

Special Report	Régie de l'énergie DOSSIER: R-3492-2002 DÉPOSÉE EN AUDIENCE	Global Credit Derivatives: Risk Management or Risk?
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■ **Summary**

To provide investors and other market participants with greater disclosure and transparency, late last year Fitch Ratings launched its first ever credit derivative survey, primarily focusing on those Fitch-rated entities acting as "sellers" of protection. The credit derivatives market has experienced explosive growth and is expected to reach \$4 trillion notional by 2004 (according to the British Bankers' Association).

Banks appear to have been net beneficiaries of this risk transfer product, but risk takers and concentrations of risk are less readily apparent. Fitch recognizes that the credit derivatives market has the potential to benefit the global financial system by promoting greater diversification and diffusion of risk. That said, the market's rapid expansion, immaturity, and relative lack of transparency present unique risks that require closer scrutiny, and this was a key consideration in Fitch's decision to pursue greater and more consistent disclosure through this survey.

■ **Overview of Survey Results**

Fitch's views of the survey results are reflected in the following key points:

- The credit derivatives market's rapid expansion, immaturity, and relative lack of transparency present unique risks. This was a key consideration in Fitch's decision to pursue greater and more consistent disclosure through a focused survey.
- Fitch surveyed approximately 200 banks, insurance companies, reinsurers, financial guarantors, and broker-dealers located around the world, focusing primarily on those "selling protection" (buying credit risk) through credit derivatives and collateralized debt obligations (CDOs). To date, 147 institutions have responded, with \$1.3 trillion of exposure.
- Although the survey process has taken longer than anticipated, Fitch chose to report its results to date in response to the market's focus on credit derivatives and the relative paucity of hard data. Fitch will follow up with those institutions that have reported large exposures to better understand the degree of risk assumed. Furthermore, certain companies were unable, or in certain cases hesitant, to fully disclose this information in time for this report. Poor response quality and timeliness may be a reflection of shortfalls in management information systems (MIS) or may reflect more fundamental credit issues. In the absence of adequate disclosure, some ratings actions, including withdrawals, may result for a small number of companies.
- The depth and quality of responses received ranged from excellent to less than satisfactory. Of the 147 respondents, approximately 76% provided superior or good responses. Furthermore, approximately 18% were able to provide satisfactory answers. Responses from 6% of the companies were deficient, in Fitch's judgment. Deficiencies in

response quality and/or timeliness in and of themselves may or may not be problematic, depending on the root causes. Certain institutions may be more diligent and detailed than others. That said, response quality may also mirror a company's degree of sophistication and MIS infrastructure supporting its credit derivative activities.

Financial reporting and disclosure on credit derivatives vary greatly by sector, and comparability is further obscured by differences in international reporting standards. On balance, this makes it difficult for investors to make fully informed decisions. As a result, Fitch supports the general market sentiment and calls from various regulatory bodies for improved financial disclosure. Fitch draws a number of parallels to the burgeoning interest rate derivative market of the late 1980s and early 1990s. Despite opportunities afforded for enhanced efficiency and risk mitigation, a number of financial institutions and corporates experienced sizable and previously unrecognized exposures following a shift in U.S. interest rate policy. As a result, regulatory and accounting changes, including the adoption of FAS 133, were implemented.

By far the largest seller of protection was the global insurance sector, with a net position (after deducting protection bought) of \$283 billion, reflecting the expansion of the industry into the credit markets in recent years. Even after excluding the financial guarantors, the insurance industry is still significantly invested in credit derivatives, with a net sold position of \$117.3 billion.

The largest sellers of credit protection (net basis) were financial guarantors. In aggregate, financial guarantors sold \$222 billion of protection (\$166 billion credit derivatives and \$56 billion CDOs). Exposures rated 'BBB' and lower, primarily due to guarantees on synthetic and cash CDOs, represented 136% of qualified statutory capital.

The global banking industry was a significant buyer of protection, with a reported net position of \$97 billion protection purchased. In other words, the global banking system, in aggregate, transferred nearly \$100 billion of credit risk outside the industry. Growth of the credit derivatives market, therefore, significantly increased liquidity in the secondary credit market and allowed the efficient transfer of risk to other sectors that lacked the ability to originate credit.

Totals for the banking industry may be misleading. Although the banking sector was a heavy buyer of protection on a consolidated basis, protection bought was relatively concentrated by institution and country. On the whole, large, more sophisticated banks are net buyers of protection, whereas smaller regional banks may use credit derivatives and CDOs as an additional channel for originating credit. For example, large European banks are net buyers of protection, whereas regional banks are net sellers of protection.

Fitch recently completed an evaluation of CDO exposure in Fitch-rated asset-backed commercial paper (ABCP) programs. As of Sept. 30, 2002, more than \$38.7 billion of outstanding ABCP and medium-term notes (MTNs) rated by Fitch were secured by CDOs out of 50 programs that invested in CDOs. The 10 largest CDO investing conduits accounted for over one-half of the total CDO investments. Of the CDOs identified, 78.31% were rated 'AAA', 90.76% were rated 'AA-' or higher, and 99.55% were rated at least investment grade ('BBB-' or higher).

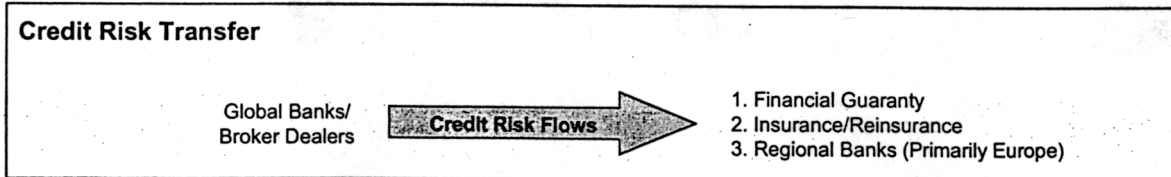
Counterparty risk is concentrated among the top 10 global banks and broker dealers. The top three counterparties were JPMorgan Chase ('A+', Negative Rating Outlook), Merrill Lynch ('AA-', Negative Rating Outlook), and Deutsche Bank ('AA-', Negative Rating Outlook).

The five most commonly cited reference entities (obligors whose credit risk has been transferred via credit derivatives) were General Motors, Daimler Chrysler, Ford, General Electric, and France Telecom. Clearly, these are entities that are widely traded and closely watched by the market.

Credit events are concentrated within a limited universe of actively traded, "fallen angel" credits. The top three most common credit events were WorldCom, Enron, and Marconi.

Of the \$1.3 trillion of notional gross sold positions (including CDOs), 62% was reported by U.S. institutions, with the vast majority of the remaining balance originating from Europe.

Responses to date were not as robust for the reinsurance sector, as the number of companies participating was limited, despite the fact that reinsurance companies have been notable participants in this market. A handful of companies that have not responded are insurance and reinsurance companies reported to be major players in this market.



Hedge funds, in particular, are not represented in this study, which is based on rated financial institutions. Increasingly, hedge funds are one of the fastest growing and more influential segments of this market, albeit as protection buyers for the most part. Were this trend to continue, Fitch believes it might heighten concerns related to poor disclosure and counterparty risk.

Fitch will continue its work to collect all appropriate credit information from companies to complete the rating analysis within the next 60–90 days. At that point, Fitch will meet with global regulators to share the findings and encourage greater disclosure of all credit derivative activity, including nonregulated companies such as hedge funds.

■ State of the Survey

Fitch directly surveyed approximately 200 banks, insurance companies, reinsurers, financial guarantors, and broker-dealers located in the U.S., Canada, Europe, and, to a more limited extent, Asia. The survey focuses primarily on credit derivative activities that involve “selling protection” (buying credit risk) since this type of derivative activity creates the real potential for off balance sheet exposures and unintended concentrations of credit risk.

