Stefan Avdjiev Andreas Schrimpf Nicholas Vause

stefan.avdjiev@bis.org *andreas.schrimpf@bis.org* *nick.vause@bis.org*

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 first quarter of 2011. The discussion of international debt securities and exchange-traded derivatives draws on data for the second quarter of 2011. The first of three boxes in this chapter discusses the relationship between the category "guarantees extended" in the BIS consolidated banking statistics and the amount of CDS sold by BIS reporting banks. The second analyses the use of covenants as a measure of risk-taking in the syndicated loan market. The third focuses on the collateralisation of counterparty credit risk in the OTC derivatives market.

The international banking market in the first quarter of 2011[1]

The aggregate cross-border claims of BIS reporting banks rose during the *first quarter of 2011*, mainly as a result of a significant increase in lending to residents of the United States. At the same time, cross-border claims on residents of emerging market economies went up for the eighth quarter in a row. By contrast, aggregate exchange rate-adjusted foreign claims on the euro zone fell by $51 billion (0.7%). As of March 2011, euro area banks had a much lower share of their total foreign claims exposed to the US public sector than did their peers from the rest of the world. The opposite was true for foreign claims on the public sectors of Greece, Ireland, Italy, Portugal and Spain.

Aggregate cross-border claims expand[2]

The aggregate cross-border claims of BIS reporting banks rose during the first quarter of 2011 (Graph 1, left-hand panel). The $491 billion (1.6%) expansion was roughly evenly split between increases in interbank claims ($254 billion or 1.3%) and lending to non-banks ($237 billion or 2.2%).

Cross-border claims on the United States expand

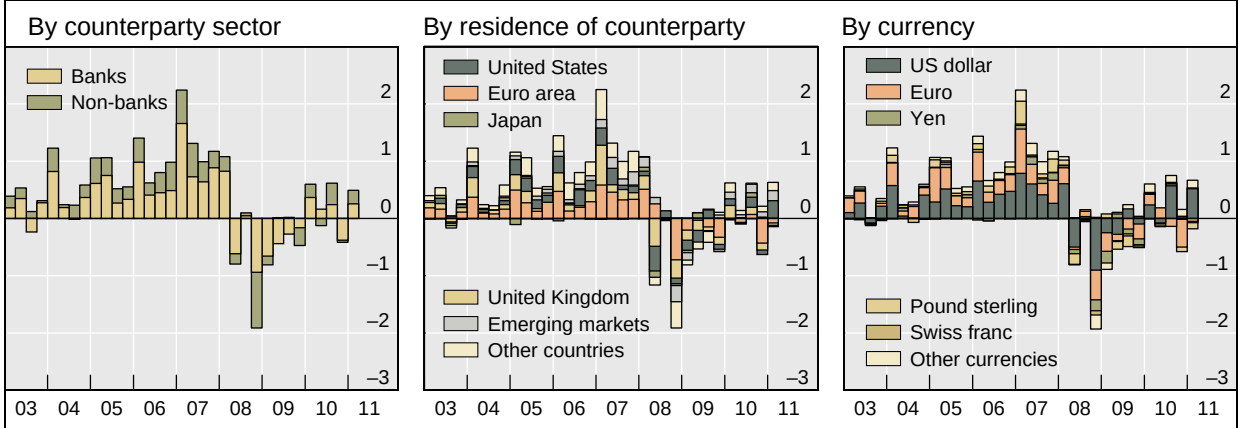
Cross-border lending to the United States grew the most (Graph 1, centre panel). In absolute terms, the $309 billion (5.9%) expansion in claims on

[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

residents of the country was the largest on record. By contrast, BIS reporting banks reduced their claims on the euro area (by $78 billion or 0.8%) and the United Kingdom (by $43 billion or 0.9%). Nevertheless, both of these declines were significantly smaller than the respective ones in the previous quarter. At the same time, claims on Japan contracted for the first time in a year (by $20 billion or 2.5%) against the backdrop of the powerful earthquake and tsunami that hit the country in March.

The overall rise in cross-border claims during the quarter was led by a substantial increase in US dollar lending (Graph 1, right-hand panel). Claims in that currency expanded by $521 billion (4.2%), bringing the overall increase in US dollar-denominated cross-border claims between June 2010 and March 2011 to $1.1 trillion (9.0%). Approximately 60% ($315 billion) of the increase in US dollar lending during the first quarter of 2011 was directed towards US residents, while close to 11% ($56 billion) went to emerging market economies. By contrast, cross-border claims denominated in sterling (–$103 billion or –6.7%), euros (–$52 billion or –0.5%) and yen (–$23 billion or –1.9%) all fell during the quarter.

Cross-border claims on emerging markets surge

BIS reporting banks increased their cross-border claims on residents of emerging market economies for the eighth consecutive quarter. The $178 billion (6.3%) expansion was the largest since the fourth quarter of 2007. It was the result of a $147 billion (10%) rise in interbank claims and a $31 billion (2.3%) increase in claims on non-banks. Cross-border claims went up in all four major developing regions.

Lending to Asia-Pacific …

Cross-border claims on Asia-Pacific continued to grow at a very rapid pace (Graph 2, top left-hand panel). Almost two thirds of the unprecedented $126 billion (12%) increase in lending to the region was due to an $80 billion (24%) surge in claims on China. Banks also reported significant increases in their claims on Malaysia ($11 billion or 25%), India ($9.3 billion or 5.0%) and Korea ($8.8 billion or 4.5%).

... and to Latin America and the Caribbean continues to grow

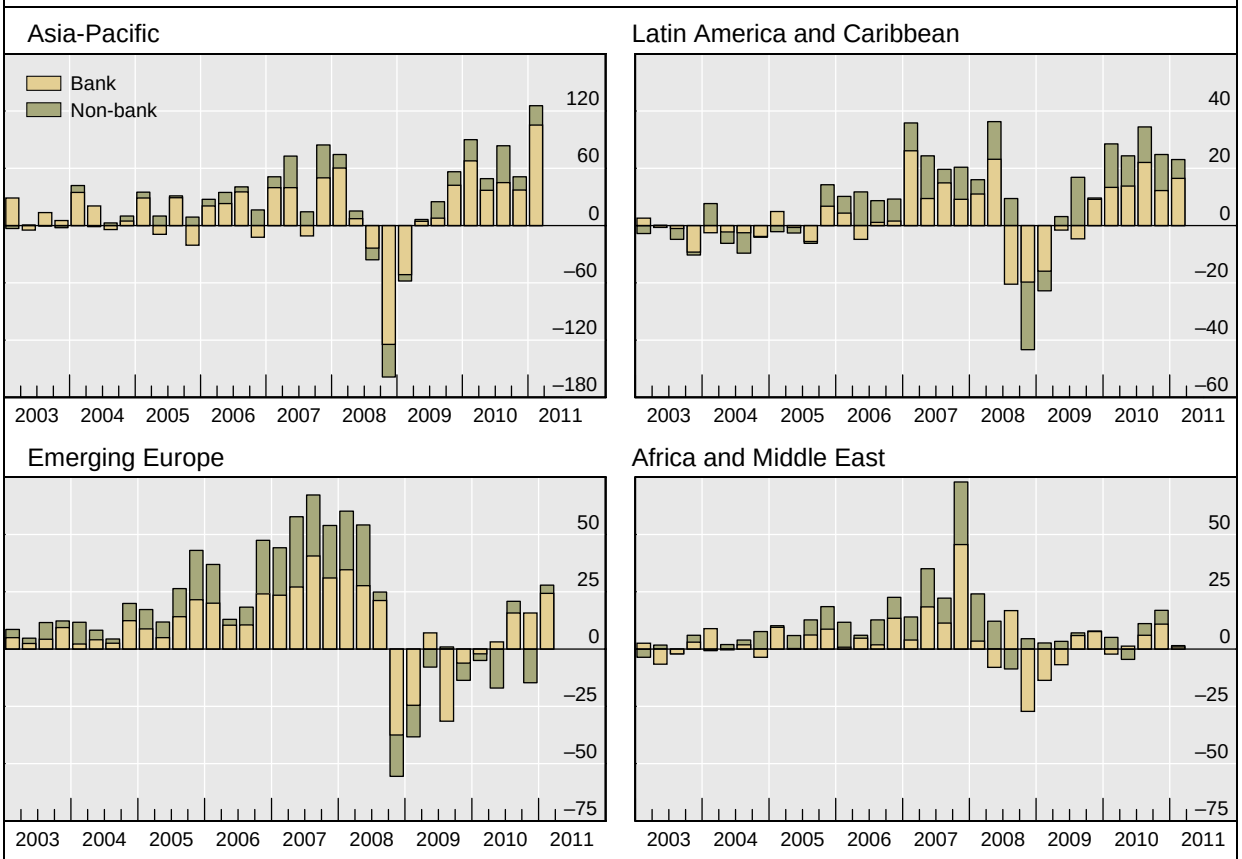
Cross-border claims on residents of Latin America and the Caribbean continued to expand (Graph 2, top right-hand panel). More than half of the $23 billion (4.4%) rise in lending to the region was explained by the eighth consecutive increase in claims on Brazil ($13 billion or 5.3%). Claims on Mexico also rose significantly (by $4.3 billion or 3.8%). By contrast, claims on Uruguay declined by $1.8 billion (34%).

