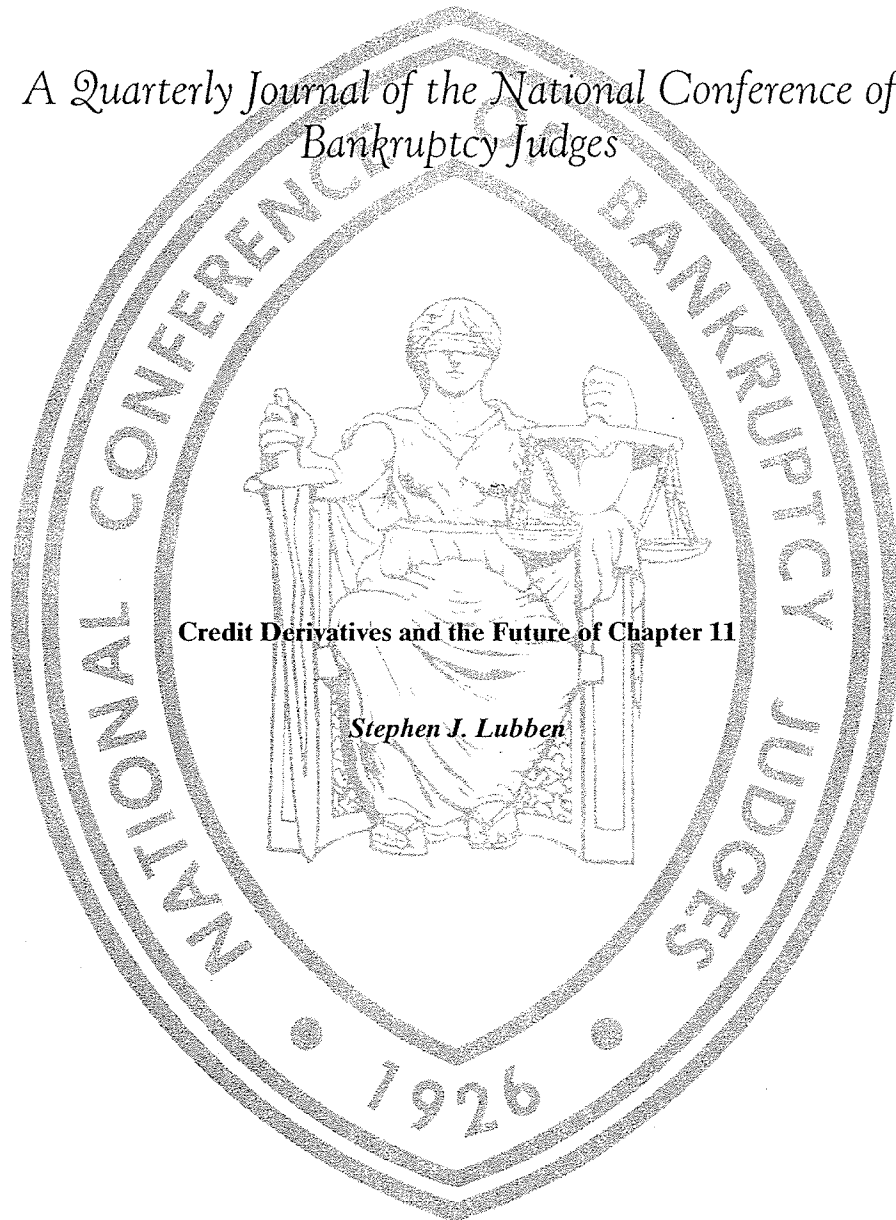


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**Credit Derivatives and the Future of Chapter 11**

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# Credit Derivatives and the Future of Chapter 11

by

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Credit default swaps are becoming the most important instrument I've seen in decades.

— Alan Greenspan<sup>1</sup>

When credit default swaps first appeared in the early 1990s, they were used primarily by banks to hedge the default risks they faced in their loan portfolios.<sup>2</sup> But by the late 1990s the use of these swaps had spread to the larger credit market, and two Deutsche Bank researchers could write that “credit derivatives are no longer an exotic corner of the bond market but must now be considered a market in its own right.”<sup>3</sup> By the end of 2006, the International Swaps and Derivatives Association (ISDA) estimated that the overall credit derivative market had grown to \$34.4 trillion.<sup>4</sup> The market, although still largely comprised of single name default swaps,<sup>5</sup> has now expanded to include index products, pools of credit risks and “first to default”

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\*Daniel J. Moore Professor of Law, Seton Hall University School of Law. I am grateful for the comments I received from participants at the 2007 American Law and Economics Association Annual Meeting, and from R. Michael Farquhar, Kenneth Kettering, Richard Levin, R. Erik Lillquist, Robert K. Rasmussen, Steven L. Schwarcz, David A. Skeel, Jr., Shmuel Vasser, and David I. Walker.

<sup>1</sup>Address at the Bond Market Association (May 18, 2006), quoted in Caroline Salas, *Derivatives, Not Bonds, Show What Pimco, TIAA-CREF Really Think*, Bloomberg.com (May 31, 2006), [http://quote.bloomberg.com/apps/news?pid=10000103&sid=aE6mQtSp402w&refer=news\\_index](http://quote.bloomberg.com/apps/news?pid=10000103&sid=aE6mQtSp402w&refer=news_index).

<sup>2</sup>See Lehman Brothers, *Default Swaps*, [http://www.lehman.com/fi/sct/def\\_default\\_swap.htm](http://www.lehman.com/fi/sct/def_default_swap.htm) (last visited Oct. 15, 2007). Credit default swaps are contracts in which one party (the “Buyer” of protection) pays a premium to a second party (the “Seller” of protection) for taking on the default risk related to a particular debt security (the “Reference Security”). *Id.* If the Reference Security is the subject of a “credit event,” typically a significant default, then the Seller of protection pays the loss on the Reference Security to the Buyer. *Id.* Essentially a credit default swap is a kind of insurance policy, although there is no requirement that any party actually own the underlying Reference Security. See *infra* Part I.

