borrowers in Latin America and the

[15] The share of gross issues of international debt securities by emerging market borrowers denominated in non-major currencies (ie other than the US dollar, euro, yen and sterling) amounted to 14% in the first quarter of 2011. While borrowing in non-major currencies has trended up slightly in recent quarters, its share is still well below the peak of 26% reached in the third quarter of 2007.

International debt securities issuance

In billions of US dollars



AT = Austria; BE = Belgium; DE = Germany; ES = Spain; FI = Finland; FR = France; GB = United Kingdom; GR = Greece; IE = Ireland; IT = Italy; LU = Luxembourg; NL = Netherlands; PT = Portugal.

[1] Net issues, by residence of issuer. [2] Quarterly JPMorgan EMBI Global Composite index, in basis points.

Sources: Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; BIS. Graph 6

Caribbean ($17 billion), led by residents of Mexico ($5 billion) and Venezuela ($3 billion). Borrowing by entities from emerging Europe increased strongly to $14 billion after just $4 billion during the previous quarter. Net issuance in Asia-Pacific amounted to $14 billion in the first quarter of 2011, a $3 billion increase from the previous quarter. In emerging Europe and Asia, borrowers in Russia, Turkey and Korea tapped the market most, raising $4 billion, $3 billion and $7 billion respectively.

Over-the-counter derivatives in the second half of 2010[16]

Positions increase somewhat

Notional amounts outstanding of over-the-counter (OTC) derivatives rose by 3% in the second half of 2010, reaching $601 trillion at end-December (Graph 7, left-hand panel). Much of the increase was a direct consequence of the appreciation of major currencies against the US dollar, the currency in which the data are reported. Gross market values of all OTC contracts fell by 14% (right-hand panel), driven mainly by the 17% decline in the market value of interest rate contracts. Finally, gross credit exposures dropped by 7% to $3.3 trillion, compared with a 2% increase in the first half of the year.[17]

Dollar depreciation masks weak activity in the interest rate segment

In the interest rate segment, the largest risk category in the OTC derivatives market by any measure, notional amounts outstanding went up by 3% to $465 trillion, largely owing to exchange rate effects. Contracts on dollar rates dropped by 8%. Positions increased in the euro (10%), yen (7%), Swiss franc (10%) and Swedish krona (14%), but this probably reflected the appreciation of those currencies against the US dollar rather than any genuine

[16] Queries concerning the OTC derivatives markets should be addressed to Nicholas Vause.

[17] Gross credit exposures take into account legally enforceable bilateral netting agreements. Excluding CDS contracts for all countries except the United States.

increase in activity. Among the major currencies, only the Canadian dollar segment showed a decline. Amounts outstanding of contracts denominated in that currency fell by 4%, despite its 6% appreciation against the US dollar.

Higher positions in short- and long-term FX contracts

Active trading at the shorter end of the FX derivatives market pushed up notional amounts of FX derivatives by 9%, to $58 trillion. Volumes outstanding of contracts with maturities of up to one year went up by 13% and those with maturities of more than five years by 11%. By contrast, amounts outstanding of those with intermediate maturities declined by 6%.

Stable amounts outstanding in the CDS market

Positions in credit default swaps (CDS) remained stable in the second half of 2010. At the end of the year, reporting dealers had contracts with a total face value of $30 trillion on their books, approximately the same as six months earlier. Amounts outstanding with a central counterparty increased from about 10% of the total market at end-June to 15% at end-December 2010 (see Box 3). Positions with non-financial customers plummeted to $0.3 trillion, only about 1% of the total. This compares to a peak of 5% reached at the end of December 2009 (Graph 8, right-hand panel) and just under 3% in the middle of 2010.

The sovereign CDS market bucked the downward trend in notional amounts, posting a 6% increase. This followed a 26% gain during the first half of 2010. Positions in non-sovereign CDS declined by 2% in the second half of the year (after falling by 7% in the previous period).

