A Weapon of Mass Destruction Strikes:

Credit Default Swaps Bring Down AIG and Lehman Brothers

By Jerome A. Madden†

In 2003, legendary investor Warren Buffet famously called derivatives "weapons of mass destruction."[1] The events of the past few months have proven him right.

On September 16, 2008, the federal government exercised powers rarely used since the Great Depression[2] to save American International Group ("AIG"). AIG is the nation's largest insurance company with $1 trillion in assets, operations in 130 countries, and seventy million customers.[3] At the same time, the government drew a line in the sand and refused to throw Lehman Brothers, one of Wall Street's top investment banks with approximately $650 billion in assets,[4] a similar life-line or to help engineer a shot-gun merger backed by the Federal Reserve as it had done in March 2008 with Bear Stearns, another top Wall Street investment bank.[5]

How did these two seemingly different companies end up with the same problem at the same time? And why did the government treat them differently even though both were failing simultaneously for the same reason—over exposure to a heretofore little known derivative called a credit default swap ("CDS")?[6]

The answer to the first question is that virtually anyone can participate in the wholly unregulated CDS market. A CDS is a derivative, a quasi-insurance product, that protects the "insured" against a company defaulting on its debt obligations. A derivative is a financial contract whose value is derived from the value of something else, in the case of a CDS, a loan, bond or other type of debt security. CDSs are not traded on an exchange. Instead, they are bilateral contracts between the insurer and the insured that are traded over the counter. The insured typically pays an up-front amount for the "insurance" and pays periodic premiums thereafter. A CDS is secured by whatever collateral requirements are set forth in the contract, if any, and there is no requirement to reserve funds to cover possible losses.[7] Additionally, CDS contracts can be sold by either party (insurer or insured) to a third-party through novation (agreement of all parties involved).[8]

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Importantly, a purchaser of a CDS need not have an insurable risk related to the bondholder.[9] As New York Governor David A. Patterson observed, anybody can enter into a CDS with a CDS counter-party simply to "bet" that some business entity to which the purchaser of the CDS contract has no relationship will be unable to meet its debt obligations to others.[10] Senator Tom Harkin (D-Iowa) has called such unregulated betting "casino capitalism."[11]

JP Morgan first used CDSs in the early 1990s to hedge its loan risks.[12] By 2000, the CDS market insured a relatively modest $900 billion in debt.[13] By 2006, however, the market had morphed into a behemoth insuring approximately $30 trillion. At its peak in 2008, it was approximately $60 trillion.[14] To appreciate the size of the CDS market, consider that $60 trillion is more than four times the gross domestic product of the United States.[15]

The explosion in CDSs was not an accident. The government banned similar "betting" on securities 100 years ago in the aftermath of the 1907 panic and stock market crash:[16]

> In the early part of the 20th century, the streets of New York and other large cities were lined with gambling establishments called "bucket shops," where people could place wagers on whether the price of stocks would go up or down without actually buying them. This unfettered speculation contributed to the panic and stock market crash of 1907, and state laws all over the country were enacted to ban them.

Congress lifted this prohibition in 2000 when it enacted the Commodity Futures Modernization Act of 2000.[17] In the Act, Congress, at the urging of then Federal Reserve Chairman Alan Greesspan and others, decided to leave the entire derivatives market unregulated.[18] Realizing, however, that CDSs are much like the "bets" placed in the now prohibited "bucket shops," the Act expressly preempted the states from enforcing "bucket shop" statutes against CDSs.[19]