Based on responses from 147 companies, this “state of the survey” report provides a preliminary snapshot of Fitch’s global findings to date. Of the respondents, 76% provided information that was of good or excellent quality. However, a limited number of companies had not fully responded to the survey as of the date of this report. A few companies were reluctant to fully disclose this type of detailed information on their credit derivative activities. These were, however, the minority. For the most part, those companies that had not fully responded found it a challenging process to provide this information in a timely manner. Some companies found it difficult to break out gross and net credit derivative positions across product areas, particularly if MIS were designed to show net exposures across cash and derivative portfolios. In other cases, Fitch suspects

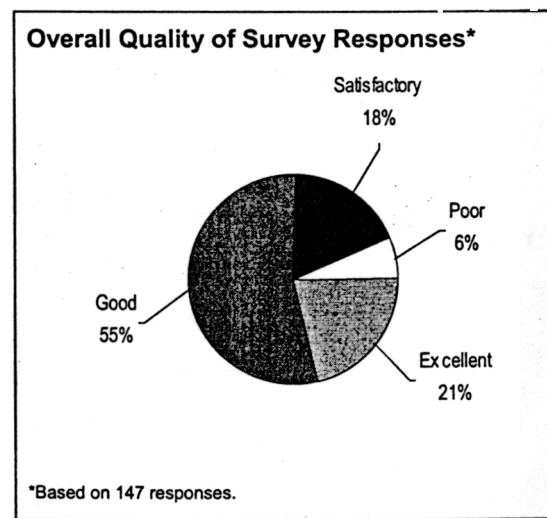
that MIS may not be fully developed, particularly for this product, which has grown explosively and is used in multiple business units and product areas.

Fitch will continue to hold discussions with those institutions that have not provided complete responses to the survey. In some cases, a meeting with a team of Fitch financial institutions and credit derivative specialists may provide the best forum for accessing this information, particularly for those companies with a large, complex presence in this market.

■ Global Findings

Response Quality

While Fitch frequently requests information on derivative activities and other areas of risk concentration, the survey was designed specifically to gauge credit derivative usage and exposures by instrument and by evidence of risk aggregation (protection sold) arising from holdings of single-name credit default swaps (CDSs), portfolio credit derivatives, credit-linked notes (CLNs), total rate of return swaps, and CDOs, and, as a by-product, to provide insights into the quality of information systems and management reporting capabilities.



Interestingly, there was a wide range of interpretations and responses to the survey questions. For example, something as seemingly straightforward as gross and net "sold" exposure is defined differently depending on the institution. Depending on a company's convention, gross positions may just reflect the notional value of sold credit derivatives, whereas others reported "gross" as the absolute value of both sold and bought positions. Others characterized their exposures based on the net marked-to-market (MTM) exposure, taking into consideration other cash and derivative positions, or based on the "value of default." This is not totally unexpected, particularly considering the diversity of respondents and the market's relative immaturity. Furthermore, responses vary depending on whether the institution is focused on trading or long-term investments. Still, lack of standardization and consistent disclosure, particularly for institutions with similar business profiles, does make it difficult for investors to consistently assess credit derivative risk from company to company.

Financial Guaranty

For the 10 financial guaranty companies surveyed, Fitch received excellent or good responses overall. Reflecting their central role in the development of this market, for the most part MIS capabilities are solid and allow aggregation of CDS and CDO exposures by vintage, transaction type, initial and current ratings, and reference entity.

Insurance and Reinsurance

The majority of insurance/reinsurance companies were able to provide satisfactory responses that

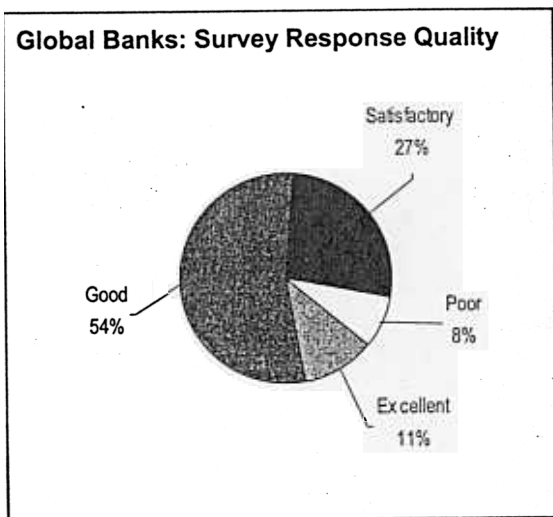
included detailed summaries of CDO holdings and credit derivative positions. While the level and sophistication of reporting was not always state of the art, overall it appeared to be acceptable relative to the degree of participation in this market. Approximately 3% provided responses that, in Fitch's judgment, were less than adequate.

In particular, Fitch's results were not as robust for the reinsurance sector, as the number of companies participating was limited, despite the fact that reinsurance companies have been notable participants in this market. A handful of companies that have not responded are insurance and reinsurance companies that are major players in this market, and Fitch will continue to seek greater disclosure from these companies.

Global Banks and Broker Dealers

The scope of Fitch's survey was intended to be on an enterprisewide basis and, therefore, encompass credit derivative usage across banking and trading books. Fitch surveyed 121 banks and broker dealers. A total of 89 global banks and broker dealers responded to Fitch's survey as of the date of this report, resulting in a 74% response rate. As measured by gross sold positions, the top 30 global banks and broker dealers held approximately 98% of positions for this sector at Sept. 30, 2002. Significantly, 32 institutions reported no credit derivative exposures (U.S. and Europe), but these were primarily smaller, regionally focused banks.

In Europe, Fitch surveyed 85 banks, of which 58 were able to respond as of the date of this report



(68% response rate). Fitch believes that its survey covers the majority of European banks that maintain a meaningful presence in this market.

Although there were notable differences in the depth and detail of responses, the quality overall was good, particularly for the leading global banks and broker dealers. The most active market participants were able to report in detail gross and net positions by product, concentrations by reference entity, counterparties, and credit event experiences. On a less sanguine note, however, it took the banks considerable time and effort to assemble the information on an enterprisewide basis across various geographic and product areas. Furthermore, a number of institutions had not provided sufficiently detailed information on this subject as of the date of this report.

Management Information Systems

The ability to provide detailed credit derivative information reflects positively on the quality and depth of an institution's infrastructure and MIS capabilities. While any conclusions in this regard must be tentative at best, those companies that provided solid responses showed an ability to report aggregate positions by instrument and capture obligor and counterparty concentrations on an enterprisewide basis. This is particularly important for the larger, more diverse organizations where credit derivatives may be actively used across a number of product areas, business lines, and legal entities.

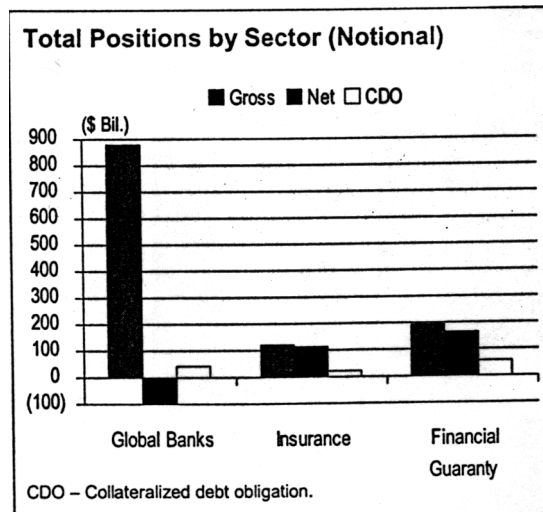
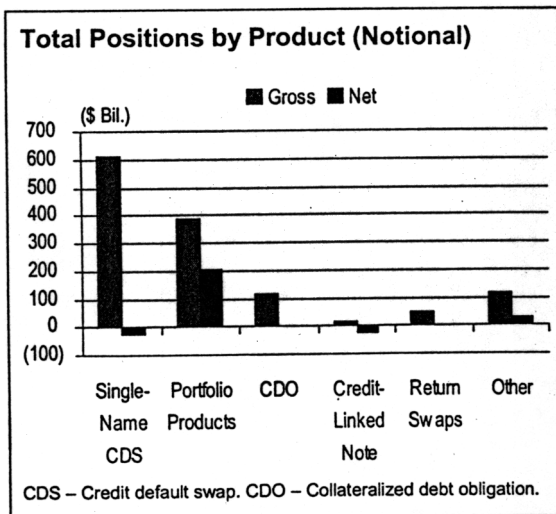
Poor response quality may be due to the institution's low or immaterial volume of activity in this market.

