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**Credit Derivatives &
The Future of Chapter 11**

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Working Draft

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CREDIT DERIVATIVES & THE FUTURE OF CHAPTER 11

Stephen J. Lubben *

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

-- Alan Greenspan¹

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.² 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.”³ And by the end of 2006, the International Swaps and

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

¹ Speaking at the Bond Market Association, in New York, New York, May 18, 2006, *quoted in* Caroline Salas, *Derivatives, Not Bonds, Show What Pimco, TIAA-CREF Really Think*, Bloomberg.com (May 31, 2006).

² 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"). 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. *See* Lehman Brothers, *Default Swaps*, at http://www.lehman.com/fi/sct/def_default_swap.htm. 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.

³ T. Bowler & J. Tierney, *Credit Derivatives and Structured Credit* (1999) (on

Derivatives Association estimated that the overall credit derivative market had grown to \$34 trillion.⁴ The market, although still largely comprised of single name default swaps,⁵ has now expanded to include index products, pools of credit risks and “first to default” baskets, as well as synthetic and “squared” versions of these products.⁶

But 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.⁷ Indeed, Congress recently expanded the special derivative provisions of the Bankruptcy Code to exempt credit derivatives from key provisions of the Code,⁸ with little or no consideration of the larger implications of credit derivatives for chapter 11 policy.⁹

file with author).

⁴ Notional amount, as of December 2006. See 2006 Year-End Market Survey, available at <http://www.isda.org/>. ISDA is the key trade association for the derivatives industry. See generally Sean M. Flanagan, *The Rise of a Trade Association: Group Interactions Within the International Swaps and Derivatives Association*, 6 Harv. Neg. L. Rev. 211 (2001).

⁵ That is, swaps involving the risk of a default by a single debtor.

⁶ See *infra* part I for a fuller description of the features of the credit derivatives markets. 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.

⁷ For the 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 (2007).

⁸ See Shmuel Vasser, *Derivatives in Bankruptcy*, 60 BUS. L. 1507 (2005).

⁹ 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

This paper takes up this task and considers the implications of the growth of the credit derivatives markets 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 “debtor in possession,” with the exclusive right to propose a plan during the early days of the case. 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.¹⁰

But 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 debtors proposed plan? Indeed, in many ways such a creditor is no longer truly a creditor 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, the appointment of a trustee, or to convert the case.

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.

TOWARDS GREATER FINANCIAL STABILITY: A PRIVATE SECTOR PERSPECTIVE, THE REPORT OF THE COUNTERPARTY RISK MANAGEMENT POLICY GROUP II, at page 9 (July 27, 2005) (available at www.crmgroup.org).

¹⁰ 11 U.S.C. § 1126(c).

The operation of chapter 11 is premised on a perception of “ownership” that may no longer exist or that is at 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 leave 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.¹¹ Swift action 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 paper begins with an overview of the credit derivatives markets. I explain the key instruments in these markets, as well as the participants and economic benefits of the markets. Part II of the paper then 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 derivatives markets. 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

¹¹ 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).

interaction.¹²

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 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.

¹² *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).

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.¹³ These contracts have no value in seclusion, but rather derive their value from movements in the value of other, more substantive, matter.¹⁴ Options, futures, and forwards are all long-recognized types of derivatives.¹⁵

The heart of the modern derivatives markets was born in the early 1980s with the advent of swap agreements.¹⁶ A swap is a contract between two parties to exchange cash flows at specified intervals.¹⁷ 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.”¹⁸

One of the most common swaps is an interest rate swap, where the parties (or “counterparties”) agree to exchange a fixed rate cash flow

¹³ FRANKLIN ALLEN, RICHARD A. BREALEY, & STEWART C. MYERS, *PRINCIPLES OF CORPORATE FINANCE* 727 (8th ed. 2006).

¹⁴ Norman Menachem Feder, *Deconstructing Over-the-Counter Derivatives*, 2002 Colum. Bus. L. Rev. 677, 682-83.

¹⁵ 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).

¹⁶ See *Bank One Corp. v. Comm'r*, 120 T.C. 174, 186-87 (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.”).

¹⁷ *Interbulk v. Louis Dreyfus Corp.* (In re *Interbulk, Ltd.*), 240 B.R. 195, 201 (Bankr. S.D.N.Y. 1999).

¹⁸ Desmond Eppel, Note, *Risky Business: Responding to OTC Derivative Crises*, 40 Colum. J. Transnat'l L. 677, 680-81 (2002).

for a floating rate cash flow.¹⁹ 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.²⁰

For example, assume two parties swap a fixed 4% payment for the 3 month LIBOR²¹ plus 150 basis points,²² based on a \$100 million notional amount.²³ If LIBOR rises to 5%, the cash flows on this swap look like this:

FIXED owes FLOATING \$4million
 FLOATING owes FIXED \$6.5million
FLOATING pays FIXED \$2.5million²⁴

By entering into this swap, the fixed rate payer has essentially replaced its interest rate risk – perhaps it has a corresponding \$100 million floating rate loan obligation – with the credit risk of the floating rate payer.²⁵ If the credit exposure issues appear acute, the risks of default

¹⁹ ALLEN, *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).

²⁰ Thrifty Oil Co. v. Bank of Am. Nat'l Trust, 322 F.3d 1039, 1042 (9th Cir. 2003).

²¹ London Interbank Offered Rate. This is the rate of interest at which banks could borrow funds from other banks in the London interbank market. It is commonly used as a reference floating interest rate in swaps. See www.bba.org.uk.

²² 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).

²³ For simplicity I assume all payments are made annually. Actually 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.

²⁴ 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.

²⁵ Of course, the risk of the floating rate payer's default is only important if the

are often balanced by posting collateral, typically in the form of government securities.²⁶ ISDA estimated that about \$1.34 trillion of collateral was in use at the end of 2006.²⁷

TABLE 1: OTC DERIVATIVES OUTSTANDING							
<i>Market Values; Billions of U.S. Dollars</i>							
	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	9694.77
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	4833.82
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	242.59	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

B. Credit Derivatives

Credit derivatives are a class of privately negotiated contracts

swap becomes valuable from the fixed rate payer's perspective.

²⁶ 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." The University of Texas System, Rules and Regulations of the Board of Regents, Interest Rate Swap Policy, at Sec. 62. (Dec. 10, 2004) (on file with author).

