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The Dark Side of Derivatives: A Book Note on Infectious Greed: How Deceit and Risk Corrupted the Financial Markets by Frank Partnoy

By now, most everyone has heard of the Enron debacle, but few understand what really happened. In Frank Partnoy's latest book, Infectious Greed: How Deceit and Risk Corrupted the Financial Markets, the author compellingly recounts the characters and events that led to the Enron drama. Partnoy chronicles the development of complex over-the-counter (OTC) derivatives and the role they played in Enron's collapse. He also examines the legislative and regulatory backdrop that fostered the spread of OTC derivatives while contributing to what he perceives as the present instability of financial markets.

Partnoy's fear of a global financial crisis stems from three major changes in the financial markets over the past fifteen years. First, the proliferation of unregulated OTC derivatives permitted parties "to manipulate earnings and exclude reporting of these instruments on their financial statements." Second, company control and ownership became more polarized, as investors struggled to monitor the financial activities of senior managers, and accountability lapsed between senior managers and "increasingly aggressive employees." Third, deregulated derivatives markets encouraged parties utilizing these instruments to engage in financial malfeasance without fear of prosecution.

This book Note highlights the greed-induced schemes, scandals, and blunders surrounding corporate corruption and the

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3. See generally id.
4. See generally id.
5. Id. at 3.
6. Id.
7. See id.
8. See Partnoy, supra note 2, at 3.
use of derivatives as described by Partnoy in *Infectious Greed.* Part I provides a brief overview of OTC derivative instruments and their uses. Part II examines the competitive banking environments that spawned the OTC derivatives explosion. Part III reviews the early warnings of the devastating impact OTC derivatives would have on financial markets. Part IV explores other market forces that coincided with the proliferation of OTC derivatives and served as a backdrop for the Enron implosion. Part V reveals the secret world of Enron and the role OTC derivatives played in its demise. Part VI considers Partnoy's recommendations for improved OTC derivatives regulation and offers insight into the continued role of derivatives in the financial markets.

I. DERIVATIVES OVERVIEW

"A derivative is a bilateral contract or payment exchange agreement whose value is linked to, or derived from, an underlying asset." The underlying asset, often referred to simply as the "underlying," can be virtually anything, including "cash instruments, like stocks and bonds; tangibles, like commodities; or intangibles, like interest rates, currency rates, stock market indices, and credit quality." Due to their highly leveraged structure, small changes in the value of the underlying can result in wild fluctuations in the value of the derivative on which it is based. Derivatives reallocate risk by isolating certain risks associated with a particular underlying and transferring that risk from one party to

9. See generally PARTNOY, supra note 2.
10. See infra notes 16-42 and accompanying text.
11. See infra notes 43-124 and accompanying text.
12. See infra notes 125-154 and accompanying text.
13. See infra notes 155-179 and accompanying text.
14. See infra notes 180-250 and accompanying text.
15. See infra notes 251-281 and accompanying text.
"Importantly, derivatives do not eliminate underlying risk; they only reposition it." Derivatives can be traded on exchanges or over-the-counter. Exchange-traded derivatives include standardized stock options and commodity futures, which are regulated and actively traded, providing liquidity and price transparency. In contrast, OTC derivatives are traded off exchanges by brokers and dealers and are generally unregulated, off-balance sheet investments. OTC derivatives are customized risk management instruments designed for the specific needs of a particular investor. The primary types of OTC derivatives include forward-based derivatives, such as forward contracts and swaps, and options-based derivatives.

Every derivative, no matter how complex, is modeled on the basic structure of either the forward or the option. Essentially, a forward is an obligation to buy or sell something in the future, while an option is the right, but not the obligation, to buy or sell something in the future.