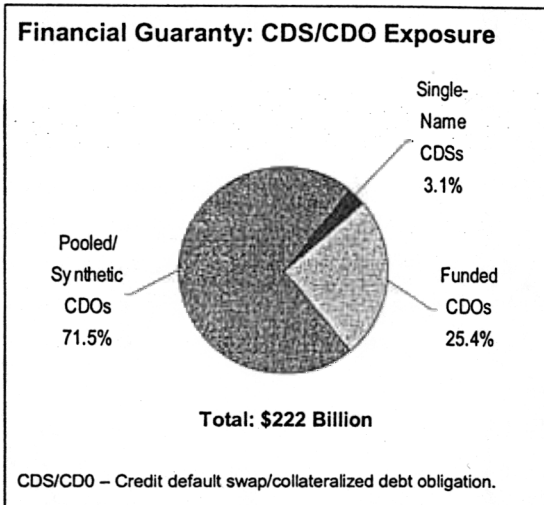
Also, certain companies, perhaps, were unable to devote resources due to year-end financial reporting pressures. That said, inadequacy of responses, particularly for companies with a significant presence in this market, raises relevant questions about whether MIS have kept pace with the level of credit derivative usage. Fitch anticipates additional follow-up with these companies to better understand their abilities to measure and manage credit derivative exposures.

Market Breakdown

On a notional basis, institutions surveyed by Fitch reported total gross sold positions in credit derivatives of \$1.3 trillion (including \$115 billion of CDOs, discussed in detail below). Of this amount, \$728 billion, or 61%, originated from U.S. institutions, whereas the balance represented European banks and insurance companies. On a net basis, total sold positions were \$187 billion. Fitch's survey excluded asset swaps from this total; if asset swaps were included, the gross balances would increase substantially. By focusing on rated entities, Fitch's survey does not reflect the full range of market participants. In particular, hedge funds have become an influential part of this market, as protection buyers and sellers, and a significant number of Asian financial institutions also are active as protection sellers.

Credit derivative usage was overwhelmingly skewed toward single-name credit default, which comprised 47% of the total. Synthetic and cash CDOs, as well as other portfolio credit default products, comprised 39% of the total. Total return swaps and credit-linked



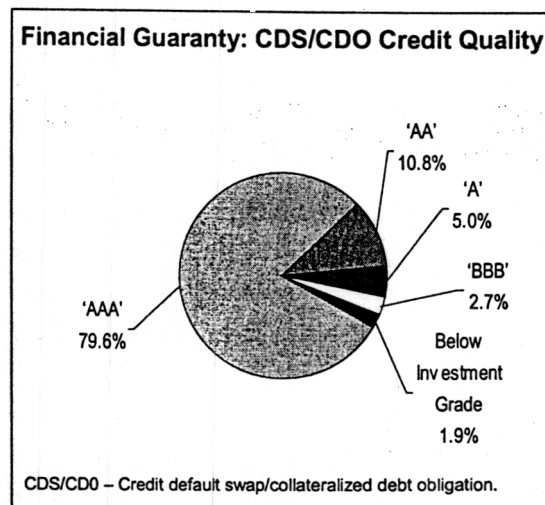


notes (CLNs) represented 4% and 1%, respectively. (see *Total Positions by Product [Notional] chart, page 5*) The top 10 entities comprised 60% of total gross sold positions, and the top 25 institutions represented 92% of the surveyed market. The market is heavily weighted toward shorter duration contracts (with 87% of five years or less), although respondents in aggregate did report that greater than 20% of outstandings exposures were beyond five years in term (see *Total Positions by Sector [Notional] chart, page 5*).

Financial Guaranty

Bond insurers are major participants in this market as sellers of protection through portfolio CDSs (synthetic CDOs) and, to a limited extent, single-name CDSs, as well as by providing financial guaranty insurance (wraps) on funded CDO transactions. The bond insurers' sold credit derivative and CDO exposure was \$222 billion, or 17% of the survey total. CDSs represented \$166 billion, whereas the par value of insured CDOs was \$56 billion.

The bond insurers' exposure to credit derivatives and CDOs grew from virtually nothing in the mid-1990s to an average of 18% of net par in force in 2002. The majority of the bond insurers' sold exposure is to highly rated synthetic CDSs that reference corporate and structured finance assets. That said, a sizable portion of their exposures represents lower rated transactions, particularly from 1997–1999 vintages that have experienced significant downgrades. At Sept. 30, 2002, the ratings breakdown for the insured portfolio was distributed as follows: 'AAA' (79%); 'AA' (11%); 'A' (5%); 'BBB' (3%); and below investment grade (2%). Transactions rated 'BBB' and

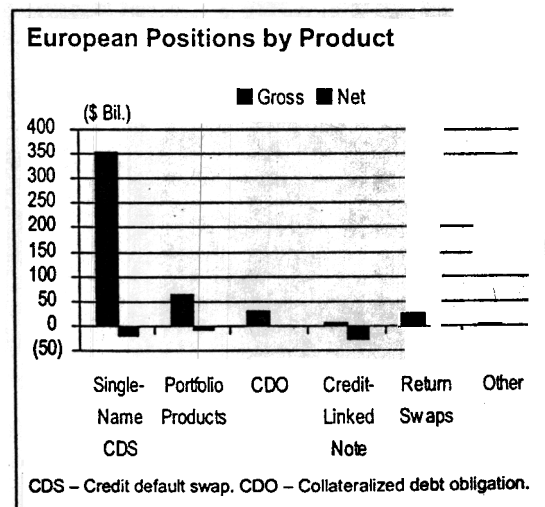


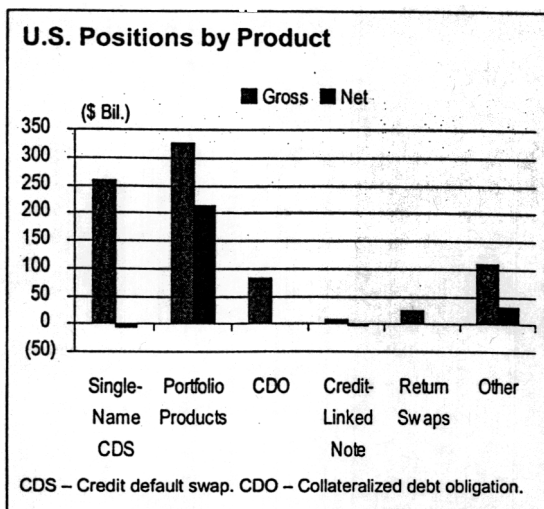
below investment grade represented 85% and 51%, respectively, of the financial guarantors' qualified statutory capital. Total CDS and CDO net par in force was 17 times the \$13.1 billion qualified statutory capital.

Insurance and Reinsurance

Insurance companies reported \$141 billion of CDOs and credit derivatives, of which 3.3%, or \$4.7 billion, was rated below investment grade. Synthetic and cash-funded CDOs comprised 93% of the total. U.S. and European insurance companies have been increasingly active in this market, investing in CDOs and selling protection through CLNs.

