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The BIS consolidated banking statistics: structure, uses and recent enhancements¹

The BIS consolidated banking statistics have been expanded to better capture banks' country risk exposures. The expanded statistics provide for the first time information about banks' derivatives and contingent exposures, as well as additional details about the reallocation of risk exposures.

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The BIS consolidated banking statistics provide internationally comparable measures of national banking systems' exposures to country risk. They have evolved over time in response to changes in both the international financial system and the character of risks managed by banks. The latest enhancements to the statistics – first published for positions outstanding on 31 March 2005 – expanded the coverage of exposures to include derivative contracts and contingent facilities. In addition, the expanded data set provides more detailed data on risk reallocations. This special feature outlines the compilation of the BIS consolidated banking statistics, focusing in particular on the latest enhancements, and discusses a few of the analytical uses of the data.²

Evolution of the consolidated banking statistics

Consolidated statistics net out banks' intragroup positions ... The BIS consolidated banking statistics are but one of several data sets compiled by the BIS that capture activity in the international banking market. The oldest of these data sets, the BIS locational banking statistics, is based on the residency of the reporting bank and includes positions vis-à-vis banks'

¹ The views expressed in this article are those of the authors and do not necessarily reflect those of the BIS.

² The Committee on the Global Financial System (CGFS) is responsible for oversight of most of the BIS international banking and financial statistics. The BIS, in cooperation with central banks and monetary authorities worldwide, compiles and disseminates the statistics in accordance with CGFS recommendations. The BIS statistics and various publications about them are available on the BIS website (www.bis.org/statistics/index.htm). For a summary of the international banking and financial statistics compiled by the BIS and a brief discussion of their uses, see Wooldridge (2002). For a more detailed explanation of the statistics, see BIS (2003a,b, 2004). The BIS consolidated banking statistics are published every quarter in a press release with a lag of approximately four months.

foreign offices. By contrast, the BIS consolidated banking statistics are based on the nationality of the reporting bank and net out intragroup positions. In other words, the consolidated statistics are based on the country where the reporting bank's head office is located and look through inter-office positions to capture exposures to unaffiliated counterparties.

Differences in the way in which the locational and consolidated banking statistics are compiled reflect differences in the motivation for their collection. The locational statistics were originally intended to complement monetary and credit aggregates and so are compiled in a way which is consistent with balance of payments statistics and the system of national accounts. By contrast, since their inception the consolidated statistics have been intended to facilitate the monitoring and management of banks' risk exposures.

The consolidated banking statistics had their origins in the expansion of international banking activity in the Caribbean and other offshore centres in the 1970s. At the time, very little information was available about such activity. Therefore, those central banks which contributed to the locational banking statistics asked their banks to consolidate any positions booked at their offshore offices with positions booked at their head offices. Banks provided information about the geographical and maturity breakdown of their (partially consolidated) claims, although only for developing countries.³

The consolidated banking statistics were expanded in the early 1980s, following the onset of debt crises in Mexico and other developing countries. These crises focused attention on transfer risk, ie the risk associated with policy measures that have a territorial jurisdiction, such as capital controls and payments moratoriums. To better capture the aggregate exposures of national banking systems to developing countries, banks were asked to fully consolidate their on-balance sheet claims on borrowers residing outside the country where the bank was headquartered.

The next major improvement to the consolidated banking statistics occurred following the Asian financial crisis of 1997–98. A lack of transparency was frequently cited as a factor contributing to the crisis (G22 (1998)). Therefore, a concerted effort was made to improve the timeliness, frequency and coverage of the consolidated statistics. They began to be published quarterly instead of semiannually; the reporting lag was shortened; additional banking systems, including those of Hong Kong SAR and Singapore, joined the reporting population; and the geographical breakdown was expanded to include all countries instead of only developing countries.

