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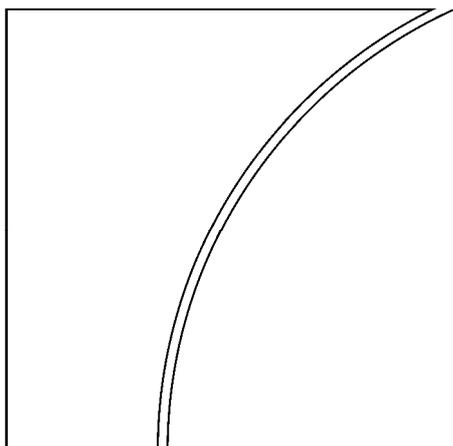
Credit risk transfer statistics

Report submitted by a Working Group established by the
Committee on the Global Financial System

This Working Group was chaired by Jean-Marc Israël
of the European Central Bank

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Executive summary

The financial crisis that began in August 2007 has revealed important gaps in statistics on credit risk transfer (CRT) instruments. In particular, information on structural changes in global CRT markets and on the transfer and ultimate distribution of credit risk has not been sufficiently comprehensive or timely.

This report explores how data on CRT collected under the auspices of the CGFS could be enhanced. One main focus was to be on expanding the coverage of credit default swap (CDS) instruments to gain a better understanding of the structural changes in global CRT markets, as well as obtaining better information on the transfer and ultimate distribution of credit risk.

The proposed extended CDS reporting template takes into account the usefulness of new data for analysis and the need to minimise the burden on reporting agents. This was achieved via a two-stage merits and costs consultation process. A questionnaire was first sent to member central bank and official sector analysts to evaluate the benefits of a set of possible improvements to CRT statistics. On the basis of the results of this evaluation, the proposed changes were streamlined and sent to reporting agents for another round of consultation. Based on the outcome of this exercise, this report proposes the following short-term and longer-term changes to the existing CDS reporting.

On the basis of their high degree of usefulness to analysts and low reporting costs, two items have been identified as candidates for *quick implementation*, possibly to be first implemented in the 2010 BIS Triennial Survey of Foreign Exchange and OTC Derivatives Markets:

- a new counterparty field of central counterparties (CCPs) – a *priority* item; and
- index CDS as a new “reference entity” – an *encouraged* item.

With a view to improving the consistency of data across reporting countries, a list of qualified CCPs will be issued to reporting agents. Separately, in order to improve the identification of counterparties, reporting agents will also be asked to record contracts with hedge funds using the European Union’s definition of hedge funds as a reference.

To allow reporters enough time to prepare for more complex changes, an extended template incorporating the recommendations listed below will be proposed to the CGFS for full implementation by June 2011, which would allow the first set of new data to be published in October that year:

- regional counterparty breakdowns to be recorded of the total outstanding amounts bought and sold for all CDS contracts, and a list of counterparties and their geographical location to be included in the new guidelines;
- CDS on asset-backed securities (ABS) to be introduced as a new reference entity under the subcategory of portfolio or structured products, with implementation subject to further work on what types of ABS should be included and a clear definition being made available to reporters;
- in the spirit of the reporting of other non-CDS derivative instruments, net market values based on the BIS guidelines for regular credit default swap reporting to be added; and
- reporting agents to be asked to also report the total amounts of synthetic collateralised debt obligations (CDOs) being bought and sold (ie without any geographical or counterparty breakdowns).

The report also reviews the potential for using the US Depository Trust and Clearing Corporation (DTCC) global CDS data to supplement BIS data for the purpose of monitoring market developments. Initial results suggested that DTCC data captured a significant part of global markets between reporting dealers but not with non-dealers. Given that the DTCC is in

the process of improving its records on non-dealers' transactions, the report recommends that further comparison exercises be conducted for end-June and end-December 2009 BIS data. A review of central bank needs for additional breakdowns could also be communicated to the DTCC by the end of 2009.

Apart from DTCC data, the report also discusses linkages between BIS consolidated banking statistics, the BIS Triennial Survey and semiannual OTC data. It finds that the BIS consolidated banking data could be used to gauge a country's overall derivatives exposures to foreign counterparties. Furthermore, the dataset could also help gauge credit risk exposures vis-à-vis other countries or regions. Given that the BIS Triennial Survey has a larger reporting population than the semiannual survey, the BIS could explore whether the Triennial Survey could assist in identifying changes in the market, such as a possible greater involvement of insurance corporations, so as to consider in due time whether a more regular monitoring would be useful.

The report was approved by the Committee on the Global Financial System at its meeting on 26 June 2009. The recommendations of the Working Group were endorsed and are being implemented within the schedule outlined in Section 5.

1. Introduction

The financial crisis that began in August 2007 has revealed important gaps in statistics on credit risk transfer (CRT) instruments. In particular, information on structural changes in global CRT markets and on the transfer and ultimate distribution of credit risk has not been sufficiently comprehensive or timely. The Committee of the Global Financial System decided in September 2008 to establish a Working Group chaired by Jean-Marc Israël of the ECB to review CRT statistics (see Annex 1 for the mandate of the Group).

The Working Group was asked to explore how data on CRT collected under the auspices of the CGFS could be enhanced. One main focus was to be on expanding the coverage of credit default swap (CDS) instruments to gain a better understanding of the structural changes in global CRT markets, as well as obtaining better information on the transfer and ultimate distribution of credit risk. This included examining ways to improve information on counterparty risk and exposures to various reference entities, and expanding the reporting to collect details on increasingly popular instruments such as index CDS contracts.

In assessing the usefulness of possible revisions to CRT statistics, the Group was asked to take into account the reporting burden and the relationship with other statistics. This was achieved via a two-stage consultation process. First, the Group surveyed member central bank and official sector analysts about their “wish list” of possible improvements to CRT statistics. Based on the results, the proposed changes were put forward to reporting agents for further consultations. The input received helped the Group draw up its recommendations.

Furthermore, to avoid duplication, the Group also considered existing data and initiatives to collect data on CRT under way at other official and private institutions, and evaluated the potential usefulness of these alternative data sources in the monitoring of CRT market developments.

This report is organised as follows. Section 2 discusses the results of the merits and costs exercise on reviewing CRT statistics reporting; and recommends possible changes to the current reporting template. Section 3 compares the CDS data published by the Depository Trust and Clearing Corporation (DTCC) with the BIS data to see whether the weekly available DTCC data can supplement BIS data for the purpose of monitoring the developments in CDS markets. In Section 4, linkages of the semiannual over-the-counter (OTC) derivatives statistics with the BIS consolidated banking statistics and the Triennial Central Bank Survey are discussed. Section 5 summarises the recommendations.

2. Review of CDS statistics reporting

In reviewing the reporting of CDS statistics as an important focus of CRT, the Working Group sought to facilitate better analysis of the credit derivatives markets by making proposals to improve data transparency, and at the same time, not overburdening reporting banks with data requests. The Working Group thus conducted a merits and costs exercise with analysts and respondent banks to help identify gaps in statistics on credit risk transfer instruments and areas for possible improvement. The exercise was organised as a two-stage process.

First, a questionnaire was sent to users in central banks and other official institutions to evaluate the benefits of some proposed enhancements to the current CDS statistics

reporting.¹ The questionnaire comprised a set of qualitative and quantitative questions (Annex 2), the quantitative ones asking users to rank on a scale of 1 to 3 the usefulness of the proposed changes (Table 1).

Second, based on the feedback received from users, the proposed enhancements were streamlined. A further questionnaire with the new proposed enhancements was then sent through Working Group members to their reporting agents for cost evaluation (Annex 3). Reporters were asked to provide an estimate of the implied costs, on a scale of 1 to 3, of both development and running costs (Table 1).² This section discusses the outcome of the exercise and proposes some changes to the current reporting template (see Annex 4 for more detailed responses to the questionnaires).

Table 1
Merits and costs, and sampling populations

	1	2	3
Merits to users	Limited importance	Fairly important	Crucial
Costs to reporters	Low cost	Fairly costly	Expensive

2.1 Geographical breakdown of CDS transactions

A geographical breakdown of CDS transactions by counterparty and/or reference entity would allow analysts to identify how much credit risk is being transferred between countries and regions as well as the concentration of risks across countries. The Working Group proposed five options to record these counterparty and reference entity geographical breakdowns by “domestic versus foreign” or by region/country (Table 2).³ These options apply only to the notional amounts outstanding of **all CDS contracts** bought and sold.