Forward-based derivatives include forward contracts, futures contracts, and swap transactions. In a forward contract, one party buys and the other party sells "a designated quantity of the underlying at a pre-agreed price on some specified future date." The gain to one counterparty in a forward-based transaction always equals the loss to the other party, i.e., it is a zero sum transaction. A futures contract is a standardized, exchange-traded, forward-based derivative. A swap transaction is a series of forward contracts, which obligates the two contracting

19. See Feder, supra note 17, at 682.
20. Id. at 683.
22. Id. at 7-8.
23. Id. at 8.
24. Id. at 7.
25. Id. at 9-11.
26. Id. at 9.
27. See Feder, supra note 17, at 691.
29. Id.
30. Id. at 10.
31. Id.
parties to exchange payment streams based on a notional amount. In a typical interest rate swap, one swap party is obligated to make fixed rate payments, while the counterparty is obligated to make floating rate payments. At settlement, one party pays the other party the net difference of the two payment streams.

An option contract gives the holder the right to buy or sell a specified underlying asset at a pre-agreed price (strike price) up to a specified future date. Favorable price movements in the underlying asset benefit the option holder upon exercise of the option, while unfavorable price movements result in a loss limited to the premium paid for the unexercised option. Options are used primarily for hedging market risk or for speculation, as a leveraging device.

Financial institutions and corporations are the primary players in the OTC derivatives markets, acting as both dealers and end-users. Derivatives dealers are intermediaries who take sides in transactions and earn spreads after contracting with parties to take the opposite sides of the transactions. End-users of derivatives are the final buyers and sellers of risk. End-users are motivated to consume derivatives products for hedging, speculating and/or arbitraging purposes. The customized nature of OTC derivatives allows hedgers, speculators, and arbitrageurs almost limitless means by which to accomplish their investment strategies, accounting in great part for the dramatic rise in demand for these products.

32. Id. The notional amount serves as a computational factor and is generally not exchanged on settlement, with the exception of currency swaps. Id.
33. Feder, supra note 17, at 702.
34. Krawiec, supra note 16, at 10. Swaps and forward contracts, unlike futures contracts, are individually negotiated and traded over-the-counter. Id.
35. See id. at 11.
36. Id.
37. Id. at 12.
38. Id. at 14.
39. Feder, supra note 17, at 717.
40. Id.
41. See id.
42. See generally Krawiec, supra note 16.
II. THE INNOVATORS

A. Salomon Brothers

Salomon Brothers, Bankers Trust, and Credit Suisse First Boston (CS First Boston) emerged as derivatives innovators in the mid 1980s and early 1990s. Leaders within each institution understood the significant role that specialized derivatives could play in the stock market's 1987 post-crash recovery. These pioneering firms recognized the increasing importance of technology in the securities industry and the critical training that math, physics, and economics graduates could bring to the field of financial engineering.

From the late 1970s through the early 1990s, Jon Meriwether headed the Arbitrage Group at Salomon Brothers. During the 1980s, the Arbitrage Group focused on complex arbitrage and mortgage instruments, which generated vast sums for Salomon. In 1984, Meriwether realized that advanced technology in options pricing might give the Arbitrage Group a sustainable edge over its competitors. In response, Meriwether and his talented troupe designed the first options pricing systems using a high-speed network of personal computers.

43. See Partnoy, supra note 2, at 36-111.
44. See id.
45. See id.
46. Id. at 84. Meriwether attended the University of Chicago and was greatly influenced by economist Merton Miller, a proponent of the efficient-market theory. Id. at 87. Miller believed that financial innovation was driven by regulatory avoidance. Id.
47. Id. at 84. Meriwether joined Salomon Brothers in 1973 and in 1977 established the Arbitrage Group. Id. It was comprised of brilliant scholars known as the best finance faculty in the world. Id. at 91.
48. Id. at 84. Arbitrage, essentially buying a market instrument at a low price while simultaneously selling it at a high price, is made possible by market mispricings due to information inefficiencies. Id. at 39.
49. See Partnoy, supra note 2, at 86.
50. Id. at 90. The most important pricing variable for currency options is volatility, or the degree to which the value of the underlying currency moves up or down. Id. at 12. Since greater volatility means greater risk, the option will be priced higher. Id.
51. Id. at 13. One Arbitrage Group member, Andrew Krieger, brought critical expertise to Salomon's pricing superiority. Id. Krieger studied finance at the Wharton School of Business, and found himself captivated by foreign-currency
The technological advances, albeit crude, created new opportunities, and spurred Arbitrage Group members to develop increasingly complex products for clients who demanded customized derivatives to meet their risk and profitability needs. In 1992, Salomon made hundreds of millions of dollars on these customized derivatives transactions, and rewarded the Arbitrage Group traders who invented them with bonuses ranging from $10 million to $25 million a piece.