The U.S. insurance sector had net sold positions of \$105 billion, which represented 42 responses from





companies that were selling protection in some form. Similarly, for Europe and Asia, the insurance industry was a net seller of protection, with positions ranging widely between institutions. As in the U.S., these companies do not appear to be active as protection buyers.

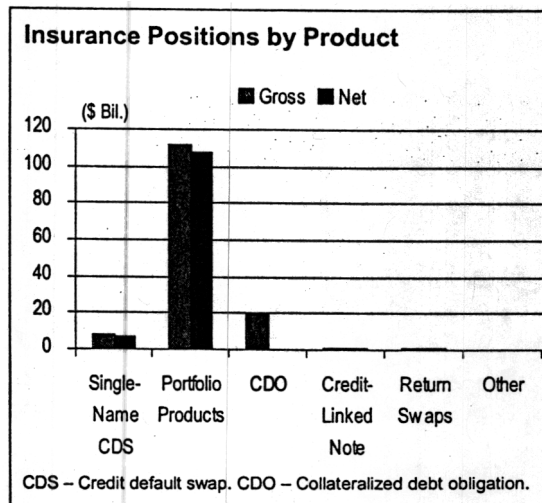
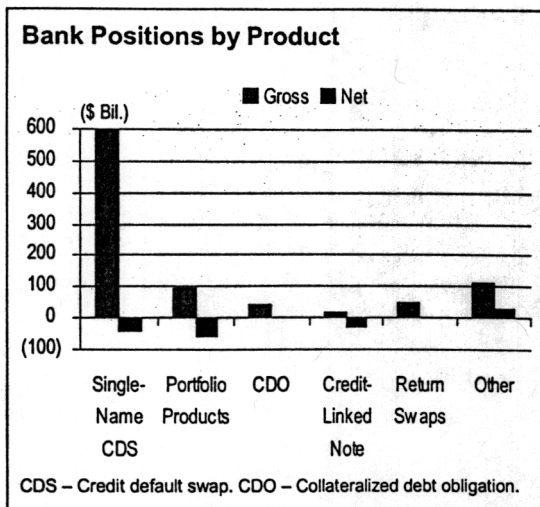
Insurance companies' growing participation in this market can be attributed to several factors. First, corporate credit risk has been viewed by insurance companies as uncorrelated to other underwritten risks and, therefore, offers an opportunity to create greater diversification. The rapid growth of the credit derivatives market in recent years has allowed insurance and reinsurance companies to diversify through alternative investments in credit risk. Second, CDOs and credit derivatives presented opportunities to exploit a "yield premium" relative to other comparably rated corporate debt and generate higher returns on statutory risk-based capital. Finally, for certain more highly rated companies, there was a natural opportunity to exploit their credit infrastructure and financial strength as a credit derivative counterparty.

Insurance companies are taking advantage of changes in the regulatory frameworks that allow purchases of credit derivatives through CLNs. Regulated insurance operating companies participate in this market as sellers of protection through investments in so-called "replication transactions" in which a funded CLN is constructed from an embedded CDS and highly rated collateral. Additionally, a number of companies engage in credit derivatives through affiliated financial products companies or captive subsidiaries domiciled in off-shore financial centers, such as

Bermuda. The latter are often known as "transformers" or "protected cell companies" and act as intermediaries by selling protection to the market via credit derivatives and hedging their exposures from the insurance sponsor via a guaranty or surety agreement under virtually the same conditions and terms. These may be unconsolidated special purpose companies to shield the insurance parent company from the profit and loss (P&L) volatility associated with MTM adjustments. As a result, the near-term impact of credit derivative activities may be less apparent than for those companies that apply MTM accounting.

It is clear that the appetite of the insurance industry for credit risk and credit derivatives is changing in response to an unprecedented level of defaults that has resulted in worse than anticipated performance for CDOs and credit derivatives. Moreover, regulators have raised concerns about the role of insurance companies — and reinsurance companies in particular — in these markets. Given the current adverse cycle, there have been recent indications of a strategic pullback by several insurance companies. Unfortunately, the low level of financial disclosure, particularly outside the U.S., makes it difficult to quantify the overall extent of these withdrawals and the likely financial implications. For example, Chubb has announced it is exploring "strategic alternatives" for its credit derivatives business, and Centre Re and Pacific Life are winding down their credit derivative efforts. Similarly, Swiss Re, one of the largest players in this market, announced in 2002 results that it had scaled back its portfolio of credit derivatives by 30% to CHF 25.3 billion, despite no announced cash losses. Swiss Re also announced a move away from a buy and hold strategy toward a more active trading strategy to more effectively manage its risk. Similarly, the financial guarantors have curtailed their growth aspirations in this market to manage overall exposures at current levels of about 15%–20% of total net par.

Fitch expects that the insurance sector's retrenchment will also be reflected in a more selective approach to credit risk and improvements in risk oversight. A more selective risk appetite and greater focus on quality by the insurance sector should act as a constraint on the growth of the credit derivatives market in the future. Given that the market expects to continue its rapid expansion (more than doubling by 2004), it perhaps begs the question of which entities will emerge as protection sellers to absorb the expected growth in volume. Despite a dearth of hard



data, hedge funds are reported to be an influential portion of the market, albeit largely as protection buyers to date. In Fitch's opinion, the growing role of hedge funds may have implications for issues such as disclosure, counterparty risk, and liquidity.

Banks and Broker Dealers

During the current credit downturn, North American banks generally have been net beneficiaries of the nascent credit derivatives market by transferring credit risk outside the system. As compared to the 1990–1991 recession, bank asset quality has, as a result, remained relatively solid in the face of record corporate defaults and a sharp deterioration in recovery values. For example, nonperforming commercial and industrial loans (excluding commercial real estate) at U.S. banks peaked at 4.4% in 1991, as compared with 2.9% for first-half 2002. By comparison, a total of \$215 billion of U.S. and European corporate bonds defaulted from 2000–2002, more than double the amount of all defaulting bonds from 1980–1999.

On the whole, banks and broker dealers do seem to be reaping the benefits of active portfolio credit risk management techniques utilizing credit derivatives, as well as loan syndications and other hedging techniques. On a net basis, banks had purchased \$97 billion of protection globally. On the whole, there is net outflow of credit risk from major banks to other sectors via credit derivatives.

Gross sold positions were also substantial, as many of the leading universal banks and broker dealers actively sell protection as part of customer-oriented trading platforms (capital markets) that make two-

way markets in credit derivatives. Additionally, protection selling may arise from portfolio hedging and rebalancing programs. Globally, banks surveyed by Fitch reported gross sold positions of \$880 billion, of which \$454 billion originated from Europe and Asia and \$426 billion from North America. As a number of institutions provided information showing trading (capital markets) and the banking book (hedging and portfolio management), it was clear that absolute position size is heavily driven by the level of trading activity for companies with large capitals markets platforms.

U.S. banks had overall net purchased positions of \$31 billion. European banks overall also are net buyers of credit derivative protection, with EUR 65 billion aggregate net purchased. Overall results, however, are somewhat misleading. In fact, only 30% of European banks active in the credit derivative market are net protection buyers, albeit with sizable positions. Protection buyers can be characterized generally as the larger, more sophisticated universal banks that have more readily embraced credit derivatives as a risk transference tool. Aggregated by country, the leading regions as net buyers of protection were Switzerland, France, the Netherlands, and Sweden. Slightly more than 20% of European banks reported net purchased positions in excess of EUR 1 billion and, in fact, a handful of banks recorded purchased positions in excess of EUR 5 billion.