Users found option 4, with regional counterparty and domestic versus foreign reference entity breakdowns, to be the most useful with an average score of 2.1 (ie very important, Table 3). Next came options 3 (with regional counterparty breakdown) and 5 (with regional counterparty and regional reference entity breakdowns). The first two options, which record domestic versus foreign breakdowns, were considered by users to be the least useful.

¹ The questionnaire was completed by users at 10 central banks – Reserve Bank of Australia, European Central Bank, Bank of France, Deutsche Bundesbank, Bank of Italy, Bank of Japan, Bank of Korea, Bank of Spain, Swiss National Bank and Federal Reserve Board – and at the IMF and BIS.

² Reporting agents in 10 countries – Australia, France, Germany, Italy, Japan, Korea, Spain, Switzerland, the United States and the United Kingdom – took part in the survey.

³ The presence of only a few reporting dealers in most countries other than Japan and the United States means that adopting a country breakdown might potentially reveal some confidential information about individual banks' operations. The regional breakdown was proposed to address this confidentiality issue.

Table 2

Geographical breakdown options

Option	Counterparty breakdown	Reference entity breakdown
1	Domestic versus foreign	None
2	Domestic versus foreign	Domestic versus foreign
3	Region ¹	None
4	Region ¹	Domestic versus foreign
5	Region ¹	Region ¹

¹ Includes: Japan, the United States, western Europe (the EU 15 countries prior to 2004 and Switzerland), Latin America, other Asian countries and all other countries.

Table 3

Geographical breakdown: merits and costs¹

Option	Average merits	Average costs			
		Setup up		Running	
		Work-load	IT	Work-load	IT
1	1.3	1.6	1.5	1.4	1.4
2	1.5	2.2	2.2	1.9	1.6
3	1.7	2.0	2.0	1.8	1.8
4	2.1	2.4	2.4	2.2	2.1
5	1.7	2.4	2.4	2.3	2.1

¹ Simple average of summary responses. See Table 1 for the scale of scores.

Reporting banks on average considered options 4 and 5 the most costly in terms of both development and running, followed by option 2. Option 3 was thought to be less costly to develop and run than option 2 but more costly than option 1. According to some reporters, reference entity data are in general fairly costly to compile, and providing a geographical breakdown would be challenging. This might explain the relatively low estimated costs for options 1 and 3.⁴ Furthermore, the Depository Trust and Clearing Corporation (DTCC) data could be used to extract geographical information on protection bought and sold on single-name reference entities (see Section 3).

⁴ However, a few reporters thought that the costs of introducing a regional counterparty breakdown outweighed its merits. Furthermore, should option 3 or any options with an extended geographical counterparty breakdown be adopted, it would be important to provide a list of these counterparties to facilitate their classification by reporters.

In the light of the merits/cost benefit assessment, the Group proposes to adopt option 3, ie to expand the current template to record a regional counterparty breakdown of notional amounts outstanding of all CDS contracts bought and sold; a list of counterparties and their geographical location should be drawn up. Users' call for a geographical breakdown by reference entity might instead be met using data from the DTCC.

2.2 Counterparty breakdown

In view of the increasingly important role of central counterparties (CCPs) in the CDS market, the Working Group proposed including a new counterparty field for positions with CCPs. This proposed item was considered by users as close to “crucial” with an average score of 2.7 (Table 4), while a majority of reporting agents regarded the addition as not particularly costly.

Before introducing CCPs into the new template, however, it will be clarified whether CCPs are to be recorded as sole counterparties in CDS trades or whether the “direct” counterparty as well as CCPs are to be recorded.

Another proposal on the counterparty breakdown was to split securities firms and banks – treated as a single group in the current template – into two separate counterparties. Some users thought that this might improve the understanding of the specific role of the banking sector in the CDS market; others argued that banks and securities firms should be treated differently as they come under different regulatory frameworks. However, on average, the merits of implementing this were ranked as less than “fairly important” whilst incurring fairly significant setup costs (Table 4).

The Group recommends the introduction of CCPs as a new counterparty filed in the CDS reporting template.

The Group agreed not to propose separating securities firms and banks.

Table 4
Counterparty breakdown¹

	Average merits	Average costs	
		Setup	Running
A new counterparty field for central counterparties	2.6	1.8	1.5
Separating securities firms from banks	1.6	2.0	1.8

¹ Simple average of summary responses. See Table 1 for the scale of scores.

2.3 Counterparty definition

To enhance the comparability of data across reporting countries, the Working Group identified two potential areas for improvement that are related to the counterparty definitions.

First, what can be classified as hedge funds? In general, most reporters welcomed any initiatives to improve the reporting guidelines and definitions of reporting. Some non-EU reporters noted that the EU definition of hedge funds laid down in Guideline ECB/2007/9 (see Annex 2) would be useful as a reference and are willing to refer to it in future reporting on a best efforts basis. Some reporting agents added that they would greatly appreciate a list of hedge funds being attached to the reporting forms.

The second issue is how to accurately record transactions with insurance companies. Market sources reveal that insurance companies are important participants in CDS markets, yet the BIS OTC derivatives statistics indicate otherwise. One possible explanation is that in some countries insurance companies are not allowed to engage in derivatives transactions directly and instead do so through affiliates. Reporters were asked whether it would be feasible to “look through” these affiliates’ CDS positions and report them as positions with insurance companies as counterparty. A majority of reporters noted that it would be a very difficult task and costly to implement and therefore would recommend not to adopt this reporting practice, at least as long as there are doubts over the actual extent of this sector’s involvement in the CDS market. With a view to monitoring this possible involvement, the Working Group proposed including a related question in the BIS Triennial Survey.

The Group agreed to use the EU definition of hedge funds in the reporting guidelines as a reference, possibly accompanied by a list of hedge funds in the reporting countries.

Regarding insurance companies, the Group decided not to put forward the proposal to “look through” transactions conducted by affiliates due to the difficulty cited by reporting agents. Further work may be needed to develop the notion of counterparty from that of a monolithic entity into a concept that differentiates between the legal entity that engages in the transaction and the ultimate obligor.

2.4 Index CDS

The rapidly growing importance of index products in the CDS market in recent years suggests that the segment might warrant closer monitoring. Currently, index products are recorded under multi-name instruments. The Working Group proposed five options to enhance the reporting of index CDS. The first four options treat index CDS as a subset of multi-name instruments with various levels of detail. The first option would be to record only the total notional amounts bought and sold for all index products (A in Table 5). The second and third options propose recording those amounts for all counterparties (B) and all reference entities (C), respectively. The fourth option involves recording all counterparty and reference entity breakdowns of index CDS (D). Finally, given the potential difficulties of classifying index CDS contracts by rating, by maturity and by sector, the Group suggested adding index CDS as a new “reference entity sector” (E) as an alternative to treating them as a subset of multi-name instruments.

Table 5
Index CDS options

Index products	Total bought and sold	Reference entity			
		By rating	By maturity	By sector	
All index products	A	C	C	C	E
By counterparty	B	D	D	D	E

On average, users ranked the recording of counterparty breakdowns of index CDS (B) or the recording of index CDS instruments in an additional reference sector (E) as having the highest merit (Table 6). While reporting agents considered the latter option as slightly more

costly in setup terms, it would incur lower running costs.⁵ Furthermore, DTCC data already provide counterparty breakdowns of index CDS instruments.

Table 6
Index CDS: merits and costs¹

Option	Average merits	Average costs			
		Setup up		Running	
		Work-load	IT	Work-load	IT
Table 5 – A	1.9	1.6	1.6	1.3	1.2
Table 5 – B	2.1	1.9	2.1	1.9	1.8
Table 5 – C	1.4	2.4	2.4	2.1	2.0
Table 5 – D	1.7	2.5	2.6	2.2	2.1
Table 5 – E	2.1	2.1		1.7	

¹ Simple average of summary responses. See Table 1 for the scale of scores.

On the basis of these considerations, the Group agreed to recommend the recording of index CDS in a new “reference entity sector” in the extended reporting template.

2.5 Asset-backed securities

Another market segment that has grown rapidly in recent years is CDS on securitised products such as CDS on asset-backed securities (ABS) and mortgage-backed securities (MBS) and CDS on collateralised debt obligations (CDS on CDOs).⁶ The Working Group proposed adding a subcategory of CDS on securitised products (“ABS”) under the portfolio or structured products in the extended template. While this proposed new item received considerable support from users (with an average score of 2.2), it incurs relatively high setup cost (Table 7). Some reporters noted that identifying such trades on a consistent basis is difficult as it requires considerable effort to examine the details of underlying securitised instruments, particularly CDOs. Meanwhile, some users noted that CDS on securitised products with pure asset-backed securities as underlying credit (ABS and MBS) could be viewed as an indicator to gauge exposures to “households”.