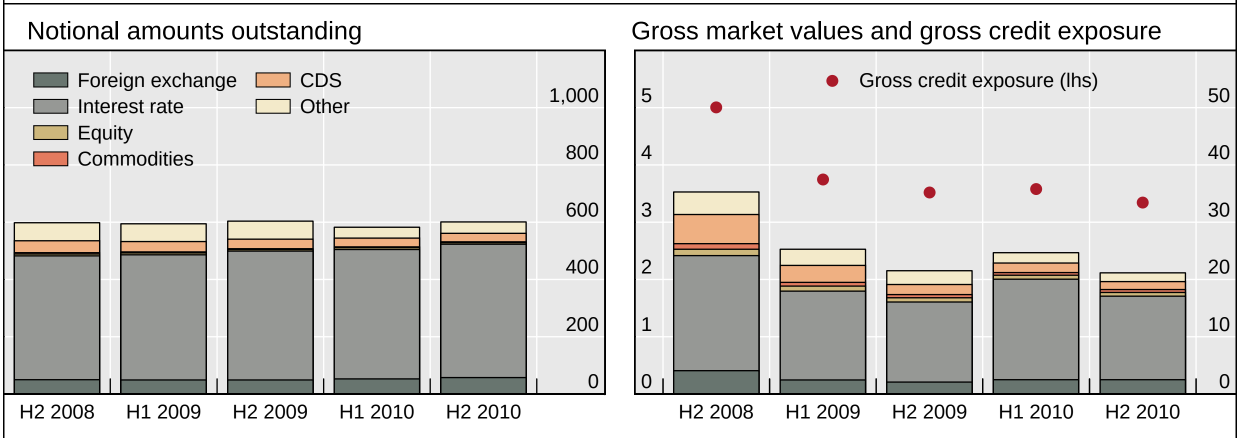
Exchange-traded derivatives in the first quarter of 2011[18]

Higher turnover and open interest in futures and options

Activity on the international futures and options exchanges rose in the first quarter of 2011. Turnover measured by notional amounts increased to $581 trillion, 21% higher than in the previous quarter (Graph 9, left-hand panel). Open interest, also measured in notional amounts, expanded by 24% between end-December 2010 and end-March 2011. Activity grew in all market segments except foreign exchange.

Global OTC derivatives

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



Source: BIS. Graph 7

[18] Queries concerning exchange-traded derivatives should be addressed to Christian Upper.

Turnover in the interest rate segment went up by 23% to $498 trillion. This mainly reflected heavy trading in futures and options on short-term interest rates, whose turnover increased by 23% and 30%, respectively. Trading in contracts on bonds also rose (15%). The growth in activity affected all major

Positioning on a rate hike pushed up turnover in sterling money market contracts

Box 3: Central clearing and OTC derivatives statistics

Nicholas Vause

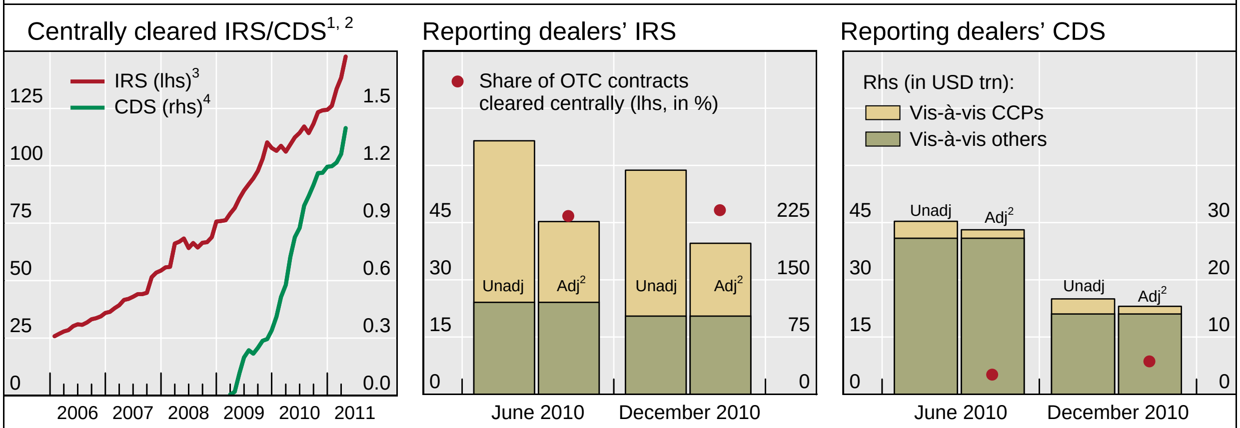
The amount of OTC derivatives cleared centrally has increased considerably in recent years (Graph A, left-hand panel). This has implications for measuring the size of the OTC derivatives market. Central clearing doubles the outstanding volume of any OTC derivative to which it is applied. This is because it involves replacing a contract between two counterparties, say A and B, with one contract between A and a central counterparty (CCP) and a second contract between B and the CCP.[①] In addition to these rather mechanical effects, clearing contracts centrally also affects volumes outstanding through the increased scope for multilateral netting and through the impact on traders' incentives. In this box, we focus on the direct impact on amounts outstanding.