²⁷ International Swaps And Derivatives Association, 2007 Margin Survey (2005).

designed with the express purpose of transferring credit risk from one party to another.²⁸ 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.²⁹

In June of 2001, the first time the trade group ISDA conducted surveys of credit derivatives, the outstanding notion amount of credit derivatives was just over \$631 billion.³⁰ But 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.³¹ About forty percent of outstanding credit derivatives are held by national banks, whose holdings are equally split between buyer and seller positions.³² Emerging market credit derivatives, the newest segment of the market, are expected to exceed \$650 billion by this year.³³

²⁸ See generally OCC Bulletin, U.S. Comptroller of the Currency, OCC 96-43: Credit Derivatives (Aug. 12, 1996).

²⁹ SATYAJIT DAS, CREDIT DERIVATIVES: CDOs & STRUCTURED CREDIT PRODUCTS 6 (3d. ed. 2005) (“Credit derivatives are defined as a class of financial instrument, 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.”)

³⁰ International Swaps And Derivatives Association, 2001 Mid-Year Market Survey.

³¹ International Swaps And Derivatives Association, 2005 Mid-Year Market Survey. The striking increase in undoubtedly largely the result of the growth of index swaps, see *infra*.

³² As of September 2005, national banks held \$2.4 trillion of credit derivatives as protection sellers and \$2.7 trillion held as protection buyers. Office of the Comptroller of the Currency, Quarterly Journal, Volume 24, No. 4, Dec. 2005, at 85.

³³ 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 that

The market encompasses roughly under 700 underlying credits, of which some

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 over a decade.³⁴ 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 seller necessarily incurs a corresponding reduction in its claim against the debtor.³⁵ 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.³⁶ 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

170 are considered liquid. Roughly 30 of the underlying reference entities are emerging market sovereigns.

Id.

³⁴ See DAS, CREDIT DERIVATIVES *supra* note 29, at 2-3.

³⁵ See generally Stephen J. Lubben, – *Securitization and Chapter 11*, 1 N.Y.U. J.L. & Bus. 89 (2004).

³⁶ By most estimates credit default swaps comprise more than 90% of the credit derivatives outstanding.

from the other counterparty (the “protection buyer”).³⁷ The debtor on the referenced obligation is not a party to the swap, and in most cases is unaware of the transaction.³⁸

If the reference obligation goes into default, the protection buyer receives a payment meant to compensate it for its losses.³⁹ 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,”⁴⁰ “failure to pay,”⁴¹ and “restructuring.”⁴² Swaps written on sovereign or emerging markets

³⁷ *Nomura International plc v Credit Suisse First Boston International*, 2 All ER (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.”).

³⁸ At the start of 2006, the five most common reference entities or debtors were General Motors, Ford, DaimlerChrysler, Russia, and France Telecom. *Fitch Says AIG Dominates Protection: Market Dismisses Concentration Risk Claims*, Euromoney, Jan. 1, 2006, at 21.

³⁹ 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).

⁴⁰ 2003 ISDA Credit Derivative Definitions, Section 4.2.

⁴¹ 2003 ISDA Credit Derivative Definitions, Section 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. See 2003 ISDA Credit Derivative Definitions, Section 4.8(d).

⁴² 2003 ISDA Credit Derivative Definitions, Section 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. 2003 ISDA Credit Derivative Definitions, Section 4.8(a). The definition of restructuring is not uniform 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. 2003 ISDA Credit Derivative Definitions, Section 2.32. See also Frank Packer & Haibin Zhu, *Contractual terms and CDS pricing*, BIS Quarterly Review, March 2005, available at http://www.bis.org/publ/qtrpdf/r_qt0503.htm.

corporate debt add provisions regarding repudiations or debt moratoriums.⁴³ In the North American and European corporate markets these events typically must occur with respect to “borrowed money” – effectively any obligation owed to a voluntary creditors of the reference entity or its subsidiaries, if the parent guaranteed the subsidiaries’ obligations⁴⁴ – in excess of the \$1 million and \$10 million limitations built into the definitions of failure to pay and restructuring, respectively.⁴⁵

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.⁴⁶ 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.⁴⁷

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”

⁴³ 2003 ISDA Credit Derivative Definitions, Section 4.6.

⁴⁴ Outside of North America the guarantee provisions usually apply to all guarantees, not just those given to a subsidiary’s creditors.

⁴⁵ *See supra* notes 38-39.

⁴⁶ *See* DAS, CREDIT DERIVATIVES *supra* note 29, at 113.

⁴⁷ 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 (“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.”).

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. 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, not bearer paper, with a maturity of less than thirty years from the settlement date.⁴⁸

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.⁴⁹ The protection seller, and its shareholders, 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.⁵⁰

⁴⁸ See generally ISDA Credit Derivatives Physical Settlement Matrix (April 18, 2006), available at www.isda.org. The Credit Derivatives Physical Settlement Matrix – which is updated periodically -- sets out the most commonly used provisions, by jurisdiction, for credit default swaps. Parties can adopt these “market standard” terms by incorporating the Matrix into their transaction. See 2005 Matrix Supplement to the 2003 ISDA Credit Derivatives Definitions (March 7, 2005).

⁴⁹ 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).

⁵⁰ 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

Because of General Motors' recent financial difficulties, pricing information for its credit default swaps has been readily available.⁵¹ Table 2 illustrates the information conveyed by this new market in a firm's credit prospects⁵² – 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 5 year CDS spreads had shrunk to just over three hundred thirty basis points.

TABLE 2: GENERAL MOTORS CDS SPREADS

Spread Over Risk Free Rate; As of March 30, 2006

	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>7 Year</u>	<u>10 Year</u>
Spread (in basis points)	967.24	1199.32	1145.15	1083.29	1040.54	1012.21

Source: 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 any imperfect correlation between the X. Corp. bonds, the reference obligation for this swap, and the loan to X. Corp.

to be sourced means that it is generally easier to transact in large round sizes with CDS." Dominic O'Kane, et al., *The Lehman Brothers Guide to Exotic Credit Derivatives* 6 (2003).