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Both AIG and Lehman Brothers were big players in the creation of CDSs as insurers and sold billions of dollars worth of CDSs to financial institutions around the world. AIG was attracted to CDSs because they function like insurance policies, AIG's core business, even though they were not considered "insurance" for state regulatory purposes. Writing CDS derivatives proved to be quite profitable because, at the time most of these contracts were written, the housing market, like the economy, was booming and there were few worries about defaults on the referenced (or insured) debt. Moreover, AIG could sell its CDS contracts without regulatory oversight. Although AIG's holding company is supervised by the federal Office of Thrift Supervision and its subsidiary insurance businesses are regulated by the New York Department of Insurance, it could operate its CDS business through its unregulated subsidiary, AIG Financial Products.[20] For its part, Lehman Brothers was attracted to the CDS business because it was compatible with its investment banking business; and although CDSs functioned somewhat like securities, they are not securities under state and federal securities laws. Although the Lehman Brothers' subsidiaries that carried out its broker dealer and investment bank businesses are regulated by the Securities and Exchange Commission, Lehman Brothers' holding company was not subject to direct regulation by any federal (or state) banking agency. Accordingly, Lehman Brothers could operate its CDS business out of its holding company without state or federal supervision.

In 2008, AIG was the largest originator of CDSs and had CDS contracts on its books with a notional value (the face amount of the insured debt) of approximately $440 billion.[21] Of the $440 billion, $57 billion involved debt securities with some exposure to sub-prime mortgages.[22] Lehman Brothers was among the top ten originators of CDSs, and also sold CDSs with notional amounts in the hundreds of billions of dollars.[23]

In many cases, counter-parties to AIG's and Lehman Brothers' CDS contracts intended them to be a hedge against credit risk on complex debt securities.[24] Financial institutions worldwide have not only corporate debt and loans of United States corporations on their books but collateralized debt obligations ("CDOs"), residential mortgage-backed securities ("RMBS"), and commercial mortgage-backed securities ("CMBSs"). An MBS is a bundle of mortgages sold in the form of a security that gives the owner of each security the right to receive a share of the income generated as the underlying mortgage loans are repaid.[25] CDOs are securities like MBSs, only they bundle and securitize different kinds of debt (*e.g.,* commercial debt, credit card debt, and car loans).[26]

In addition to hedging risk, CDS contracts have been used by European banks to leverage their balance sheets, and, in 2007, AIG wrote billions of dollars in CDS contracts with European banks.[27] Under the international capital rules known as the Basel Accords, European banks are required to hold reserves to cover potential losses on their assets, principally loans.[28] By purchasing CDS contracts to hedge against losses on those loans, the banks appeared to have eliminated the risk of loss, which permitted them to hold more assets with less capital.[29] At the same time, AIG, however, because of its high credit rating, was writing these CDSs with very little collateral to cover those potential losses.[30]

The complexity of these CDOs and MBSs is magnified by their division into different levels of risk, called "tranches," the most secure of which is called a "super senior" tranche.[31] All other tranches fall behind the super senior tranche in a descending "pecking" order. In other words, the super senior tranche gets paid first, while the tranche at the bottom is the first to incur losses caused by non-payment of the underlying loans.[32] A third layer of complexity is that the upper level tranches are typically hedged through the purchase of a CDS, which has the effect of increasing the credit worthiness of the senior tranche. Super senior tranches, hedged by CDSs, were given AAA to A bond ratings by the rating agencies.[33] AIG and Lehman Brothers wrote billions of dollars of CDSs on super senior tranches. As a result of the high ratings, billions of dollars of these tranches were considered "buy and hold" securities by many financial institu-