The Asian and subsequent international financial crises also highlighted the changing character of banks' risk exposures. During the 1990s, traditional cross-border lending gave way to other types of business (McCauley et al (2002), Domanski et al (2003)). Banks were increasingly active in derivatives markets, either to accommodate customers' risk management requirements or to hedge their own risk exposures – or even, at times, to take speculative ... so as to facilitate the monitoring of risk exposures

Crises of the early 1980s focused attention on transfer risk

³ To be precise, banks reported their claims on borrowers residing in non-reporting countries, ie countries which did not contribute to the consolidated statistics. The vast majority of non-reporting countries were developing countries.



positions. They were also active in capital markets, for example as bond underwriters or asset managers. Furthermore, many banks invested heavily in foreign subsidiaries, in the process greatly expanding their locally funded operations. In Asia, claims on local residents denominated in local currencies and booked by reporting banks' affiliates in the corresponding country grew from 14% of banks' foreign claims in 1985 to nearly 40% two decades later (Graph 1). Latin America saw an even sharper increase over the same period, from 3% to almost 60%.

In the 1990s attention shifted to country risk

Expanded statistics are compatible with banks' risk management practices As a result, attention gradually shifted from transfer risk to country risk, or the risk associated with the economic, business, political and social environment in which the debtor operates.⁴ Country risk is a broader concept than transfer risk and thus the measurement of country risk exposures requires more comprehensive data than for transfer risk exposures. Therefore, in the late 1990s, the consolidated banking statistics were expanded to capture guarantees received and other credit enhancements which result in the reallocation of reporting banks' risk exposures from the immediate borrower to another (ultimate) obligor. Furthermore, in 2000 the Committee on the Global Financial System recommended that the consolidated statistics be expanded to fully incorporate risk reallocations, derivatives exposures, guarantees extended and credit commitments (CGFS (2000)). Its recommendations led to the latest enhancements to the statistics.

A key goal of the enhanced statistics is to provide aggregate information compatible with individual banks' own risk management practices. As these practices became more sophisticated and their focus shifted from transfer risk

⁴ While transfer risk refers to the risk that sovereign policy will impede capital flows and hence loan repayments, country risk refers to country-wide events which lead to systemic instability that prevents obligors – whether direct debtors or guarantors of claims on other borrowers – from fulfilling their obligations.

to country risk, the reporting system set up in the early 1980s became less useful to banks. The expanded BIS consolidated banking statistics, with their greater focus on country risk exposures, are intended to enhance the relevance of the statistics in today's more complex international financial system.

Structure of the consolidated banking statistics

Recent enhancements to the BIS consolidated banking statistics greatly increase the richness of the data set. At the same time, they add to its complexity because some of the breakdowns available in the expanded data set differ from those that were previously available. The BIS consolidated statistics are structured around six breakdowns: residency of the borrower; basis for allocating risk exposures; type of exposure; booking office location; sector of the borrower; and maturity. While these various breakdowns are complementary, providing a complete matrix of positions would impose a very high reporting burden on banks. Therefore, banks are required to report only a limited range of disaggregated data. Table 1 gives an overview of the structure of the consolidated banking statistics. The table aggregates data reported by the 18 national banking systems which provided a full set of consolidated statistics for the first quarter of 2005.⁵

Banks contributing to the consolidated statistics report a full country breakdown of claims booked by their offices worldwide. Only assets are reported; no data on liabilities are collected.⁶ Furthermore, the country breakdown is based on the residency of the borrower, as opposed to the nationality. Finally, only claims on borrowers residing outside the country in which the reporting bank is headquartered are included; claims on residents of the reporting bank's home country are excluded.

Importantly, the BIS consolidated statistics distinguish between the residency of the immediate borrower and the residency of the ultimate obligor. The ultimate obligor refers to the counterparty who is ultimately responsible for servicing any outstanding obligations in the event of a default by the immediate borrower. The residency of the ultimate obligor – or the country of ultimate risk – is defined as the country in which the guarantor of a financial claim resides or the head office of a legally dependent branch is located.⁷ If a reporting bank purchases protection against default in the credit derivatives market, then the country of ultimate risk is defined as the country in which the country in which the counterparty to the contract resides. Collateral may also be considered as an indicator of

⁵ An additional 12 reporting countries provided partial data. Data for most of the individual reporting countries can be found in Tables 9B and 9D in the Statistical Annex. Some reporting countries publish more detailed data for their national banking systems.

Banks report a full country breakdown ...