⁵¹ See generally Eduardo Porter, Auto Bailout Seems Unlikely, N.Y. Times, Apr. 14, 2006, at

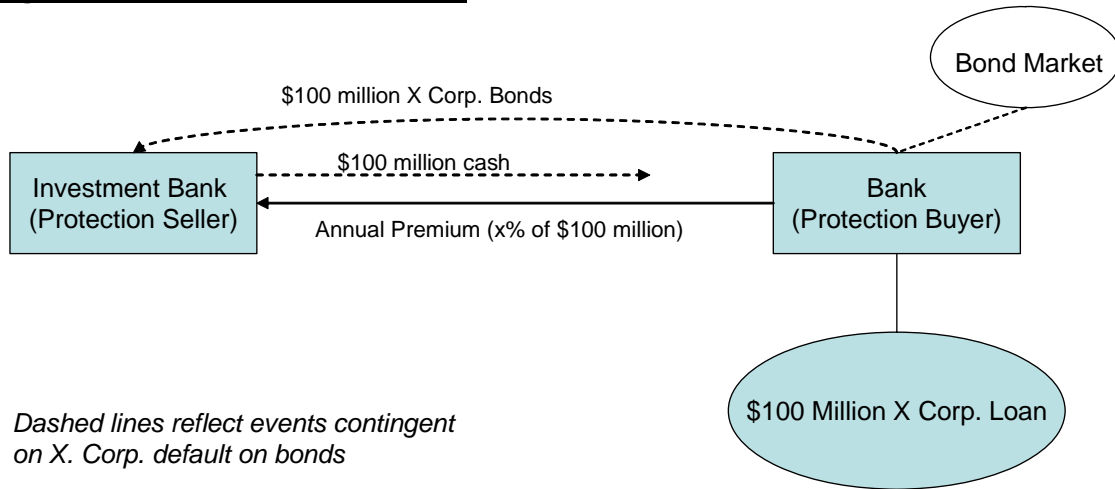
⁵² A credit default swap spread is the cost per year for protection against a default by the referenced firm. Table 2 shows that a two year credit default swap on GM, purchased in late March, would have cost the protection buyer almost 12% (11.9932%) of the face amount of the swap.

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.⁵³

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.⁵⁴

⁵³ 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, a problem that could be especially acute if the reference entity is not subject to SEC reporting obligations.

⁵⁴ 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.

Figure 1: Credit Default Swap

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.⁵⁵ Similarly, 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.⁵⁶ 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.⁵⁷

⁵⁵ See DAS, CREDIT DERIVATIVES *supra* note 29, at 181-201.

⁵⁶ Index composition and price information can be found at <http://www.markit.com/markit.jsp>.

⁵⁷ \$800,000 = (1/125)(\$100 million)

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 derivatives markets has exposed several areas of structural underdevelopment, at least two of which are important for present purposes.⁵⁸ 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.⁵⁹ 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.⁶⁰ And while under the terms of the ISDA Master Agreement,⁶¹ the prior

⁵⁸ 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.

⁵⁹ 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.

LCDS Forum Summary, www.markit.com/marketing/lcds_summary.php (last visited July 24, 2006).

⁶⁰ 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 International Swaps And Derivatives Association, ISDA 2006 Operations Benchmarking Survey, 5 (2006) (reporting a 17% average error rate for credit derivative transactions).

⁶¹ Most of the derivatives in the global derivatives market are documented under International Swaps and Derivatives Association (ISDA) documentation. The ISDA

written consent of the other party is required when its counterparty in a trade wishes to assign its position in a trade to a third party,⁶² this practice has apparently been tolerated in the community.⁶³ Thus, upon a chapter 11 filing, it may not be clear which creditors are protected from losses, even among the parties to swaps. And while the problem of unauthorized transfers should soon disappear from the market, as ISDA has moved to address regulatory concerns regarding assignments, the larger question of which creditors have bought or sold protection will loom large in chapter 11 cases in the future.⁶⁴

Additionally, the rapid growth of the credit derivatives market has recently lead to supply and demand problems upon a default. After the recent chapter 11 filing of automotive parts manufacturer Delphi Automotive, for example, \$2 billion of bonds were said to be in circulation when it filed for bankruptcy, but the notional amount of outstanding derivatives of more than \$20 billion, which initially had

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. *See also* *Ursa Minor Ltd. v. Aon Financial Products, Inc.*, 2000 U.S. Dist. LEXIS 10166, at *6-*8 (S.D.N.Y. July 21, 2000).

⁶² ISDA 2002 Master Agreement § 7.

⁶³ *See* Richard Beales, *Popular Credit Market Still Too Opaque*, *Fin. Times.*, Jan. 6, 2006, at 21.

⁶⁴ *See* Greg Ip & Carrick Mollenkamp, *U.S. and Britain Team Up to Test Financial Risk*, *Wall St. J.*, March 2, 2006, at C1.

the explicable, although still strange, effect of driving up the market prices of the bonds just as Delphi filed for chapter 11.⁶⁵ 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.⁶⁶ 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.⁶⁷ Removing index swaps from the mix reduces, but does not eliminate the supply and demand effects on the bond markets.⁶⁸

From a chapter 11 perspective, this post-petition turbulence in the markets for the debtor’s claims could have several consequences. Chapter 11 voting, already complex because of the need to identify beneficial bondholders,⁶⁹ could well become further complicated by substantial and rapid turnover among bondholders at the start of chapter 11 cases. Similarly, tax rules that require bondholders to be “old and cold” may well be of limited value if default swaps prompt large-scale trading upon default.⁷⁰ There also remains a largely

⁶⁵ See Richard Beales, *Uncertain Road Ahead For Delphi*, Fin. Times, Nov. 8, 2005, at 45.

⁶⁶ See Richard Beales, *Credit Derivative Industry Set To Propose New Settlement Rules*, Fin. Times, Jan. 31, 2006, at 30.

⁶⁷ While traditionally these settlement procedures have been used only in conjunction with index products, the process was recently extended to single name swaps. See Creditex And Markit Announce Results Of Dura Credit Event Fixing For Defaulted Bonds, Press Release dated Nov. 28, 2006 (on file with author).

⁶⁸ For example, in the Delphi Automotive chapter 11 case there was \$28 billion in outstanding swaps. \$8 billion was in single names (on \$5.2 billion in bond and bank debt), and \$20 billion was in indexes.

⁶⁹ In re Southland Corp., 124 B.R. 211 (Bankr. N.D. Tex. 1991).

⁷⁰ See generally Robert A. Jacobs, *The Chapter 11 Corporate Tax Survival Kit or How to Succeed as Guardian Ad Litem of a Corporate Debtor's NOL*, 42 Tax Law. 3 (1988).

unaddressed question of how chapter 11 orders that restrict trading in the debtor's securities, to preserve the value of tax losses, interact with the settlement requirements of credit default swaps.⁷¹

But these effects are still relatively minor in scale when compared with the fundamental philosophical differences as between traditional chapter 11 assumptions and a new world where creditors are able to separate default risk from the other attributes of being a creditor. It is this issue that I take up in Part III, after explaining the traditional chapter 11 assumptions about creditors in the next part of the paper.