Lending to emerging Europe expanded during the first quarter of 2011 (Graph 2, bottom left-hand panel). The $28 billion (3.7%) overall increase was mainly driven by a $24 billion (6.1%) rise in interbank claims. Claims on residents of Poland increased by $13 billion (11%). Cross-border lending to residents of Turkey also grew considerably ($9.4 billion or 6.1%), despite the measures imposed by local policymakers in an effort to discourage further capital inflows and to slow down credit growth. Claims on Hungary (+$3.1 billion or +4.2%), Russia (+$2.0 billion or +1.4%) and Croatia (+$1.9 billion or +4.7%) also increased noticeably.

Cross-border claims on residents of Africa and the Middle East also recorded an expansion, albeit a much more modest one than those in the other three emerging market regions (Graph 2, bottom right-hand panel). Against the backdrop of the sociopolitical turmoil that engulfed a large part of the region during the first quarter of 2011, overall cross-border lending increased slightly

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

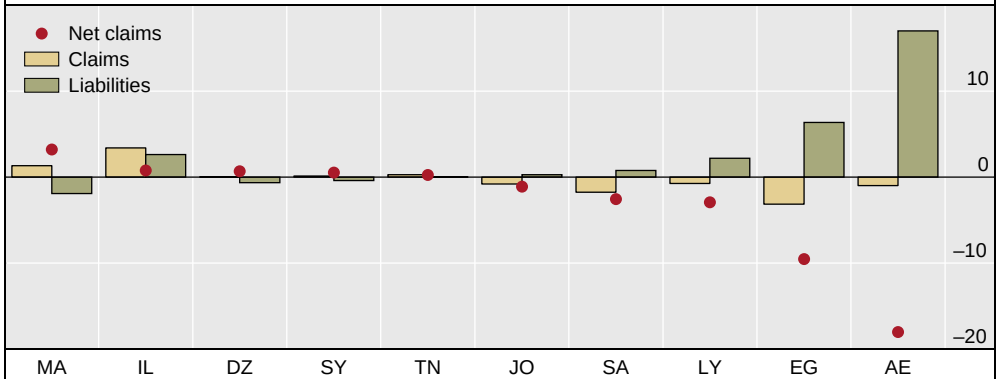
(by $1.5 billion or 0.3%). The relatively modest aggregate change in claims masks significant variation at the country level (Graph 3, brown bars). For example, claims on Egypt, which was shaken by a popular uprising that resulted in a regime change, shrank by $3.2 billion (14%). Similarly, claims on Libya, where a civil war erupted during the same period, contracted by $0.7 billion (37%). Considerable declines were also seen in lending to Saudi Arabia ($1.8 billion or 2.0%), the United Arab Emirates ($1.0 billion or 1.0%) and Jordan ($0.8 billion or 17%). By contrast, internationally active banks reported substantial increases in their claims on Israel ($3.4 billion or 17%) and Morocco ($1.3 billion or 14%). Claims on Tunisia, which was the first country in the region to go through mass protests and a change in political leadership, also increased (by $0.3 billion or 7.1%).

There were several noteworthy developments in the flow of liabilities of BIS reporting banks to residents of the Middle East and North Africa (Graph 3, green bars). Internationally active banks reported the largest single-quarter increase in liabilities to residents of Egypt ($6.4 billion or 26%). Liabilities to residents of Libya also increased considerably (by $2.2 billion or 3.7%). These developments most likely reflected domestic funds being moved out of the two countries as a result of the elevated levels of political and economic uncertainty.[3] Meanwhile, against the backdrop of rapidly growing oil prices, banks reported a surge in liabilities to residents of the United Arab Emirates ($17 billion or 23%). The rise was the largest since the fourth quarter of 2007. Liabilities to residents of Saudi Arabia also rose, but by a much more modest amount ($0.8 billion or 0.5%).

Changes in cross-border positions[1]

Q1 2011, in billions of US dollars

Selected countries in the Middle East and North Africa



AE = United Arab Emirates; DZ = Algeria; EG = Egypt; IL = Israel; JO = Jordan; LY = Libya; MA = Morocco; SA = Saudi Arabia; SY = Syria; TN = Tunisia.

[1] BIS reporting banks' cross-border positions (including inter-office positions) vis-à-vis all sectors. Net claims are defined as claims minus liabilities.

Source: BIS locational banking statistics by residence. Graph 3

[3] The financial sanctions that many countries imposed on Libya in the first quarter of 2011 may have also affected the flow of liabilities of BIS reporting banks to residents of the country.

Foreign claims on the euro area decline on an exchange rate-adjusted basis[4]

Exchange rate-adjusted foreign claims on the euro area decline

BIS reporting banks' total *consolidated* foreign claims[5] on residents of the euro area stood at $7,979 billion as of the end of the first quarter of 2011. According to our estimates, at constant exchange rates,[6] aggregate foreign claims on the euro zone fell by $51 billion (0.7%) during the first quarter of 2011.[7] The overall decline was primarily caused by a $69 billion (3.1%) contraction in interbank claims (Graph 4). By contrast, claims on the public sector rose (by $21 billion or 1.4%), while those on the non-bank private sector remained virtually unchanged. All of these changes were fairly modest in magnitude relative to the average historical variability of each of the series.

Among individual countries, exchange rate-adjusted foreign claims on France fell the most. The overall reduction ($33 billion or 2.7%) was led by a $31 billion (5.0%) decrease in interbank claims. Foreign claims on the country's public and non-bank private sectors also declined slightly (by $1.0 billion or 0.5% and by $0.5 billion or 0.1%, respectively). Foreign claims on Germany also contracted during the first quarter of 2011. Just as in the case of France, the overall decline ($15 billion or 0.9%) was led by a $29 billion (5.4%) reduction in interbank claims. Foreign claims on the German non-bank private sector also fell, but by a much smaller amount ($0.5 billion or 0.1%). In contrast, claims on the country's public sector rose by $15 billion (3.1%) during the quarter.

Foreign claims on Spain, Ireland and Greece also shrank during the first quarter of 2011. The overall contractions in claims on Spain and Ireland ($24 billion or 3.4% and $17 billion or 3.7%, respectively) were led by declines in interbank claims ($23 billion or 10% and $11 billion or 13%, respectively). By contrast, the $7.7 billion (5.6%) reduction in foreign claims on Greece was primarily caused by falls in claims on the country's public and non-bank private sectors ($4.1 billion or 8.8% and $3.2 billion or 3.9%, respectively).

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[4] The analysis in this and the following 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).