The Arbitrage Group received unfettered autonomy from Salomon's management, which proved crucial to the group's success because it allowed members to ride out their bets when other firms' traders were forced to liquidate their positions by unnerved managers. The lax management control at Salomon, however, encouraged traders to place wild bets while skirting legal options trading, the right to buy or sell foreign currencies at specified times and prices in the future, after taking a course in international finance. While at Wharton, Krieger wrote a computer program assessing the value of currency options. Additionally, he worked at a Chicago currency-trading firm and learned about currency trades on the Chicago Mercantile Exchange. The Chicago Mercantile Exchange introduced currency options in 1982 when few investment bankers knew about them or the theory of options pricing.

Meriwether set up trading desks in London and Tokyo using similar computers systems, exploiting options opportunities in international markets as well. One such strategy devised by an Arbitrage Group member involved Japanese convertible bonds. A convertible bond is made up of two components: a bond and an option to buy stock. The value of the bond component rises as the issuer's stock price declines and vice versa. Since the Japanese market significantly undervalued convertible bonds, Salomon bought them and split them into two pieces, one piece representing the bond, and the other piece representing the stock option. The pieces were hedged using interest-rate swaps and stock options and were sold off separately for more money than it paid for the whole. The Arbitrage Group traders created two products from each bond that sold for far more than the price of the original bond.

Salomon also pioneered the complex mortgage derivative, Collateralized Mortgage Obligations (CMOs). With CMOs, Salomon purchased mortgages and stripped them into pieces, based on various criteria, including interest rates, principal, short-term, long-term, etc. Salomon made money from mortgages in three ways. First, it received creative fees for setting up the deals. Second, it earned commissions from selling the instruments at substantial premiums (mostly because investors did not understand how to value them). Third, Salomon made money from trading CMOs in its own accounts.

Salomon's Arbitrage Group traders were the highest paid on Wall Street at the time.
rules, which ultimately led to the ouster of Salomon’s top management, including Meriwether.\textsuperscript{57}

In the early 1990s, despite all of its technological innovation, Salomon was not able to reliably value its own derivatives positions.\textsuperscript{58} In 1993, Salomon overhauled the firm’s internal risk management system\textsuperscript{59} and discovered millions of dollars of mistakes, $87 million worth in the U.S. and $194 million in London.\textsuperscript{60} Neither Salomon, nor its accountants at Arthur Anderson, could understand or accurately value the risks of Salomon’s complex derivatives.\textsuperscript{61}

\textbf{B. Bankers Trust}

In 1983, Bankers Trust appointed Charles S. Sanford, Jr. president.\textsuperscript{62} Wanting Bankers Trust to be more than a staid commercial bank, Sanford strived to make it a leading derivatives participant and the most technologically advanced bank in the world.\textsuperscript{63} To accomplish this transformation, Sanford focused on financial technology, incentives for employees and deregulation.\textsuperscript{64} Sanford hired traders and sales people with science and math backgrounds.\textsuperscript{65} These “chess masters and physics Ph.D.s” created investment devices that enabled Bankers Trust’s clients to generate profits by repositioning risks while avoiding regulation.\textsuperscript{66}