⁷¹ For more background on these orders, see http://www.lsta.org/assets/files/Standard_Documents/Legal_Analysis-Regulatory_Matters/Final_Model_NOL_Order_Memorandum_Nov04.pdf.

II. Ownership and Chapter 11

In the hundred and twenty-five year history of American corporate reorganization, the locus of power has shifted from the creditor-dominated railroad reorganizations of the nineteenth century,⁷² to the bureaucratized mode of the New Deal,⁷³ to the debtor controlled chapter 11 cases of the 1980s,⁷⁴ and back again, apparently, to the point of secured creditor control.⁷⁵ Throughout the goal has been to locate an appropriate balance of debtor and creditor power, ensuring an efficient reorganization.

Especially since the adoption of chapter 11 in 1978, American bankruptcy law has been premised on the notion that creditors will act in their own self interest. Creditors with large claims, including most secured lenders, will participate in chapter 11 because they stand to gain or lose a good deal. Creditors with more moderately sized claims, such as bondholders or trade creditors, may have to be given an incentive to participate. Participation may be costly relative to the size of these creditors' claims, and the benefits of participation that accrue to any one creditor may even be outweighed by these costs. Thus, the Bankruptcy Code provides for the creation of creditors'

⁷² See generally Stephen J. Lubben, *Railroad Receiverships and Modern Bankruptcy Theory*, 89 Cornell L. Rev. 1420 (2004).

⁷³ Act of June 22, 1938, (the "Chandler Act"), ch. 575, 52 Stat. 840, *repealed by* Bankruptcy Reform Act of 1978 (the "Bankruptcy Code"), Pub. L. No. 95-598, 92 Stat. 2549.

⁷⁴ See generally Charles J. Tabb, *The Future of Chapter 11*, 44 S.C. L. Rev. 791 (1993).

⁷⁵ See, e.g., Douglas G. Baird & Robert K. Rasmussen, *The End of Bankruptcy*, 55 Stan. L. Rev. 751 (2002); Stephen J. Lubben, *The New and Improved Chapter 11*, 93 Ky. L.J. 839 (2005).

committees funded by the debtor's assets.⁷⁶ More generally, in virtually every instance where the Bankruptcy Code gives the chapter 11 debtor substantial power, it checks that power with avenues for creditor action. Table 3 shows the five primary elements of a debtor's power in chapter 11, and the correlative creditors' powers.

⁷⁶ 11 U.S.C. § 1102.

TABLE 3: DEBTOR POWERS AND CORRELATIVE CREDITORS' POWERS		
Debtors' Powers	General Creditors' Powers	Creditor Specific Powers
Initiation/Choice of Procedure [§ 301, § 1112(a)]	Involuntary Petition [§ 303] Conversion Or Dismissal [§ 1112(b)]	
Automatic Stay [§ 362]	Lift Stay [§362(d)] Adequate Protection [§361]	Aircraft & Rail Lenders [§§ 1110 & 1168] Derivative Counterparties [§ 362(b)(6), (7), (17)] Lenders With Proceeds Or Accounts Liens [§ 363(c)(2)] Recent Trade Creditors [§§503(b)(9); 546(c)]
Assumption/Rejection [§ 365]	Lift Stay [§362(d)]	Parties To Contracts With Nonmonetary Performance [§ 365(b)(1)(A)] Nonresidential Lessors [§ 365(d)(4)] Unionized Workers [§ 1113] Derivative Counterparties [§§ 555-556, 559-560] Lenders [§ 365(c)(2)] Non-Assignable Contract Counterparties [§ 365(c)(1)] Shopping Center Lessors [§ 365(b)(3)]
Exclusivity [§ 1121]	Terminate Exclusivity [§ 1121(d)] Trustee [§ 1104] Conversion Or Dismissal [§ 1112(b)]	
Cramdown [§ 1129(b)]	Classification [§ 1122] Good Faith [§ 1129(a)(3)] One Class Rule [§1129(a)(10)] Two Part Majority Rule [§1126(c)] Best Interests Test [§1129(a)(7)]	Nonrecourse & Undersecured Lenders [§ 1111(b)]

As seen from the table, some of the debtor's key powers are checked better than others. For example, unless a contract involves a select subject matter – including derivative contracts – the counterparty will have but a very limited ability to terminate that agreement upon a debtor's bankruptcy.⁷⁷ The debtor, on the other hand, will have a much broader power to breach, perform, or assign the agreement.⁷⁸

Other powers are more plainly balanced, such as the debtor's ability to impose a plan on creditors. And the debtor's exclusive right to propose a plan – although once considered a key weakness in chapter 11 – seems to have reached a point of balance.⁷⁹ Indeed, Congress' recent amendments that automatically terminate exclusivity may swing the balance of power to creditors, especially in smaller cases where the costs of drafting a competing plan would be slight.⁸⁰

Likewise, even if the Code as originally enacted was not always applied in an entirely balanced manner, the recent development of “creditor in possession” chapter 11 cases seems to have convinced

⁷⁷ Courts and academics often proclaim, with little analysis, that the Bankruptcy Code prohibits non-debtor termination of contracts. A careful reading of sections 362 and 365 shows that this assertion is overstated. The Bankruptcy Code simply ensures that the non-debtor party will have to pay full breach damages if it terminates a contract solely because of the debtor's bankruptcy filing. In most cases paying damages is an unattractive option, since the debtor will likely incur substantial costs to cover. In short, the Code often effectively precludes termination by the non-debtor party, by making it prohibitively expensive, but there may be instances in which a party could advance sufficient “cause” to lift the automatic stay for purposes of breaching a contract.

⁷⁸ 11 U.S.C. § 365(a), (f).

⁷⁹ 11 U.S.C. § 1121.

⁸⁰ See Bankruptcy Abuse Prevention and Consumer Protection Act, Pub. L. No. 109-8, § 441 (2005) (adding a new paragraph to section 1121(d) that limits the debtor to a single 14-month extension of both the exclusivity and plan solicitation periods).

even long-time critics of the utility of the chapter 11 process.⁸¹ In particular, several leading scholars have argued that “[c]orporate reorganizations today are the legal vehicles by which creditors in control decide which course of action – sale, prearranged deal, or conversion of debt to a controlling equity stake – will maximize their return.”⁸²

Whichever version of chapter 11 we look at, we assume that creditors act in their own self interest. The Bankruptcy Code gives creditors a variety of tools that check the tools given to debtors, but there is no affirmative requirement that creditors use these tools. And the court generally has no obligation or power to assert the rights or powers of creditors if no creditor deems it wise to appear before the court. Likewise, a theory of creditor control in chapter 11 only works if the creditor who has bargained for certain levers of control also decides to use those levers.