⁵ This partly reflects the fact that this option requires reporters to record only the total outstanding amounts bought and sold, but not for single-name and multi-name instruments separately, which may make it easier to handle.

⁶ The standard documentation of the International Swaps and Derivatives Association (ISDA) for CDS on securitised products is currently available in two ISDA forms of CDS designed for “pay as you go” settlements: “CDS on ABS and MBS” and “CDS on CDOs”.

Given the complexity of implementation and potential merits, the Working Group proposes to introduce “ABS” as a new reference entity under the subcategory of portfolio or structured products, with implementation subject to further work on what types of ABS should be included and a clear definition being made available to reporters. If further work were to suggest that the costs have outweighed the merits, this item would be withdrawn. In the meantime, the definition and reporting instructions should be further elaborated, if possible, by end-2009.

Table 7

Asset-backed securities¹

	Average merits	Average costs	
		Setup	Running
ABS as a new reference entity	2.1	2.3	2.0

¹ Simple average of summary responses. See Table 1 for the scale of scores.

2.6 Net market values

The Working Group also proposed adding a new field for net market values alongside the gross market values in the current reporting template. Two methods of deriving net values are considered. The first follows the BIS guideline on semiannual OTC derivatives, it calls for the market value of claims and liabilities to be netted when they are claims on and liabilities to the same counterparty and both the reporting institutions and the counterparty have a valid, legally enforceable netting agreement. According to the users, this *BIS definition* would be a useful measure to gauge counterparty credit exposure. A second approach focuses on the credit risk of *particular reference entities*. For example, the DTCC publishes net notional amounts outstanding of top 1,000 reference entities. The *DTCC definition* of netting the sum of the notional values of protection bought by net buyers with respect to any single reference entity could be borrowed to derive the net market values of particular reference entities.

Overall, both of these options were ranked as “fairly costly” by reporting agents although the BIS definition was thought to be less burdensome in terms of both setup and running (Table 8). However, the responses varied considerably. Some reporters said that the netting of market values according to the BIS guideline is already in their systems as the BIS definition is consistent with local accounting and regulatory rules.⁷ But others said that they collect only gross values at present, so gathering the desired information would be a costly exercise. In other cases, reporters have been recording the net present values associated with every trade in their system but not applying netting by counterparty.

⁷ In some cases, reporters calculate net values by the same counterparty by netting all positions in financial and credit derivatives.

The Working Group recommends adding the BIS definition of net market values. This would be in the spirit of the reporting of other BIS semiannual OTC derivatives statistics. Because, in practice, counterparty netting applies at the level of a given master agreement and not at the level of the instrument (type of derivatives contract), it was noted that this statistic will only be a rough proxy for the values that would actually be settled in a netting event. The issue of netting methodology might warrant further work in the near future.

Table 8
Net market values¹

	Average costs	
	Setup	Running
Applying to counterparty (BIS definition)	2.0	2.0
Applying to reference entity (DTCC definition)	2.4	2.3

¹ Simple average of summary responses. See Table 1 for the scale of scores.

2.7 Other credit derivatives

Apart from the CDS market, the Working Group also suggested collecting the total notional amounts of contracts bought and sold for four other credit derivatives instruments: synthetic CDOs, forwards, swaps and OTC options. Among these four instruments, users found the additional reporting on synthetic CDOs to be the most useful with an average score of 2.1 (Table 9). However, that form of reporting also had the highest estimated setup costs due to the complex structures of these instruments.

Table 9
Other credit derivatives: merits and costs¹

Option	Average merits	Average costs			
		Setup up		Running	
		Work-load	IT	Work-load	IT
Synthetic CDOs	2.1	2.1	2.1	1.8	1.7
Forwards	1.7	2.0	2.0	1.8	1.7
Swaps	1.7	1.8	1.8	1.6	1.5
OTC options	1.8	1.9	1.9	1.7	1.6

¹ Simple average of summary responses. See Table 1 for the scale of scores.

The Working Group proposes introducing the reporting of only total amounts of credit protection bought and sold for synthetic CDOs without further breakdowns for counterparties or reference entities. It is also desirable to include a more precise definition of synthetic CDOs into the reporting guidelines.

2.8 Timeliness and frequency

On the frequency issue, many users thought that the semiannual reporting framework was appropriate and adequate for monitoring broad market trends, especially if DTCC data, which are published weekly, proved to be a good complement to the BIS survey data. Furthermore, since CDS reporting is integrated in the overall reporting of OTC derivatives, it would be difficult to increase the frequency of CDS reporting without applying the same to other OTC derivatives. There has been little support for changing the frequency of the reporting of other OTC derivatives.

A majority of users regarded more timely data an important improvement. While some reporters stressed that it would be quite burdensome to increase the timeliness of the CDS data, others suggested that more timely data (available after a quarter) could be set as a “longer-term” target, also as data are already available in many reporting countries.

The Working Group proposes to keep the reporting frequency as semiannual and encourages the reporting agents to provide more timely data.

3. Linking BIS statistics with DTCC data

The Working Group was mandated to consider data sources and initiatives to collect data on CRT under way at other institutions and to evaluate the potential usefulness of these alternative data sources in the monitoring of CRT market developments. One such source that has attracted much attention is the DTCC’s Trade Information Warehouse (TIW) data on CDS (see Annex 5 for a summary of types of data published by DTCC). In early November 2008, the DTCC started to publish on a weekly basis aggregated data derived from the CDS Trading Information Warehouse as part of an on-going initiative to address market concerns about the transparency of CDS markets. Initially, the data include outstanding gross and net notional values of CDS contracts for the top 1,000 underlying single-name reference entities and all indices as well as certain aggregates of the data. This section assesses the usefulness of the DTCC data in the monitoring of global market trends based on a comparison between the coverage of DTCC data with the BIS semi-annual central bank survey on outstanding CDS at end-2008.

3.1 Comparison exercise between DTCC with BIS CDS data

3.1.1 Preliminary

One important indicator of the size of global CDS markets is the gross notional amounts outstanding, which are available in both the BIS and DTCC datasets. While total gross notional amounts outstanding of CDS in the BIS survey are subdivided into single- and multi-name contracts; DTCC data comprise three categories of instruments: *credit default single names*; *credit default index* and *credit default tranches*. For comparison, the DTCC’s credit default index and credit default tranches are treated as multi-name contracts.

By counterparty, the BIS data distinguish between reporting dealers, other financial institutions and non-financial customers, whereas DTCC data separately identify between

dealers and non-dealers/customers.⁸ The comparison exercise applies to only two counterparties: dealers and non-dealers.

To make a fair comparison of the coverage of the two datasets would also require controlling for the sample of reporting dealers in the same reporting period. According to the DTCC, data reported at end-2008 were collected from 22 reporters in eight countries.⁹ To compare like with like, the BIS asked the central banks of the eight countries to provide only data recorded by reporters that appeared in the DTCC sample at end-2008 – the so-called BIS subsample.

3.1.2 Results

At first glance, the DTCC and BIS subsample data are perfectly matched for the *total* gross amounts outstanding between dealers as of end-2008 (Table 10). By instruments, the BIS subsample reports much larger amounts outstanding in single-name instruments, which is offset by a smaller total for multi-name instruments. One potential discrepancy is the definition of multi-name contracts. In fact, a major BIS reporting country has confirmed that one of its reporters has been classifying “credit default tranches” as single-name contracts.

Table 10
Amounts outstanding of credit default swaps
In trillions of US dollars

	Dealers			Non-dealers		
	DTCC (A)	BIS (B)	Ratio (A/B) ¹	DTCC (C)	BIS (D)	Ratio (C/D) ¹
Single-name instruments	12.2	15.6	78	2.6	9.4	28
Multi-name instruments ²	12.2	8.8	138	2.2	6.4	34
Total contracts	24.4	24.4	100	4.9	15.8	31

¹ In per cent. ² DTCC data include credit default tranches and credit default index.

Sources: DTCC; BIS.

However, the amounts outstanding recorded in the BIS subsample are considerably larger on deals with non-dealer counterparties. One possible explanation is that contracts linked to mortgage securities and less standardised contracts that cannot be confirmed over electronic systems (eg CDS on CDOs) are not comprehensively included in the DTCC Warehouse.