<sup>3</sup>T. Bowler & J. Tierney, *Credit Derivatives and Structured Credit: A Survey of Products, Applications and Market Issues* (1999), available at <http://www.fonet.co.kr/bbs/aca208/145overview.pdf>.

<sup>4</sup>Notional amount as of December 2006. ISDA, 2006 YEAR-END MARKET SURVEY, available at [http://www.isda.org/\(select “Survey & Market Statistics,” then select “Summaries of Market Survey Results,” then select “2006 Year-End”\).](http://www.isda.org/(select%20Survey%20&Market%20Statistics,then%20select%20Summaries%20of%20Market%20Survey%20Results,then%20select%202006%20Year-End)) ISDA is the key trade association for the derivatives industry. See generally Sean M. Flanagan, Student Article, *The Rise of a Trade Association: Group Interactions Within the International Swaps and Derivatives Association*, 6 HARV. NEGOT. L. REV. 211 (2001).

<sup>5</sup>That is, swaps involving the risk of a default by a single debtor.

baskets, as well as synthetic and “squared” versions of these products.<sup>6</sup>

The development of this new market has been largely missed by legal scholars, especially in the bankruptcy context where it arguably has the most relevance.<sup>7</sup> Indeed, Congress recently expanded the special derivative provisions of the Bankruptcy Code to exempt credit derivatives from key provisions of the Code,<sup>8</sup> with little or no consideration of the larger implications of credit derivatives for chapter 11 policy.<sup>9</sup>

This article takes up this task and considers the implications of the growth of the credit derivative market in relation to chapter 11. The Bankruptcy Code, and chapter 11 in particular, relies on creditors to check the broad power debtors have by virtue of their status as “debtors in possession,” with the exclusive right to propose a plan during the early days of the case.<sup>10</sup> For example, chapter 11 attempts to give power to both small and large creditors by use of a unique two-part voting rule that provides that a class accepts a plan only when creditors “that hold at least two-thirds in amount and more than one-half in number of the allowed claims of such class held by creditors” vote in favor of the plan.<sup>11</sup>

If the largest creditor in a class has hedged its risk with credit default swaps, should that same creditor have the power to upend the debtor’s proposed plan? Indeed, in many ways such a creditor is no longer truly a credi-

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<sup>6</sup>See *infra* Part I for a fuller description of the features of the credit derivative market. A synthetic product uses derivatives to stand in for an underlying asset. For example, while a collateralized debt obligation (CDO) would normally involve a pool of debt instruments, a synthetic CDO would involve a pool of derivatives. A squared product involves two layers of derivatives: for example, a squared CDO would involve a pool of CDOs. *Id.*

<sup>7</sup>For exceptions, see Paul M. Goldschmid, Note, *More Phoenix Than Vulture: The Case For Distressed Investor Presence In The Bankruptcy Reorganization Process*, 2005 COLUM. BUS. L. REV. 191, 233-34; Frank Partnoy & David A. Skeel, Jr., *The Promise And Perils Of Credit Derivatives*, 75 U. CIN. L. REV. 1019, 1048-50 (2007).

<sup>8</sup>Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, Pub. L. No. 109-8, 119 Stat. 23; see Shmuel Vasser, *Derivatives in Bankruptcy*, 60 BUS. LAW. 1507, 1511 (2005).

<sup>9</sup>The financial community is unquestionably aware of the problem. As noted in a recent report on derivatives:

one of the great strengths of the financial system has been its capacity to organize and execute restructurings for troubled but viable companies and countries. Such restructurings typically occurred through groups of primary creditors having a major financial interest in the outcome. To the extent such primary creditors now use the credit default swap market to dispose of their credit exposure, restructuring in the future may be much more difficult.

COUNTER PARTY RISK MANAGEMENT & POLICY GROUP II, TOWARDS GREATER FINANCIAL STABILITY: A PRIVATE SECTOR PERSPECTIVE 9 (July 27, 2005), available at <http://www.crpmgroup.org/docs/CRMPG-II.pdf>.

<sup>10</sup>11 U.S.C. § 1121 (2006); Richard Levin & Alesia Ranney-Marinelli, *The Creeping Repeal of Chapter 11: The Significant Business Provisions of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005*, 79 AM. BANKR. L.J. 603, 631 (2005).

<sup>11</sup>11 U.S.C. § 1126(c) (2006).

tor for chapter 11 purposes – but should the counterparty to the swap be subrogated to the rights of the primary creditor, or should the bankruptcy court simply ignore this debt altogether? Alternatively, should the bankruptcy court take any notice of a transaction that does not involve the debtor? Similar problems arise in connection with a host of other Bankruptcy Code provisions, such as the powers to file involuntary petitions, move for adequate protection, appoint a trustee, or convert the case.<sup>12</sup>

The operation of chapter 11 is premised on a perception of ownership that may no longer exist or is at the very least threatened by the expansion of credit derivatives. If creditors cease to have an incentive to act as creditors, an important check on the debtor's discretion will depart the corporate reorganization system, leaving only the bankruptcy court to check debtor abuse. These issues have just begun to surface in large chapter 11 cases, but Congress and the courts need to act before further problems arise.<sup>13</sup> Swift consideration of these issues is also efficient, inasmuch as early adoption of clear rules will reduce the need for creditors and credit-protection sellers to extract premiums to compensate for uncertainty in the interaction between the Bankruptcy Code and the derivatives markets.