Creditor powers can increase claim values in two ways, thus making participation in chapter 11 economically attractive to the creditor. First, successful use of the creditor’s powers may confer direct monetary benefits on the creditor: the creditor may recover more on its claim. Second, using these powers can add to value by deterring debtor misconduct in future cases, a benefit primarily obtained by larger, institutional creditors who expect to participate in multiple reorganizations.

⁸¹ See generally Jay Lawrence Westbrook, *The Control of Wealth in Bankruptcy*, 82 Tex. L. Rev. 795 (2004).

⁸² Baird & Rasmussen, *Chapter 11 at Twilight*, 56 STAN. L. REV. 101, 103 (2003).

These benefits are thinned by two types of costs. First, creditors incur varying degrees of costs in exercising their powers under the Bankruptcy Code. Some creditors, mostly secured lenders, can extract many of these costs directly from the debtor if the creditor obtains sufficient collateral *ex ante*.⁸³ Post-petition lenders, who may be especially likely to exert the kind of overarching control many scholars have recently noted, can also charge these costs directly to the debtor. And unless the debtor is heavily insolvent, these creditors will not indirectly incur these costs in the form of reduced recoveries. But unsecured creditors' recoveries are directly diminished by any expenses they incur in exercising their powers, save for some ability to spread the costs to similarly situated creditors through the committee process – if the creditor's individual interests coincide with the interests of creditors generally.

Second, exercise of creditor powers also imposes costs on the debtor, and these costs will ultimately be born by the junior creditors. Any particular creditor only bears these costs in proportion to their membership in the overall junior class of creditors.

In an ideal world, creditors would only exercise their powers when doing so would be socially efficient, taking into account these various costs and benefits. Of course, in actuality, the decision will depend only on the creditor's own personal costs and benefits.

Consider a hypothetical chapter 11 debtor with \$1 billion of assets and \$1.5 billion of liabilities. Assume that \$600 million of the debt is held by senior, secured creditors – imagine a group of banks – while the remainder is held by various bondholders (\$700 million) and trade

⁸³ 11 U.S.C. § 506(b).

creditors (\$200 million).

First consider a situation where the bondholders believe that the chapter 11 case is being run for the benefit of the senior creditors and the trade creditors, and that continuation in chapter 11 will reduce bondholder recoveries from the *status quo*. The cost of litigating a motion to convert the case to chapter 7 costs \$400,000, divided equally between creditors and debtors – but keep in mind that junior creditors ultimately pay the second cost in proportion to their claims against the estate, in the form of reduced recoveries in the bankruptcy.

Under these facts, an individual bondholder holding \$50 million par value of the debtor's bonds would incur the following costs:

$$C_t = C_c + (50m/900m)C_d = 200,000 + (0.0555)(200,000) = \$211,100$$

Unless the bondholder expects that its own recovery will decline by more than \$211,100 – or just over 1% of the current recovery – by staying in chapter 11, it will not pursue the conversion motion. However, this decision does not result in a willingness to bring suit when it will be socially optimal. Namely, there is a zone where the decline in recovery is positive but less than \$211,100 when the junior creditors should move to convert – namely, at any time when the continued stay in chapter 11 will reduce the debtor's unencumbered assets by more than 0.04% (or just over \$22,000 with respect to our bondholder's claim). In other words, the bondholder will make an inefficient decision not to bring a conversion motion when the reduction in its recovery (r) falls within the following range:

$$\mathbf{\$22,222 < r < \$211,100}$$

The Bankruptcy Code attempts to solve this collective action problem by giving creditors' committees the power to bring such motions, which effectively spreads the costs of the motion among all of the junior creditors.⁸⁴ This is not a complete solution, and the example is thus oversimplified, because the committee will make some errors with regard to when to bring the motion and the trade creditors will resist this move when the present value of their future sales to the debtor is greater than any reduction to their individual recoveries – that is, in a real reorganization case the junior creditors will have conflicting beliefs about when it will be prudent to bring a conversion motion.⁸⁵ Similarly, courts can be expected to make some errors in ruling on the conversion motion, especially in cases at the margin, which induces a risk element into the junior creditors' calculations, causing them to discount the gains from bringing the conversion motion.

The secured creditor's incentives under these facts depend on the degree of the creditor's security interest. If the creditor is secured by all of the debtor's assets, the creditor will be largely indifferent as between chapter 11 and chapter 7, unless the stay in chapter 11 is transferring more wealth to insiders and trade creditors than the secured creditor.⁸⁶ Even then the transfers would have to be substantial for the secured creditor to be concerned in the short term, as the creditor can continue to collect both interest, often at a

⁸⁴ See 11 U.S.C. § 1103(c).

⁸⁵ See Stephen J. Lubben, *Some Realism About Reorganization: Explaining the Failure of Chapter 11 Theory*, 106 Dick. L. Rev. 267, 301-02 (2001).

⁸⁶ See Lubben, *The New and Improved Chapter 11*, *supra* note 75, at 849-56.

heightened “default rate,”⁸⁷ and the costs of participation in the bankruptcy process.⁸⁸

But a secured creditor whose collateral is more closely matched with the amount of its claim – perhaps a more likely occurrence – also has some incentive to bring the conversion motion. In particular, delay will eventually become costly to this creditor, as interest ceases to accrue once the creditor’s claim passes the collateral value.⁸⁹ The creditor’s ability to recover its collection costs also phases out at this point, and the creditor’s incentives become similar to those of a junior creditor with a claim equal to the creditor’s unsecured deficiency claim. Similar, but not the same, because the secured creditor is also incurring losses on its secured claim equal to the time value of money for the delay imposed by the automatic stay.⁹⁰

In both cases, the essential point remains the same: because the exercise of creditor checks on debtor powers will often have positive cost to the creditor, these powers will only be exercised when doing so is in the creditors’ rational self interest. The Bankruptcy Code sometimes intervenes to reduce those costs by spreading them among all creditors, reducing the collective action and free-rider problems that would otherwise exist. But in all cases we assume that creditors are motivated to take all available steps to maximize their recoveries in

⁸⁷ See *In re Liberty Warehouse Assocs. Ltd. Pshp.*, 220 B.R. 546 (Bankr. S.D.N.Y. 1998).

⁸⁸ 11 U.S.C. § 506(b).

⁸⁹ 11 U.S.C. §506 (interest only accrues to the extent the collateral value “is greater than the amount of [the] claim.”).