... and distinguish between the country of the immediate borrower and the country of ultimate risk

⁶ There is one exception: banks report their foreign affiliates' local liabilities to local residents denominated in local currencies.

⁷ These definitions are consistent with the risk reallocation principle for measuring country risk exposures recommended by the Basel Committee on Banking Supervision. For a more comprehensive discussion of risk reallocations in the consolidated statistics, see BIS (2004).

Consolidated foreign exposures of	BIS reporting banks	s ¹							
Positions outstanding at end-March 2005, in billions of US dollars									
	Basis for risk allocation								
	Immediate borrower	Net risk transfers	Ultimate risk						
By type of exposure									
Claims (loans and securities) ²									
Foreign claims	13,667.6	-321.7	13,344.4						
Cross-border claims	International		8,125.3						
Local claims – in foreign currency			5 215 9						
- in local currency	4,622.8		5,215.6						
Derivative contracts			1,702.8						
Contingent facilities									
Guarantees extended			674.9						
Credit commitments			2,661.2						
Other breakdowns ⁴									
Claims by sector	9,044.8		13,344.4						
Public sector	1,627.0		2,095.3						
Banks	3,451.3		4,206.5						
Non-bank private sector	3,933.5		6,549.5						
Unallocated	33.0		493.1						
Claims by maturity	9,044.8								
Up to and including 1 year	4,428.7								
Over 1 year up to and including 2 years	309.8								
Over 2 years	2,513.7								
Unallocated	1,792.6								
Memorandum: Starting date of time series	December 1983	June 1999	March 2005						
¹ Sum of positions reported by banks beadquartered in Australia Belgium Canada Chile Finland France Germany India Italy									

¹ Sum of positions reported by banks headquartered in Australia, Belgium, Canada, Chile, Finland, France, Germany, India, Italy, Japan, the Netherlands, Norway, Portugal, Singapore, Taiwan (China), Turkey, the United Kingdom and the United States.
² Outstanding loans and deposits, plus holdings of debt and equity securities; historically referred to as on-balance sheet claims.
³ Cross-border claims denominated in all currencies plus local claims of foreign offices denominated in foreign currencies.
⁴ For claims on an immediate borrower basis, the breakdowns refer to international claims; for claims on an ultimate risk basis, the breakdowns refer to foreign claims.

where the final risk lies to the extent that it is recognised as a risk mitigant under the Basel Capital Adequacy Framework.

Claims on an ultimate risk basis equal the sum of claims on an immediate borrower basis and net risk transfers. Net risk transfers, in turn, equal the difference between inward transfers of risk to the country of the ultimate obligor and outward transfers of risk from the country of the immediate borrower.⁸

To illustrate the difference between claims on an immediate borrower basis and claims on an ultimate risk basis, consider a loan from a US bank to the subsidiary of a German auto manufacturer incorporated in Mexico. On an immediate borrower basis, this loan would be reported by the US bank as a

⁸ In principle, for every outward risk transfer there is an equivalent inward risk transfer and so in aggregate net risk transfers should equal zero. However, this equality does not hold in the consolidated banking statistics because banks do not report risk reallocations to or from their home country.

claim on a borrower in Mexico. If the parent company guaranteed the loan, then on an ultimate risk basis the loan would be reported by the US bank as a claim on a borrower in Germany. In other words, the US bank would record an outward risk transfer from Mexico and an equivalent inward risk transfer to Germany.

The recent enhancements to the consolidated statistics greatly expanded the availability of data on different types of exposures. Whereas the reporting system set up in the early 1980s mainly captured on-balance sheet exposures, the expanded statistics also capture exposures that were historically classified as off-balance sheet. Owing to changes in accounting standards, some of these latter exposures, in particular derivatives, have since been brought on to the balance sheet.⁹

For positions on an immediate borrower basis, banks report their outstanding loans and holdings of securities. In the consolidated banking statistics, the term "claims" is usually interpreted as referring to these instruments. For positions on an ultimate risk basis, banks report separately their derivative contracts and contingent facilities as well as their outstanding claims. Only derivative contracts which give rise to a counterparty risk exposure are reported; thus, derivatives exposures are calculated as the positive market value of outstanding contracts.¹⁰ Derivatives exposures include contracts covering all types of risks: foreign exchange, interest rate, equity, commodity and credit risks. However, credit protection bought to hedge an outstanding claim is classified as a risk transfer, and any credit protection sold is classified as a guarantee.