Total notional amounts outstanding between dealers reported by the BIS full sample, which does not include reporting dealers headquartered in Spain, are closely matched to those reported by the DTCC, suggesting a full global coverage of dealer transactions by the company.

⁸ The DTCC also reports deals between customers, but that amounts to only 0.09% of the total.

⁹ In total there were 26 reporting offices, of which some are related but located in more than one country. This reduces the number to 22. The headquarters of these reporters are located in eight countries: France, Germany, Italy, the Netherlands, Spain, Switzerland, the United Kingdom and the United States.

3.2 Conclusion

The sample of reporters in the DTCC dataset accounts for a substantial proportion of global CDS business and hence can potentially be a useful source of information for monitoring the global trends. In particular, the reported gross notional amounts outstanding of CDS between dealers are broadly the same in the BIS and DTCC datasets. However, the DTCC data on CDS contracts between dealers and non-dealers are considerably smaller-scale. This perhaps reflects the fact that non-standard CDS contracts with customers are usually more difficult to register electronically.

The DTCC is working intensively to improve the coverage of CDS transactions in the TIW, and its ultimate goal is for near universal coverage. The work will be conducted in stages.

The Working Group recommends that further comparison exercises be conducted for end-June and end-December 2009 BIS data. In addition, in agreement with the DTCC, the Working Group recommends that some members liaise with the DTCC, possibly via an electronic discussion group, to further define relevant breakdowns of DTCC data.

4. Other linkages

The Working Group also explores the usefulness of other data on credit derivatives markets and their linkages to the semiannual OTC derivatives statistics. This section discusses two such datasets: the BIS consolidated banking statistics and the Triennial Central Bank Survey.

4.1 Linkages with the BIS consolidated banking statistics

4.1.1 Credit derivatives in the consolidated banking statistics

Under the current BIS consolidated banking statistics reporting framework, exposures to credit derivatives are captured in three different categories: *net risk transfers*, *guarantees extended* and *derivatives contracts* (see Table 11 for a summary).¹⁰

- **Net risk transfers.** This item was designed to help track down the *ultimate* responsibility for repaying a claim should the original borrower default. There are in general six general categories of risk transfers: (i) guarantees (legally binding commitments by a third party to repay a debt if the direct obligor fails to do so); (ii) insurance policies; (iii) claims on a branch when the parent is based in another country; (iv) collateralised claims; (v) risk participations (eg, loans and acceptances, where the accepting bank has sold a risk participation, are considered to be guaranteed by the purchaser of the participation); and (vi) credit derivatives that have been used as cover for counterparty risk in the *banking book*. Credit derivatives reported under net risk transfers are the *notional value* of credit protection *purchased* by a reporting bank, as this involves the credit risk being shifted from the immediate counterparty to the protection seller.

¹⁰ This section draws on the following documents: Bank for International Settlements *Guidelines to the international consolidated banking statistics*, 2008; US Federal Financial Institutions Examination Council *Instructions for the preparation of the country exposure report*, 2006; and Bank of England, *Form CE: UK-owned banking groups country exposure report*, 2004.

- **Guarantees extended.** Guarantees are contingent liabilities arising from an irrevocable obligation to pay a third-party beneficiary when a client fails to perform some contractual obligation. The *notional value* of credit *protection sold* by a reporting bank, which represents the maximum possible value of the associated contingent liability, is thus reported under guarantees.
- **Derivatives contracts.** Data reported under this category cover all cross-border financial claims (ie *positive market values*) arising from all derivatives contracts.¹¹ These include forwards, foreign exchange swaps and options, interest rate, equity, commodity and credit derivatives contracts. However, for credit derivatives contracts (such as CDS and total return swaps), only those claims that belong to the *trading book* of the *protection-buying* reporting bank are included in this category.¹²

Table 11

Summary of the derivatives statistics reported in the BIS consolidated banking data

	Components	Derivatives transactions	Valuation	Account¹
Net risk transfers	Guarantees and derivatives	Credit protection purchased by the reporter	Notional value	Banking book
Guarantees extended	Guarantees and derivatives	Credit protection sold by the reporter	Notional value	Banking book
Derivatives contracts	Derivatives	All derivatives contracts	Positive market value	Trading book

¹ In the United States, however, these three items include “derivative contracts” in both the banking and trading books.

Source: BIS.

4.1.2 Gauging risk transfer using consolidated banking statistics

In principle, *derivatives contracts* data reported in the consolidated banking and OTC derivatives datasets should be comparable as they are both collected on a consolidated basis under the same netting valuation method, and cover the same types of derivatives. Thus comparing the positive values of derivatives exposures of the two datasets could provide an estimate of the country’s derivatives exposures to foreign counterparties.¹³

The large variation in the share of credit derivatives exposures to foreign counterparties, however, could reflect the differences in reporting populations of the two datasets. For example, as Davies (2008) points out: as of March 2008, 65 US banking organisations reported their derivatives transactions for the consolidated banking statistics, while seven large US derivatives dealers (three large banks and four large investment banks) were

¹¹ Negative market values of derivatives contracts are considered to represent financial liabilities and are therefore by definition excluded from the reporting of financial claims.

¹² According to the BIS guidelines to the international consolidated banking statistics (p 19): “Credit derivatives that are not held for *trading* should be reported as ‘Risk transfers’ by the protection buyer and all credit derivatives should be reported as ‘Guarantees’ by the protection seller.”

¹³ The BIS publishes only the gross market values (which are the sum of positive and negative values) of OTC derivatives statistics; but both positive and negative values are collected on a confidential basis.

included in the semiannual survey of derivatives activity.¹⁴ By comparing the data reported by a same set of banks in the two datasets, Davies (2008) finds that the proportion of these banks' derivatives exposures to foreign counterparties has been above 50% over the past few years.

As for the *net risk transfers* and *guarantees extended*, despite the presence of other non-derivatives components in the current reporting framework, they do provide geographical information on the *total* amount of credit risk that is transferred into a country's banking system.¹⁵ In particular, as CDS transactions represent a substantial part of guarantees extended in a number of countries, the Working Group considers that these data could be a useful indicator of the geographical distribution of a country's credit risk exposures.

Overall, consolidated banking statistics together with semiannual OTC data could be used to gauge a country's overall derivatives exposures to foreign counterparties. Nevertheless, given the range of differences between the two datasets, such as differences in reporting population and coverage as mentioned above, the comparisons between the two datasets would only be rough estimates.

The consolidated banking statistics could also help gauge total credit risk exposures (ie CDS and other credit derivatives) vis-à-vis other countries or regions. To extract CDS positions from consolidated banking data, however, would require lengthy consultations with reporting agents and compilers which is beyond the scope of this Working Group.

4.2 The Triennial Central Bank Survey

Every three years, the BIS coordinates a global central bank survey of foreign exchange and derivatives market activity (the Triennial Survey) on behalf of the Markets Committee and the CGFS. One objective of the Triennial Survey is to provide a benchmark for the semiannual OTC derivatives market statistics, which are limited to banks and dealers in the most important financial centres.¹⁶ The format of the data on amounts outstanding in the Triennial Survey is the same as that used in the regular semiannual BIS surveys of positions in the global OTC derivatives market. In addition, it contains information on instruments not covered by the semiannual survey, in particular credit derivatives other than CDS. Given the difficulty of "looking through" transactions as discussed in Section 2.3, the wider coverage of the Triennial Survey could potentially assist in identifying changes in the CDS transactions with insurance corporations.¹⁷

The close linkages between the two surveys imply that any proposed changes to the semiannual survey should also be considered in the Triennial Survey. Those amendments that are not too costly to implement could be introduced in the 2010 Triennial Survey. In addition, the clarifications that could help improve compilation of the derivatives statistics should also be included in the Triennial Survey guidelines.

¹⁴ Sally M Davies, *Cross-border derivatives exposures: how global are derivatives markets?*, paper presented at the Irving Fisher Committee Conference, 2008.

¹⁵ In some countries, a majority of the guarantees extended are through CDS. Indeed, in the United States over 95% of guarantees extended are through CDS.

¹⁶ While the semiannual survey relies on data provided by major dealers in the G10 countries and Switzerland, the Triennial Survey covers a much larger set of market participants.

¹⁷ A limited number of insurance companies took part in the 2007 BIS Triennial Survey.

5. Summary of recommendations

This section provides a summary of the recommended enhancements to the current reporting framework. These proposed changes are based on the merits and costs exercise as well as the discussion among Working Group members. It also describes the timeline and other specific issues regarding their implementations.