Nearly three-quarters of regional banks from around Europe were net sellers of protection. Credit derivatives are used as an integral part of their revenue-generating business, enabling certain

Common Reference Entities*

1. General Motors/General Motors Acceptance Corp.
2. Daimler Chrysler
3. Ford Motor Corp./Ford Motor Credit Co.
4. General Electric/GECC
5. France Telecom
6. AOL Time Warner
7. Bank of America
8. Citigroup
9. Deutsche Bank
10. Philip Morris
11. Amgen
12. Deutsche Telecom
13. Household
14. JPMorgan Chase
15. Merrill Lynch
16. Walt Disney
17. BNP Paribas
18. Commerzbank
19. Province of Quebec
20. ABN Amro
21. AT&T Corp.
22. British Telecom
23. Greece
24. Italy
25. The Royal Bank of Scotland
26. Verizon
27. Vodafone Group
28. AIG
29. Banco Santander
30. Bulgaria
31. Caterpillar
32. Colombia
33. Dow Chemical
34. DuPont
35. Farmer Mac
36. Fifth Third Bancorp
37. Hewlett-Packard
38. IBM
39. IntesaBci
40. Japan

*Commonly quoted reference entities, based on frequency of occurrence.

European banks to diversify by gaining exposure to regions and sectors where they are underweighted. The level of activity varied significantly, with a large number of companies reporting small sold positions. This is a somewhat surprising finding since the conventional view is that banks are primarily net buyers of protection.

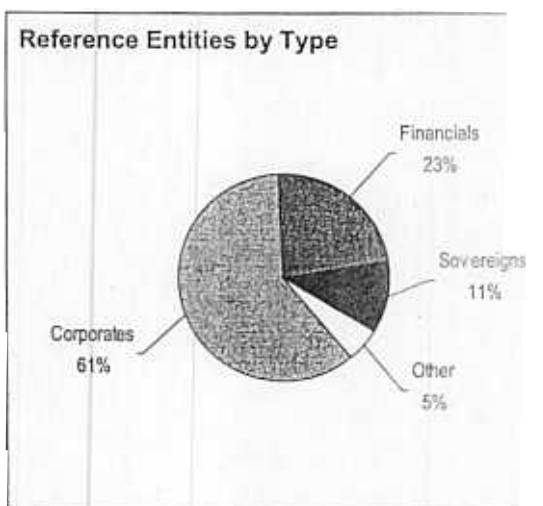
German banks, in particular, are in the aggregate net sellers of protection, with a total net sold position of EUR 11 billion. However, if only those German banks that are net sellers are aggregated (excluding those that are net protection buyers), the German banking system's net sold position reaches EUR 27 billion. This amount is heavily skewed by the presence of the German landesbanks, which are active as protection sellers. This is a reflection of the structural factors at play in the German banking

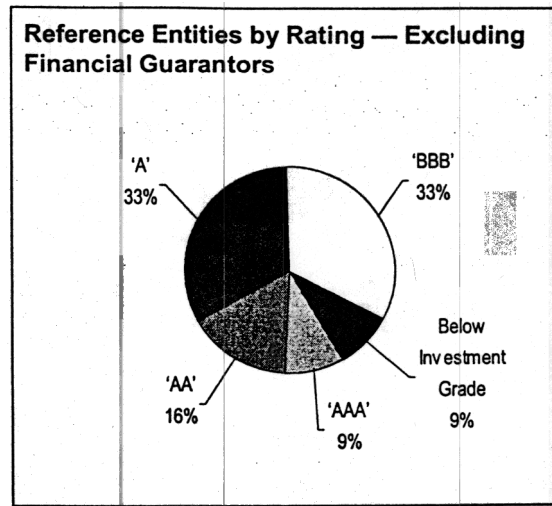
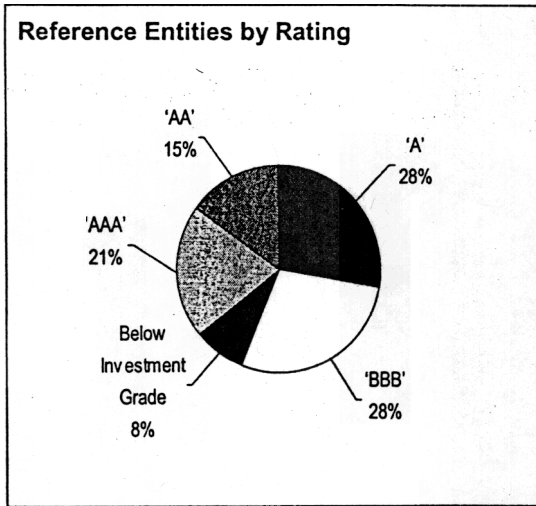
system. Low margins in the domestic market have compelled many German state-guaranteed banks to search for alternative sources of higher yielding assets, such as credit derivatives.

Reference Entities

In terms of credit quality, 93% of the \$1.2 trillion of global sold credit derivative exposures was to entities rated 'BBB' or higher, with 28% to 'BBB' rated entities, 28% to 'A', and 37% to 'AAA' and 'AA'. The balance of \$84 billion, or 7%, was to entities rated below investment grade ('BB+' or lower). These results are influenced, in part, by the financial guarantors' large notional exposures and appetite for 'AAA' and "super senior" risk tranches. Excluding the financial guarantors, the percentages shift to 9% below investment grade and 91% rated 'BBB' or higher (see charts on page 10). This reinforces the view that this is largely a market for larger, investment-grade credit at this stage. As the credit derivative market evolves and becomes more mature, credit derivatives are expected to extend to more illiquid, less creditworthy names.

Reference entity exposures are heavily concentrated in the corporate sector (61% of net sold positions) and, to a lesser extent, financial institutions (23%) and sovereigns (11%). The balance resulted primarily from European insurance companies with exposures to other asset classes, including structured securities, presumably via synthetic portfolio asset-backed securities structures. The top five most frequently cited reference entities were General Motors, Daimler Chrysler, Ford, General Electric, and France Telecom.





Not all companies reported exposures in aggregate for their largest reference entities. While financial guarantors may have significant exposures to single-name risk, in the aggregate, this risk is diversified across a number of transactions and is attenuated by risk attachment points at solid investment-grade levels.

For European banks, large U.S. automotive and industrial credits were significant reference entities — Ford, Daimler Chrysler, and General Electric — as were big incumbent telecom credits such as Deutsche Telekom, France Telecom, and British Telecom. These names are heavy issuers in the debt markets, and many institutions have exposures to these names.

Credit Events

Respondents reported a total of 108 credit events. Certain institutions experienced more than one credit event, and it is clear from the survey that credit event payments were concentrated in a relatively small number of the most widely traded entities. The most frequently cited names are shown in the table at right. Interestingly, the top 10 names accounted for 76 (70%) of the reported credit events. In fact, WorldCom and Enron resulted in 28 of the identified credit events. This reinforces the view that this market, despite its absolute size and the number of quoted reference entities, largely involves more widely traded investment-grade names and that credit events have been concentrated in so-called “fallen angel” credits.