Contingent facilities refer to the unutilised portion of irrevocable contractual obligations which, if utilised, result in the extension of a loan or purchase of a security.¹¹ This includes any guarantees made by a reporting bank to fulfil contractual obligations to a third party in the event that the bank's client fails to fulfil them.¹² It also includes commitments to extend credit at the client's request, such as standby loans or purchase facilities. Guarantees and credit commitments are reported at face value so as to measure reporting banks' maximum possible exposure to exceptional circumstances.

Positions can be further disaggregated by the booking office location. As previously mentioned, the consolidated statistics capture exposures to borrowers residing outside the country in which the reporting bank is Consolidated statistics have been expanded to include derivative contracts ...

... and contingent exposures

⁹ For example, under IAS39 of the International Financial Reporting Standards, derivatives positions are recorded on the balance sheet at market values. IAS39 has been implemented in numerous countries, including (since 2005) those in the European Union.

¹⁰ Contracts which have negative market value are classified as liabilities and so are not reported. The reported measure of derivatives exposures takes into account legally enforceable bilateral netting arrangements but not collateral.

¹¹ Banks had, until December 2004, reported undisbursed credit commitments and backup facilities on an immediate borrower basis. This was discontinued following the expansion of the consolidated banking statistics and so such contingent exposures are now only published on an ultimate risk basis.

¹² The face value of protection sold through credit derivatives is also recorded as a guarantee.

headquartered. For derivative contracts and contingent facilities, banks report their total foreign exposure. For outstanding claims – more specifically, for claims on an ultimate risk basis – banks distinguish between cross-border and local claims. Cross-border claims are claims on non-residents booked by either the banks' head office or a foreign affiliate. Local claims are those booked by a foreign affiliate on borrowers residing in the country in which the affiliate is located.

Breakdowns available for claims on an ultimate risk basis ...

... differ from breakdowns available on an immediate borrower basis A similar breakdown is available for claims on an immediate borrower basis. The main difference compared to the breakdown on an ultimate risk basis is that local claims denominated in local currencies are reported separately, and local claims denominated in foreign currencies are grouped together with cross-border claims in an aggregate labelled international claims.¹³ Given that the breakdown by booking office location for claims on an immediate borrower basis differs from the breakdown on an ultimate risk basis, net risk transfers cannot be derived from the disaggregated data and consequently are available only for total foreign claims (Table 1, column 3).

Outstanding claims are also broken down by sector of the borrower and by maturity of the claim. Borrowers are identified as belonging to one of three sectors: the public sector or general government; banks, defined as deposit-taking institutions; or the non-bank private sector, for borrowers not classified as public sector or banks.¹⁴ For data on an immediate borrower basis the breakdown applies to international claims, whereas for data on an ultimate risk basis it applies to foreign claims. A maturity breakdown is available for international claims on an immediate borrower basis. It is based on remaining maturity, and therefore claims with an original maturity of more than one year but maturing within the next year are grouped together with claims with an original maturity of one year or less.

Uses of the consolidated banking statistics

Since the inception of the consolidated banking statistics, the primary motivation behind their collection and dissemination has been the monitoring of banks' foreign assets. Yet what is an asset to a creditor is a liability to a borrower. Therefore, the consolidated statistics are also a valuable supplementary source of information about countries' external debt.

¹³ International claims also include: (a) cross-border claims booked by foreign affiliates located inside a reporting country but headquartered outside the reporting area; and (b) cross-border claims on residents of the reporting bank's home country booked by affiliates located inside the reporting area. For example, international claims include any cross-border claims booked by the UK office of a Philippine bank, as well as any claims on US residents booked by the UK office of a US bank.

¹⁴ In the expanded consolidated banking statistics, some borrowers have been reclassified from one sector to another. This has resulted in a structural break in the sectoral breakdown of claims on an *immediate borrower* basis in March 2005. Official monetary authorities and multilateral development banks have been reclassified as public sector borrowers instead of banks, and non-financial public enterprises have been reclassified to the non-bank private sector from the public sector.