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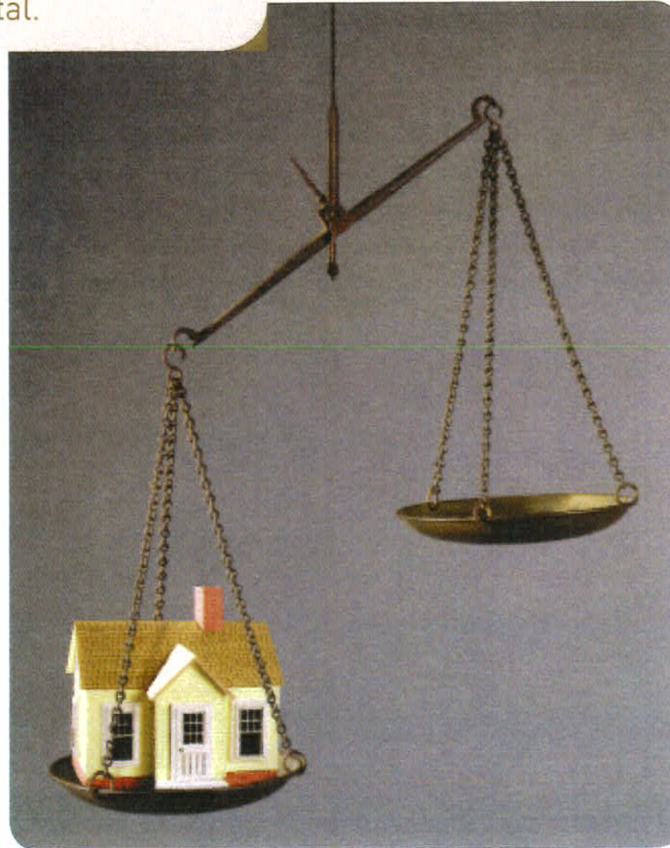
tions worldwide.[34] When the market for these assets evaporated, banks now had no alternative but to hold them.

These debt instruments became increasingly complex over time, including "multi-sector CDOs.[35] Such CDOs could incorporate as many as 100 different types of securities, including those that are backed by mortgages, auto loans and credit card receivables.[36] As the Wall Street Journal reported, the value of CDOs depended upon "tens of thousands" of disparate loans, making them nearly impossible to value in the absence of a transparent market.[37] Accordingly, in the absence of market pricing, in order to divine a value for fair value accounting purposes, financial institutions owning these assets have resorted to the use of sophisticated software and high-powered computers to generate a value internally.[38] AIG relied too heavily upon such modeling to assess its side of the risk, and, incredibly, its models did not assess how market forces and CDS contract terms could affect its risk.[39] For example, AIG's models did not even measure the risk of future collateral calls or write downs, both of which crushed AIG's financial statements beginning in the latter half of 2007.[40] The failure of these models to properly account for risk led Warren Buffet, in a recent interview on the Charlie Rose Show, to quip: "All I can say is, beware of geeks . . . bearing formulas."[41]



The failure to appreciate this simple distinction proved to be a fatal flaw in managing the CDS risk to these firms.[42] Insuring debt is not like insuring houses or cars. Unlike traditional insurance, where not all homes burn down at the same time or all cars are involved in the same accident, debt securities can be negatively affected at the same time; by analogy, they can catch on fire or crash simultaneously.[43] The chain-reaction risks inherent in a CDS contract insuring a MBS or a CDO include the following: (1) in the event of a default on the referenced debt, the CDS insurer must pay the counter-party for any part of the debt not recovered; (2) as the insured debt declines in value , the CDS contract typically gives the counter-party the right to require the insurer to post more collateral; (3) the requirement to post more collateral can cause a downgrade in the the insurer's credit rating; (4) a downgrade in the insurer's credit rating, in turn, often requires the insurer to post still more collateral[44]; and (5) a decline in the value of the referenced debt requires the insurer to write down the value of the CDSs on its financial statements.[45] Making matters worse, a significant amount of the assets used as collateral by these CDS insurers were MBSs and CDOs that, of course, also can fall simultaneously in value.[46]

The potential worst-case scenario occurred. With the bursting of the housing valuation bubble, led by a crash in the sub-prime market, even the "super senior" tranches began to suffer significant losses and a market for these assets quickly disappeared.[47] As the value of mortgages fell, the rating agencies started to lower the rating on many MBSs.[48] Goldman Sachs which was the counter-party on $20 billion of AIG's CDS then began pressuring AIG to post more and more collateral, eventually requiring AIG to post approximately $8 billion in collateral in connection with these CDSs.[49] Soon, other counter-parties also began demanding that AIG post more collateral.[50] By early November 2008, AIG had been required to post approximately $50 million in collateral.[51]

