

Enhancements to the BIS international banking statistics

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The BIS international banking statistics (IBS) are a long-established data set for monitoring banks' international activities. The IBS comprise several data sets, each consisting of aggregated information for the banking system (as opposed to individual institutions) and collected with a different objective in mind. Collectively, they are a key source of information for analysing financial stability issues ranging from country risk exposures to funding risks in different currencies and banks' role in the transmission of shocks across countries. They have been used in top-level academic research (eg Aviat and Coeurdacier (2007), Buch et al (2010), Cetorelli and Goldberg (2011), Houston et al (2011), Lane and Shambaugh (2010), Ongena et al (2013)), as well as by policymakers (eg Bernanke et al (2011), Haldane (2009)) and market participants (eg Deutsche Bank (2010)).

In 2011–12 the Committee on the Global Financial System (CGFS), which oversees the collection of the IBS, approved a major set of enhancements to them (CGFS (2012)). This note explains the motivations for the enhancements and outlines the additional data being collected.

Data gaps revealed by the financial crisis

The global financial crisis of 2007–09 revealed gaps in the information available to monitor and respond to risks to financial stability. Financial institutions, and banks in particular, have become larger, more complex and more global over the past 20 years, thereby contributing to a higher degree of interconnectedness within the financial sector as well as between sectors and countries (BIS (2011)). This has made it harder to predict where vulnerabilities will emerge, and harder still to predict how vulnerabilities in one part of the financial system will affect other parts. Balance sheet data are critical to identifying any build-up of vulnerabilities, and the IBS helped to shed light on the strains that emerged in the crisis, especially the US dollar funding needs of European banks (McGuire and von Peter (2009), Borio (2013)). Nevertheless, at the time, the details available in the IBS were insufficient to support a fuller analysis of vulnerabilities.

Country risk

The BIS consolidated banking statistics (CBS) track banks' worldwide claims and other exposures to unrelated borrowers, after consolidating positions between

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affiliates of the same banking group. They thus provide internationally comparable measures of national banking systems' exposures to country risk. The statistics were expanded in the early 1980s after debt crises in emerging markets highlighted the need for information on banks' transfer risk, ie the risk associated with policy measures that have a territorial jurisdiction, such as capital controls and payment moratoriums. By the time of the Asian financial crisis, attention had shifted from transfer risk to the broader concept of country risk, or the risk associated with the economic, business, political and social elements of the environment in which the debtor operates. In the late 1990s, the CBS were expanded again to capture guarantees and other credit enhancements that result in the reallocation of banks' risk exposures from the immediate borrower to another (ultimate) obligor. These ultimate risk data have recently proved useful in tracking banks' exposures to troubled European sovereigns (Avdjiev et al (2010)).

The global financial crisis revealed some shortcomings in these data. First, the counterparty sector breakdown (bank, official sector and non-bank private sector) is too coarse to permit analysis of banks' exposures to particular parts of the non-bank private sector, in particular non-bank financials and households. Mortgage lending by foreign banks in many countries rose significantly in the 2000s. Similarly, over this period banks' exposures to special purpose vehicles, securities brokers, hedge funds and other non-bank financials built up significantly. A second shortcoming in the data is that banks do not report exposures vis-à-vis residents of their home country. These are generally large and thus should be considered in any assessment of banks' country risk exposures.

Funding risk

The IBS are also a key source of information on the currency composition of banks' balance sheets. Indeed, the BIS locational banking statistics (LBS) were established in the 1960s to track the growth in US dollar deposits outside the United States. The LBS follow balance of payments compilation practices and are collected on a residence basis, meaning that banks report business booked in the territory where they are located. Because reporting countries also provide information on the nationality (ie the home country) of the reporting banks in their territory, the statistics can also be aggregated along the lines of national banking systems, as in the CBS. These data provide a broad picture of the currency breakdown of banks' international positions. When combined with the CBS, they help to track, at the level of national banking systems, cross-currency funding and investment patterns, which proved fragile during the recent crisis.

Again, however, the global financial crisis highlighted some limitations in the data. Estimates of banks' US dollar funding needs are approximate at best since there is no reported information on the maturity of banks' assets and liabilities in specific currencies, or on banks' use of foreign exchange swaps or other currency derivatives. And the counterparty sector split that is used to proxy for residual maturity is very coarse. Moreover, the LBS only cover banks' international activities, not their domestic currency positions against residents of the reporting country. This incomplete picture of banks' balance sheets makes it difficult to monitor system-level funding risks.

Data enhancements

To close these gaps, in 2011–12 the CGFS approved a major set of enhancements to the locational and consolidated banking statistics. The basic thrust of the enhancements is to capture additional details about banks' balance sheets. In general terms, the enhancements extend the coverage of the statistics to banks' domestic positions, not just their international activities. In addition, they provide more information on banks' counterparties, specifically on their sector of activity.