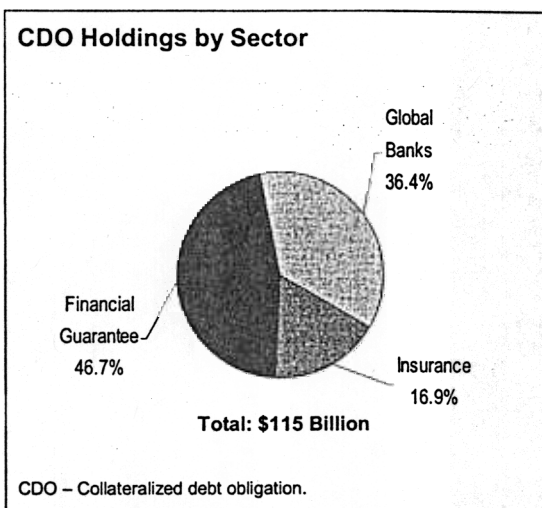
Overwhelmingly, settlement occurred through physical delivery, with few disputes as to the legitimacy of the credit event or other contractual

terms. In a few notable cases, such as Xerox and Railtrack, disputes were reported that resulted in a disagreement and delay in settlement. In the case of Xerox, a number of leading protection sellers have

Credit Events Experienced*

1. WorldCom
2. Enron
3. Marconi
4. Railtrack
5. Xerox
6. Argentina
7. Teleglobe
8. TXU
9. Pacific Gas & Electric
10. Swissair
11. FINOVA
12. Armstrong
13. AT&T Canada
14. Comdisco
15. NRG Energy
16. Solutia
17. Adelphia Comm
18. Birmingham Steel
19. Conseco
20. Ecuador
21. Equistar Chemicals LP
22. Genuity
23. Global Crossing
24. Kmart
25. Landis Group
26. Netia Holdings
27. Ogden Corp.
28. Owens Corning
29. Pacific Gas & Life
30. Social Edison
31. Southern California Edison
32. Toolex International
33. USG Corp.
34. Warnaco Group
35. XO Communications

*Commonly quoted credit events, based on frequency of occurrence.



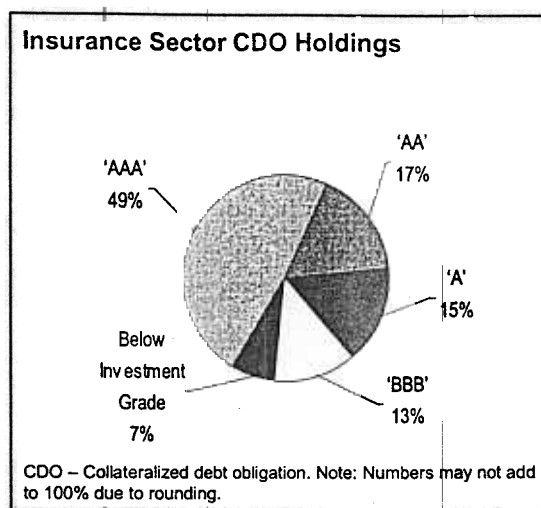
challenged whether a credit event was triggered under the “restructuring” clause following a restructuring of its loan agreement. This subject of “restructuring” remains a contentious issue for the market, and financial guarantors, in particular, have foresworn the use of this credit event going forward.

Given the critical role that universal banks and broker dealers play as market intermediaries, it was not surprising that these companies reported experiencing a significant number of credit events. In total, this sector experienced 61 credit events. Insurance companies reported 47 credit events. While financial guarantors experienced some credit events related to single-name CDSs, the majority of their exposures involve credit-enhanced portfolio products that, to date, have not resulted in payments despite credit events in the underlying portfolios.

CDO Holdings

Aggregate exposures to CDOs totaled \$115 billion. In light of CDOs’ negative ratings migration and the current default environment, investments in mezzanine and junior tranches of CDOs are particularly noteworthy. This is especially true in the case of high yield CDOs originated from 1997–1999 since these have experienced higher than expected credit deterioration and ratings migration.

Financial guarantors had the largest overall exposures, with \$56 billion of financial guarantee policies written against various types and vintages of CDOs. Of this amount, \$2.4 billion of the CDO exposures was rated below investment grade. As active fixed-income investors, insurance and reinsurance companies’ CDO holdings also were



significant, with \$19.2 billion of CDO investments. Fitch calculated that \$6.5 billion, or 28%, of insurance company CDO holdings were rated ‘BBB’ or lower. A number of insurance companies reported write-downs of CDO investments to reflect permanent impairment in carrying values.

Bank holdings in CDOs totaled \$42 billion, with more than three-quarters from European banks. In fact, 76% of European banks that responded to the survey indicated investments in cash CDOs with aggregate investments of EUR 30 billion. A substantial portion of this balance resides within banks in Germany, the Netherlands, Belgium, and Switzerland. While the majority of CDO investments were high quality, approximately 14% was invested in CDOs rated ‘BBB’ or below investment grade. Some deterioration in rating quality was evident in a number of cases. Additionally, banks are heavily invested in CDOs through sponsored ABCP vehicles (see Appendix 3, page 17).

Counterparties

Global banks and broker dealers consistently ranked as the top credit derivative counterparties among all respondents. The top 25 counterparties based on the 147 responses are shown in the table on page 12. The top three counterparties were JPMorgan Chase (‘A+’, Negative Rating Outlook), Merrill Lynch (‘AA-’, Negative Rating Outlook), and Deutsche Bank (‘AA-’, Negative Rating Outlook). Since banks and broker dealers are active credit derivative intermediaries, management of counterparty risk takes on particular importance. While these institutions generally are solid investment-grade risks, material nonperformance

Top Counterparties*

1. JPMorgan Chase & Co., Inc.
2. Merrill Lynch
3. Deutsche Bank
4. Morgan Stanley
5. Credit Suisse First Boston
6. Goldman Sachs
7. UBS
8. Citigroup
9. Lehman Brothers
10. Commerzbank
11. Toronto Dominion
12. Bank of America
13. Bear Stearns
14. BNP Paribas
15. Societe Generale
16. Royal Bank of Canada
17. Barclays
18. Dresdner Bank
19. The Royal Bank of Scotland
20. ABN Amro
21. Canadian Imperial Bank of Commerce
22. Rabobank
23. WestLB
24. AIG
25. Bank One Corp.

*Commonly quoted counterparties, based on frequency of occurrence.

due to financial deterioration (ability to pay) or contractual disputes (willingness to pay) is a potential risk.

Counterparty risk must be managed for any bilateral derivative contract; however, this may be particularly true for credit derivatives since counterparty performance may be more closely correlated to performance of the underlying credit derivative portfolio. While collateralization mechanisms may mitigate some of the risk, certain prominent counterparties such as the financial guarantors (discussed below) are unable or unwilling to post collateral.

Globally, the biggest concentration of sold protection, on a net basis, resides within the financial guaranty and reinsurance sectors. For a large percentage of these transactions, the counterparties were the same top names cited above. In Fitch's view, concentration of counterparty risk is a notable feature of this market. In many cases, the major market intermediaries are dependent on the performance of these primary sellers of protection — financial guarantors, reinsurance, and insurance companies — as well as the other major intermediaries.

Much of this exposure may be well "out of the money" due to credit enhancement, and many of the largest protection sellers are highly rated.

Nonetheless, in a time of severe market stress, capital calls for the major counterparties relative to available capital could be substantial and jeopardize ability to perform. Moreover, while major market intermediaries generally strive to manage counterparty risk through netting and collateral arrangements, some of the most significant participants, including the financial guarantors, generally have strong disincentives to post collateral as a precondition for protecting their credit ratings.

Disclosure

Despite recent moves to MTM accounting (discussed below), disclosure on credit derivatives is less than optimal under all the major accounting standards. Greater disclosure as to the methodology underlying the MTM calculation and key MTM value drivers, vis-à-vis realized and expected losses on the underlying assets, would prove useful. Also, MTM values, independent of more robust disclosure, may not appropriately reflect exposures under stressful default and correlation scenarios.

It is difficult to develop a true picture of an institution's consolidated exposure to credit risk, as protection bought or sold is recorded and broken down as separate balance sheet and footnote items, with inadequate detail provided. In addition, in terms of a company's credit loss experience, it is equally difficult to achieve an accurate assessment of losses from public statements, as gains or losses on credit derivative contracts are recorded as part of income. Also, transactions that qualify for fair value hedging treatment don't flow through the P&L at all. Consequently, disclosed provisioning figures are becoming less meaningful as they can understate actual credit losses in the case of an institution that has sold protection. Similarly, for an institution that has bought protection, current reporting standards may not show the financial benefit, scale, or magnitude of such transactions and, thus, do not give a meaningful insight into this increasingly important risk management tool.