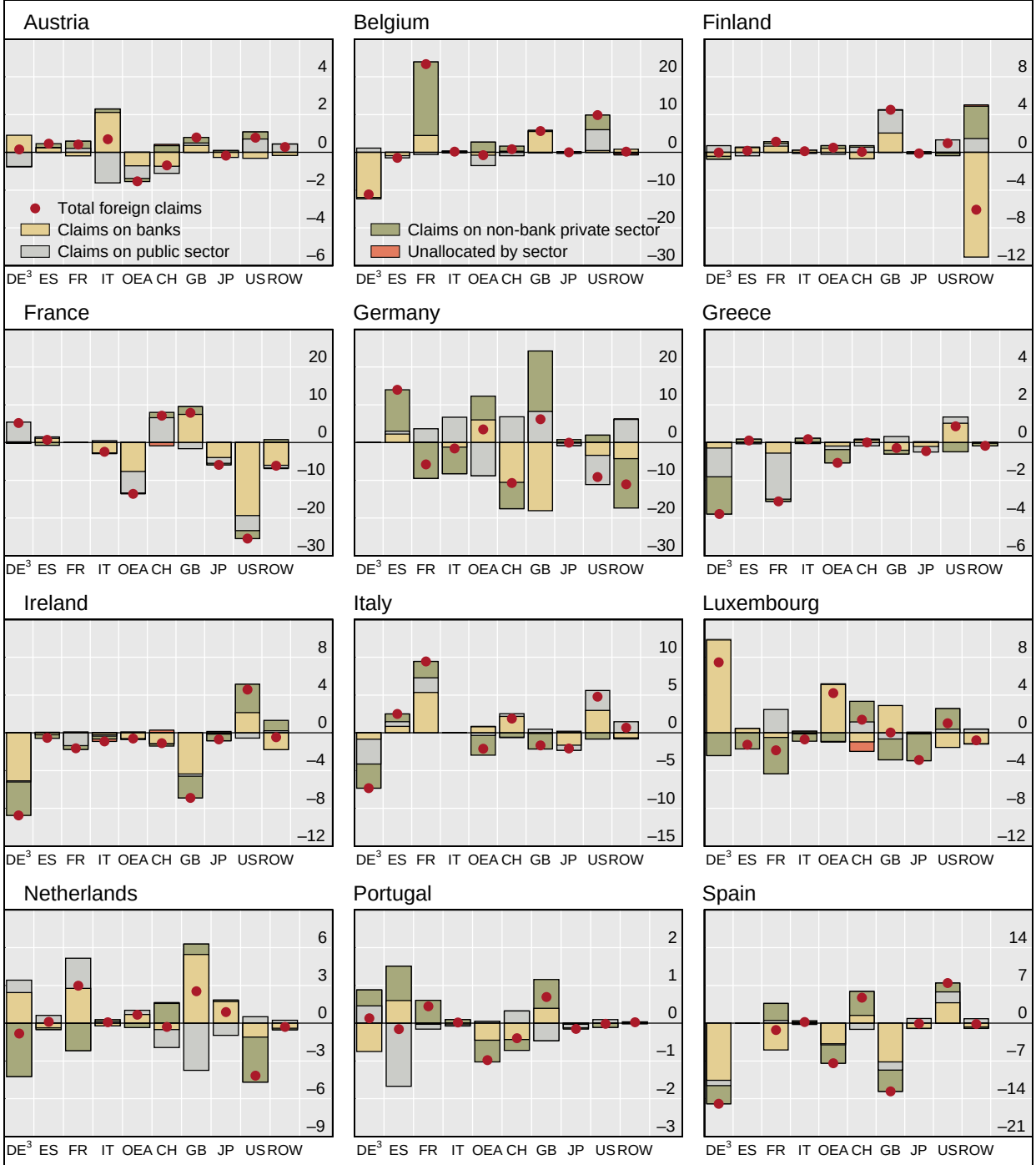
[5] *Foreign claims* consist of cross-border claims (ie claims on entities located in a country other than the country of residence of the reporting banking office) and local claims (ie claims on entities located in the country of residence of the reporting banking office) of foreign affiliates (ie branches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

[6] 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.

[7] All flow figures have been adjusted for breaks in series.

Estimated changes in foreign claims[1] on selected countries, Q1 2011

By bank nationality at constant end-Q1 2011 exchange rates,[2] in billions of US dollars



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

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

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

BIS reporting banks' foreign claims on the public sectors of the GIIPS countries and the United States

The latest fiscal developments in a number of euro area economies (Greece, Ireland, Italy, Portugal and Spain – "GIIPS" hereafter) and in the United States have generated interest in the shares of major banking systems' foreign portfolios that are invested in the public sectors of those countries. The BIS consolidated banking statistics on an ultimate risk basis allow us to quantify those shares (Graph 5, top panel) and to track their evolution over the past several years (Graph 5, bottom four panels). Several facts stand out.

The foreign public sector allocations of euro area banks differ significantly from those of banks from the rest of the world

First, as of the end of the first quarter of 2011, there was a strong geographical pattern in BIS reporting banks' relative holdings of claims on the public sectors of the GIIPS countries and the United States (Graph 5, top panel). Namely, the banking systems with the highest shares of foreign claims on the GIIPS public sectors were all from the euro area (Belgium, France, Germany and Ireland). Conversely, the banking systems whose foreign portfolios were most heavily biased towards the US public sector were all from outside the euro area (Canada, Japan, Switzerland and the United Kingdom). The fact that euro area banks have a tendency to hold more of the public sector debt of the GIIPS countries than banks from the rest of the world is not surprising. It could be explained by a variety of factors such as currency risk considerations, institutional arrangements, regulatory requirements and informational asymmetries. What is more surprising is that euro zone banks tend to hold substantially smaller shares of foreign claims on the US public sector than their peers from the rest of the world.

Second, there were no major banking systems that had substantial portions of their foreign portfolios invested in both the US public sector and the public sectors of the GIIPS countries (ie there were no banking systems in the top-right quadrant of the top panel of Graph 5). For example, Belgian, French and German banks had relatively high shares of foreign claims on the public sectors of the GIIPS countries (6.6%, 5.0% and 3.4%, respectively) but were significantly less exposed to the US public sector (3.3%, 2.9% and 0.8%, respectively). Conversely, even though the weights of the US public sector in the foreign portfolios of Canadian and Japanese banks were fairly high (20% and 15%, respectively), these two banking systems had very little exposure to the public sectors of the GIIPS countries (0.7% and 1.6%, respectively). Swiss banks and UK banks were in similar situations.

Third, the evolution of the shares of BIS reporting banks' foreign portfolios dedicated to the public sectors of the United States and the GIIPS countries over the past four years can be split into two periods (Graph 5, middle left-hand panel). During the first one, which begins with the onset of the global financial crisis in the third quarter of 2007 and lasts until the third quarter of 2009, internationally active banks increased the shares of claims on the public

Box 1: Exploring the relationship between "guarantees extended" and CDS sold

Stefan Avdjiev

Recently, there has been a substantial amount of interest in the extent to which the category "guarantees extended"[1] of the BIS consolidated banking statistics on an ultimate risk basis could be used as a proxy for the *credit default swap (CDS) exposures* of various banking systems to individual countries. Several important caveats apply to such an approximation.

First, while the contingent liabilities of the protection seller of credit derivatives contracts are a part of the category "guarantees extended", they are not the only item included in it. In addition to CDS contracts sold by BIS reporting banks, this category also includes secured, bid and performance bonds, warranties and indemnities, confirmed documentary credits, irrevocable and standby letters of credit, acceptances and endorsements. Therefore, the fact that US banks, for instance, had $37 billion worth of guarantees exposures to Greece as of the end of Q1 2011 (Table 9E in the BIS Statistical Annex) does not imply that US banks had sold $37 billion worth of CDS protection on entities located in Greece.

Second, banks are not the only institutions that buy and sell CDS contracts. Other financial enterprises, such as insurance companies and hedge funds, also actively participate in the CDS market. As a result, not all CDS written on entities located in a given country are included in the category "guarantees extended" of the BIS consolidated banking statistics. Thus, US banks' $37 billion worth of guarantees exposures to Greece from the above example is not the correct ceiling on the total amount of CDS written on Greek entities by US institutions.