5.1 Proposed changes in the near term

On the basis of their high degree of usefulness to analysts and low reporting costs, two items have been identified as candidates for quick implementation:

- a new counterparty field of CCPs – as a *priority* item; and
- index CDS as a new “reference entity sector” – as an *encouraged* item.

The Group recommends that these changes to be first implemented in the 2010 BIS Triennial Survey of Foreign Exchange and OTC Derivatives Markets.

With a view to improving the consistency of data across reporting countries, the Working Group took account of the importance of providing coherent definitions and guidelines on reporting. In this regard, a list of qualified CCPs will be issued to reporting agents. These agents could also refer to contracts recorded with hedge funds using the European Union’s definition of hedge funds.

5.2 Longer-term amendments and outstanding issues

5.2.1 Extended CDS reporting template

To give reporters enough time to prepare for more complex changes, an extended template incorporating the recommendations listed below will be proposed to the CGFS for full implementation by June 2011, which would allow the first set of new data to be published in October that year:

- regional counterparty breakdowns to be recorded of the total outstanding amounts bought and sold for all CDS contracts, and a list of counterparties and their geographical location to be included in the new guidelines. Further work may be required to refine the concept of counterparty so as to differentiate between the legal entity engaging in the transaction and the ultimate obligor;
- CDS on ABS to be introduced as a new reference entity under the subcategory of portfolio or structured products, with implementation subject to further cost-benefit analysis on what types of ABS should be included and a clear definition being made available to reporters;
- in the spirit of the reporting of other non-CDS derivatives instruments, net market values based on the BIS guideline to be added; and
- reporting agents to be asked to also report the total amounts of synthetic CDOs being bought and sold.

5.2.3 Other outstanding issues

The Working Group reviewed the potential of using DTCC CDS data to supplement the BIS CDS statistics for the purpose of monitoring market developments. Initial results suggest that DTCC data capture a significant part of the market between reporting dealers but not with non-dealers. Given that the DTCC is in the process of improving its records on non-dealers’ transactions, the Working Group recommends that further comparison exercises be

conducted for end-June and end-December 2009 BIS data. The Working Group also proposes that some members liaise with the DTCC to further define relevant breakdowns of DTCC data.

The Group examined the linkages between BIS consolidated banking statistics and semiannual OTC data. It found that the two datasets could be used to gauge a country's overall derivatives exposures to foreign counterparties. Furthermore, the consolidated banking data could also help gauge credit risk exposures vis-à-vis other countries or regions. However, to extract CDS positions from consolidated banking data would require lengthy consultations with reporting agents and compilers, which is beyond the scope of this Working Group.

The BIS could explore whether the Triennial Survey, which has a wider reporting population than the semiannual survey, could assist in identifying changes in the market, such as a possible greater involvement of insurance corporations, so as to consider in due time whether a more regular monitoring would be useful.

Annex 1: Mandate of the Working Group

The financial crisis has revealed gaps in statistics on credit risk transfer (CRT) instruments. In particular, information on structural changes in global CRT markets and on the transfer and ultimate distribution of credit risk has been insufficient.

Against this backdrop, the Working Group on Credit Risk Transfer Statistics is requested to explore how data on CRT collected under the auspices of the CGFS could be enhanced. Specific issues to be explored by the Working Group include:

- possible revision of the current reporting on credit default swap (CDS) data to expand on data on reference entity (eg financial and non-financial institutions) and counterparty type (eg special purpose entities and hedge funds);
- possible widening of the coverage of CDS instruments to include more detailed information on multi-name indices, and to enrich current statistics with additional geographical, credit rating and counterparty breakdowns; and
- investigation of the compatibility of CDS statistics and statistical information on other CRT instruments, in particular on structured securities, and the needs in other statistical areas (eg securitisation) required to gauge global CRT.

In assessing the usefulness of possible revisions to CRT statistics, the Group will take into account the reporting burden and the relationship with other statistics. It will, in particular, consider whether any additional breakdowns should be provided on a regular basis, or possibly on an ad hoc basis or through estimates based on lower-frequency surveys. The Group will also consider existing data and initiatives to collect data on CRT under way at other official and private institutions, and evaluate the potential usefulness of these alternative data sources in the monitoring of CRT market developments.

The Group is expected to report to the CGFS at its meeting in June 2009.

Annex 2: Questionnaire for users

The financial crisis has revealed gaps in statistics on credit risk transfer (CRT) instruments. Against this backdrop, the Committee on the Global Financial System (CGFS) has established a Working Group on Credit Risk Transfer (CRT) Statistics to explore how data on CRT collected under the auspices of the Committee could be enhanced. Based on the existing data reporting template, the Working Group has identified some areas for improvement and would like users to comment on the usefulness of these possible revisions and suggest other issues that the Group should address.

1. Consistency of BIS/DTCC data

If the DTCC data (<http://www.dtcc.com/products/derivserv/data/index.php>) turn out to capture a substantial share of all CDS contracts (or of certain subsets of CDS contracts), then the BIS data on CDS could be viewed as a periodic benchmark for the DTCC data. If this were to be the case, then given that the DTCC data provide much more granular data on reference entity characteristics (eg sector and credit rating), how would you view the possibility of scaling back the reference entity characteristics in the BIS CDS data in exchange for reducing reporting burden or increasing timeliness of the BIS data?

2. Geographical breakdown

2a Working Group members have proposed five options to record geographical breakdowns of counterparty and reference entity in the CDS template (see main text, Table 2). On a scale of 1 to 3, how would you rank the usefulness of these geographical breakdowns (see main text, Table 1)?

Please provide a detailed explanation of the reasons for your scores. Is it necessary to apply these breakdowns to each item? Given that an expanded reporting scheme would naturally be more costly, please rank your requirements.

If you consider other geographical splits to be more useful, please specify (including a ranking of importance) and give a detailed explanation.

2b The existing BIS consolidated banking data on guarantees and credit derivatives provide, by country of the reference entity, the notional amount of inward transfer of credit risk through credit protection sold using CDS or other guarantees. To what extent can these statistics help gauge cross-border credit risk transfer? Could these statistics supplement the proposed five options in assessing the geographical breakdowns of counterparty and reference entity? If so, how?

3. Counterparty breakdown

3a On a scale of 1 to 3, how would you rank the usefulness of adding a new field for central counterparties (CCPs)? Please provide a detailed explanation of the reasons for your scores.

3b The current reporting template puts banks and securities firms into one group. Some Working Group members have proposed separating securities firms (SFs) from banks and merging SFs with other special purpose vehicles. On a scale of 1 to 3, how would you rank the usefulness of these changes? Please provide a detailed explanation of the reasons for your scores.

4. Counterparty definitions

Countries may adopt different definitions for hedge funds.

According to ECB Guideline ECB/2007/9 (European Commission Guideline 2007/830/EC), hedge funds are defined as any collective investment undertakings regardless of its legal structure under national laws, which apply relatively unconstrained investment strategies to achieve positive absolute returns, and whose managers, in addition to management fees, are remunerated in relation to the fund's performance. For that purpose, hedge funds have few restrictions on the type of financial instruments in which they may invest and may therefore flexibly employ a wide variety of financial techniques, involving leverage, short-selling or any other techniques. This definition also covers funds that invest, in full or in part, in other hedge funds provided that they otherwise meet the definition. These criteria to identify hedge funds must be assessed against the public prospectus as well as fund rules, statutes or by-laws, subscription documents or investment contracts, marketing documents or any other statement with similar effect of the fund.

Is the EU definition analytically useful? If not, please explain why. If yes, would non-EU countries be able to use the same / a similar definition? Can the Working Group come up with useful definitions of counterparty – especially for hedge funds, insurance companies and special purpose vehicles (or financial vehicle corporations) – that can be consistently applied?

According to ECB Regulation ECB/2008/30, "FVC" means an undertaking which is constituted pursuant to national or Community law under one of the following:

(i) contract law as a common fund managed by management companies; (ii) trust law; (iii) company law as a public or private limited company; (iv) any other similar mechanism; and whose principal activity meets both of the following criteria:

(a) it intends to carry out, or carries out, one or more securitisation transactions and is insulated from the risk of bankruptcy or any other default of the originator;

(b) it issues, or intends to issue, securities, securitisation fund units, other debt instruments and/or financial derivatives and/or legally or economically owns, or may own, assets underlying the issue of securities, securitisation fund units, other debt instruments and/or financial derivatives that are offered for sale to the public or sold on the basis of private placements.