The article begins with an overview of the credit derivative market. I explain the key instruments in these markets as well as the participants and economic benefits of the markets. Part II sketches the aspects of chapter 11 that rely on creditor ownership to balance debtor discretion. Part III then unites the two worlds, noting instances where chapter 11 will be weakened by the growth of credit derivatives and suggesting changes to address these problems. The goal of this exercise is to preserve the functionality of chapter 11 without undue intrusion into the credit derivative market. I assume that both chapter 11 and the derivatives markets individually enhance social wealth, and thus strive only for changes that will maximize the overall efficiency of both systems upon their interaction.<sup>14</sup>

For this reason, while I identify several areas of unease, I reject the pull of government intercession, at least at this point. The credit derivatives market is young, and there are reasons to think that the problems I identify will at least moderate as the market matures. To be sure, the novelty, opacity and complexity of the credit derivatives market could interact with chapter 11 in ways that produce a grave financial crisis, especially if we assume the sudden

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<sup>12</sup>11 U.S.C. §§ 303, 361, 362(d), 1104, 1112 (2006).

<sup>13</sup>See *In re Enron Corp.*, 328 B.R. 58 (Bankr. S.D.N.Y. 2005); *In re Worldcom, Inc. Sec. Litig.*, 346 F. Supp. 2d 628, 651-52 (S.D.N.Y. 2004); see also Henny Sender, *Spotlight Put on Credit-Derivatives Market*, WALL ST. J., Dec. 3, 2001, at C15 (noting that the Enron bankruptcy brought attention to the market).

<sup>14</sup>But see Franklin Allen & Elena Carletti, *Credit Risk Transfer And Contagion*, 53 J. MONETARY ECON. 89, 93 (2006) (arguing that credit derivatives might reduce overall welfare through increased risk of contagion).

bankruptcy of a very large corporate debtor. But that risk does not yet warrant the disruption of this promising new market simply to preserve the traditional role of chapter 11.

## I. A PRIMER ON CREDIT DERIVATIVES

### A. DERIVATIVES GENERALLY

Financial derivatives are contracts that derive their value from interest rates, the outcome of specific events, or the price of underlying assets such as debt or equities.<sup>15</sup> These contracts have no value in seclusion, but rather derive their value from movements in the value of other more substantive matter.<sup>16</sup> Options, futures, and forwards are all long-recognized types of derivatives.<sup>17</sup>

The heart of the modern derivatives markets was born in the early 1980s with the advent of swap agreements.<sup>18</sup> A swap is a contract between two parties to exchange cash flows at specified intervals.<sup>19</sup> Unlike securities or futures contracts, which are standardized for easy trading on national exchanges, swaps are party-specific bilateral contracts and are thus traded over the counter.<sup>20</sup>

One of the most common swaps is an interest rate swap, where the parties (or "counterparties") agree to exchange a fixed rate cash flow for a floating rate cash flow.<sup>21</sup> The amount of the cash flows is determined by reference to a hypothetical or "notional" amount of money that is never actually exchanged between the parties.<sup>22</sup>

For example, assume two parties swap a fixed 4% payment for the three-month London Interbank Offered Rate (LIBOR)<sup>23</sup> plus 150 basis points,<sup>24</sup>

<sup>15</sup>FRANKLIN ALLEN, RICHARD A. BREALEY, & STEWART C. MYERS, *PRINCIPLES OF CORPORATE FINANCE* 727 (8th ed. 2006).

<sup>16</sup>Norman Menachem Feder, *Deconstructing Over-the-Counter Derivatives*, 2002 COLUM. BUS. L. REV. 677, 682-83.

<sup>17</sup>See, e.g., ADOLF A. BERLE, JR., *STUDIES IN THE LAW OF CORPORATION FINANCE* 133 (1928); Frank Partnoy, *The Shifting Contours of Global Derivatives Regulation*, 22 U. PA. J. INT'L ECON. L. 421, 424-28 (2001).

<sup>18</sup>See *Bank One Corp. v. Comm'r*, 120 T.C. 174, 186 (2003) ("The origin of the swaps market is generally traced to a currency swap negotiated between the World Bank and IBM in 1981. That transaction involved an exchange of payments in Swiss francs for payments in deutschmarks. The first interest rate swap was negotiated with the Student Loan Marketing Association in 1982.")

<sup>19</sup>*Interbulk v. Louis Dreyfus Corp. (In re Interbulk, Ltd.)*, 240 B.R. 195, 201 (Bankr. S.D.N.Y. 1999).

<sup>20</sup>Desmond Eppel, Note, *Risky Business: Responding to OTC Derivative Crises*, 40 COLUM. J. TRANS. NAT'L L. 677, 680-81 (2002).

<sup>21</sup>ALLEN ET AL., *supra* note 13, at 735-37; Louis Vitale, Note, *Interest Rate Swaps under the Commodity Exchange Act*, 51 CASE W. RES. L. REV. 539, 547-59 (2001).

<sup>22</sup>*Thrifty Oil Co. v. Bank of Am. Nat'l Trust*, 322 F.3d 1039, 1042 (9th Cir. 2003).