Third, in the category "guarantees extended" of the BIS consolidated banking statistics, CDS sold are reported at *notional* values, not at fair values. In order to illustrate that point, suppose that a French bank sells a CDS to a Spanish bank on $1 billion worth of securities issued by the Greek government. Suppose further that, at the time of reporting, the CDS has a positive fair value of $100 million from the seller's perspective (ie the French bank). According to the *Guide to the BIS consolidated banking statistics*, the French bank should report $1 billion (ie the *notional* amount of CDS sold) worth of "guarantees extended" to Greece.

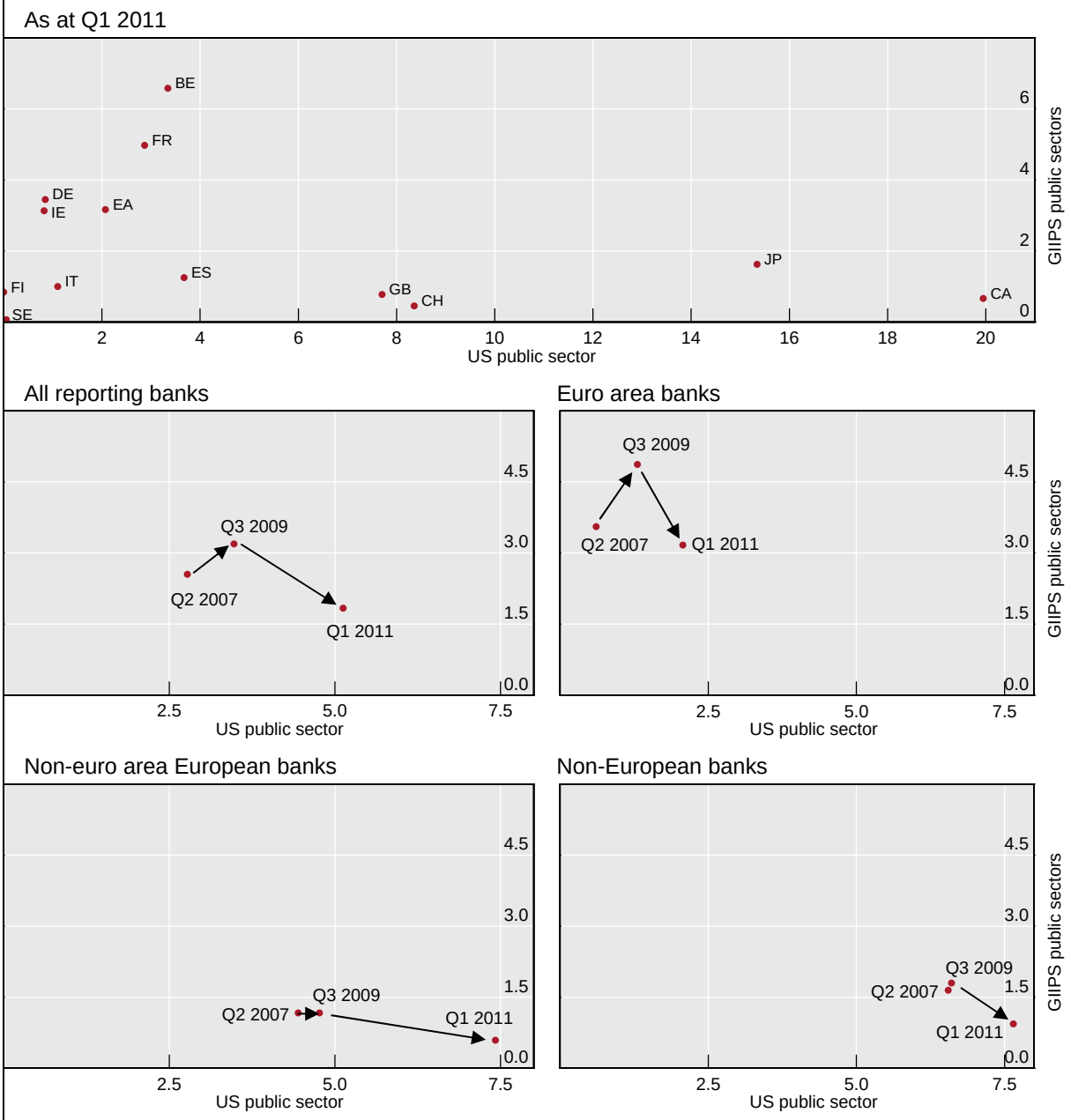
Fourth, in the category "guarantees extended" of the BIS consolidated banking statistics, CDS sold are generally reported at *gross (not net)* values. To illustrate this, suppose that the French bank from the above example sells a CDS to a Spanish bank on $1 billion worth of securities issued by the Greek government and simultaneously buys a CDS on the same set of securities from an Italian bank. If these were the only two transactions the French bank engaged in during the period, it would report $1 billion (ie the *gross* notional amount of CDS sold) worth of "guarantees extended" to Greece, despite the fact that it has also bought a CDS on the same contract from a third party (in this example, from the Italian bank).

Finally, CDS bought by banks are *not* reported in the category "guarantees extended". Their treatment in the BIS consolidated banking statistics depends on whether the reporting bank that purchased the CDS contract owns the underlying security or not. Suppose that the CDS contract that the French bank bought from the Italian bank in the above example has a positive fair value of $100 million from the buyer's perspective (ie from the perspective of the French bank). If the French bank does not own the underlying security, it should report $100 million (ie the *positive fair value* of CDS bought) worth of "derivatives" exposures to Italy. If, on the other hand, the French bank owns the underlying security, it should report a risk transfer of $1 billion out of the Greek public sector into the Italian banking sector (ie on an immediate borrower basis, the French bank will report $1 billion worth of foreign claims on the Greek public sector; on an ultimate risk basis, it will report $1 billion worth of foreign claims on the Italian banking sector).

[1] The *Guide to the BIS consolidated banking statistics* defines guarantees as "contingent liabilities arising from an irrevocable obligation to pay a third-party beneficiary when a client fails to perform some contractual obligation".

Consolidated foreign claims on the public sectors of the GIIPS[1] countries and the US

By bank nationality, as a percentage of banks' total foreign claims



BE = Belgium; CA = Canada; CH = Switzerland; DE = Germany; EA = euro area; ES = Spain; FI = Finland; FR = France; GB = United Kingdom; IE = Ireland; IT = Italy; JP = Japan; SE = Sweden; US = United States.

[1] GIIPS = Greece, Ireland, Italy, Portugal, Spain. Claims of banks headquartered in Ireland, Italy and Spain on their respective home country's public sector are not included, as these are not foreign claims.

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

sectors of both the United States and the GIIPS countries in their foreign portfolios (from 2.5% to 3.2% and from 2.8% to 3.5%, respectively).[8] These increases were part of a global rebalancing of BIS reporting banks' foreign

[8] Even though some of the above changes may partially reflect exchange rate fluctuations that took place during the period, our estimates indicate, on a wide range of assumptions, that these were not the main drivers of the above movements.

portfolios towards the public sector. The share of those claims in aggregate foreign claims increased from 14.5% to 18.5% during the same period. The second period begins in the fourth quarter of 2009, when the first more serious signs of fiscal problems in the euro zone began to emerge, and ends in the first quarter of 2011, which is the quarter to which the latest available data refer. During that period, the share of the US public sector continued to increase (from 3.5% to 5.1%), while that of the GIIPS public sectors shrank to a level that was much lower than at the start of the financial crisis (from 3.2% to 1.8%). During the same time, the global share of foreign claims on the public sector increased again, but by much less than during the first period (from 18.5% to 19.8%).

Fourth, euro area banks entered the financial crisis with very different foreign public sector allocations than banks from the rest of the world. In the middle of 2007, euro zone banks had 3.6% of their total foreign claims invested in the public sectors of the GIIPS countries and only 0.6% in the US public sector (Graph 5, middle right-hand panel). By contrast, European banks from outside the euro area (Graph 5, bottom left-hand panel) and non-European banks (Graph 5, bottom right-hand panel) had allocated substantially lower shares to the public sectors of the GIIPS countries (1.2% and 1.7%, respectively) and significantly higher shares to the US public sector (4.4% and 6.6%, respectively).