Neither of the following is included in the definition of FVC:

- MFIs within the meaning of Article 1 of Regulation (EC) No 25/2009 (ECB/2008/32),
- investment funds (IFs) within the meaning of Article 1 of Regulation (EC) 958/2007 of the ECB of 27 July 2007 concerning statistics on the assets and liabilities of investment funds (ECB/2007/ 8) (1).

To what extent will the consistency of reporting data be affected by differences in sectoral definition?

Would replacing the hedge fund category with a broader category of asset management companies be a good alternative?

5. Index CDS

Index products could be added as a subset of multi-name instruments. On a scale of 1 to 3, how would you rank the four possibilities as specified in Table 5 (A, B, C and D)? Please provide a detailed explanation of the reasons for your scores.

One drawback of the possibilities set out above is the difficulty of classifying the index contracts by rating, by maturity and by sector. An alternative is to add index CDS as an

additional column in the “sector or reference entity” breakdown (Table 5 – E). On a scale of 1 to 3, how do you view the importance of this alternative? Please provide a detailed explanation of the reasons for your scores.

6. Asset-backed securities as a new reference entity

A new category of sector or reference entity, asset-backed securities (ABS), can be used to replace the existing portfolio or structured sector. This new item is shown as a column for both single-name and multi-name instruments as a single CDS can be written on a single ABS or on a portfolio of ABS. Is this breakout useful – and, if so, how useful (on a scale of 1 to 3)? Please provide a detailed explanation of the reasons for your scores.

How do you view the merit of excluding those ABS held by financial firms?

7. Net market values

A new field for net market values alongside the existing gross market values has been added to the existing template. There are several valuation methods that could be used to derive net values. For example, the definition used for Table 5 of the semiannual OTC derivative statistics calls for the market value of claims and liabilities to be netted when they are claims on and liabilities to the same counterparty and the reporting institutions and the counterparty have a valid, legally enforceable netting agreement. Thus, this definition is a measure of counterparty credit exposure. However the definition may not be feasible for reporters to report for only one type of derivative product, but the question of feasibility will be explored in discussions with reporting institutions. On the other hand, the DTCC uses a definition of netting that is the sum of the net protection bought by net buyers with respect to any single reference entity. Note that when net values reported according to this definition are summed across different reporting institutions, the resulting sum is likely not to have a conceptually clear definition. What “net market values” would be the most useful indicator of actual risk hedging/exposure reduction or of counterparty credit exposures arising from CDS? The counterparty credit exposure measure or that with respect to any single reference entity or other measures (please specify)?

8. Other credit derivatives

In addition to CDS statistics, some Working Group members suggested including other credit derivatives instruments such as synthetic CDOs, forwards, swaps and OTC options. Should these items be included? On a scale of 1 to 3, how would you rank the usefulness of these statistics?

Should these be included as a single line, with the full matrix of detail that is associated with CDS, or merely included (indistinguishably) in with CDS contracts?

9. Timeliness and frequency

9a Would you like to increase the timeliness of the BIS CDS data? Given the cost constraints, what data items would you consider giving up in exchange for more timely data?

9b Would you like to increase the frequency of the BIS CDS data? Given the cost constraints, what data items would you consider giving up in exchange for more frequent data?

Annex 3: Questionnaire for reporters

The financial crisis has revealed gaps in available statistics on credit risk transfer (CRT) instruments. Against this backdrop, the Committee on the Global Financial System (CGFS) has established a Working Group (WG) on Credit Risk Transfer (CRT) statistics to explore how data on CRT collected under the auspices of the Committee could be enhanced. Based on the existing data reporting template and a round of user consultation, the WG has identified some areas for improvement. In this questionnaire, reporters are asked to provide an indication of the expected costs of the potential enhancements.

1. Geographical breakdown

A geographical breakdown would allow analysts to identify how much credit risk is being transferred between countries as well as the concentration of risks across regions. The WG has proposed five options to record geographical breakdowns of counterparty and reference entity in the CDS template (see main text, Table 2). On a scale of 1 to 3, could you provide an estimation of the setup (workload- and IT-related) and running (workload- and IT-related) costs for reporting these different geographical breakdowns (see main text, Table 1)?

Could you suggest how the burden could be reduced, eg, via alternative approaches?

If you consider other geographical splits to be more useful, please specify (including a ranking of importance) and give a detailed explanation.

2. Counterparty breakdown

In view of the increasingly important role of central counterparties (CCPs) in the CDS market, the WG proposed including a new counterparty field of CCPs. On a scale of 1 to 3, could you provide an estimation of the setup and running costs of reporting this new field?

Please provide a detailed explanation of the reasons for your scores.

The current reporting template combines banks and securities firms into one group. To improve the understanding of the specific role and exposures of the banking sector in the CDS market, the WG has proposed separating securities firms from banks. How would you value the setup and running costs of the proposed amendment (on a scale of 1 to 3)?

Please provide a detailed explanation of the reasons for your scores.

3. Counterparty definition

Countries may adopt different definitions for hedge funds. Could you implement the EU definition? If not, please explain why and specify what parts of the definition make implementation unfeasible? Could you suggest an alternative definition that would enhance data consistency?

Insurance companies are generally thought to be significant participants in CDS markets, yet the BIS OTC derivatives data suggested otherwise. One possible explanation is that insurance companies are not allowed to engage in derivatives activities directly in some countries and thus engage in these transactions indirectly through their affiliates. If this is the case, would it be feasible for you to report positions according to the sector of the ultimate parent organisation of a counterparty? If so, how costly would this be? Could you give a rough estimate of your CDS transactions with insurance companies as counterparties?

4. Index CDS

As index products are a large and growing part of the CDS market, the WG suggested introducing index CDS as a subset of multi-name instruments. Would you consider this a meaningful addition? How would you estimate the setup (workload- and IT-related) and running (workload- and IT-related) costs of the four options for reporting index CDS positions (see main text, Table 5 – A, B, C and D)?

Please provide a detailed explanation of the reasons for your scores.

The WG is aware of the difficulty of classifying index CDS contracts by rating, by maturity and by sector. An alternative is to add index CDS as an additional column in the “sector or reference entity” break-down. How would you estimate the setup and running costs of this alternative (Table 5 – E)?

Please provide a detailed explanation of the reasons for your scores.

5. Asset-backed securities as a new reference entity

The rapid development of asset-backed securities (ABS) has fuelled a strong growth in CDS on ABS in recent years. To improve the monitoring of this new market segment, the WG proposes adding a subcategory of ABS under portfolio or structured products. This new item would include pure ABS, mortgage-backed securities and collateralised debt obligations as documented in the ISDA templates for CDS on ABS. Is this new item feasible? How costly would this be (on a scale of 1 to 3, in terms of both setup and running)?

Please provide a detailed explanation of the reasons for your scores.

6. Net market values

A new field for net market values alongside the existing gross market values has been added to the existing template. There are several valuation methods that could be used to derive net values

As a measure of counterparty credit exposure, central bank staff find the definition of the BIS semiannual OTC derivatives statistics particularly useful. The BIS guideline calls for the market value of claims and liabilities to be netted when they are claims on and liabilities to the same counterparty and both the reporting institution and the counterparty have a valid, legally enforceable netting agreement. Are such market values already available in your systems? If not, would it be possible to apply this definition? If so, on a scale of 1 to 3, how costly would it be (in terms of both setup and running)?

Please provide a detailed explanation of the reasons for your scores. Alternatively, could you suggest other ways of reporting net market values?

Central bank analysts are also interested in gauging the credit risk of particular reference entities that are of systemic importance (eg, banks and emerging market sovereigns). In this regard, the DTCC definition of netting the sum of the net protection bought by net buyers with respect to any single reference entity will be a useful indicator. Would it be possible to apply this definition? If so, on a scale of 1 to 3, how costly would it be (in terms of both setup and running)?

Please provide a detailed explanation of the reasons for your scores.

7. Other credit derivatives

In addition to CDS statistics, the WG also proposed including a simple breakdown involving two items – the total amount bought and total amount sold – for four other credit derivatives

instruments: synthetic CDOs, forwards, swaps and OTC options. On a scale of 1 to 3, how would you estimate the setup and running costs of reporting these statistics?

Please provide a detailed explanation of the reasons for your scores.

8. Timeliness and frequency

Would you be able to increase the timeliness of reporting CDS data? Given the cost constraints, what data items would you consider giving up in exchange for more timely data?