While central clearing doubles the number of contracts, it does not change the volume of underlying risk that is being transferred by OTC derivatives. If the aim is to measure the size of this risk transfer, then it is appropriate to halve outstanding contract volumes with CCPs. It is also appropriate if the objective is to establish the volume or proportion of contracts in OTC derivatives markets that is centrally cleared.

However, if one is interested in counterparty risk, then the total volume of outstanding derivatives contracts, ie without halving the amounts cleared with CCPs, is the relevant figure. Although CCPs are intended to have very low default probabilities, these are not zero.[②] It is therefore necessary to count all contracts to which they are a counterparty, along with all other contracts, when evaluating the total volume of counterparty risk in OTC derivatives markets.

Graph A shows the growing importance of CCPs in OTC interest rate and credit derivatives markets and the effect that halving CCP positions can have on contract volumes in these markets.

Central counterparties in interest rate swap and credit default swap markets



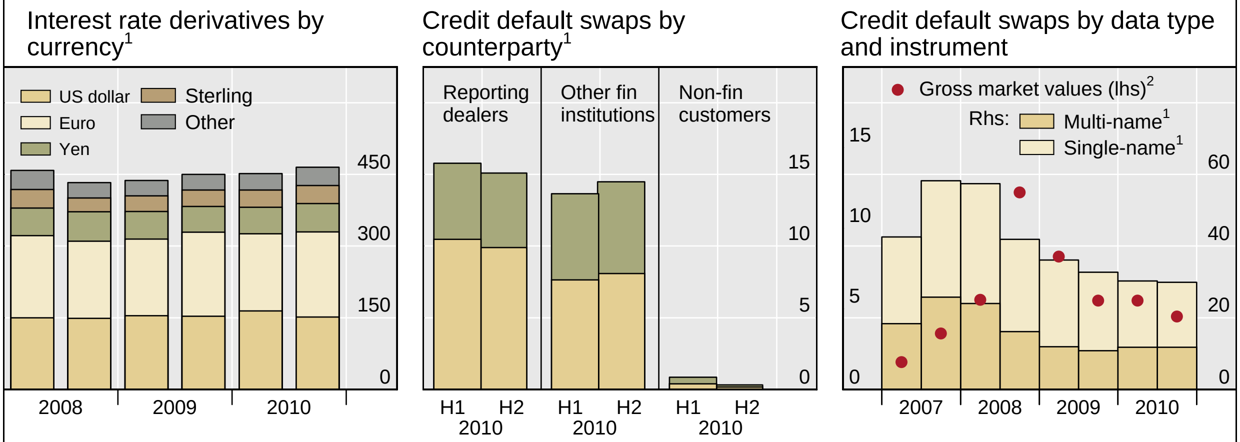
[1] Interest rate swaps (IRS) and credit default swaps (CDS); notional amounts outstanding, in trillions of US dollars. [2] Volume of CCP contracts is halved. [3] Approximated by IRS cleared by SwapClear. [4] Approximated by CDS cleared by ICE Trust and ICE Clear Europe. Note that these data overstate outstanding volumes by the amount of contracts that have terminated during the period.

Sources: IntercontinentalExchange; LCH.Clearnet; TriOptima; BIS. Graph A

[①] For a fuller description of the mechanics of central clearing, see N Vause, "Counterparty risk and contract volumes in the credit default swap market", *BIS Quarterly Review*, December 2010. [②] For an investigation of the risk faced by CCPs, see D Heller and N Vause, "Expansion of central clearing", in this issue.

Global OTC derivatives

In trillions of US dollars and in per cent



[1] Notional amounts outstanding. [2] As a percentage of the notional amount outstanding.

Source: BIS. Graph 8

currencies except the Japanese yen (Graph 9, centre panel). Particularly large increases were recorded in the short-term sterling segment, where futures turnover surged by 57% and options turnover by 113% as traders took positions on the changing odds of a Bank of England policy rate increase. In Japan, the odds of a rate change remained low throughout the period, which could explain the 20% drop in turnover at both the long and the short end of the interest rate market.