<sup>23</sup>This is the rate of interest at which banks can borrow funds from other banks in the London interbank market. It is commonly used as a reference floating interest rate in swaps. See <http://www.bba.org.uk/bba/jsp/polopoly.jsp?d=141>.

based on a \$100 million notional amount.<sup>25</sup> If LIBOR starts at 2.5% and rises to 5%, the cash flows on this swap look like this:

FIXED owes FLOATING \$4 million  
 FLOATING owes FIXED \$6.5 million  
 FLOATING pays FIXED \$2.5 million<sup>26</sup>

By entering into this swap, the fixed rate payer has essentially replaced its interest rate risk with the credit risk of the floating rate payer, perhaps because it has a corresponding \$100 million floating rate loan obligation.<sup>27</sup> If the credit exposure issues appear acute, the risks of default are often balanced by posting collateral, typically in the form of government securities.<sup>28</sup> ISDA estimated that about \$1.34 trillion of collateral was in use at the end of 2006.<sup>29</sup>

### B. CREDIT DERIVATIVES

Credit derivatives are a class of privately negotiated contracts designed with the express purpose of transferring credit risk from one party to another.<sup>30</sup> As with other derivatives, credit derivatives do not themselves involve a credit relationship, but rather look to the credit consequences of other financial instruments or conditions to find their value.<sup>31</sup>

In June of 2001, the first time the trade group ISDA conducted surveys of credit derivatives, the outstanding notional amount of credit derivatives

<sup>24</sup>0.01% = 1 basis point. Because swaps typically have net present values equal to zero at inception—that is, the swap is balanced and no payment is owing in either direction—the example implies a LIBOR rate of 2.5%. See Linda M. Beale, *Book-Tax Conformity and the Corporate Tax Shelter Debate: Assessing the Proposed Section 475 Mark-To-Market Safe Harbor*, 24 VA. TAX REV. 301, 389-90 (2004).

<sup>25</sup>For simplicity, I assume all payments are made annually, but actual practice varies by jurisdiction. In the United States fixed payments are often made semi-annually and floating payments are made quarterly. The numbers in the example also do not take into account date conventions. For example, in the United States many swaps trade under an actual/360 day count convention.

<sup>26</sup>Conversely, if the LIBOR rate fell below 2.5%, so that the floating payment was less than 4% in total, FIXED would make payments to FLOATING equal to the difference in the two rates.

<sup>27</sup>Of course, the risk of the floating rate payer's default is only important if the swap becomes valuable from the fixed rate payer's perspective.

<sup>28</sup>For example, the University of Texas policy on swaps requires collateral in all transactions where the University has more than \$30 million of exposure to the counterparty's default and provides that the collateral "will consist of cash, U.S. Treasury securities, and Federal Agency securities guaranteed unconditionally by the full faith and credit of the U.S. Government." UNIVERSITY OF TEXAS SYSTEM, RULES AND REGULATIONS OF THE BOARD OF REGENTS, INTEREST RATE SWAP POLICY § 6.2 (last amended Aug. 23, 2007), available at <http://www.utssystem.edu/bor/rules/70000series/70202.pdf>.

<sup>29</sup>ISDA, 2007 MARGIN SURVEY, available at [https://www.isdadocs.org/c\\_and\\_a/pdf/ISDA-Margin-Survey-2007.pdf](https://www.isdadocs.org/c_and_a/pdf/ISDA-Margin-Survey-2007.pdf).

<sup>30</sup>See generally OFFICE OF THE COMPTROLLER OF THE CURRENCY (OCC), OCC BULLETIN 96-43 (Aug. 12, 1996), available at <http://www.occ.treas.gov/ftp/bulletin/96-43.doc>.

<sup>31</sup>SATYAJIT DAS, CREDIT DERIVATIVES: CDOs & STRUCTURED CREDIT PRODUCTS 6 (3d. ed. 2005) ("Credit derivatives are defined as a class of financial instruments, the value of which is derived from an underlying market value driven by the credit risk of private or government entities other than the counterparties to the credit derivative transaction.")

TABLE 1: OTC DERIVATIVES OUTSTANDING							
Market Values, Billions of U.S. Dollars							
	Dec.2000	Dec.2001	Dec.2002	Dec.2003	Dec.2004	Dec.2005	Dec.2006
Total contracts	3183.06	3788.19	6359.85	6987.22	9377.05	9748.58	9 694.77
Foreign exchange contracts	849.30	778.92	881.26	1301.02	1546.30	997.05	1262. 21
Forwards and forex swaps	468.90	374.03	468.17	607.30	643.24	406.03	467.14
Currency swaps	313.06	334.83	337.32	557.33	745.01	452.82	599.47
Options	67.33	70.06	75.77	136.40	158.06	138.21	195.60
Interest rate contracts	1426.37	2209.87	4266.42	4327.83	5416.96	5397.16	4 833.82
Forward rate agreements	12.26	18.64	21.64	19.03	22.29	22.14	31.30
Interest rate swaps	1259.62	1969.41	3863.51	3917.72	4903.02	4777.77	4166.26
Options	154.49	221.83	381.27	391.09	491.65	597.24	636.26
Equity-linked contracts	289.29	205.13	255.42	273.94	498.33	581.92	851.14
Forwards and swaps	60.56	57.69	61.08	57.04	76.07	111.78	164.53
Options	228.73	147.44	194.34	216.90	422.26	470.14	686.61
Commodity contracts	133.46	75.49	85.80	127.55	168.63	870.70	667.49
Gold	16.97	19.96	28.15	39.19	31.85	51.03	56.22
Other commodities	116.49	55.54	57.65	88.37	136.77	819.67	611.27
Credit default swaps	...	...	...	...	133.48	2 42.59	470.05
Single-name instruments	...	...	...	...	111.70	171.12	289.45
Multi-name instruments	...	...	...	...	21.79	71.46	180.60
Other	484.64	518.78	870.96	956.87	1613.36	1659.16	1610.07
Gross Credit Exposure	1080.35	1170.90	1510.74	1968.74	2075.21	1900.33	2044.60

Source: Bank for International Settlements, <http://www.bis.org/statistics/derstats.htm>

was just over \$631 billion.<sup>32</sup> By June 2005, only four years later, the notional amount of outstanding credit default swaps, the key credit derivative instrument, stood at more than \$12 trillion – almost a twenty-fold increase.<sup>33</sup> About forty percent of outstanding credit derivatives are held by national banks, whose holdings are equally split between buyer and seller positions.<sup>34</sup> Emerging market credit derivatives, the newest segment of the market, are expected to exceed \$650 billion by this year.<sup>35</sup>

The speedy growth of the credit derivatives market can be seen as a further extension of a larger, ongoing trend toward disaggregation of financial obligations, albeit one that is just now approaching the level of development on the default side that has been seen in the interest rate swap markets for

<sup>32</sup>ISDA, 2001 MID-YEAR MARKET SURVEY, available at [http://www.isda.org/\(select "Survey & Market Statistics," then select "Summaries of Market Survey Results," then select "2001 Mid-Year"\)](http://www.isda.org/(select%20Survey%20&%20Market%20Statistics)).