Risk exposures of reporting banks

What makes the consolidated statistics especially useful for monitoring banks' risk exposures is the netting out of intragroup positions. Whereas in the BIS locational banking statistics about one third of cross-border assets represent inter-office positions, in the consolidated statistics banks look through their inter-office positions and record only claims on unrelated counterparties.

For monitoring transfer risk exposures, the most appropriate data are those on an immediate borrower basis, specifically international claims. Transfer risk arises from cross-border claims as well as local claims denominated in foreign currencies, which are often funded from abroad. Local claims in local currencies are usually funded locally and so are not affected by external payment restrictions.¹⁵ Therefore, foreign claims can provide a misleading estimate of transfer risk exposures, especially for those countries where reporting banks have sizeable local claims.

Data on an ultimate risk basis, especially cross-border claims, can provide supplementary information useful for monitoring transfer risk exposures. For example, if a country were to declare an external debt moratorium, then guarantees provided by a borrower's foreign parent (ie outward risk transfers) might reduce a reporting bank's exposure to transfer risk. At the same time, claims on overseas branches of banks headquartered in the crisis-stricken country (ie inward risk transfers) might increase a reporting bank's exposure to transfer risk. For most emerging markets, outward risk transfers exceed inward risk transfers. At end-March 2005, net risk transfers reduced foreign claims (immediate borrower basis) on emerging market borrowers by as much as 27% in the case of German banks but by as little as 1% in the case of US banks (Table 2).

Turning to country risk exposures, the most comprehensive data available are those on an ultimate risk basis. Given the size and growth of reporting banks' local claims, foreign claims provide a more meaningful measure of country risk exposure than international claims. Historically, claims were synonymous with country risk exposures. However, owing to banks' increasing use of derivatives, claims can significantly underestimate actual exposures. For example, at end-March 2005, derivative contracts boosted Belgian banks' aggregate exposure to emerging markets by more than 50% compared to outstanding claims on an ultimate risk basis. In contrast, such contracts boosted Japanese and Portuguese banks' exposure to emerging markets by less than 1%.

Loans and derivatives represent actual exposures to country risk at a given point in time. However, actual exposures may be only loosely related to potential exposures. Derivatives facilitate leveraged trading and so small movements in the price of the underlying instrument can result in large changes in derivatives exposures. Indeed, these exposures can multiply during

International claims can be used to monitor transfer risk

Country risk exposures include claims and derivatives exposures

¹⁵ Local claims in local currencies are sometimes funded in foreign currency from abroad, for example in countries where local debt issues are indexed to the exchange rate. In such countries, transfer risk exposures may be increased by the amount by which local claims in local currencies exceed local liabilities in local currencies.

BIS reporting banks' exposures to emerging markets¹

Positions outstanding at end-March 2005								
Nationality of reporting bank	Foreign claims on an immediate borrower basis	Net risk transfers	Foreign exposures on an ultimate risk basis					
			Foreign claims	Derivative contracts	Guarantees extended	Credit commitments		
	In billions of US dollars			As a share of foreign claims (ultimate risk basis)				
All banks ¹	1,452.3	-140.1	1,313.9	5.9	8.1	15.5		
Australia	7.9	-0.3	9.9	5.5	32.5	3.5		
Belgium	44.2	-1.7	42.5	56.2	7.8	15.9		
Canada	40.5	0.1	40.6	1.0	1.8	6.8		
France	161.5	-20.5	140.9	3.5	15.9	16.0		
Germany	286.1	-76.4	209.7	7.3	14.7	16.4		
Italy	79.0	-1.9	77.1	1.3	9.0	15.7		
Japan	95.4	-19.2	76.2	0.9	10.4	6.0		
Netherlands	130.0	-5.6	124.4	9.4	6.9	6.2		
Portugal	14.3	-1.1	13.2	0.9	3.6	6.4		
United Kingdom	229.5	-8.8	220.7	3.1	6.5	17.7		
United States	285.3	-2.4	282.9	2.9		20.9		
¹ Sum of positions reported by banks listed in the table plus banks headquartered in Chile, Finland, India, Norway, Singapore, Taiwan								

(China) and Turkey. Table 2

> periods of extreme market volatility. US banks' derivative exposures to Korea totalled only \$1.3 billion at the end of September 1997. Three months later, after the flotation of the Korean won, they had ballooned to \$4.7 billion even while US banks' international claims had declined slightly.