Finally, the foreign public sector portfolios of euro area banks evolved in a different manner than those of their peers from the rest of the world in the first of the two periods discussed above, but moved in roughly the same direction during the second one (Graph 5, middle right-hand and bottom panels). Between the end of the second quarter of 2007 and the end of the third quarter of 2009, euro area banks considerably increased the weights of the public sectors of the GIIPS countries (from 3.6% to 4.9%) and the US public sector (from 0.6% to 1.3%) in their foreign portfolios. By contrast, the respective shares for European banks from outside the euro area and non-European banks changed very little during the same time. In the second period, all three groups reported sharp declines in the shares of the GIIPS public sectors and substantial increases in the shares of the US public sector in their respective foreign portfolios.

International debt securities issuance in the second quarter of 2011[9]

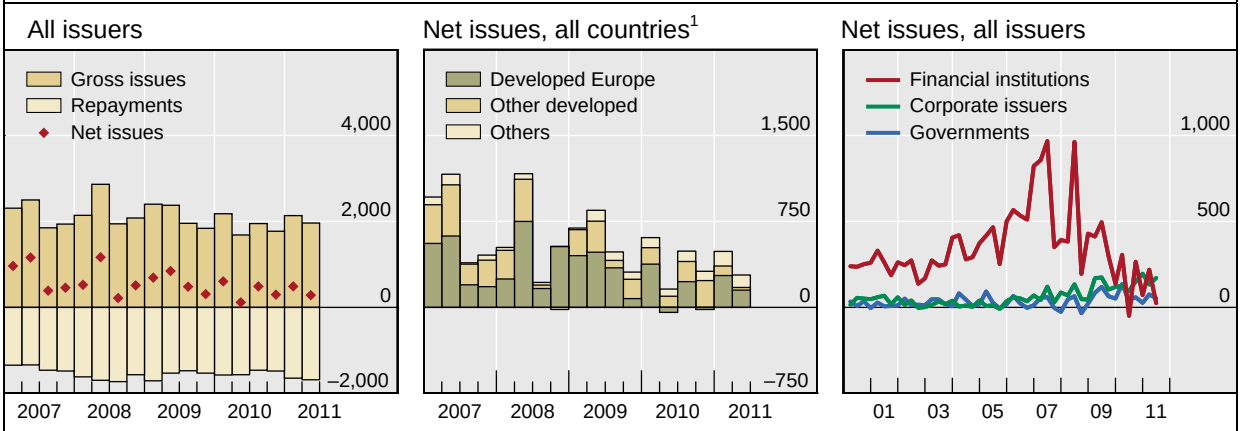
Declining issuance in the international debt securities market …

Activity in the primary market for international debt securities retreated in the *second quarter of 2011* (Graph 6, left-hand panel). Completed worldwide gross issuance stood at $1,965 billion, 8% lower than in the previous quarter. In combination with stable repayments, this resulted in a fall in net issuance to $283 billion, from $489 billion in the first quarter.

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

International debt securities issuance

In billions of US dollars



[1] By nationality of issuer.

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

... driven mainly by lower US issuance

Low activity by borrowers of US nationality was the main driver behind the drop in global issuance. US borrowers raised a mere $1 billion via international debt securities during the second quarter of 2011, compared with an average of $142 billion per quarter over the period Q1 2004–Q1 2011.[10] Borrowers from other non-European developed markets sold international debt securities amounting to $22 billion (net). This contrasts with strong issuance by European entities, who tapped the market with $151 billion of net issues (just over half the world total). Emerging market issuers, international institutions and issuers from offshore centres raised $70 billion, $34 billion and $6 billion, respectively, on a net basis.

Issuance by non-financial corporates outstrips that by financials

Continuing a trend that started in late 2008, non-financial corporate issuance outstripped new borrowing by financial institutions. Non-financials raised $172 billion net of repayments, compared with financial issuance of $25 billion, the second lowest level since 2000. The low issuance by financial institutions was primarily the result of net repayments by US firms ($114 billion) and lower borrowing by European financial institutions ($81 billion, after $187 billion in the first quarter). In Europe, French financial institutions cut their issuance to $16 billion, down from $97 billion in the first quarter. Spanish financial institutions were also less active in the market, raising $11 billion in new issues compared with $47 billion in the first quarter. Borrowing by Dutch financial institutions remained strong, at $27 billion (Graph 7, left-hand panel). Financial institutions from Ireland and Austria actually paid back funds on a net basis, with respective repayments of $11 billion and $10 billion.

[10] Note, however, that the major market for US borrowers is the domestic debt securities market, which is quantitatively clearly more important than the international market segment discussed here. Aggregate issuance of US debt securities in the domestic market was still fairly robust in the first quarter of 2011 (the latest available figure in the BIS domestic debt securities data) and was mostly driven by the government and the corporate sector (see changes in stocks, Tables 16A and 16B in the Statistical Annex).

Box 2: Have lenders become complacent in the market for syndicated loans? Evidence from covenants

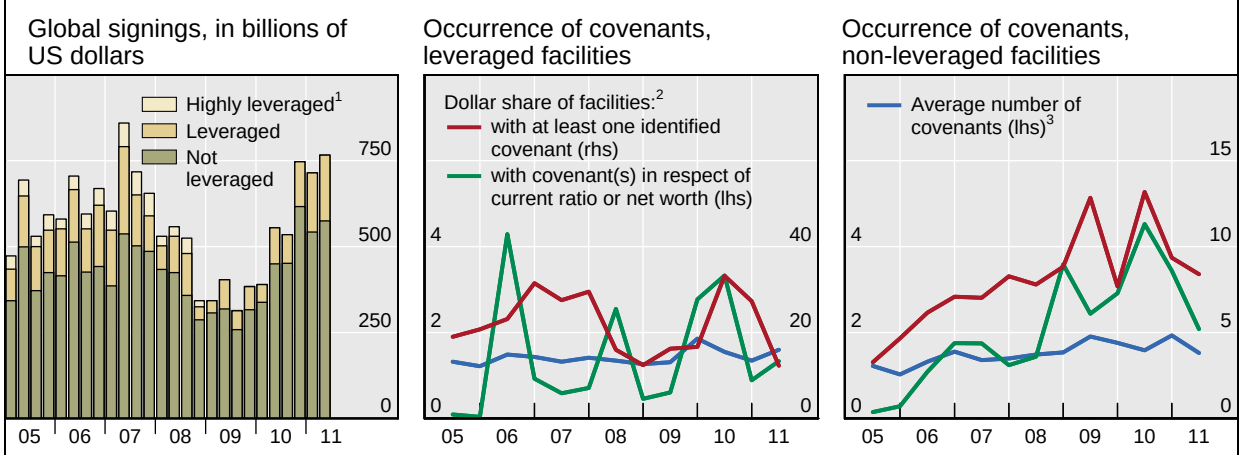
Blaise Gadanecz

The market for syndicated loans, a very significant source of funding for corporate borrowers, has recovered from its collapse during the financial crisis. By early 2011, financing was available at close to pre-crisis conditions.

Syndicated loan signing volumes bounced back from the nadir reached in the aftermath of the crisis, rising from $314 billion in the third quarter of 2009 to $766 billion in the second quarter of 2011 (Graph A, left-hand panel). Refinancings generated $405 billion of signings in the second quarter of 2011, or 53% of the total, as borrowers sought to replace facilities obtained during the crisis at less attractive conditions. Issuance of leveraged loans,① which had dropped sharply, has also rebounded. A number of large banks have resumed lending, as emergency liquidity and rescue operations helped alleviate funding constraints and shore up bank balance sheets. Activity on secondary markets also revived, suggesting that investors are willing to absorb larger amounts of loan exposure.

Syndicated lending, 2005–11

Signings and occurrence of covenants



[1] Dealogic Loan Analytics does not distinguish between highly leveraged and leveraged for loans signed after 2008. From 2009 onwards, only leveraged versus non-leveraged status is reported. The highly leveraged category used to apply to facilities carrying spreads above a certain benchmark. [2] In per cent. [3] Weighted by facility sizes; only for facilities with at least one covenant.

Source: Dealogic Loan Analytics. Graph A

A number of measures indicate that financing conditions in the syndicated loan market have become looser since 2009 and are now comparable to or more favourable than the pre-crisis terms observed from the early 2000s.