Annex 4: Summary of responses to the questionnaires

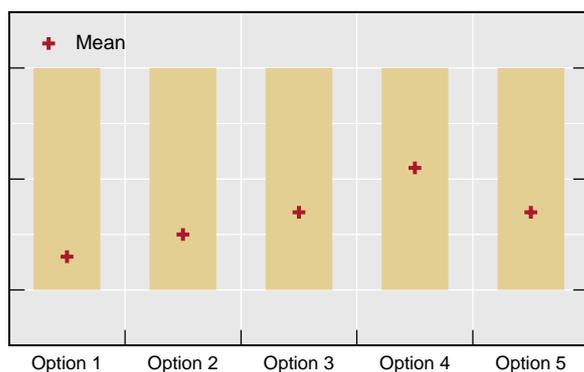
1. Questionnaire for users

Graph A4.1

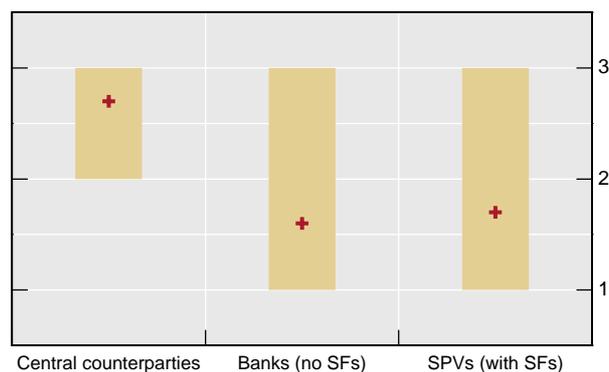
Usefulness of proposed changes

(1 = of limited importance; 2 = fairly important; 3=crucial)

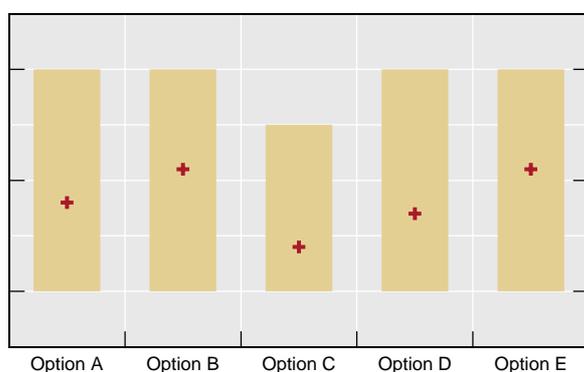
Geographical breakdown¹



Counterparty breakdown²



Index CDS³



Asset-backed securities and other credit derivatives



Shaded area denotes range of scores.

¹ Option 1 = domestic versus foreign counterparty breakdown; option 2 = domestic versus foreign counterparty and reference entity breakdown; option 3 = regional counterparty breakdown; option 4 = regional counterparty breakdown and domestic versus foreign reference entity breakdown; option 5 = regional counterparty and reference entity breakdown. ² SF = securities firm. ³ Option A = only the total notional amounts bought and sold for all index products; option B = total notional amounts bought and sold for all counterparties; option C = total notional amounts bought and sold for all reference entities; option D = all counterparty and reference entity breakdowns of index CDS; option E = index CDS as a new reference entity sector.

Source: Based on the responses from the Reserve Bank of Australia, ECB, Bank of France, Deutsche Bundesbank, Bank of Italy, Bank of Japan, Bank of Korea, Bank of Spain, Swiss National Bank, Federal Reserve Board, IMF and BIS.

2. Questionnaire for reporters

Graph A4.2a

Expected costs of potential enhancements

(1 = low-cost; 2 = fairly costly; 3 = expensive)

Geographical breakdown

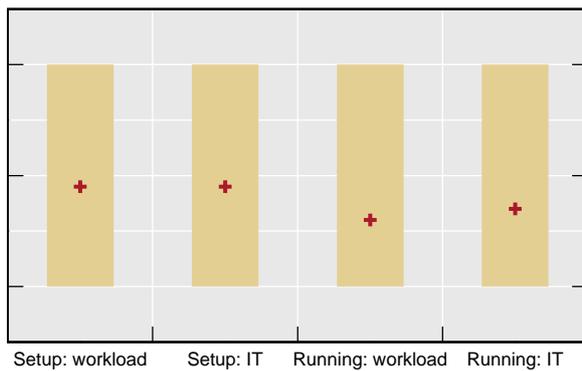
Option 1: domestic versus foreign counterparty split



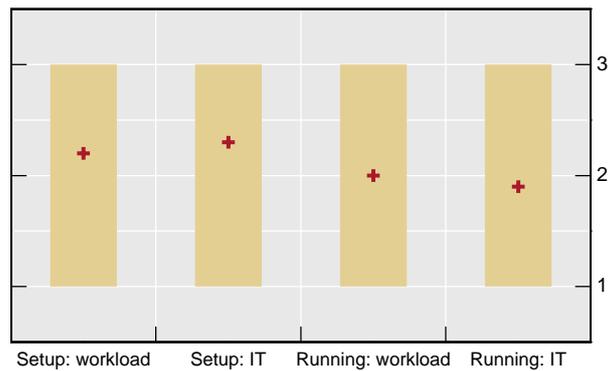
Option 2: domestic versus foreign counterparty and reference entity split



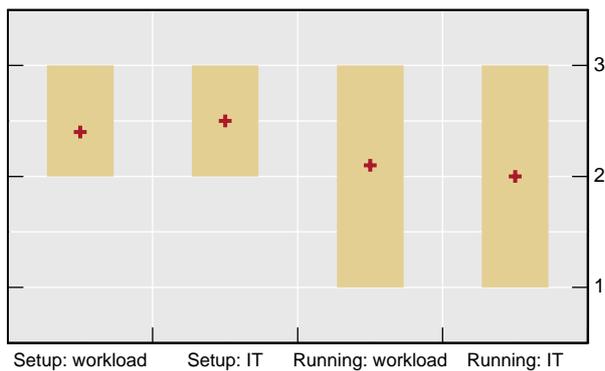
Option 3: regional counterparty split



Option 4: regional counterparty breakdown and domestic versus foreign reference entity split



Option 5: regional counterparty and reference entity split



Shaded area denotes range of scores.

Source: Based on reporter responses collected by the Reserve Bank of Australia, ECB, Bank of France, Deutsche Bundesbank, Bank of Italy, Bank of Japan, Bank of Korea, Bank of Spain, Swiss National Bank, Bank of England and Federal Reserve Board.

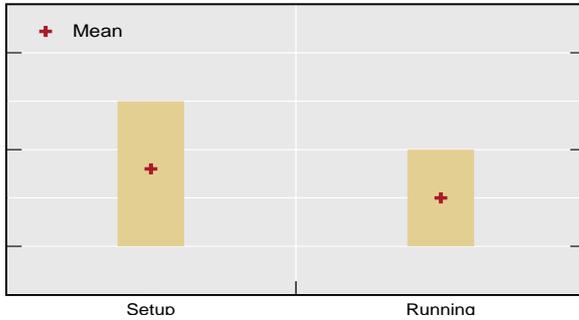
Graph A4.2b

Expected costs of potential enhancements

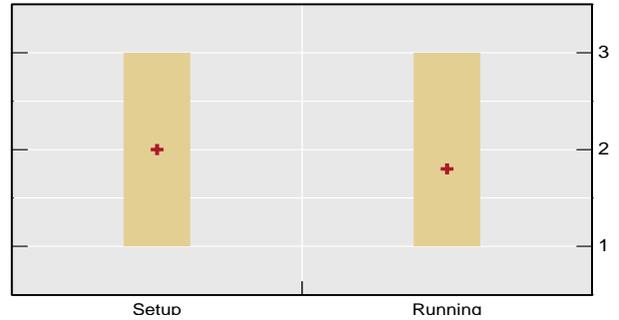
(1 = low-cost; 2 = fairly costly; 3 = expensive)

Counterparty breakdown

Central counterparties as a new field



Separating securities firms from banks



Shaded area denotes range of scores.

Source: Based on reporter responses collected by the Reserve Bank of Australia, ECB, Bank of France, Deutsche Bundesbank, Bank of Italy, Bank of Japan, Bank of Korea, Bank of Spain, Swiss National Bank, Bank of England and Federal Reserve Board.