> Furthermore, in exceptional circumstances, such as a severe recession, borrowers may draw down lines of credit and call on guarantees provided by reporting banks. If such contingent exposures become outstanding claims, they can greatly increase banks' actual exposure to country risk. Relative to outstanding claims on emerging markets on an ultimate risk basis, guarantees equalled approximately 33% of Australian banks' claims at end-March 2005 but only 2% of Canadian banks' claims. Credit commitments accounted for close to 20% of UK and US banks' outstanding claims but only 6% of those for Dutch banks.

> Exchange rate movements can lead to changes over time in estimated measures of transfer or country risk exposures. No currency breakdown is available for the consolidated banking statistics; outstanding positions are converted by reporting banks into US dollars at end-of-quarter exchange rates. Therefore, movements in exchange rates can result in changes in reported positions even when actual positions remain unchanged. For example, the locational banking statistics indicate that around half of cross-border claims on borrowers in the 10 new EU countries are denominated in euros. Owing to the appreciation of the euro against the US dollar between 2001 and 2004, the consolidated statistics probably overestimate the growth of euro area banks' claims on the region.¹⁶

Contingent claims add to potential country risk exposures

Exchange rate movements can affect reported positions

¹⁶ The currency breakdown from the locational statistics can be applied to the consolidated statistics to adjust for exchange rate movements. The resulting estimates, however, should be regarded as no more than very rough approximations.

External vulnerabilities of countries

In many countries, liabilities to banks account for a declining proportion of external debt. Borrowers instead increasingly tap capital markets to meet their financing requirements. Nevertheless, when analysing countries' external vulnerabilities, it is important to monitor banks' activities because of the often short maturity of their claims as well as banks' key role in trade financing.

The BIS locational banking statistics provide creditor-side information on external liabilities to banks consistent with balance of payments measures of external debt. In fact, many national statistical agencies use the locational statistics to enhance their own balance of payments data (IMF (1992), Bach (2001)).

In countries with limited international banking business, there is often little difference between external debt owed to banks based on the locational statistics and the same stock based on the international component of the consolidated statistics. For example, as of March 2005, cross-border (locational) claims on emerging markets were in aggregate no more than 8% larger than international (consolidated) claims.¹⁷ Therefore, the sectoral and maturity breakdowns from the consolidated statistics can help to highlight risks that may not be apparent in other statistics. In fact, the consolidated statistics provide one of the few internationally comparable measures of short-term external debt (BIS (2002)). For instance, the rapid build-up of short-term debt in Latin America in the late 1970s and Asia in the mid-1990s was evident in the consolidated banking statistics several years before the eventual crises.

Claims on an immediate borrower basis are the most comparable to conventional measures of external debt. Nevertheless, risk transfers and claims on an ultimate risk basis can provide useful supplementary information about countries' external vulnerabilities. Data on the residency of the ultimate obligor may be useful to monitor debt rollovers or initiate a debt restructuring. For example, borrowing by a bank's foreign affiliate in London or another international financial centre will not be captured by external debt statistics. Yet it could potentially result in liquidity problems in the bank's home country if the affiliate has difficulty rolling over its obligations. For instance, in the last three months of 2002, total inward risk transfers to Brazil fell sharply as reporting banks reduced credit to Brazilian banks' offices abroad. Consequently, net outward risk transfers from Brazil rose substantially between September and December 2002 (Graph 2).