As a proponent of greater financial disclosure as a means of improving market transparency in general, Fitch believes there is a clear need for financial institutions to substantially improve their disclosure practices concerning credit derivatives. The level of disclosure concerning credit derivatives, despite some improvement, is less than ideal. Financial statements, on the whole, currently provide little meaningful insight into an institution's use of this increasingly important credit risk management tool.

In tandem with greater disclosure vis-à-vis credit risk overall, companies should be encouraged to provide more insightful data related to credit derivatives and overall credit risk management. Various national and supranational regulatory bodies have made similar calls for enhanced transparency as it relates to the credit derivatives market.

Financial Reporting

The accounting standards dealing with credit derivatives have changed in recent years, with a move towards MTM practices, especially in the U.S. The applicability of MTM accounting for credit derivatives transactions, particularly as it relates to hedging and long-term investments, remains somewhat controversial. The accounting and disclosure rules governing credit derivatives are primarily covered by three standards: U.S. GAAP via FAS 133; U.K. GAAP by FRS 13; and internationally under IAS by IAS 39.

U.K. GAAP

In the U.K., there are a number of standards dealing with derivatives issued by various accounting bodies, of which the British Bankers Association 1996 Statements of Recommended Accounting Practice is the most relevant. Its main points include the following:

- Derivatives should be included on balance sheet as either "other assets" or "other liabilities," depending on whether the contract has a positive or negative replacement value, respectively.
- Nonhedging contracts should be MTM and carried at their fair value with changes running through the P&L as they occur.
- Hedging transactions, by contrast, should be measured on the same basis as the underlying instrument (i.e. either accrual or fair value accounted).
- Other relevant standards include separate policies dealing with contingent liabilities, as some contracts have characteristics similar to guarantees. Such instruments can be accounted for as contingent liabilities with changes in cash flows going through the P&L.

Consequently, the ability of institutions to classify some credit derivatives as hedges plus the lack of detailed rules concerning their measurement and effectiveness (unlike U.S. GAAP and IAS) means that, overall, the potential impact of credit derivatives on the P&L of U.K. companies is less than for their U.S. or IAS counterparts. However, this distinction may prove short-lived, as the European Commission

has stated that it wants all European Union-domiciled listed companies to prepare consolidated accounts on European Union-approved IAS basis by 2005.

In terms of disclosure, FRS 13 "Derivatives and Other Financial Instruments: Disclosure," is the dominant accounting standard. Under FRS 13, which applies to all listed companies (except insurance), institutions are required to give a detailed breakdown of how they use derivatives to manage risk. Disclosure basically takes two forms. First, it is numerical in the form of nominal amount and fair value of trading and nontrading contracts, as well as a breakdown by maturity. Second, it includes a descriptive summary detailing how credit derivatives are used and why. While such data is useful, it is only of limited value, as important information, such as sector and quality exposure, is missing, as well as data on hedges, claims experience, and P&L gains and losses. Similarly, the descriptive element is general anodyne, lacking any real detail. Insurance companies are subject to their own disclosure and accounting requirements, and in practice, disclosure is significantly weaker than that under FRS 13.

International Accounting

The rules concerning international accounting and disclosure standards for credit derivatives are set out in IAS 39 "Financial Instruments: Recognition and Measurement." Its basic tenets include the following:

- Derivatives should be MTM with resulting gains and losses taken to the P&L account.
- The only exception is derivatives used for hedging purposes. However, such exceptions are unusual, as there are onerous requirements for hedge accounting.
- If a contract does qualify as a hedge, accounting treatment depends on the underlying transaction and whether fair value or cash flow treatment is the most appropriate.
- In terms of the balance sheet, most derivative contracts appear as some form of trading or "other" assets or liabilities, depending on whether the contract has a positive or negative replacement value, respectively.
- Like U.K. GAAP, it is also possible that some credit derivatives will fall under IAS 37 "Provisions, Contingent Liabilities and Contingent Assets" if they are viewed as a qualifying guarantee. Such contracts are treated as either a contingent asset or liability with changes in associated cash flows going through

the P&L statement. However, such cases are very much the exception rather than the rule.

Under IAS 39 it is likely, therefore, that the vast majority of an entity's credit derivative contracts will be MTM. As such, the volatility of its P&L account will be higher than an equivalent company reporting under U.K. GAAP. However, unlike with U.S. GAAP, the macro hedges are permissible under IAS. This asymmetric treatment, for instance, MTM of an instrument held to hedge an asset held to maturity (i.e. accrual accounting), is a contentious topic. Furthermore, the debate will intensify, as there are proposals to value all financial instruments on an MTM basis, thus prohibiting any form of hedged accounting, possibly as early as 2005.

In terms of disclosure, the majority of information for derivatives is required under IAS 32 "Financial Instruments: Disclosure and Presentation." However, IAS 39 outlined further disclosure requirements. Specifically, it included a description of an institution's risk management objectives and policies, methods used for calculating fair values, detailed information on hedges, and significant P&L items resulting from the revaluation of financial instruments. In practice, this means that positive or negative values of derivative contracts are shown on balance sheet. As a footnote, credit derivatives are then broken out to show positive and negative values by maturity, as well as nominal amounts. Some show additional information, such as the value of derivative hedges. In summary, disclosure is more comprehensive than U.K. GAAP, being very similar to U.S. GAAP. However, both standards still suffer from a lack of specific detail when addressing the use of, and financial results from, credit derivatives.

U.S. GAAP

Of the three accounting regimes, the U.S. is probably the most complex and aggressive, with MTM accounting being the norm for derivatives. Specifically, FAS 133 "Accounting for Derivative Instruments and Hedging Activities," issued by the Financial Accounting Standards Board, outlines accounting and disclosure standards. It is applicable to all entities that report under U.S. GAAP. FAS 133's main policies include the following:

- All derivative transactions are classified as either an asset or a liability.
- Most are subsequently MTM with changes flowing through the P&L.
- The balance, which qualify for true hedge treatment, recognize MTM changes as an

adjustment to the "comprehensive income" section of equity.

- If a hedge does qualify, it can either be accounted for on a fair value or cash flow basis, depending on the underlying transaction.
- In terms of the balance sheet, most derivative contracts appear as an asset or liability, depending on whether the contract has a positive or negative replacement value, respectively.
- Like U.K. GAAP and IAS, it is possible for some forms of contract to be classified as a financial guarantee and, therefore, be excluded from FAS 133 and treated as a contingent liability. However, it is unlikely that many credit derivatives will qualify for such treatment.

From the above, it is clear that of the three accounting regimes, FAS 133 is by far the most strict with respect to MTM requirements. Specifically, the high hurdle rates to achieve hedge accounting and the low possibility of guarantee treatment mean that MTM is the norm for valuing credit derivatives in the U.S. Going forward, derivatives accounting may become even more complex and inflexible in the U.S., as FAS 133 is subject to ongoing review by the Securities and Exchange Commission. Indeed, it has already been amended once (by FAS 138).

Disclosure in the U.S. was significantly increased by FAS 133, as it required all derivatives to be recorded on balance sheet as either assets or liabilities at fair value. In addition, changes to the value of the effective portion of any recognized hedge are shown as a separate item in equity. In practice, many institutions show the value of their derivative contracts by sector, rating, and region. However, credit derivatives are not always broken down this way. Rather, the positive replacement value is given as a footnote, along with the total amount of loans covered by the contracts. In this respect, disclosure under FAS 133 is not as comprehensive as with IAS 39. As with the other statements, derivatives MTM results are included in "other" trading revenues and not shown separately.