Graph A4.2c

Expected costs of potential enhancements

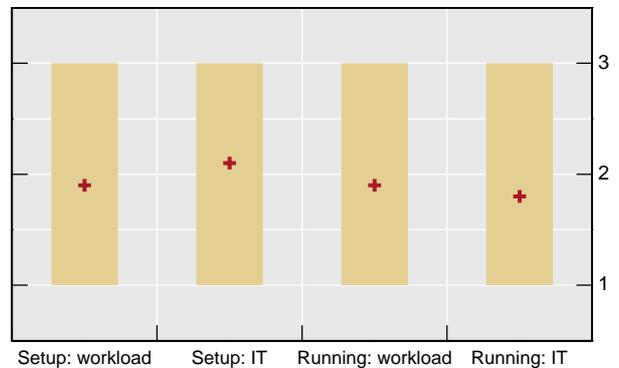
(1 = low-cost; 2 = fairly costly; 3 = expensive)

Index CDS

Option A: total bought and sold only



Option B: total bought and sold for all counterparties



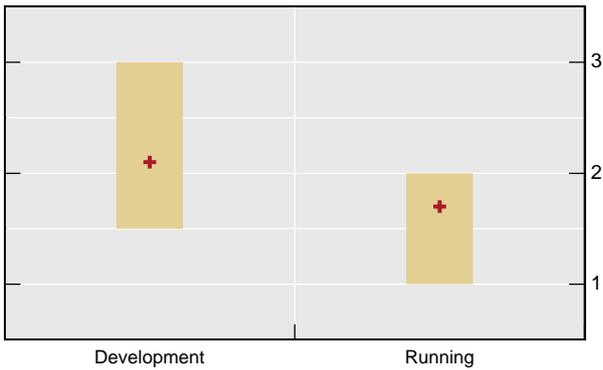
Option C: total bought and sold for all reference entities



Option D: total bought and sold for all counterparty and reference entities



Option E: index CDS as a new reference entity sector



Shaded area denotes range of scores.

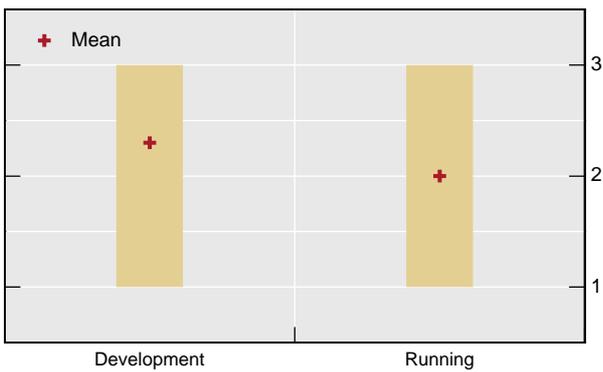
Source: Based on reporter responses collected by the Reserve Bank of Australia, ECB, Bank of France, Deutsche Bundesbank, Bank of Italy, Bank of Japan, Bank of Korea, Bank of Spain, Swiss National Bank, Bank of England and Federal Reserve Board.

Graph A4.2d

Expected costs of potential enhancements

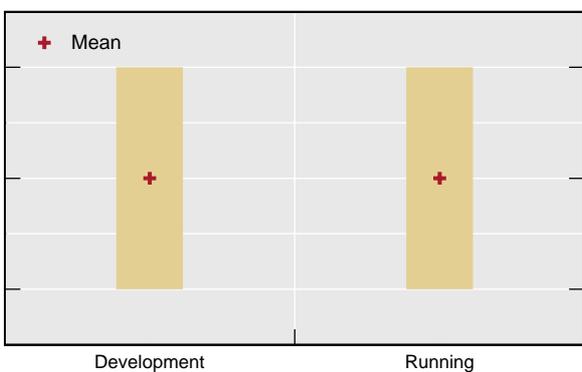
(1 = low-cost; 2 = fairly costly; 3 = expensive)

ABS as a new reference entity

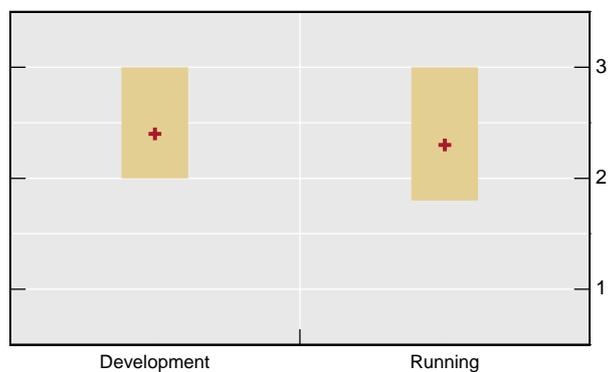


Net market values

BIS definition



DTCC definition



Shaded area denotes range of scores.

Source: Based on reporter responses collected by the Reserve Bank of Australia, ECB, Bank of France, Deutsche Bundesbank, Bank of Italy, Bank of Japan, Bank of Korea, Bank of Spain, Swiss National Bank, Bank of England and Federal Reserve Board.

Graph A4.2e

Expected costs of potential enhancements

(1 = low-cost; 2 = fairly costly; 3 = expensive)

Other credit derivatives

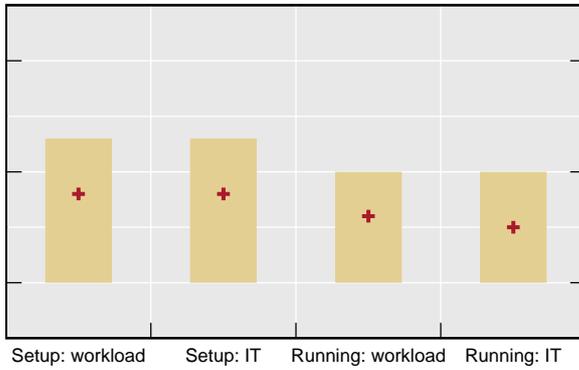
Synthetic CDOs



Forwards



Swaps



OTC options



Shaded area denotes range of scores.

Source: Based on reporter responses collected by the Reserve Bank of Australia, ECB, Bank of France, Deutsche Bundesbank, Bank of Italy, Bank of Japan, Bank of Korea, Bank of Spain, Swiss National Bank, Bank of England and Federal Reserve Board.

3. Average usefulness score versus estimated costs

	Setup costs		Running costs		Usefulness
	Workload	IT	Workload	IT	
Geographical breakdown					
Option 1	1.5	1.5	1.3	1.3	1.3
Option 2	2.1	2.3	1.8	1.6	1.5
Option 3	1.9	1.9	1.6	1.7	1.7
Option 4	2.2	2.3	2.0	1.9	2.1
Option 5	2.4	2.5	2.1	2.0	1.7
Counterparty breakdown					
Central counterparties	1.8		1.5		2.7
Separating SFs from banks	2.0		1.8		1.6
Index CDS					
Option A	1.6	1.6	1.3	1.2	1.8
Option B	1.9	2.1	1.9	1.8	2.1
Option C	2.4	2.4	2.1	2.0	1.4
Option D	2.5	2.6	2.2	2.1	1.7
Option E	2.1		1.7		2.1
ABS	2.3		2.0		2.2
Other credit derivatives					
Synthetic CDOs	2.1	2.1	1.8	1.7	2.2
Forwards	2.0	2.0	1.8	1.7	1.7
Swaps	1.8	1.8	1.6	1.5	1.7
OTC options	1.9	1.9	1.7	1.6	1.8

Annex 5: DTCC data

The weekly DTCC data are published in three broad categories: (i) data on all positions as of specified date (see table below); (ii) information on the change in weekly activity; and (iii) data on all transaction activity, such as new trades, assignments, and terminations that were confirmed within the specified week reflecting either an increase or decrease in overall positions.

Table	Description
1	All credit products by customer type and breakout by product type, gross notional amounts outstanding Customer type: dealer and non-dealer/customer Product type: all credit default single names; all credit default index; and all credit default tranche
2 (3)	Single-name reference entity type by buyer (seller) of protection, gross notional amounts outstanding Customer type: dealer and non-dealer/customer Reference entity: corporate; sovereign, RMBS; CMBS; CDS on loans and other
4 (5)	On-the-run/off-the-run index / index tranche by buyer (seller) of protection, gross notional amounts outstanding Customer type: dealer and non-dealer/customer
6	Top 1,000 reference entities, gross and net notional amounts outstanding
7	All indices and index tranches, gross and net notional amounts outstanding
8	Aggregate single-name contracts by year of scheduled termination date, gross notional amounts outstanding for 2009 to 2056

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