It is an understatement to say that AIG failed to protect itself through pricing, capital, adequate reserves for losses, and meaningful hedging.[52] As Mr. Eric Dinallo, the New York Insurance Superintendent, put it, the CDS insurers simply did not have the ability to meet their obligations:[53]

> As the market began to seize up and the market for the underlying obligations began to perform poorly, everybody wanted to get paid, had a right to get paid on those credit default swaps. And there was no "there" there. There was no money behind the commitments. And people came up short. And so that's to a large extent what happened to Bear Stearns, Lehman Brothers, and the holding company of AIG.

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In short, Bear Stearns, Lehman Brothers, and AIG, three of the country's largest financial institutions, made too many bad bets and could not cover their obligations.[54] Nevertheless, by as late as December 2007, AIG was telling investors that it was confident that it had properly assessed the risk on its CDS contracts.[55] Throughout 2008, however, its losses began to balloon.[56] This downward spiral worsened in September 2008 when Lehman Brothers failed and the credit markets froze. In response, the rating agencies dramatically lowered AIG's credit ratings on its debt obligations. The reduction in its credit rating caused the floor to drop out from under AIG's stock.[57]

AIG's financial condition was exacerbated when its counter-parties began to doubt AIG's ability to meet its CDS obligations to them. For example, the Wall Street Journal reported that when AIG strongly resisted posting more collateral to cover potential losses on CDS contracts between AIG and Goldman Sachs, Goldman Sachs began hedging its exposure to AIG CDSs by buying CDSs on AIG's CDS obligations and AIG's debt from other "insurers."[58]

Furthermore, speculators, with no economic interest in AIG's or Lehman Brothers' debt, are believed to have purchased CDS contracts betting that these firms would default.[59] At the same time, these speculators purportedly began shorting AIG and Lehman Brothers stock, which caused the stock price for both firms to fall precipitously. AIG's stock fell as much as thirty percent in one day.[60] In this way, unrestrained trading in the unregulated and opaque CDS market helped to fuel a "death spiral" for these firms that, ironically, got into financial difficulty to begin with by improvidently entering into a large number of CDS contracts as an insufficiently capitalized insurer.

Both the state of New York and the Securities and Exchange Commission are now seeking authority to regulate the CDS market.[61] As the SEC Chairman Christopher Cox said with respect to the regulatory "hole" caused by the unregulated CDS market, the situation provided speculators with "outsized incentives" to target financial institutions involved in the CDS market.[62] In September 2008, New York Governor Patterson stated that New York would begin regulating CDS contracts as insurance as of January 1, 2009. New York, however, has jurisdiction over only about twenty percent of the market.[63] In a rare display of cooperation, New York and federal investigators now are delving into whether or not traders manipulated the stocks of these and other CDS insurers through a combination of purchasing CDS contracts against the ability of the insurers to meet their debt and CDS obligations while, at the same time, shorting their stock.[64]

Had the federal government not stepped in to save AIG from bankruptcy, AIG would have defaulted on $440 billion in CDS contracts. A CDS, like any contract, is subject to the risk that the other party will not live up to the agreement (counter-party risk). If after receiving the premiums the insuring party fails to pay the amount due when a triggering or default event occurs, or if the insurer goes into bankruptcy (such as Lehman Brothers did, and AIG almost did), the insured loses the benefit of the contract.[65] Where the CDS was purchased as a hedge against the loss in value of a debt security (*e.g.*, a MBS or CDO), and the security has lost value, the loss of CDS "insurance" requires that the losses in value be recognized on the counter-parties' financial statements, unless the counter-party purchases a CDS from another counter-party. AIG's bankruptcy also would have triggered default events on CDS contracts written by others on AIG's own debt. As Mr. Dinallo, Superintendent of the New York Insurance Department, explained:[66]

> When we were dealing with finding a solution for AIG, we knew the company had written almost half a trillion dollars in swaps, but we had no idea how much swaps had been written on AIG itself or by whom. That meant

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we did not know what the broader effect of an AIG bankruptcy would be.