The enhancements to the IBS are part of a broader international effort to close data gaps revealed by the crisis. The CGFS had earlier approved an expansion in the coverage of credit default swap statistics, which was fully implemented in 2011 (CGFS (2009), Vause (2011)). The Financial Stability Board and International Monetary Fund recommended improvements to a broad range of statistics, including the collection of detailed data on the exposures of global systemically important financial institutions (FSB and IMF (2009)).

Annex A summarises the enhancements to the IBS. They are being implemented in two stages. The first stage (blue text in Annex A) focuses on the locational banking statistics and involves the BIS gathering data already collected by many central banks from their reporting institutions. These data were first reported to the BIS for the end-June 2012 reference period, although some central banks started later. The second stage (red text) encompasses the consolidated as well as the locational statistics and involves the collection of additional data from reporting institutions. These data were first reported to the BIS for the end-December 2013 reference period, although again some central banks started later.

Dissemination of the enhanced IBS is following a phased approach. The BIS first releases data to reporting central banks and later – data quality, completeness and confidentiality permitting – to the general public. As part of the second stage of the enhancements, reporting central banks were asked to review their confidentiality classifications with a view to making data more widely available. On the basis of this review, plans are progressing to disseminate some enhanced data to the general public starting in 2015.

Challenges posed by granularity

The enhancements greatly increase the granularity of the data, and this granularity poses a number of challenges for compilers as well as users. First, the volume and complexity of the enhanced data make it more difficult for reporting central banks and the BIS to maintain data quality. For example, inconsistencies in data retrieved from different forms and systems, or across different breakdowns, are more noticeable in granular data than in more aggregated data. Also, reclassifications and other adjustments that impact the comparability of data across time are more costly to identify and implement for granular data.

Second, granular data tend to be more confidential. Central banks and other authorities typically have a statutory obligation not to disclose information about individual institutions except for specific purposes. While the IBS consist of national aggregates, the greater the granularity of those aggregates, the greater is the likelihood that individual reporting institutions' data can be inferred from them.

Consolidation in the banking industry and the withdrawal of some banks from international banking activities since the global financial crisis further increases this likelihood. The potential confidentiality issues associated with the enhanced IBS in turn hinder data sharing among reporting central banks and limit the details that can be publicly disseminated. Indeed, the enhancements are likely to introduce a sharper differentiation between data released to the general public and data released only to reporting central banks, where policies and procedures are in place to safeguard the confidentiality of unpublished data.

Third, granular data tend to be less complete. While the enhancements increase the details available in the IBS, these details are more likely to have gaps than more aggregated data. Gaps arise from differences in the details reported by each central bank as well as confidentiality restrictions. For example, in the LBS, the coverage of claims vis-à-vis the non-bank sector in a given counterparty country is typically complete, but the breakdowns by subsector introduced as part of the enhancements may have gaps. For subsectors of the non-bank sector, some central banks do not report any subsectors, others report only a broad breakdown between the non-bank financial sector and the non-financial sector, and still others report a full breakdown including non-financial corporations, general government and households. Even when a full breakdown is reported, data for some subsectors or selected observations within a subsector may be classified as confidential and thus available only to the BIS for internal use.

Such gaps complicate the analytical use of the IBS and require users to consider carefully how any gaps might bias their analysis. That said, the enhancements support a richer analysis of risks to financial stability. The BIS is planning steps to help central banks, other policymakers and private sector analysts integrate the IBS more closely into their monitoring of financial sector developments. In particular, the BIS is considering how to make the banking statistics more easily available to users, even while providing more data. Furthermore, over the next few years the BIS will step up its own research using the banking statistics. Finally, the BIS intends to organise workshops with central banks to provide guidance on how to use the banking statistics in financial stability analysis.

Simplified overview of the BIS international banking statistics

Data reported from Q2 2012 are shown in **blue (Stage 1)** and from Q4 2013 in **red (Stage 2)**

Annex A

	Locational banking statistics		Consolidated banking statistics	
	By residence	By nationality	Immediate counterparty	Ultimate risk
Reporting countries ¹	44	43	31	25
Business reported	Financial assets and liabilities (including derivatives)		Financial assets (excluding derivatives), total assets and liabilities (including derivatives), capital, risk transfers	Financial assets (excluding derivatives), other potential exposures (including derivatives)
Breakdowns reported				
Bank type	All reporting banks, domestic banks, foreign subsidiaries, foreign branches	not available	All reporting banks, domestic banks, inside-area foreign banks, ² outside-area foreign banks ³	Domestic banks
Bank nationality	not available	≥ 43	≥ 31	≥ 25
Type of position	Cross-border, local		Total, international (cross-border plus local in foreign currencies), local in local currency ⁴	Total, cross-border, local in all currencies ⁵
Currency	Local currency, USD, EUR, JPY, GBP, CHF, other foreign currencies (optional)		<i>For local claims and liabilities in local currency: >160</i>	not available
Maturity	<i>For liabilities: debt securities (of which: ≤1 year)</i>		<i>For international claims: ≤1 year, 1–2 years, >2 years⁶</i> <i>For total liabilities: debt securities (of which: ≤1 year)</i>	not available
Instrument	Loans and deposits, debt securities, other instruments	<i>For liabilities: debt securities</i>	<i>For assets: claims, total assets, risk-weighted assets</i> <i>For liabilities: deposits, debt securities, derivatives, other liabilities</i> <i>For capital: total equity, Tier 1 capital</i>	<i>For other potential exposures: derivatives, credit commitments, guarantees extended</i>
Counterparty country	>200 (including reporting country) ⁷	≥76 (including reporting country)	>200 (including reporting country) ⁴	
Counterparty sector	Banks ⁸ (related offices, unrelated banks, central banks), non-banks ⁹ , non-bank financial institutions, non-financial sector (general government, non-financial corporations, households)		Official sector (including central banks), banks (excluding central banks), non-bank private sector, non-bank financial institutions, non-financial private sector (non-financial corporations, households) ^{4,5,6}	