First, spreads over Libor have declined, average maturities have lengthened and facility sizes have increased. The dollar share of collateralised tranches has also fallen slightly. Leveraged borrowers worldwide paid an average spread (weighted by tranche sizes) over Libor of 339 basis points in the second quarter of 2011, non-leveraged borrowers 144 basis points. That is still 100–150 basis points above the extraordinarily low pre-crisis levels, but only about half as high as the peaks reached during the crisis. These trends can be consistently observed for a number of different leverage classes, currencies, ratings classes and regions.

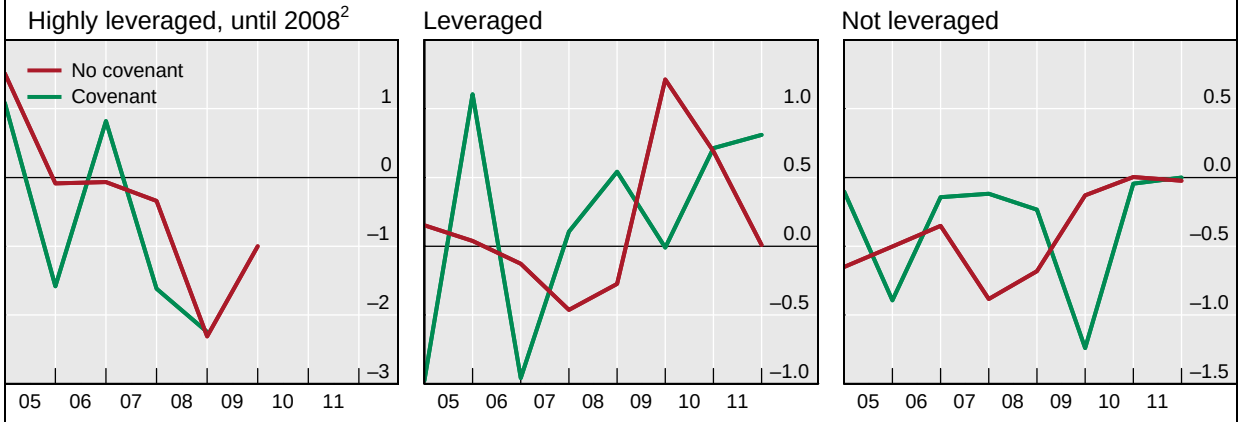
Second, "covenant-lite" loans have accounted for an increasing share of signings. Covenants are contract clauses that entitle lenders to impose penalties (eg a surcharge in the spread) or to accelerate the repayment of the loan if the borrower undertakes actions that might diminish the value of the collateral (such as selling or transferring assets), or fails to keep commitments (such as paying on time or keeping certain financial ratios above a given threshold). In a covenant-lite facility, the lender waives these clauses, thus enjoying less protection if the borrower meets with financial difficulties. As covenants can take many forms, aggregating them into a single measure is difficult. Nonetheless, based on the literature, it is possible to construct a number of indicators for

covenant intensity: the share as a percentage of total dollar amounts of facilities with at least one identifiable covenant (Graph A, red lines in the centre and right-hand panels); the average number of different financial covenants per facility[②] (for those facilities which have at least one covenant, blue lines); and the dollar share of facilities with at least one covenant requiring the borrower's current ratio,[③] net worth or tangible net worth to remain above a certain threshold (green lines).[④] Admittedly, these indicators are rather noisy, showing large fluctuations within a year, particularly during crises when issuance is low. That said, all three indicators point to a drop in covenant usage in recent quarters, after an increase between 2008 and 2010 that followed a steady decline during the pre-crisis years. This has happened across regions and leverage classes.

Borrowers that were granted covenant-lite facilities during the height of the crisis have (for now) performed relatively well. Graph B shows better post-signing borrower ratings performance since 2009 for facilities without covenants (red lines) than for loans with covenants (green lines). Leveraged covenant-lites were associated with more borrower upgrades and non-leveraged covenant-lites with fewer downgrades. That said, this trend has recently started to reverse, which is reminiscent of the pre-crisis phase between 2000 and 2007–08 when covenant-lites exhibited a worse performance than facilities with covenants. While these comparisons need to be interpreted with caution, it is fair to conclude that, during crisis times, lenders are more likely to discriminate in favour of the better risks when waiving covenants. Besides, covenant-lite structures can help borrowers survive financial troubles, in that fewer defaults and penalties are mechanically triggered.

Post-signing ratings performance[1]

Average borrower ratings changes between signing date and present



[1] Average notch changes in the ratings of the borrower (weighted by tranche sizes) between the loan signing date and the current date. For instance, minus 2 means a two-notch average downgrade (e.g. from B+ to B–) between the time of signing and the current date. [2] See Graph A, footnote 1.

Sources: Dealogic Loan Analytics; author's calculations. Graph B

All in all, even as investor sentiment may have started turning in July–August, the above results suggest that financing conditions on the market for syndicated loans have loosened since the height of the crisis. For the United States, this is in keeping with the Federal Reserve Board's Senior Loan Officer Opinion Survey on Bank Lending Practices, which has indicated since 2009 that a falling net fraction of domestic banks is tightening standards or raising spreads on commercial and industrial loans.

[①] This box relies on the definition of Dealogic Loan Analytics for leveraged loans, which is revised annually. Over time the criteria have included borrower financial leverage and loan spreads above a certain threshold, ratings below a certain level, and loan purpose (in particular LBOs). Every loan is classified according to the definition which was valid when it was signed. It is not possible to reclassify earlier loans when the definition changes. [②] See M Puri and S Drucker, "On loan sales, loan contracting and lending relationships", *Review of Financial Studies*, vol 22, no 7, 2009 and N Mora, "Lender exposure and effort in the syndicated loan market", *Federal Reserve Bank of Kansas City Working Papers*, no RWP 10-12, September 2010. [③] Current assets divided by current liabilities. [④] S Chava and M Roberts, "How does financing impact investment? The role of debt covenants", *Journal of Finance*, vol 6, no 5, October 2008, give precedence to these two types of covenants over others, as they have the advantage that they are used relatively frequently and the associated accounting measures are standardised and unambiguous. Other types of covenants, such as those applied to EBITDA, are more complicated, notably because the definition of debt they refer to is not standardised.

Activity in the primary market for covered bonds weakened over the second quarter. At $14 billion, the estimated net issuance of covered bonds was about one third lower than in the previous quarter. Strong issuance by French and Swedish financial institutions ($12 billion and $9 billion, respectively) contrasted with continued repayments of Pfandbriefe by German banks ($29 billion). Likewise, Spanish banks made net repayments of cédulas worth $7 billion, in contrast to their strong issuance over the past two years.

Lower activity in the covered bond market

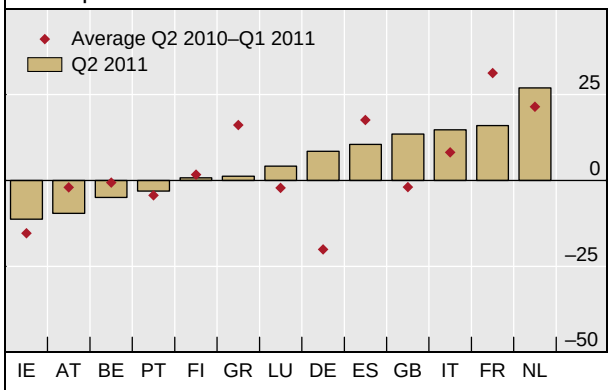
Non-financial corporations rated below investment grade took advantage of the declining spreads in the high-yield bond market segment and raised record amounts. Activity in this market segment was rather depressed during much of 2010 but soared from the beginning of 2011 (Graph 8, left-hand panel).[11] Net issuance of non-investment grade bonds was $73 billion in Q2 2011 and $63 billion in Q1 2011, compared with average net repayments of $4 billion per quarter in 2010. This strong issuance of high-yield debt securities and the tightening of spreads went hand in hand with a pickup in the syndicated loans market, another important funding source for corporate borrowers (see Box 2). Corporations headquartered in the United States accounted for the bulk of high-yield issuance ($56 billion in Q2 2011), followed by those from developed European economies ($14 billion). Issuance of high-yield debt securities slowed in June 2011 and continued to decline in July and August.