Moreover, risk transfers may provide an early warning indicator of perceived changes in borrowers' creditworthiness. As concerns about country risk mount, banks may seek third-party guarantees before rolling over maturing credits, hedge their exposures in derivatives markets or cut back their lending to borrowers' overseas affiliates. Indeed, owing to the improving liquidity of Consolidated data highlight risks not apparent in external debt statistics

¹⁷ From December 2004, reporting banks were no longer requested to separately identify claims on banks with headquarters outside the country of residence, for example claims on the Mexican subsidiaries of non-Mexican banks. Consequently, it is no longer possible to estimate the overlap in reporting banks' claims. As of September 2004, such claims equalled 2% of international claims on emerging markets.



credit derivatives markets, banks often find it more cost-effective to buy protection against problematic credit risks rather than sell their exposures outright or wait for them to mature. Even though claims on Indonesia on an immediate borrower basis grew in late 2004 for the first time since the Asian financial crisis, the continued increase in net outward risk transfers suggests that banks remained wary of taking on Indonesian risk (Graph 2). By contrast, the steady improvement in India's economic fundamentals has in recent years contributed to a gradual decline in banks' net outward risk transfers from India.

... and contingent exposures

Contingent exposures can also provide an early warning indicator of perceived changes in borrowers' creditworthiness. Credit commitments and utilisation ratios will tend to fluctuate with investment spending, inventory accumulation and other facets of borrowers' business. Yet, a steady decline in commitments could indicate that borrowers are facing difficult financing conditions, and are therefore either drawing down their backup facilities or losing access to bank financing.

Furthermore, credit commitments are a key determinant of borrower's vulnerability to liquidity crises. Borrowers with access to large lines of credit are likely to be able to adjust to a temporary deterioration in financing conditions more smoothly than borrowers without such access. Whereas reporting banks' credit commitments to Philippine borrowers equalled nearly 20% of their claims on an ultimate risk basis at the end of March 2005, to Taiwanese borrowers they were only 7% (Graph 3).

Debtors, like creditors, are vulnerable to fluctuations in the value of derivative contracts. The data on derivative contracts available in the consolidated banking statistics provide, at a given point in time, a very rough approximation of the additional external liabilities arising from derivatives activity. However, they are based on foreign claims and so include derivatives exposures of reporting banks' local affiliates to residents – exposures which do



not necessarily result in an external liability. Furthermore, they are reported on an ultimate risk basis and so derivatives exposures to countries where the major dealers are headquartered will tend to be higher than on an immediate borrower basis.

Finally, because the consolidated statistics net out intragroup positions, they provide a more accurate measure of the degree of concentration among creditors, or at least among banks, than external debt statistics. The concentration of creditors is a measure of funding risk and, moreover, one possible channel for contagion. For example, creditors who experienced losses following the default by the Russian government in August 1998 sought to reduce their risk by closing positions in other markets (CGFS (1999)). Countries with liabilities to a broad range of creditors are less likely to be affected by such contagion.

Future enhancements to the consolidated banking statistics

Since their inception in the 1970s, the BIS consolidated banking statistics have been a rich source of information on banks' foreign assets. The comprehensiveness of the statistics has improved over time and will continue to be enhanced in years to come. The number of countries that report the full set of consolidated statistics, including derivatives and contingent exposures, should eventually include all of the 30 countries which currently contribute to the consolidated statistics. In addition, several emerging market countries have been making the necessary preparations to join the reporting population. Banks in emerging economies play an increasingly important role in the international banking market, and their participation will ensure that the coverage of international banking activity in the consolidated statistics remains virtually complete. Monitoring the concentration of creditors

The reporting population is set to expand

Benefits of additional data must be weighed against the costs to reporting banks Changes in the international financial system and in the character of risks managed by banks will continue to highlight areas where more data might be desirable. For example, over the past decade non-bank financial institutions, especially hedge funds, have become major players in financial markets as well as representing sizeable credit exposures on banks' balance sheets. The introduction into the consolidated banking statistics of a finer sectoral breakdown, which distinguishes between non-bank financial institutions and the non-financial private sector, might thus provide useful additional information on risk exposures. Against the benefits of such a change, however, must be weighed the costs to reporting banks of continually fine-tuning the reporting system.

Regardless of whether future enhancements are made, the consolidated banking statistics are likely to remain an essential source of information for understanding the risks to which banks are exposed through their foreign operations. Despite the trend towards globalisation, geography still matters. Political risks, macroeconomic risks, legal systems and market conventions – to name but a few factors – all differ from one country to another. Therefore, identifying where in the world risk exposures lie will long continue to be a key focus of banks' risk management.

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