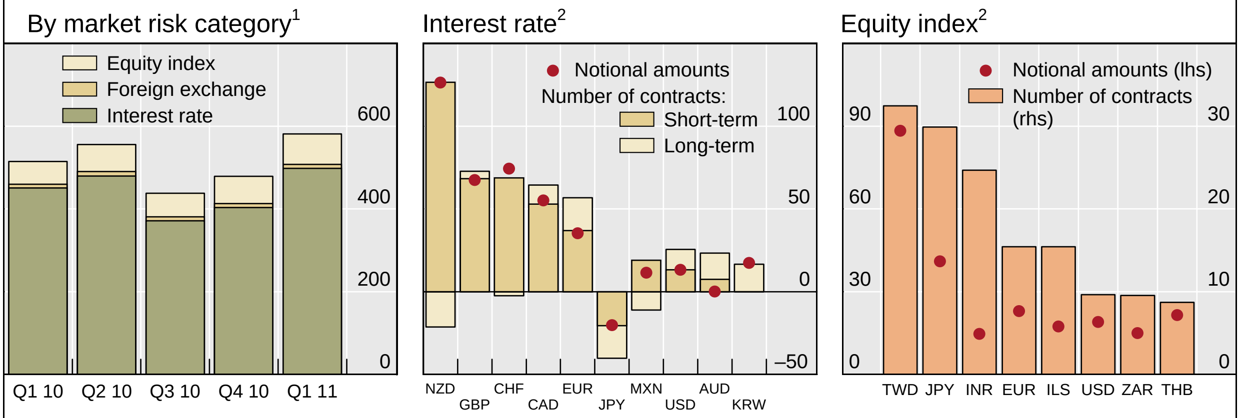
Stock price increases lift dollar turnover of equity index contracts

Trading in futures and options on stock prices indices grew moderately in the first quarter of 2011. Turnover measured by notional amounts rose smartly by 12%, but this overstates the underlying increase in activity. When measured in terms of the number of contracts traded, turnover inched up by merely 4%. That said, there were sizeable discrepancies across regions: trading in stock price indices denominated in Japanese yen surged by 30% (number of contracts) and 41% (notional amounts) over the quarter as a whole (Graph 9, right-hand panel). Much of this rise took place after the severe earthquake and tsunami that hit the east coast of Japan on 11 March. Trading in contracts denominated in euros also picked up significantly (number of contracts: 15%, notional amounts: 23%). Sizeable growth in turnover also took place in a number of emerging markets, such as Israel (15% and 17%), India (25% and 15%), Thailand (9% and 22%), Chinese Taipei (32% and 88%) and South Africa (10% and 15%).

Stable turnover in FX futures and options

Activity in the foreign exchange segment of the international derivatives markets remained stable at $10 trillion in the first quarter of 2011, but this masks sizeable differences across currencies. Turnover in contracts on the Japanese yen went up by 29%. Most of this was short-term trading; open interest rose by merely 9%. Turnover in futures and options on sterling and the Swiss franc rose by 20% each. By contrast, turnover in the Brazilian real (which is traded predominantly on exchanges) fell by 17% and that in the euro by 6%.

Turnover on the international derivatives exchanges



AUD = Australian dollar; CAD = Canadian dollar; CHF = Swiss franc; EUR = euro; GBP = pound sterling; ILS = Israeli new shekel; INR = Indian rupee; JPY = Japanese yen; KRW = Korean won; MXN = Mexican peso; NZD = New Zealand dollar; THB = Thai baht; TWD = New Taiwan dollar; USD = US dollar; ZAR = South African rand.

[1] Notional amounts, in trillions of US dollars. [2] Growth rate between Q4 2010 and Q1 2011, in per cent.

Sources: FOW TRADEdata; Futures Industry Association; BIS calculations. Graph 9

Stronger activity in commodities contracts except in China

Lower trading on Chinese exchanges weakened overall activity on the international commodity exchanges during the first quarter of 2011. Worldwide turnover measured in terms of the number of contracts (notional amounts are not available) of commodity derivatives contracted by 20% as trading on Chinese exchanges halved, partly because contract sizes increased. If one excludes China, turnover in commodity derivatives increased by 14%, with limited variation across commodity types.