⁹⁰ 11 U.S.C. § 362. See also *United Sav. Ass'n of Tex. v. Timbers of Inwood Forest Assocs., Ltd. (In re Timbers of Inwood Forest Assocs., Ltd.)*, 484 U.S. 365 (1988) (holding that undersecured creditors are not entitled to compensation for the delay caused by the automatic stay in foreclosing on their collateral).

bankruptcy, at least when those steps have a positive net value. How that self interest changes in the light of credit default swaps is the subject of the next section.

III. Incentives without Risk?

It has long been recognized that insurance contracts can have the paradoxical effect of producing risky and wasteful behavior. This is the well known “moral hazard” problem.⁹¹

It might seem that credit derivatives present the same problem with respect to chapter 11. After all, credit default swaps often act as a kind of insurance contract against default, and thus we might quickly conclude that creditors protected against the consequences of default will stop monitoring debtors and allow managers of financially troubled companies a free hand to do as they will.

Maybe. But the true story is likely more complicated. Credit default swaps have payouts that are economically similar to insurance contracts, but differ from insurance in several key respects. In this final section of the paper, I first generally consider the effect of credit default swaps on the parties’ incentives, and then look at several specific aspects of chapter 11 practice that could change as a result of the increased use of credit derivatives.

A. *Credit Derivatives and Chapter 11 Incentives*

Credit default swaps can be conceptualized as a piece of a debt obligation consisting of the credit spread (*i.e.* interest beyond the risk free rate) and the default risk of the instrument, both of which are transferred to the protection seller. A hedging buyer of a default swap essentially transforms part or all of its existing exposure on a debt

⁹¹ See, e.g., Daniel Keating, *Pension Insurance, Bankruptcy and Moral Hazard*, 1991 WIS. L. REV. 65, 67-68.

obligation into something close to a high-quality government bond – the “closeness” varying the credit risks associated with the counterparty to the swap.⁹² For example, a bank that hedges a \$100 million loan with a \$50 million credit default swap purchased from a major investment bank has transformed half of the original debt into a high quality obligation, regardless of the credit of the underlying reference debtor.

Conversely, the seller of a credit default swap buys a slice of the original debt obligation, taking on the role of a lender but without incurring any funding costs or interest rate risks. The seller has acquired an instrument that will turn almost entirely on the firm-specific risks of the reference debtor.

In chapter 11, the protection buyer who has hedged its exposure to the debtor will receive cashflows (R) equal to the full face amount of their debt (f), less the costs of the hedge (p) and the adjusted by the difference between the cost of the delivered obligation and the actual recovery the buyer receives in the bankruptcy procedure (g), where g equals the cost of obligation delivered under the swap (c) minus the recovery on an equal amount of hedged debt obligation (h):

$$\mathbf{R = f - p - g}$$

$$\mathbf{g = c - h}$$

For example, assume a \$100 million notional amount swap used to hedge the buyer's exposure to a \$100 million loan, the same

⁹² Even if there is no credit risk associated with the counterparty, differences in taxation will prevent perfect equivalence with government bonds.

transaction shown in Figure 1. Further assume that the default occurred two years into a swap that was originally priced at 200 basis points, and that the bonds used to settle the swap were purchased in the market for \$38 million, while the bank expects to recover \$40 million on its loan. For simplicity, ignore the time value of money. The protection buyer's recovery would look like this:

$$\mathbf{R = (\$100\ million) - (\$4\ million) - (-\$2\ million) = \$98\ million}$$

$$\mathbf{g = (\$38\ million) - (\$40\ million) = -\$2\ million}$$

It then becomes clear that an insurance analysis will not capture the buyer's full incentives. For example, in a normal insurance transaction the insurance company, who in a swap transaction corresponds to the protection seller, would step into the shoes of the protection buyer and assert the seller's claim in the chapter 11 case by way of subrogation. Here the protection seller instead replaces an unknown bondholder and the protection buyer continues to assert their original claim in chapter 11. In short, a swap creates insurance-like payouts without the ownership implications of an insurance contract.

But how does the swap influence the creditor's incentives in chapter 11? First note that the protection buyer in this transaction can never recover less than \$58 million (\$100 million - \$ 4 million - \$38 million), and even this absolute floor is unlikely to ever be reached because it would require an entirely unanticipated destruction of the debtors assets such that unsecured creditors received no recovery whatsoever. Furthermore, on average the value of g should equal zero – as the price paid for the bonds used to settle the swap should reflect

the market's best estimate of the junior creditors' recovery in chapter 11. Slight deviations in individual cases are, of course, possible because of the "cheapest to deliver" option and the potential that the protection buyer has superior information about the reference debtor, a reasonable possibility in this example because the buyer is also a bank lender.

The presence or absence of these two qualifications will drive the protection buyer's incentives with regard to any particular chapter 11 case. For example, in a case where the lender has no better information than any other creditor and the cheapest to deliver option is inapplicable, perhaps because the debtor has only issued one type of transferable debt instrument, the protection buyer will have little or no incentive to participate in the chapter 11 case. No matter what they do, they will not expect to alter their recovery in chapter 11 sufficiently to receive more or less than \$96 million. Participation would simply mean incurring the positive costs of participation. Even if we assume that bond markets are somewhat inefficient, the protection buyer would have to assume a degree of inefficiency sufficient to clear their participation costs.

If either of the two other factors are present, however, the protection buyer may have incentives to participate if doing so will produce excess returns. In the example above, the additional \$2 million the protection buyer recovers could reflect additional information about the debtor's ability to repay. If creditors' are generally unaware of the debtor's true ability to repay, management may engage in undetected rent seeking behavior – paying themselves

retention bonuses, perhaps.⁹³ Under these facts, the protection buyer could have an incentive to incur the positive costs of participation in the chapter 11 case in order to protect its expected \$2 million gains, assuming participation costs do not exceed the gains.⁹⁴

On the other hand, cases of information asymmetry may be rare since lenders may also have an incentive to separate lending and hedging operations in order to protect their reputations – otherwise protection sellers might discover an adverse selection problem with regard to those reference entities that the protection buyer sought to hedge. Similarly, a possible moral hazard problem that could crop up if lenders were to stop monitoring the borrower once protection was in place, and this strategy would likely fail over the long run as protection would become prohibitively expensive for lenders who acquired a reputation for this type of shirking.⁹⁵ In short, even if the lender has superior information it may have rational motivations to avoid using that information.