Federal Reserve Chairman Benjamin Bernanke and Secretary of the Treasury Henry Paulsen apparently decided that the risk of systemic failure to the financial system was too great. AIG was too big to fail, or at least too risky to let fail. The government originally agreed to lend AIG up to $85 billion for two years in return for a nearly 80% stake in the company.[67] The loan terms were onerous at approximately 11%. AIG will most likely be required to sell off its profitable insurance businesses to repay the government.[68]

AIG soon realized, however, that it needed more assistance. On October 8, 2008, the federal government increased its loan commitment to AIG by an additional $38 billion, bringing the government's financial exposure, up to that point, to over $120 billion. The concern both here and internationally has been that a failure of AIG to meet its CDS commitments would pose a systemic risk to the world's economy.[69] Since the bailout, AIG has drawn down approximately $62 billion of the original $85 million loan limit, of which a substantial portion has gone to meet collateral obligations on AIG's CDS contracts to its insured counter-parties.[70] Some foreign governments have begun pressuring the United States to *guarantee* AIG's CDS commitments.[71]

The cost and contours of the AIG bailout continue to increase and change. On November 10, 2008, AIG announced a renegotiation of the original deal, increasing the rescue amount to $150 billion.[72] First, the interest rate on the loan was reduced to approximately 8.5% from approximately 11%.[73] Second, the amount of the loan was reduced from $85 billion to $60 billion.[74] Third, $40 billion of the $700 billion Congress allocated for TARP will be used to buy preferred stock in AIG.[75] Lastly, the government decided to capitalize a separate entity with $30 billion to be used to purchase the referenced debt securities (principally CDOs) being insured by AIG CDS contracts.[76] If AIG successfully acquires the referenced securities, it then would be able to cancel the underlying CDS contracts. Doing so would allow AIG to take possession of the collateral it has been required to post as the value of the referenced debt securities declined.[77]

The government did not offer Lehman Brothers a similar deal, and on Monday, September 15, 2008, Lehman Brothers' holding company filed for Chapter 11 bankruptcy.[78] Lehman Brothers was not "saved" from bankruptcy for several apparent reasons. First, the Bush Administration sought to address the "moral hazard" risk that could occur by bailing out all institutions that made poor or reckless business decisions.[79] Ironically, within a month, the financial system was under such stress that the federal government tossed aside concerns about "moral hazard." Instead, it directed the nations leading financial institutions to accept a $125 billion direct government investment in them through preferred stock and pledged to invest another $125 billion in other banks (and perhaps insurance companies) in return for preferred stock.[80] Second, the government, which was familiar with the investment bank model, had been preparing for the possible failure of another investment bank since Bear Stearns nearly collapsed in March 2008. In contrast, AIG was not only bigger but it was an insurance company about which the federal government knew relatively little given that the insurance industry is regulated by the states.

Moreover, the Federal Reserve and Treasury were not fully aware of the urgency of AIG's plight until Friday, September 12, 2008.[81] At that point, even AIG failed to grasp the scope of its own problem.[82] When it first approached the Federal Reserve in New York, it said it needed approximately $30 billion.[83] That figure soon rose to $40 billion.[84] By the end of the weekend, its auditors discovered that, in fact, AIG needed $85 billion to survive.[85] Today, as noted, the bailout figure stands at $150 billion.