■ Follow-Up

Fitch will continue its work to collect all appropriate credit information from companies to complete the rating analysis within the next 60-90 days. At that point, Fitch will meet with global regulators to share the findings and encourage greater disclosure of all credit derivative activity, including nonregulated companies such as hedge funds. Given the potential to accumulate concentrations of risk (on and off

balance sheet), Fitch believes investors and the market as a whole would benefit from greater transparency and disclosure. At the end of this survey period, it is possible that Fitch will find it necessary to take certain ratings actions, including withdrawing ratings, in the event disclosure concerning credit derivatives is not forthcoming. For those companies with seemingly large exposures, additional follow-up

may be warranted to assess the level of risk and its relevance in the context of the other ratings variables. Fitch anticipates providing additional market commentary as additional information is processed and in response to other market developments (financial reporting and disclosure, hedge funds, and risk management practices, among others).

■ Appendix 1: Survey Summary

The questionnaire focused on institutions' credit derivative activities as sellers of protection. In addition, questions focused on investments in cash and synthetic CDOs. Wherever necessary, Fitch followed up with further questions to clarify ambiguities or discrepancies. Questions referred to positions as of close of business on Sept. 30, 2002. The following information was requested:

Credit Derivative Activities and Exposures

- Gross and net notional value of outstanding credit derivative positions (gross protection sold, as well as net sold after protection purchased) in aggregate and by individual credit derivative instrument. Credit derivative instruments included: single-name CDSs; total return swaps; CLNs; and basket or portfolio products.
- Primary and secondary motivations or applications driving credit derivatives usage.
- Breakdown of the underlying reference entities on protection sold by sector, rating, tenor, and largest aggregate reference entity.
- Leading counterparty exposures.

Fitch acknowledges that some CLNs are structured to be referenced to a basket of reference obligations. As such, Fitch has treated these CLNs as basket products for the purposes of this survey. Although Fitch inquired about usage of asset swaps as part of the survey, asset swaps were not included in the reported credit derivative totals.

Credit Events

- Number of credit events experienced.
- Name and sector of each credit event reference entity.
- Reasons for each credit event occurrence.
- Disputes, if any, related to credit events.

CDO Investments

- Aggregate investment in CDOs.
- Original and current CDO ratings.
- Date of issuance (vintage).
- Underlying assets.

Financial Reporting and Disclosure

- Financial reporting convention for credit derivatives and CDO products.
- Assumptions under which an exposure is deemed "impaired."

■ Appendix 2: Survey Respondents

ACE Guaranty
 AEGON
 AFLAC
 AIG
 Allgemeine Hypothekbank Rheinboden
 Ambac
 AmSouth Bancorp
 AXA Re Finance
 Banca Intesa
 Banca Popolare dell' Emilia Romagna
 Banco Atlántico
 Banco Bilbao Vizcaya Argentaria
 Banco Santander Central Hispano
 Bank of America
 Bank of Montreal
 Bank of Nova Scotia
 Bank of Tokyo-Mitsubishi
 Bank One Corp.
 Bankgesellschaft Berlin
 Bausparkasse Schwäbisch-Hall
 Bayerische Hypo-und Vereinsbank
 Bayerische Landesbank
 Bear Stearns
 BNP Paribas
 Bremer Landesbank
 Caja de Ahorros y Monte de Piedad de Madrid
 Caja de Ahorros y Pensiones de Barcelona (la Caixa)
 Canada Life
 Canadian Imperial Bank of Commerce
 CDC IXIS Financial Guaranty
 Centre Solutions
 Citigroup (Salomon Smith Barney)
 CNA
 Comerica
 Commerzbank
 Connecticut General Life Insurance Co.
 Credit Suisse First Boston
 Cuna Mutual
 DekaBank Deutsche Girozentrale
 Delphi
 Depfa Bank
 Deutsche Apotheker-und Aerztebank
 Deutsche Bank
 Deutsche Postbank
 Deutsche Zentral-Genossenschaftsbank
 Dexia Bank
 DG Hypothekbank
 Fifth Third Bancorp
 FleetBoston Financial Corp.
 Fortis
 FSA
 GE Financial
 Great American

Great-West
 Group Banques Populaires
 Grupo Banco Comercial Portugues
 Guardian
 Gulf International Bank
 Hamburgische Landesbank
 Hannover Rückversicherung
 Hartford Financial Services Group Inc.
 HBOS
 HSBC
 HSBC Trinkaus & Burkhardt
 Hypothekenbank in Essen
 IDS Life
 IKB Deutsche Industriebank
 ING BHF-Bank
 J.P. Morgan
 Jackson National Life Insurance Co.
 Jefferson-Pilot
 John Hancock
 KBC Bank
 Key Bank
 Landesbank Baden-Württemberg
 Landesbank Hessen-Thüringen
 Landesbank Rheinland-Pfalz
 Landesbank Saar
 Landesbank Sachsen
 Landwirtschaftliche Rentenbank
 Lehman Brothers
 Lincoln National Corp.
 Lloyds TSB
 M&T Bank
 Manulife
 Markel
 Mass Mutual
 Max Re
 MBIA
 MBNA
 Mellon Bank
 MetLife
 Minnesota
 Mizuho Bank
 Munich Re
 National Bank of Greece
 National City
 Nationwide
 New York Life
 Nippon Life
 Norddeutsche Landesbank
 Northern Trust
 Northwestern Mutual
 Pacific Life
 PartnerRe
 Penn Mutual
 Phoenix

Piraeus Bank
 PNC Bank
 Presidential Life Insurance
 Principal
 Provident Financial Group
 Prudential Financial
 Rabobank
 Radian Asset Assurance
 Radian Reinsurance
 Regions Bank
 Renaissance Re
 Royal Bank of Canada
 Safeco Insurance
 San Paolo IMI
 SCOR
 SEB AG
 Societe Generale
 SouthTrust Bank
 Sovereign Bank
 St. Paul Co.
 Standard Bank
 State Street
 Sumitomo Life
 Sumitomo Trust & Banking Co.
 Sun Life
 SunTrust Bank
 Thrivent
 TIAA
 Travelers Life
 UBS Warburg
 UFJ Bank
 UniCredito Italiano
 Union Bank of California
 UnumProv
 Wachovia Corp.
 Washington Mutual
 Wells Fargo
 Western & Southern
 XL Capital Assurance
 XL Financial Assurance

**■ Appendix 3: Asset-Backed
 Commercial Paper Programs: CDO
 Holdings**

Fitch recently completed an evaluation of CDO exposure in Fitch-rated ABCP programs. As of Sept. 30, 2002, more than \$38.7 billion of outstanding ABCP and MTNs rated by Fitch were secured by CDOs. For this study, the underlying portfolios of the 181 Fitch-rated ABCP vehicles were reviewed. Fitch identified 50 programs that invested in CDOs.

It was no surprise that 59.44% of all CDO exposure was found in cash-flow securities-backed vehicles — vehicles established specifically to purchase rated assets such as CDOs. The remaining CDO exposure was split between traditional multiseller vehicles (35.24%) and structured investment vehicles (5.32%). The 10 largest CDO investing conduits accounted for more than one-half of the total CDO investments.

Of the CDOs identified in the study, 78.31% were rated 'AAA', 90.76% were rated 'AA-' or higher, and 99.55% were rated at least investment grade

('BBB-' or higher), thus returning a weighted average rating of 'AA+'. The high credit quality of the identified CDOs evidences the strict investment guidelines that ABCP vehicles must adhere to at the time of purchase (typically 'AA-' or higher), as well as the structural protections that facilitate the removal of troubled assets (CDO or otherwise) upon downgrade.

For more information on this study, see the Fitch newsletter on "ABCP Trends & Advances," available on Fitch's web site at www.fitchratings.com.

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