<sup>33</sup>ISDA, 2005 MID-YEAR MARKET SURVEY, available at <http://www.isda.org/> (select "Survey & Market Statistics," then select "Summaries of Market Survey Results," then select "2005 Mid-Year"). The striking increase is undoubtedly largely the result of the growth of index swaps. Paul J. Davies, *Interest Grows For Credit Default Swaps*, FIN. TIMES, March 7, 2006, at 41.

<sup>34</sup>OCC, "Financial Performance of National Banks," 24-4 QJ. 85 (Dec. 2005), available at <http://www.occ.treas.gov/qj/qj24-4/qj24-4.pdf>. As of September 2005, national banks held \$2.4 trillion of credit derivatives as protection sellers and \$2.7 trillion held as protection buyers. *Id.*

<sup>35</sup>B. Gerard Dages et al., Fed. Reserve Bank of N.Y., *An Overview of the Emerging Market Credit Derivatives Market* (2005), available at <http://www.bis.org/publ/cgfs22fedny4.pdf>. The authors explain: "The market encompasses roughly under 700 underlying credits, of which some 170 are considered liquid. Roughly 30 of the underlying reference entities are emerging market sovereigns." *Id.*

over a decade.<sup>36</sup> While syndication of loans and securitization of receivables have long provided ways for the initial lender to reduce their exposure to the debtor, the subsequent investor still acquires something more than pure credit or default risk, while the initial lender necessarily incurs a corresponding reduction in its claim against the debtor.<sup>37</sup> Credit derivatives, on the other hand, allow for the sale of the default risk of a loan separate from any other element of ownership. In addition, the growth of credit markets has allowed for “shorting” of bonds, something that was often impossible beforehand due to the limited liquidity of the corporate bond markets. Credit derivatives also allow investors an opportunity to invest in debt that trades in foreign markets without bearing currency risk.

As noted, the most important credit derivative instrument is the credit default swap, also known as a single-name credit default swap.<sup>38</sup> This type of swap is a contract covering the risk that a specified debtor defaults. One party (the “protection seller”) acquires the credit risk associated with a debt or class of debts in exchange for an annual fee from the counterparty (the “protection buyer”).<sup>39</sup> The debtor on the referenced obligation is not a party to the swap, and in most cases is unaware of the transaction.<sup>40</sup>

If the reference obligation goes into default, the protection buyer receives a payment meant to compensate it for its losses.<sup>41</sup> More specifically, the protection seller’s payment obligation is triggered by the occurrence of a “credit event” with regard to a specified class of obligations incurred by the reference entity. Commonly used credit events include “bankruptcy,”<sup>42</sup> “failure to pay,”<sup>43</sup> and “restructuring.”<sup>44</sup> Swaps written on sovereign or emerging

<sup>36</sup>See DAS, *supra* note 31, at 2-3.

<sup>37</sup>See generally Stephen J. Lubben, *Beyond True Sales: Securitization and Chapter 11*, 1 N.Y.U. J.L. & BUS. 89 (2004).

<sup>38</sup>See Richard Beales, *Exchanges Attempting To Offer Instruments That Align With OTC Credit Derivatives*, FIN. TIMES, March 23, 2007, at 39.

<sup>39</sup>*Nomura Int’l plc v. Credit Suisse First Boston Int’l*, 2 All E.R. (Comm) 56 (Q.B. 2003) (describing a credit default swap transaction, whereby “Nomura ‘bought’ from CSFB as ‘seller’ credit protection referable to Railtrack plc in a principal amount of US\$10m. Nomura paid 0.47% of \$10m per annum for the protection.”).

<sup>40</sup>At the start of 2006, the five most common reference entities or debtors were General Motors, Ford, DaimlerChrysler, Russia, and France Telecom. Alex Chambers & Mark Brown, *Credit Derivatives: Fitch Says AIG Dominates Protection*, EUROMONEY, Jan. 1, 2006, at 21.

<sup>41</sup>Whether a credit event has occurred is sometimes subject to dispute, as when Argentina announced a debt exchange in 2001. *Eternity Global Master Fund Ltd. v. Morgan Guar. Trust Co.*, 375 F.3d 168 (2d Cir. 2004); see also Stephen J. Choi & G. Mitu Gulati, *Contract as Statute*, 104 MICH. L. REV. 1129, 1142-44 (2006).

<sup>42</sup>ISDA, 2003 ISDA CREDIT DERIVATIVES DEFINITIONS § 4.2.

<sup>43</sup>*Id.* § 4.5. “Failure to Pay” is defined, in part, as the failure of the reference entity to make “payments in an aggregate amount of not less than the Payment Requirement.” “Payment Requirement” is a term that the parties can define, but otherwise defaults to obligations of at least \$1 million. *Id.* § 4.8(d).