Nonetheless, rescuing AIG appears to have been the right decision. Shortly after Lehman Brothers' holding company entered Chapter 11 bankruptcy, the Reserve Primary Fund, one of the nation's largest money market funds, announced that as a result of Lehman's bankruptcy its net asset value had fallen below $1 to $0.97.[86] Other money market funds were under similar pressure for the same reason. The Primary Fund announcement, coupled with concerns about the condition of other large money-market funds, caused investors to move approximately $189 billion out of money market funds in just a few days. The total value of money market funds nationally is approximately $3 trillion.[87]

On Thursday, September 18, 2008, Treasury Secretary Paulson decided that a more unified approach needed to be taken by the government in order to address the credit crisis. He, Fed Chairman Bernanke and SEC Chairman Cox briefed Con-

gressional leaders about the need for a massive government bailout.[88] This initiative for a bailout on October 3, 2008 led to the enactment of TARP—a plan to spend up to $700 billion to stabilize the financial system. Until the bailout of Citigroup, TARP money had been used only to recapitalize the banks directly by buying preferred stock. Under the Citigroup deal, however, Citigroup will share losses on approximately $300 million of its toxic assets with the TARP and the FDIC.[89]

There now appears to be a consensus that CDSs need to be traded on some sort of electronic platform in order to increase transparency and reduce counter-party default risk. Senator Harkin has announced his intention to introduce legislation to regulate the CDS market.[90] In the meantime, the Federal Reserve in New York gave the futures exchanges until the end of October 2008 to come up with ways to make the CDS market less risky.[91] Four groups are vying to manage clearing operations, including the two largest companies operating futures exchanges—CME Group Inc. and Intercontinental Exchange Inc.[92]

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A clearinghouse system would provide transparency and reduce counter-party risk by requiring the exchange (clearinghouse) to make good on the defaults by an insurer:[93] A clearinghouse, capitalized by its members, "all but eliminates the risk of trading-partner default by being a buyer for every seller and the seller for every buyer. It employs daily mark-to-market pricing and liquidates positions of traders who can't pay their margin."[94]

An alternative means of bringing at least some transparency was instituted recently with the backing of nine banks, including Credit Suisse Group, J.P. Morgan Chase, and Goldman Sachs, involving an on-line platform operated by TradeWeb LLC.[95] This electronic platform trades CDS indexes, which are bundles of CDSs tied to the debt of dozens of companies. The contracts are more standardized than contracts on individual securities or bonds.[96]

Based upon the lessons learned from the crisis so far, it is safe to assume that regulatory changes will be forthcoming. There are several issues that need prompt attention. First, to the extent the CDS market, itself, does not pose an undue risk to the financial system, effective federal regulatory controls need to be designed and imposed to assure increased standardization, transparency through exchange trading, reduced counter-party default risk, and orderly and timely settlements. Second, the role of and connection between "naked" CDS contracts and "naked" short-selling, in the "death spirals"of AIG and Lehman Brothers, needs to be studied in order to determine if remedial legislation or regulation is appropriate. Third, the systemic risks to the financial system caused by excessively complex debt products such as tranched CDOs and MBSs, including the complexity added to these products by CDS contracts, needs to be studied and addressed by federal legislation if appropriate.[97] Finally, investment bank holding companies, to the extent still viable today, need federal oversight. BLB

ENDNOTES: *Jerome A. Madden*

† Mr. Madden is a Counsel in the Litigation Division, Office of the Comptroller of the Currency. He holds a J.D. from the University of Dayton School of Law (Summa Cum Laude) and an LL.M. from the Georgetown University Law Center (Securities and Financial Regulation). Prior to joining the OCC in 2006, he litigated cases related to the financial institution crisis of the 1980's and early 1990's, as a Senior Trial Counsel at the Torts Branch, Civil Division, U.S. Department of Justice, and as Counsel and Acting Senior Counsel at the FDIC, Appellate Litigation Section. The views expressed in this article are entirely his own.

1 Letter from Warren Buffet, Chief Executive Officer, Berkshire Hathaway, Inc., to shareholders of Berkshire Hathaway, Inc., at 15 (Feb. 21, 2003) *available at* http://berkshirehathaway.com/letters/2002pdf.pdf.