Record issuance of high-yield bonds in the first and second quarters

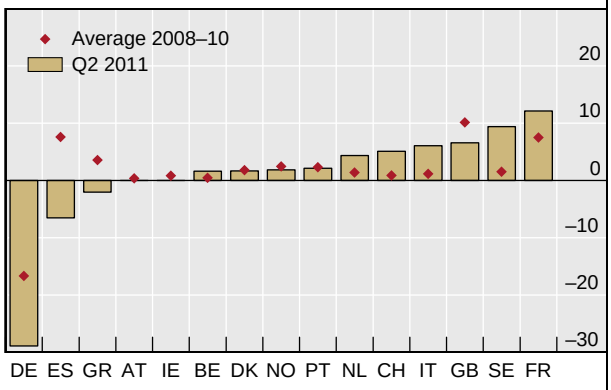
Debt securities issuance

In billions of US dollars

European financial institutions[1]



Covered bonds[2]



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.

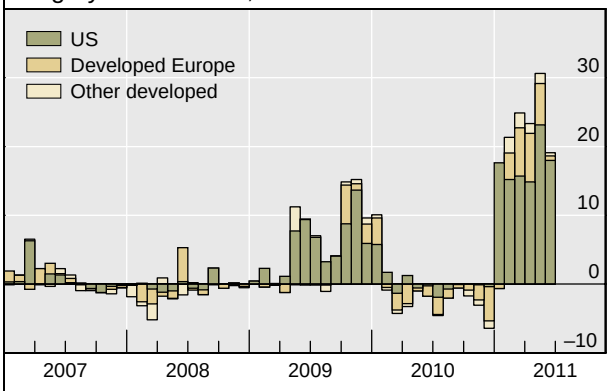
[1] Net issues, international debt securities, by nationality of issuer. [2] Net issues, placed on domestic and international markets, by nationality of issuer.

Sources: Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; BIS. Graph 7

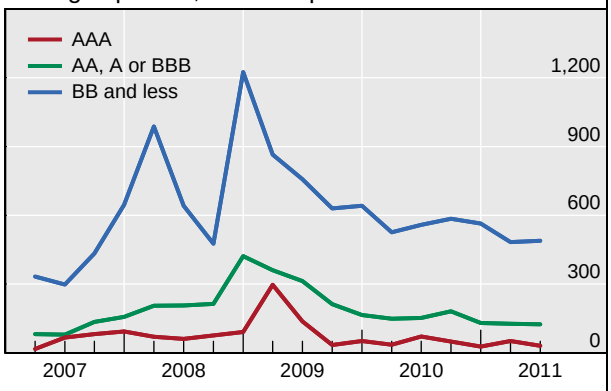
[11] While the decline in average high-yield bond spreads from their recent peaks in the fourth quarter of 2008 is substantial, average spreads in the primary market are still higher than their record pre-crisis lows in the second quarter of 2007 (Graph 8, right-hand panel). Furthermore, preliminary data in the first two months of the third quarter of 2011 suggest that spreads in the high-yield segment have widened again more recently.

International debt securities issuance

High-yield issuance,[1] in billions of US dollars



Average spreads,[2] in basis points



[1] Net issues by non-financial corporations, by nationality of issuer. [2] Weighted average, rating at issue. Announced issues by non-financial corporations headquartered in developed countries.

Sources: Dealogic; BIS. Graph 8

Exchange-traded derivatives in the second quarter of 2011[12]

Derivatives turnover and open interest fell slightly overall

The notional amount of interest rate, currency and equity index derivatives traded *in the second quarter of 2011* was slightly lower in dollar terms than in the first quarter. Trading volume fell by 3% overall, as turnover of interest rate futures (–1%) and options (–14%) declined, while that of currency (+5%) and equity index (+3%) derivatives increased. Outstanding positions also declined modestly during the quarter, by 2% overall. Turnover of commodity derivatives, measured by number of contracts, was broadly unchanged, while outstanding positions contracted by 3%.

Interest rate exposures rose for dollars but fell for other major currencies

Trading in interest rate derivatives in the second quarter may reflect reduced uncertainty about future interest rates for some of the major currencies. Turnover declined by 4% overall, reflecting falls in trading of futures and options linked to euro (–12%) and sterling (–28%) rates. Outstanding positions also declined in derivatives referencing euro (–20%) and sterling (–19%) rates, while those linked to US dollar rates increased by 13% (Graph 9, left-hand panel). This is consistent with declines in probabilities implied by the option prices of euro and, particularly, sterling rate increases during the quarter, as global inflation pressures eased. In contrast, few market participants attached significant probability to near-term changes in the US policy rate at any time during the quarter. Futures linked to yen interest rates also saw declines in trading volumes (–28%) and outstanding positions (–23%). This might reflect greater certainty that rates would remain low to support the Japanese economy following the March earthquake.

Trading of Brazilian real contracts boosted foreign exchange exposures

A significant portion of trading in currency derivatives may also have been driven by interest rate developments, via amendments to synthetic carry trade

[12] Queries concerning the exchange-traded derivatives statistics should be addressed to Nicholas Vause.

Box 3: Measuring counterparty credit exposures in the OTC derivatives market

Nicholas Vause

One key mechanism through which the failure of Lehman Brothers in September 2008 weakened the rest of the financial system involved potential counterparty credit exposures. Lenders withheld credit, fearing that borrowers might have significant claims on the investment bank that were not fully secure. Such claims could have arisen from bilateral derivatives trades in the over-the-counter (OTC) market, where total counterparty credit exposures vastly exceeded the total collateral posted by market participants. Since then, this gap has narrowed, reducing but perhaps not eliminating this particular systemic risk. This box discusses how to measure counterparty credit exposures across the OTC derivatives market. It does so based on the hypothetical positions in Table A.

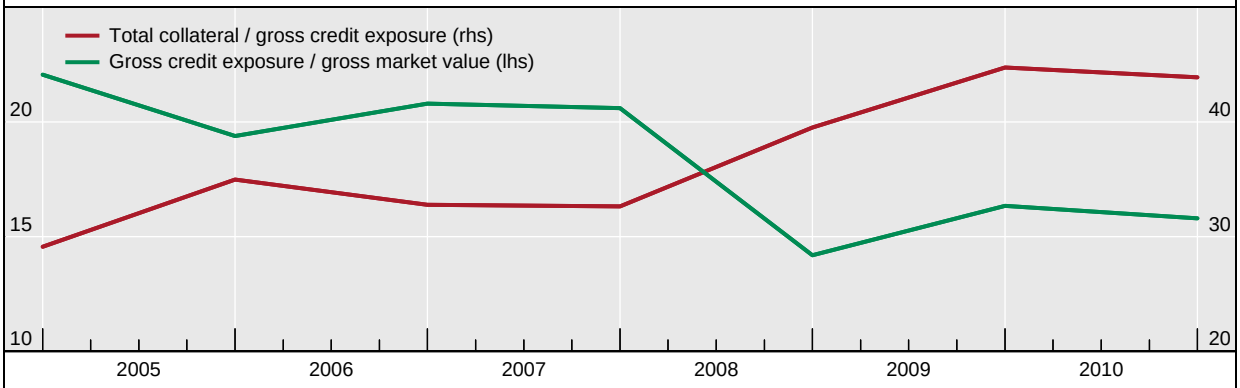
Hypothetical OTC derivatives positions

Party 1	Party 2	Positions	Market value		Gross market value	Gross credit exposure
			Party 1	Party 2		
Dealer A	Dealer B	FX option	–10	+10	13	7
		Gold future	+3	–3		
		Net bilateral position	–7	+7		
		Collateral received (+) / posted (–)	–7	+7		
Dealer A	Hedge fund	Single-name CDS	+9	–9	14	4
		Multi-name CDS	–5	+5		
		Net bilateral position	+4	–4		
		Collateral received (+) / posted (–)	+8	–8		
Dealer A	Non-financial	Interest rate swap	–4	+4	14	6
		Equity future	+10	–10		
		Net bilateral position	+6	–6		
		Collateral received (+) / posted (–)	0	0		
				Total	41	17