Overall, this analysis has plain implications for the future of chapter 11. To the extent that recent commentators correctly identify senior creditor control as the lynchpin of a newly efficient chapter 11 process, any trend toward creditor passivity threatens to undermine the very basis of this putative reform. If we assume that the most concentrated creditors are the creditors most likely to hedge their

⁹³ See generally David A. Skeel, Jr., *Creditors Ball: The "New" New Corporate Governance in Chapter 11*, 151 U. Pa. L. Rev. 917 (2003).

⁹⁴ This situation is unlikely to arise in reverse, as the protection buyer would have an incentive to disclose its superior information and avoid overpaying for the bonds.

⁹⁵ See Viral V. Acharya & Timothy C. Johnson, *Insider Trading in Credit Derivatives*, 84 J. Fin. Econ 110, 11-12 (2007).

positions, the growth of credit derivatives could plainly reverse the trend toward creditor control. More generally, if large creditors generally disengage from the chapter 11 process, the only check on debtor, shareholder, and management overreaching will be the bankruptcy court and the rough balance described in Part II will cease to function.

The protection seller side of the transaction may temper the more extreme version of this story. To the extent that protection sellers aggregate large blocks of a reference debtor's debt, they may represent a new source of creditor control in chapter 11.⁹⁶ However, it appears that key players in the credit derivatives markets more often maintain neutral positions in a particular reference entity⁹⁷ – balancing protection sales with protection purchases – so the bonds transferred in the settlement process may simply represent a reshuffling of debt among large institutions.⁹⁸ Nevertheless, if smaller bondholders begin to use the swap settlement process as a market for exiting defaulted positions, a distinct possibility if supply and demand effects continue to drive up prices, there could be a mitigating trend at work in large chapter 11 cases. It is not clear that this trend will entirely counteract the potential problem, however, especially if the debt that is aggregated through this process is subordinated or otherwise junior to the obligations that are neutralized through the credit derivatives

⁹⁶ Cf. Chaim J. Fortgang & Thomas Moers Mayer, *Trading Claims and Taking Control of Corporations in Chapter 11*, 12 Cardozo L. Rev. 1 (1990).

⁹⁷ See *Deutsche Bank v. AMBAC Credit Products*, 04 Civ. 5594, at p. 15 (S.D.N.Y. July 6, 2006).

⁹⁸ Since many of the large dealers have high credit ratings, they may be able to buy protection for less than the cost paid by the parties buying protection from them, leaving the dealer with gains equal to the spread.

markets.

Likewise, the increasing transferability of bank loans may also moderate the problems of creditor passivity, inasmuch as the protection seller is more likely to be directly subrogated to the rights of the original creditor if that creditor's claim can be used to settle a swap.⁹⁹ In this way, the increased transferability of claims might provide a market solution for the problem of creditor passivity. Of course, as the credit default swaps market continues to expand, other creditors with transfer restrictions on their claims – like trade creditors and contract creditors – might counteract this correction.

Additionally, it is not clear that many protection sellers have any interest or desire to participate in chapter 11 cases. For example, some hedge funds sell credit protection as an easy way to generate income from the periodic fees paid by they seller.¹⁰⁰ They have little interest in the underlying debt and thus, even if they could take the place of senior lenders, it is not clear they will do so.

The ultimate answers to these questions await further data on this very obscure market and further developments in the market itself.

B. Changing Dynamics

Beyond the general concerns raised in the prior section, the

⁹⁹ The Loan Syndication and Trading Association has developed a series of standardized lending forms that allow for greater trading in bank loans. See www.lsta.org. One practitioner advises that about “five years ago, banks began to refuse to include any limitation on transferability in their loan documents.” Email dated June 7, 2006 (on file with author). ISDA recently published model documents for use in credit default swap transactions where the reference obligation is a syndicated secured loan and the deliverable obligations are also syndicated secured loans. These documents are available on the ISDA's web page (www.isda.org).

¹⁰⁰ Apparently hedge funds can sell protection without recording a potential liability on their balance sheets, increasing the attractiveness of this approach.

increased use of credit default swaps could have several more immediate, and specific, effects on current chapter 11 practice. As widely recognized among practitioners, the growth of credit derivatives could well impede the negotiation of workouts, as well as pre-negotiated or pre-packaged bankruptcy plans, inasmuch as the party with the real risk of loss will often be unknown.

More importantly, credit derivatives may ultimately discourage out-of-court restructurings or at least place artificial time limits on the length of such negotiations, while simultaneously increasing the incidence of involuntary bankruptcy filings. To see why, recall that credit default swaps are often relatively short term instruments that expire without value to the protection buyer if no credit event occurs before maturity. Thus, as maturity dates approach on outstanding credit default swaps, protected creditors will have an increasing disincentive to work with the debtor on the terms of a restructuring arrange that might not be announced or consummated until after the creditors' swaps have terminated. More generally, the protection buyer faces the risk that any workout could extend the underlying debt obligation beyond the terms of the swap.

Creditors will have every incentive to trigger the swap by filing an involuntary bankruptcy petition against the debtor, illustrating the important point that "bankruptcy" is the one credit event that can be controlled by many credit buyers.¹⁰¹ It may be that petitioning creditors should be required to disclose their swap positions as part of the involuntary petition, a change that would require an amendment to either the Code or the Federal Rules of Bankruptcy Procedure, so that

¹⁰¹ See 11 U.S.C. § 303.

courts considering petitions have some awareness if the creditors' had incentives to "jump the gun" with the petition.¹⁰²

This example also illuminates the potential for credit default swaps to exacerbate creditor conflicts. Restructuring agreements, including prepackaged chapter 11 plans, are most often negotiated with the debtor's largest creditors and then submitted to all creditors for consideration.¹⁰³ But the largest creditors are presumably the creditors most likely to have hedged their default risk. And while it was undoubtedly always true that big bondholders are unlike small bondholders, the growth of credit derivatives may swell this gap, as large bondholders now agree to riskier reorganization plans or other similar terms that result solely from the downside protection these large bondholders have by virtue of their swap positions.¹⁰⁴

Credit default swaps may also undermine chapter 11's elegant two-part voting rule. The Code provides that two-thirds of claims (by amount) in a class vote to approve a plan, and, in addition, that a flat majority (by head count) also vote in favor of the plan.¹⁰⁵ This rule

¹⁰² Cf. F.R.B.P. 2019 (requiring disclosures from creditor groups, including "the amounts of claims or interests owned by the entity, the members of the committee or the indenture trustee, the times when acquired, the amounts paid therefor, and any sales or other disposition thereof").