<sup>44</sup>*Id.* § 4.7. The restructuring must relate to debt in excess of the “Default Requirement,” which is set at \$10 million unless the parties agree otherwise. *Id.* § 4.8(a). The definition of restructuring is not uniform



markets debt add provisions regarding repudiations or debt moratoriums.<sup>45</sup> In the North American and European corporate markets, these events typically must occur with respect to “borrowed money” – effectively any obligation owed to voluntary creditors of the reference entity or its subsidiaries, if the parent guaranteed the subsidiaries’ obligations<sup>46</sup> – in excess of the \$1 million and \$10 million limitations built into the definitions of failure to pay and restructuring, respectively.<sup>47</sup>

Most often the swap will call for “physical settlement” upon the occurrence of a credit event, meaning that the buyer will deliver a defaulted bond to the seller in exchange for payment of the full face value of the bond.<sup>48</sup> Unlike insurance, credit default swaps do not require proof of actual loss, so the buyer can purchase a bond post-default and deliver it to the seller.<sup>49</sup>

The types of obligations that can be delivered to settle the swap are typically set forth in the documentation, although market practice does tend to give the protection buyer a choice within a range of debt instruments. This gives rise to the so-called “cheapest to deliver” option in a triggered swap; namely, the ability of a buyer to maximize recovery under the swap by purchasing the least valuable debt instrument that will satisfy the contractual provisions of the swap.<sup>50</sup> In the North American and European corporate markets, swaps regularly allow for the delivery of any bond or loan issued by the reference entity, provided that, among other things, the obligation is not subordinated, is not bearer paper, and does not mature more than thirty years from the settlement date.<sup>51</sup>

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among jurisdictions; for example, in the North American corporate market the definition is usually modified – and thus referred to as “Modified Restructuring” – by electing additional limitations on the maturity and transferability of the debt that can be delivered under the swap. *Id.* § 2.32; see also Frank Packer & Haibin Zhu, *Contractual Terms and CDS Pricing*, BIS Q. REV. (Mar. 2005) available at [http://www.bis.org/publ/qtrpdf/r\\_qt0503.htm](http://www.bis.org/publ/qtrpdf/r_qt0503.htm).

<sup>45</sup>ISDA, 2003 ISDA CREDIT DERIVATIVES DEFINITIONS § 4.6.

<sup>46</sup>Outside of North America the guarantee provisions usually apply to all guarantees, not just those given to a subsidiary’s creditors.

<sup>47</sup>See *supra* notes 43-44.

<sup>48</sup>See *DAS*, *supra* note 311, at 113.

<sup>49</sup>INSOL INTERNATIONAL, CREDIT DERIVATIVES IN RESTRUCTURINGS 12 (2006). This might occur if the buyer used the credit default swap to hedge an illiquid debt, such as a bank loan with transfer restrictions, or simply because the buyer was making a speculative bet on the reference debtor’s credit worthiness. Cf. N.Y. INS. LAW § 3401 (McKinney 2007) (“No contract or policy of insurance on property made or issued in this state, or made or issued upon any property in this state, shall be enforceable except for the benefit of some person having an insurable interest in the property insured. In this article, ‘insurable interest’ shall include any lawful and substantial economic interest in the safety or preservation of property from loss, destruction or pecuniary damage.”).

<sup>50</sup>INSOL INTERNATIONAL, CREDIT DERIVATIVES IN RESTRUCTURINGS 11 (2006).

<sup>51</sup>See generally ISDA, ISDA CREDIT DERIVATIVES PHYSICAL SETTLEMENT MATRIX (Apr. 18, 2006), available at [http://www.isda.org/c\\_and\\_a/docs/Credit-Derivatives-Physical-Settlement-Matrix-20060418.xls](http://www.isda.org/c_and_a/docs/Credit-Derivatives-Physical-Settlement-Matrix-20060418.xls). The Credit Derivatives Physical Settlement Matrix—which is updated periodically—sets out the most commonly used provisions by jurisdiction for credit default swaps. *Id.* Parties can adopt these

In a credit default swap transaction, the protection buyer gives up the risk of default by the debtor and takes on the risk of concurrent default by both the protection seller and the underlying debtor. While the risk of mutual default is likely remote, especially given the strong credit quality of many swap dealers, it is not inconceivable that a major corporate default could cause one or two financial institutions severe financial distress.<sup>52</sup> The protection seller takes on the default risk of the debtor, as if it had lent money to the debtor. For this reason, the seller is sometimes described as a “synthetic” lender, albeit a short term lender, as the duration of swaps tends to extend for no more than a few years; whereas, a bond could last twenty or more years.<sup>53</sup>

Because of General Motors’ recent financial difficulties, pricing information for its credit default swaps has been readily available.<sup>54</sup> Table 2 illustrates the information conveyed by this new market in a firm’s credit prospects.<sup>55</sup> Because prices for long term coverage are lower than mid-term protection, the market apparently believes that General Motors faces the biggest challenges in the next three or four years, after which the risks apparently moderate. By early 2007, General Motors’ prospects had substantially improved, at least in the market’s eyes, and five-year CDS spreads had shrunk to just over 330 basis points.<sup>56</sup>

TABLE 2: GENERAL MOTORS CDS SPREADS						
<i>Spread Over Risk Free Rate; As of March 30, 2006</i>						
	1 Year	2 Year	3 Year	5 Year	7 Year	10 Year
Spread (in basis points)	967.24	1199.32	1145.15	1083.29	1040.54	1012.21

Source: [www.markit.com](http://www.markit.com)

Figure 1 next shows an example of a basic credit default swap used to hedge the buyer’s exposure to a \$100 million loan. Notice that, in addition to the risk of simultaneous default, the bank in this example takes on the risk of

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“market standard” terms by incorporating the Matrix into their transaction. See ISDA, 2005 MATRIX SUPPLEMENT TO THE 2003 ISDA CREDIT DERIVATIVES DEFINITIONS (Mar. 7, 2005), available at <http://www.isda.org/publications/pdf/2005-Supplement-for-CDS-Matrix.pdf>.