2 Federal Reserve Act § 13(3), 12 U.S.C. § 343; Press Release, Board of Governors of the Federal Reserve (Sept. 16, 2008), *available at* http://www.federalreserve.gov/newsevents/press/other/20080916a.htm.

3 AIG, 2007, Annual Report (AIG at a Glance: Financial Highlights).

4 Lehman Brothers, 2007, Annual Report 75 (2007).

5 Like real lines in real sand, this line blurred over ensuing days and weeks as the still unfolding financial crisis led to the enactment on October 3, 2008 of the Troubled Asset Relief Program ("TARP"). Press Release, White House, *President Bush Signs H.R. 1424 into Law* (Oct. 3, 2008). TARP, originally billed as providing funding to unfreeze the credit markets by purchasing toxic assets from sinking financial institutions, was effectively recast on October 14, 2008 as a vehicle also to be used to directly recapitalize the nation's banks (and perhaps insurance companies) when the Treasury announced it would purchase up to $250 billion in preferred corporate bank stock. Press Release, Department of The Treasury, *Treasury Announces TARP Capital Purchase Program Description* (Oct. 14, 2008), *available at* http://www.treas.gov/press/releases/hp1207.htm.

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7 http://www.cbsnews.com/stories/2008/10/26/60minutes; Steve Kroft, *The Bet that Blew Up Wall Street*, CBS News 60 Minutes, Oct. 26, 2008, *available at* http://www.cbsnews.com/stories/2008/10/26/60minutes/main4546199.shtml.

8 David Mengle, *Credit Derivatives: An Overview*, Fed. Reserve Bd. Atlanta, at 19 (May 2007) (Mr. Mengle is the head of research at the International Swaps and Derivatives Association).

9 A CDS written on a loan or bond and purchased by a counter-party that does not otherwise possess an economic interest with respect to the loan or bond is called a "naked CDS." Terry Kivlan, *Senate Agricultural Panel Reviews Credit Default Swaps*, CONGRESSIONAL DAILY, Oct. 14, 2008, *available at* 2008 WLNR 19567728.

10 http://www.nytimes.com/2008/09/23/business/23swap. Danny Hakim, *New York to Regulate Credit Default Swaps*, N.Y. TIMES, Sep. 22, 2008, *available at* http://www.nytimes.com/2008/09/23/business/23swap.html (statement of N.Y. Gov. David A. Patterson) ("I thought they should be regulated by the gaming industry, because it's gambling.").

11 *See* Telis Demos, Taming Derivatives, FORTUNE, Oct. 30, 2008, *available at* http://money.cnn.com/2008/10/28/magazines/fortune/CDSclearinghouses_demos.fortune/index.htm.

12 http://www.newsweek.com/id/161199. Matthew Philips, *The Monster That Ate Wall Street*, NEWSWEEK, Oct. 6, 2008, *available at* http://www.newsweek.com/id/161199.

13 International Swaps and Derivatives Association Market Survey, *ISDA Market Survey Historical Data, Notional Amounts Outstanding, Semi-Annual Data, All Survey Contracts 1987-Present* (showing notional amount of CDS in 2000 of $918.87 million and notional amount of CDS in 2008 of $62,173.20 billion.), *available at* http://www.isda.org/statistics/pdf/ISDA-Market-Survey-historical-data.pdf.

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15 Jim Manzi, *Walls, Brakes, and Risk: We Can Learn from the Market Turmoil, or We Can Make Things Worse*, NAT. REV., Nov. 3, 2008, *available at* http://findarticles.com/p/artickes/mi_m1282/is_20_60/ai_n30931061/print?tag=artBody;col1; Janet Morissey, *Credit Default Swaps: The Next Crisis?*, TIME MAG. (June 2008) (stating that "[t]he CDS market exploded over the past decade to more than $45 trillion in mid-2007, according to the International Swaps and Derivatives Association. This is roughly twice the size of the U.S. stock market (which is valued at about $22 trillion and falling) and far exceeds the $7.1 trillion mortgage market and $4.4 trillion U.S. treasuries market . . . .").