¹⁰³ See Stephen J. Lubben, *The Direct Costs of Corporate Reorganization: An Empirical Examination of Professional Fees in Large Chapter 11 Cases*, 74 Am. Bankr. L.J. 509, 516 (2000).

¹⁰⁴ Credit default swaps may also discourage participation in creditors' committees, especially by large financial institutions. Courts have repeatedly held that committee members owe fiduciary duties to the class of creditors they represent. *E.g.*, *Westmoreland Human Opportunities, Inc. v. Walsh* 246 F.3d 233, 256 (3d Cir. 2001). A large financial institution, with an active trading arm, already faces problems reconciling its dual roles in chapter 11 and the growth of swaps may convince these creditors to avoid problems by declining committee membership altogether.

¹⁰⁵ See 11 U.S.C. § 1126(c).

accomplishes several things at once. First, it prevents a mass of small creditors from imposing a plan on a creditor that has one large claim. Conversely, the majority vote rule ensures that one large creditor does not control the fate of an entire class. Finally, the rule, along with the cramdown provisions of the Code, eliminate the holdout problems that were being to become a serious problem in the receiverships of the early twentieth century – a fact that facilitated the adoption of sections 77 and 77a in the early 1930s, federalizing corporate reorganization for the first time in the Nation's history.¹⁰⁶

But now, if large creditors hedge their positions with credit default swaps, their voting power will be disproportionate to the economic stakes in the debtor.¹⁰⁷ For example, in the earlier example the protection buyer would vote claims of \$100 million in the debtor's case while at most \$42 million was actually at risk in the case, the remainder being fully protected by the swap. In essence, this creditor, if it agrees to the plan, contributes \$58 million toward meeting the Code's two-thirds of claims than a typical \$42 million claim, while the risks to both creditors are otherwise quite similar. In short, hedged creditors are more valuable to the debtor than regular creditors because they can move the debtor's plan closer to confirmation and may be more willing to approve somewhat more risky plans since the risks they face a low relative to the size of their claims.

In large part this is not as troubling as it might appear at first blush

¹⁰⁶ See Stephen J. Lubben, *Out of the Past: Railroads & Sovereign Debt Restructuring*, 35 Geo. J. Int'l L. 845, 850 (2004).

¹⁰⁷ See Shaun P. Martin & Frank Partnoy, *Encumbered Shares*, 2005 U. Ill. L. Rev. 775, 778-79.

– since at least 1789, and Hamilton’s *Report on Public Credit*,¹⁰⁸ it has been the rule that a bondholder can assert a claim for the full face amount thereof, regardless of whether they lent that much to the debtor when the debt was originally incurred or whether the current holder bought the bond for pennies on the dollar in the secondary market.¹⁰⁹ Thus, it has long been the case that chapter 11 cases contain creditors whose voting power far exceeds their “true” stake in the proceedings.

The more important question is whether the potential for riskier plans is itself objectionable. Plainly the more ambitious the plan, the greater the risk of a need for further reorganization. Whether repeated chapter 11 cases are sub-optimal is the subject of much debate.¹¹⁰ While early reorganizations were very expensive,¹¹¹ and repeat filings thus unlikely to be desirable, evidence suggests that the direct costs of modern chapter 11 cases is more modest.¹¹² Thus, it is plausible that two short chapter 11 cases might be preferable to a single, protracted chapter 11 case, which may have greater indirect costs. The real issue may be one of disclosure: if chapter 11 plans increasingly become

¹⁰⁸ ALEXANDER HAMILTON, *Report on Public Credit*, in WRITINGS 531, 540-41 (Joanne B. Freeman ed. 2001).

¹⁰⁹ See *In re Pengo Indus., Inc.*, 962 F.2d 543, 550 (5th Cir. 1992).

¹¹⁰ See generally Lynn M. LoPucki, *Courting Failure: How Competition for Big Cases Is Corrupting the Bankruptcy Courts* (2005).

¹¹¹ See Lubben, *Railroad Receiverships*, *supra* note 72, at 1483.

¹¹² Lynn M. LoPucki & Joseph W. Doherty, *The Determinants of Professional Fees in Large Bankruptcy Reorganization Cases*, 1 J. Empirical L. Stud. 111, 140 (2004) (reporting that the average ratio of fees and expenses to assets in a sample of 48 chapter 11 cases was 2.2%); Stephen J. Lubben, *The Direct Costs of Corporate Reorganization: An Empirical Examination of Professional Fees in Large chapter 11 Cases*, 74 Am. Bankr. L.J. 509, 540 (2000) (finding that professional fees averaged 2.5% of assets if prepackaged cases were excluded from the sample); Lawrence A. Weiss, *Bankruptcy Resolution: Direct Costs and Violation of Priority of Claims*, 27 J. Fin. Econ. 285, 286 (1990) (reporting professional fees of 3% of assets, based on a sample of 31 publicly traded firms that filed for bankruptcy in the early 1980s).

more speculative, driven by either the increasing detachment of creditors or the aggregation of debt in the hands of speculators, both in turn driven by the spread of credit default swaps, courts will have to ensure that the remaining creditors understand the plan under consideration.

Overall, it seems probable that credit default swaps could alter the current chapter 11 landscape, especially in the larger cases where the most common recent trend is senior lenders leading the debtor through a reorganization largely designed by that lender. Instead, these creditors may lose their incentives to engage in such active participation, thus ceding the field to speculative debt buyers or, much less optimistically, the debtor's management. In either case the potential for riskier plans that seek to maximize the debtor's value will be the likely result. Courts should be aware of this potential, but they should not necessarily seek to stop it, as it is uncertain that this result is less desirable than the other likely option for a distressed firm: liquidation. The court plainly should not suppose its ability to compel some alternative reorganization on unwilling sophisticated players.

Conclusion

Credit default swaps have already transformed the bond markets, providing market participants with greater information about and control over their investments. These swaps stand ready to transform the next wave of chapter 11 cases too – potentially altering the *modus operandi* for large chapter 11 practice once again.

Throughout I have offered relatively cautious, disclosure-based solutions to the problems caused by the interaction of chapter 11 and credit default swaps. This caution comes from the realization that while this interaction may cause inefficiencies in chapter 11, it may be that these inefficiencies are outweighed by overall gains in the capital markets. That is, the effects of credit derivatives on corporate finance may be inefficient in the limited context of chapter 11 while still being overall efficient. The growth of credit derivatives raises many important questions, and bears close inspection as the market develops, but in the short term bankruptcy scholars and professionals should avoid the temptation to overreact to a market that may ultimately mature and self-correct without our aid.