<sup>52</sup>Cf. J. DAUGHEN & P. BINZEN, *THE WRECK OF THE PENN CENTRAL* 289-90 (2d ed. 1999) (noting the Nixon Administration’s concerns about the effects of Penn Central’s bankruptcy on the money markets).

<sup>53</sup>According to one industry source, “the most liquid CDS is the five-year contract, followed by the three-year . . . . The fact that a physical asset does not need to be sourced means that it is generally easier to transact in large round sizes with CDS.” Dominic O’Kane, et al., *Lehman Brothers, The Lehman Brothers Guide to Exotic Credit Derivatives 6* (2003), available at <http://investinginbonds.com/assets/files/LehmanExoticCredDerivs.pdf>.

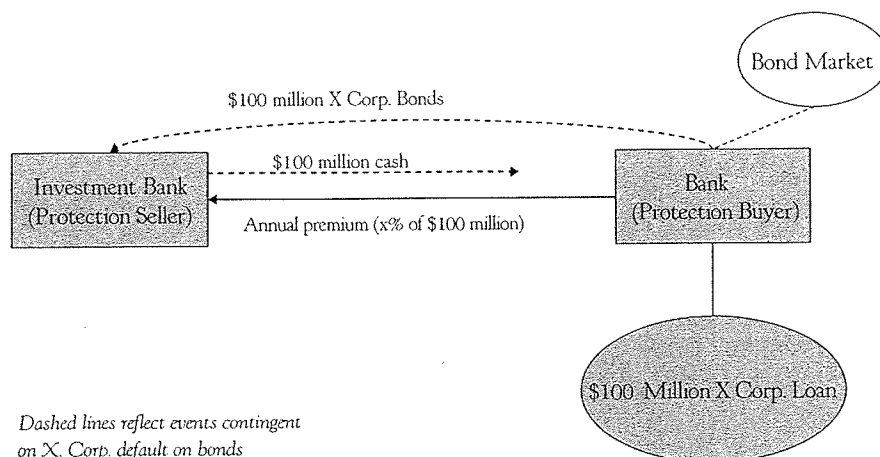
<sup>54</sup>See generally Eduardo Porter, *Auto Bailout Seems Unlikely*, N.Y. TIMES, Apr. 14, 2006, at C1.

<sup>55</sup>A credit default swap spread is the cost per year for protection against a default by the referenced firm. Table 2 shows that a two year credit default swap on GM, purchased in late March, would have cost the protection buyer almost 12% (11.9932%) of the face amount of the swap.

<sup>56</sup>As quoted by Markit Group Limited ([www.markit.com](http://www.markit.com)).

any imperfect correlation between the X Corp. bonds, the reference obligation for this swap, and the loan to X Corp. that the bank is hedging. For example, there may be some instances in which X Corp. could default on the bank loan without triggering a default (or "credit event") on its bonds.<sup>57</sup>

FIGURE 1: CREDIT DEFAULT SWAP



Credit default swaps are used for speculation, hedging credit risk, and as building blocks in creating more complex financial products. For example, a credit default swap can be used to construct a synthetic asset securitization, where the risk of loss is transferred to the special purpose vehicle but all other aspects of ownership remain with the originator.<sup>58</sup>

More recently, credit default swaps have moved from simple, single-name products to swaps that look to groups of reference entities. One product - known as an "nth to default" swap - protects the buyer against the nth default to occur among a group of debtors and then terminates.<sup>59</sup> Similarly,

<sup>57</sup>This is referred to as "basis risk" in the derivatives community. There is also a related question of whether all triggering defaults will be publicly known, which is a problem that could be especially acute if the reference entity is not subject to SEC reporting obligations.

<sup>58</sup>See Lubben, *supra* note 35, at 93-94.

Stated at a very basic level, a securitization involves the sale of an asset or a group of similar assets to a separate but related legal entity that then borrows against those assets to pay the purchase price to the selling party. More formally, in a securitization transaction the owner of the assets (the "originator") transfers assets to a newly created subsidiary called a "special purpose vehicle" (the "SPV") that issues debt or comparable securities to the market, based on the cash-flows anticipated from the assets. The funds generated from the sale of these securities are used by the SPV to pay the originator for the purchased assets.

Id.

<sup>59</sup>See DAS, *supra* note 31, at 181-201.

swaps written on indexes give the protection buyer a hedge against a pool of representative debtors with similar credit profiles.

For example, the Dow Jones CDX IG portfolio consists of 125 North American investment grade bond issuers, each equally weighted in the index.<sup>60</sup> Assume a swap written on this index with notional amount of \$100 million. Upon a default of a single index element, the protection buyer would deliver bonds with a par value of \$800,000 to the protection seller in exchange for a payment of \$800,000 in cash.<sup>61</sup> The transaction continues until a predetermined “roll date,” when the index is adjusted and reissued with a revised group of 125 issuers. Similar products exist for the foreign and high-yield markets.

The sudden growth of the credit derivative market has exposed several areas of structural underdevelopment, at least two of which are important for present purposes.<sup>62</sup> First, even when it works as described, this market is rather opaque and is arguably not truly a “market” in the conventional sense.

Consisting entirely of privately negotiated bilateral contracts, one of the oft cited benefits of the market is the ability of lenders to hedge or diversify their credit exposure without incurring any relationship costs with respect to the borrower.<sup>63</sup> Recently, however, it has become widely known that many credit default swaps were assigned to new protection buyers without the prior consent of the seller.<sup>64</sup> Under the terms of the ISDA Master Agreement,<sup>65</sup> the prior written consent of the other party is required when its

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<sup>60</sup>Index composition and price information can be found at <http://www.markit.com/markit.jsp?jspPage=indices.jsp>.

<sup>61</sup> $\$800,000 = (1/125)(\$100 \text{ million})$

<sup>62</sup>See Richard Beales, *Sequel Could Contain Many Plot Twists After A Year Of Extraordinary Growth, There Is Still Plenty Of Room For Drama In The Credit Derivatives Market*, FIN. TIMES, Jan. 6, 2006, at 37.