16 http://www.cbsnews.com/stories/2008/10/26/60minutes. *See* Kroft *supra* note 7.

17 *See* 7 U.S.C. § 16(e)(2) (2000).

18 Peter S. Goodman, *The Reckoning: Taking a Hard Look at a Greenspan Legacy*, N.Y. TIMES, Oct. 8, 2008, *available at* http://www.nytimes.com/2008/10/09/business/economy/09greenspan.html?_r=1&pagewanted=all.

19 *See* 7 U.S.C. § 16(e)(2) (2000).

20 *See* Press Release, Office of Thrift Supervision, OTS 01-52 (Aug. 1, 2001).

21 AIG, Annual Report (Form 10-Q), at 87 (June 30, 2008).

22 *Id.*

23 *See* Jonathan D. Glater & Gretchen Morgenson, *A Fight for a Piece of What's Left*, N.Y. TIMES, Sept. 15, 2008, *available at* http://www.nytimes.com/2008/09/16/business/16bankruptcy.html (stating that Lehman was one of the 10 largest parties in the market for credit default swaps).

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25 *See* U.S. Securities and Exchange Commission, http://www.sec.gov/answers/mortgagesecurities.htm.

26 http://en.wikipedia.org/wiki/Collateralized_debt_obligation.

27 *See generally* AIG, Annual Report (Form 10-K), at 122 (Mar. 1, 2007); David Henry, Matthew Goldstein & Carol Matlack, *A Lethal Loophole at Europe's Banks*, BUSINESS WEEK, Oct. 27, 2008, *available at* http://www.businessweek.com/magazine/content/08_43/b4105032835044.htm?campaign_id=rss_daily.

28 *Id.*

29 David Henry, Matthew Goldstein & Carol Matlack, *A Lethal Loophole at Europe's Banks*, BUSINESS WEEK, Oct. 27, 2008, *available at* http://www.businessweek.com/magazine/content/08_43/b4105032835044.htm?campaign_id=rss_daily.

30 *Id.*

31 *See* AIG, Annual Report (Form 10-K), at 122 (Mar. 1, 2007) (elucidating the level of security that is unique to senior tranches)

32 *See id.* (listing tranches by order of priority).

33 Testimony of Patrick M. Parkinson, Deputy Director, Division of Research and Statistics, Federal Reserve Board, *Bond insurance*, Before the House of Representatives Subcommittee on Capital Markets, Insurance, and Government Sponsored Enterprises, Committee on Financial Services, U.S. House of Representatives (Feb. 14, 2008) ("[Insurance from AAA-rated guarantors raised the ratings of the insured bonds to AAA, which lowered interest costs to the issuers and made the bonds attractive to a wider range of investors."), *available at* http://www.federalreserve.gov/newsevents/testimony/parkinson20080214a.htm.

34 *See generally Credit Buffers: Derivative Product Companies Offer an Efficient Home for Corporate Credit Risk And, with Many Vehicles on the Way, Could Mean an Influx of Hundreds of Billions of Dollars Worth of Demand in the Credit Default Swap Markets. But, the Barriers to Entry at this Point in the Cycle Are High*, STRUCTURED FINANCE INTERNATIONAL, Issue 44, May 2006, *available at* 2006 WLNR 12024966.

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[41] Charlie Rose Show, Transcript, Oct. 1, 2008 video *available at* www.charlierose.com/view/interview/9284.

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[45] *See id.*

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[47] *See Professionally Gloomy: Risk Managers Take a Hard Look at Themselves*, ECONOMIST, May 17, 2008, *available at* http://www.economist.com/specialreports/PrinterFriendly.cfm?story_id=11325440.

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[50] *Id.*

[51] *Id.*

[52] *See generally* AIG, 2007, Annual Report (Form 10K) at 121 (discussing how AIG managed its credit risk related to derivatives).

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