Table A

Bilateral netting and collateralisation reduce counterparty credit exposures.[1] Dealers A and B in Table A are counterparties to an FX option that has a positive market value of 10 to B (and hence a negative market value of 10 to A). If A became bankrupt, B may never get to collect this value. B therefore has a counterparty credit exposure to A via the FX option of 10. To neutralise this counterparty risk, B could request collateral worth 10 from A, which it would retain if A defaulted on its contractual obligations. But A and B are also counterparties to a gold future, which has market value of +3 to A (and hence –3 to B). With a legally enforceable netting agreement, A and B could net market values over these two positions. This would compress the counterparty credit exposures between A and B to a single claim of B on A of 7. B would then only need collateral worth 7 from A to eliminate current counterparty credit exposures. Across all the positions in Table A, the sum of positive market values (or, equivalently, the sum of negative market values), known as the "gross market value", is 41. The sum of positive (or negative) market values after bilateral netting, known as the "gross credit exposure", is 17. Graph A (green line) shows that the ratio of gross credit exposure to gross market value in the OTC derivatives market has fallen in recent years, notably so in 2008, consistent with an increase in bilateral netting.[2] In addition, Graph A (red line) shows that total collateral received (or, equivalently, total collateral posted) has risen relative to gross credit exposures, as rates of collateralisation of net positions have increased. Data on collateral used in the numerator of this ratio came from the International Swaps and Derivatives Association (ISDA), although the reported figures were halved, as ISDA calculates the amount of collateral on a different basis, whereby "collateral assets are counted twice, once as received and once as delivered".[3]

Netting and collateralisation in the OTC derivatives market[1]



[1] Gross credit exposure excludes contributions of credit default swaps of non-US reporting institutions.

Sources: ISDA; BIS calculations. Graph A

An average collateralisation rate of 100% does not ensure that all current counterparty exposures have been eliminated. This is because counterparty credit exposures are often over- or undercollateralised, as is the case for the positions in Table A between Dealer A and the hedge fund and Dealer A and the non-financial corporation respectively. Firms may demand overcollateralisation to protect against losses on potential future counterparty credit exposures, which could be significantly larger than current exposures depending on how position values evolve. They may concede undercollateralisation if counterparties cannot easily source collateral or have low perceived default probabilities. A better measure of collateralisation than average rates is therefore to cap the collateral of any individual position at 100%. This would be equivalent to measuring the fraction of *current* counterparty credit exposures backed by collateral. Only a high value of this metric could generate confidence that there were no large uncollateralised counterparty credit exposures in the financial system.

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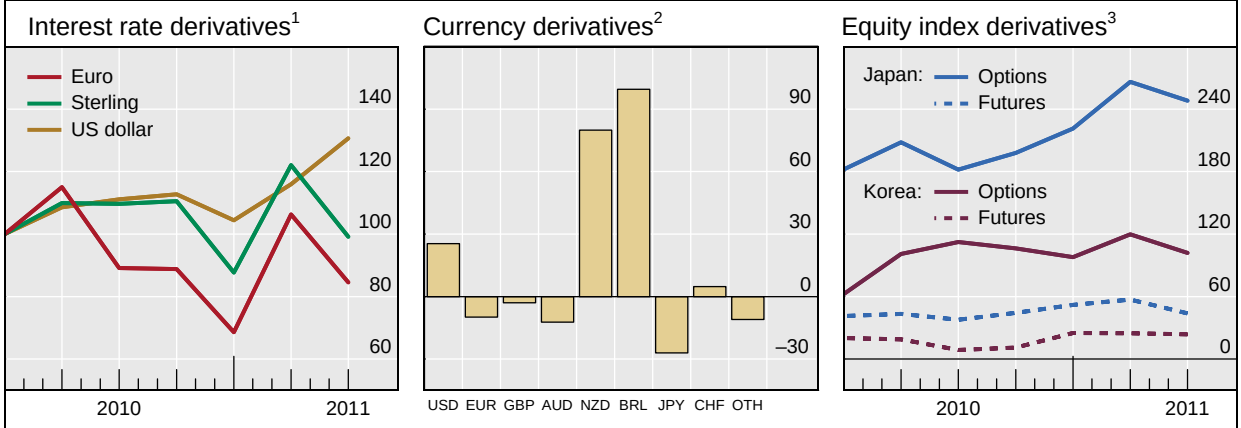
① Counterparty credit risk may also be reduced via trade compression, which tears up redundant contracts on a multilateral basis. See, for example, N Vause, "Counterparty risk and contract volumes in the credit default swap market", *BIS Quarterly Review*, December 2010. ② Including via the transfer of positions vis-à-vis multiple original counterparties to a much smaller number of central counterparties, which is explained in Vause (2010), op cit. ③ See, for example, ISDA, *ISDA Margin Survey 2011*, April 2011. This also reports an aggregate collateralisation rate, which is the average rate of collateral received against pre-collateral counterparty credit exposures by its membership, which includes the major derivatives dealers. For this to be representative of the whole market, however, it would require ISDA non-members to receive collateral at similar rates against exposures (or, almost equivalently, for ISDA members to post collateral at the same rate).

positions.[13] Short-term interest rates on the Brazilian real, for example, increased as the Central Bank of Brazil raised its policy rate from 11.75% to 12.25% during the second quarter, having already boosted it by 50 basis points towards the end of the first quarter. This widened the gap vis-à-vis the US policy rate to 12 percentage points. Currency derivatives can be used to speculate that such interest differentials will not be offset by currency movements. Open interest in currency derivatives referencing the Brazilian real almost doubled during the second quarter (Graph 9, centre panel), boosting the share of such contracts in total currency derivatives positions from 14% to

[13] A USD/BRL forward contract, for example, is a synthetic carry trade as it has the same payoff as a traditional carry trade that borrows USD, exchanges this for BRL at the prevailing exchange rate, and invests in BRL for the duration of the forward contract.

Exchange-traded derivatives

Open interest in futures and options contracts



AUD = Australian dollar; BRL = Brazilian real; CHF = Swiss franc; EUR = euro; GBP = pound sterling; JPY = Japanese yen; NZD = New Zealand dollar; OTH = other currencies; USD = US dollar.

[1] Index (end-2009 = 100). [2] Change during second quarter of 2011 in derivatives referencing selected currencies as either leg; in per cent. [3] In billions of dollars.

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

23%. Open interest in currency derivatives referencing the New Zealand dollar also rose sharply, but from a much lower base.

Korean options trading drove a decline in equity index exposures

The modest rise in trading of equity index derivatives in the second quarter was driven by strong turnover growth in the Korean options market. Growth of 18% boosted the share of total equity index transactions accounted for by these options to 36%, up from 31% in the previous quarter. The trades brought about a 15% decline in outstanding Korean options positions, which along with declines in outstanding Japanese futures (–23%) and options (–7%) contributed to an overall decline in open interest in equity index derivatives of 2% (Graph 9, right-hand panel). Open interest in North American (–1%) and European (+3%) equity indices were little changed.

Open interest in some commodity derivatives fell in May, when prices declined sharply

Turnover and open interest in commodity derivatives varied across segments of the market. Trading in precious metals futures increased by 13% and open interest rose by 6% during the second quarter, perhaps as investors sought safe havens from sovereign credit and inflation risks. This is consistent with Commodity Futures Trading Commission (CFTC) data, which show that "non-commercial" traders such as asset managers increased their net long positions in gold futures during this quarter. This overall second quarter increase in precious metals open interest was interrupted by a sharp fall in May, however, as silver prices crashed during the early part of the month. Outstanding positions in energy futures (–2%) and options (–4%) also fell in May, coinciding with a correction in oil prices, although positions in energy derivatives were broadly unchanged over the quarter. Trading increased by 4% in agricultural derivatives, while open interest declined by about 11%. Producers and consumers may have felt less need to hold hedging positions after agricultural prices stabilised towards the end of the first quarter, after rising for many months. This is consistent with CFTC data showing lower "commercial" positions in corn and wheat futures.