<sup>63</sup>As explained on one industry web site:

It's not hard to see why [leveraged loan credit default swaps have] attracted significant investor interest. Buyers of protection, i.e. taking a short credit risk position, are able to hedge risk on loans without the borrower knowing. This is particularly important for bank portfolio managers . . . for whom managing client relationships is paramount.

Gavan Nolan, Markit, LCDS Forum Summary, [www.markit.com/marketing/lclds\\_summary.php](http://www.markit.com/marketing/lclds_summary.php) (last visited Oct. 16, 2007).

<sup>64</sup>Jenny Anderson, *Derivatives May Put the New York Fed Chief Through a Stress Test*, N.Y. TIMES, Feb. 9, 2007, at C1 (“The so-called “assignment issue” was simple: credit derivatives were negotiated by two parties, say JPMorgan and Goldman Sachs. But banks were “assigning” the contracts out to others—like hedge funds—without telling each other. It was a little bit like lending money to a friend who is really rich who in turn lends it to her deadbeat brother and fails to mention it.”). A substantial number of swaps also contain errors in their documentation, an issue that could present serious problems in the event of a major economic downturn. See ISDA, ISDA 2006 OPERATIONS BENCHMARKING SURVEY 5 (2006) (reporting a 17% average error rate for credit derivative transactions), available at [http://www.isda.org/c\\_and\\_a/pdf/ISDA-Operations-Survey-2006.pdf](http://www.isda.org/c_and_a/pdf/ISDA-Operations-Survey-2006.pdf).

<sup>65</sup>Most of the derivatives in the global derivatives market are documented under ISDA documenta-

counterparty in a trade wishes to assign its position in a trade to a third party.<sup>66</sup> However, this non-conforming practice has apparently been tolerated in the community.<sup>67</sup> Thus, upon a chapter 11 filing, it may not be clear which creditors are protected from losses, even among the parties to swaps. ISDA has moved to address regulatory concerns regarding assignments, so the problem of unauthorized transfers should hopefully disappear from the market.<sup>68</sup> The larger question of which creditors have bought or sold protection will loom large in chapter 11 cases in the future.<sup>69</sup>

Second, the rapid growth of the credit derivatives market has recently led to supply and demand problems upon a default. After the recent chapter 11 filing of automotive parts manufacturer Delphi Automotive, \$2 billion of bonds were said to be in circulation when it filed for bankruptcy.<sup>70</sup> However, the notional amount of outstanding derivatives was more than \$20 billion, which initially had the explicable, although still strange, effect of driving up the market prices of the bonds just as Delphi filed for chapter 11.<sup>71</sup> ISDA has stepped in to mitigate this problem through a series of "protocols," which were successfully deployed in not only the Delphi case but also in connection with other recent chapter 11 cases.<sup>72</sup> Essentially, these protocols use an auction mechanism to set a price for the debtor's bonds, and then use that price to allow settlement of index credit default swaps without need for actual delivery of bonds.<sup>73</sup> Removing index swaps from the mix reduces but does

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tion. The ISDA Master Agreement, the most current version of which is the 2002 ISDA Master Agreement, is a standard agreement, used in the industry, to provide a set of default terms for a series of derivative transactions between a set of counterparties. A "schedule" is attached to the Master Agreement to account for party-specific terms of the deal. The economic terms of individual derivative transactions are reflected in "confirmation" term sheets, which are deemed to be part of the single Master Agreement between the parties, somewhat like the schedules of equipment used in long-term equipment leases. Each confirmation will incorporate by reference a relevant set of ISDA definitions. In the credit derivatives context, this is typically the 2003 ISDA Credit Derivatives Definitions. Also commonly used are documents related to credit support, which are used when parties are of differing credit quality and provide for the lower credit quality party to provide collateral to reduce the credit risk associated with the transaction. See generally [www.isda.org](http://www.isda.org); see also *Ursa Minor Ltd. v. Aon Fin. Prods., Inc.*, No. 00 Civ. 2474 (AGS), 2000 U.S. Dist. LEXIS 10166, at \*6-8 (S.D.N.Y. July 21, 2000).

<sup>66</sup>ISDA 2002 MASTER AGREEMENT § 7.

<sup>67</sup>See Richard Beales, *Popular Credit Market Still Too Opaque*, *FIN. TIMES*, Jan. 6, 2006, at 21.

<sup>68</sup>Richard Beales, *Sign-ups Strong on New ISDA Practices*, *FIN. TIMES*, Nov. 25, 2005, at 41 ("The broad acceptance of the new procedures - intended to streamline assignments, in which one party transfers its position in an existing trade to a third party - should help reduce one of the thorniest documentation problems for the fast-growing credit derivative market.")

<sup>69</sup>See Greg Ip & Carrick Mollenkamp, *U.S. and Britain Team Up to Test Financial Risk*, *WALL ST. J.*, Mar. 2, 2006, at C1; see also Stacy-Marie Ishmael, *Banking Staff Face Derivatives Backlog*, *FIN. TIMES*, Oct. 25, 2007, at 27.

<sup>70</sup>In re Delphi Corporation, et al., 05-44481 (RDD) (Bankr. S.D.N.Y. Oct. 8, 2005).

<sup>71</sup>See Richard Beales, *Uncertain Road Ahead For Delphi*, *FIN. TIMES*, Nov. 8, 2005, at 45.

<sup>72</sup>See Richard Beales, *Credit Derivative Industry Set To Propose New Settlement Rules*, *FIN. TIMES*, Jan. 31, 2006, at 30.

<sup>73</sup>While traditionally these settlement procedures have been used only in conjunction with index prod-