¹ Reporting countries and the date when they joined the BIS reporting area are listed on the BIS website: www.bis.org/statistics/rep_countries.htm. ² For inside-area foreign banks not consolidated by their parent, encouraged to report the same breakdowns as domestic banks. ³ Report international claims only. ⁴ On an immediate counterparty basis, breakdown reported for claims only, ie for financial assets (excluding derivatives). Breakdowns by type of position, counterparty country and counterparty sector not reported for total assets, risk-weighted assets, total liabilities or capital. ⁵ Breakdowns by type of position and counterparty sector reported for claims only and reported separately, ie not crossed. Breakdown not reported for other potential exposures. ⁶ Breakdowns by maturity and counterparty sector reported separately, ie not crossed. ⁷ When crossed with bank type, only basic counterparty country breakdown reported distinguishing between residents and non-residents (and unallocated location if applicable). ⁸ Prior to Q4 2013, reported in LBS by nationality only. ⁹ Prior to Q4 2013, reported in LBS by residence only. Historically bank sector was derived as total minus the non-bank sector and thus included claims unallocated by sector.

References

- Avdjiev, S, C Upper and N Vause (2010): "Highlights of international banking and financial market activity", *BIS Quarterly Review*, December, pp 13–25, www.bis.org/publ/qtrpdf/r_qt1012b.htm.
- Aviat, A and N Coeurdacier, N. (2007): "The geography of trade in goods and asset holdings", *Journal of International Economics*, vol 71, no 1, pp 22–51.
- Bank for International Settlements (2011): *81st Annual Report*, June, Chapter VI.
- Bernanke, B, C Bertaut, L DeMarco and S Kamin (2011): "International capital flows and the returns to safe assets in the United States", *Banque de France Financial Stability Review*, vol 16, February, pp 13–26.
- Borio, C (2013): "The great financial crisis: setting priorities for new statistics", *BIS Working Papers*, no 408, April, www.bis.org/publ/work408.htm.
- Buch, C, K Carstensen and A Schertler (2010): "Macroeconomic shocks and banks' foreign assets", *Journal of Money, Credit and Banking*, vol 42, no 1, pp 171–88.
- Cetorelli, N and L Goldberg (2011): "Global banks and international shock transmission: evidence from the crisis", *IMF Economic Review*, vol 59, no 1, pp 41–76.
- Committee on the Global Financial System (2009): "Credit risk transfer statistics", *CGFS Publications*, no 35, September, www.bis.org/publ/cgfs35.htm.
- (2012): "Improving the BIS international banking statistics", *CGFS Publications*, no 47, November, www.bis.org/publ/cgfs47.htm.
- Deutsche Bank (2010): "Monitoring cross-border exposure", *Deutsche Bank Research*, November.
- Financial Stability Board and International Monetary Fund (2009): "The financial crisis and information gaps", Report to the G20 Finance Ministers and Central Bank Governors, October, www.imf.org/external/np/g20/pdf/102909.pdf.
- Haldane, A (2009): "Rethinking the financial network", speech delivered at the Financial Student Association, Amsterdam, 28 April.
- Houston, J, C Lin and Y Ma (2011): "Regulatory arbitrage and international bank flows", *Journal of Finance*, vol 67, no 5, pp 1845–95.
- Lane, P and J Shambaugh (2010): "Financial exchange rates and international currency exposures", *American Economic Review*, vol 100, no 1, pp 518–40.
- McGuire, P and G von Peter (2009): "The US dollar shortage in global banking and the international policy response", *BIS Working Papers*, no 291, October.
- Ongena, S, A Popov and G Udell (2013): "'When the cat's away the mice will play': Does regulation at home affect bank risk-taking abroad?", *Journal of Financial Economics*, vol 108, no 3, pp 727–50.
- Vause, N (2011): "Enhanced BIS statistics on credit risk transfer", *BIS Quarterly Review*, December, pp 85–9, www.bis.org/publ/qtrpdf/r_qt1112i.htm.