\begin{itemize}
\item \textsuperscript{57} \textit{Id.} at 98-107. Meriwether and other Salomon executives were forced to resign in 1991 after a Treasury bond trader repeatedly engaged in practices to manipulate the U.S. Treasury Bond market. \textit{Id.} at 98.
\item \textsuperscript{58} \textit{Id.} at 94.
\item \textsuperscript{59} \textit{Id.}
\item \textsuperscript{60} See \textit{PARTNOY, supra} note 2, at 94. Because of an outdated accounting system, the debts had been mounting undetected since 1989. \textit{Id.}
\item \textsuperscript{61} \textit{Id.} at 95.
\item \textsuperscript{62} \textit{Id.} at 15. Sanford started his career at Bankers Trust in 1961 after graduating from Wharton. \textit{Id.} at 37. He headed the bank’s bond-trading operations and persuaded bosses to pay performance-based bonuses for his traders, mimicking Wall Street firms. \textit{Id.}
\item \textsuperscript{63} \textit{Id.} at 37.
\item \textsuperscript{64} \textit{Id.}
\item \textsuperscript{65} \textit{Id.}
\item \textsuperscript{66} See \textit{PARTNOY, supra} note 2, at 38. A former managing director of Bankers Trust described Sanford’s recruits “as really nice kids, mostly nerds, mostly guys without girlfriends [who] would hang out in the office and work all night.” \textit{Id.} Another remarked it was a “techoloony bin of crazed nerds.” \textit{Id.}\
\end{itemize}
Taking cues from Wall Street investment banks, Sanford applied intense pressure on employees to meet performance goals, even implementing a profitability measure that tied compensation for all bank employees to the return they generated on the capital at their disposal.\(^6\) Bankers Trust’s sophisticated risk-management systems, intellectual horsepower, and competitive bonus environment positioned it on the forefront of the derivatives explosion.\(^6\)

In 1987, Bankers Trust appointed Sanford chairman and CEO.\(^6\) Shortly thereafter, he hired Andy Krieger,\(^7\) a former top Salomon trader, to start up a currency-options trading business.\(^7\) Sanford gave twenty-nine-year-old Krieger $700 million of trading capital, allowing him to control billions of dollars worth of currency.\(^7\) Krieger made enormous profits for Bankers Trust by exploiting mispricings in the currency markets.\(^7\) To achieve this, Krieger, an options-pricing visionary,\(^7\) utilized sophisticated pricing models, while other traders relied on flawed models that tended to undervalue foreign currency options.\(^7\) Krieger preferred OTC derivatives trading because he could use options to hide his trading strategies.\(^7\) Additionally, his use of options over actual capital

\(^{67.}\) Id. at 43. The system, Risk Adjusted Capital Return (RAROC), determined the allocation of the bank's capital. *Id.* The greater the capital risk, the lower the RAROC, so performance would have to be higher. *Id.* RAROC was a revolutionary concept that encouraged employees to focus on both risks and profits. *Id.* The RAROC compensation concept quickly spread throughout corporate America. *Id.*

\(^{68.}\) *Id.*

\(^{69.}\) Id. at 15.

\(^{70.}\) *Id.*

\(^{71.}\) See *PARTNOY*, supra note 2, at 15. Krieger had generated $56 million in option-currency profits for Salomon, but he was dissatisfied with his bonus relative to other group members. *Id.* at 17. Krieger’s bonus-envy made him ripe for defection when Bankers Trust came wooing with a more lucrative bonus offer. *Id.* at 15.

\(^{72.}\) *Id.* at 25.

\(^{73.}\) *Id.* at 14. Although markets were supposed to be efficient and reflect all known information, Krieger and many other Wall Street traders found the efficient markets economic theory flawed. *Id.*

\(^{74.}\) See *supra* note 51 and accompanying text.

\(^{75.}\) *PARTNOY*, supra note 2, at 15.

\(^{76.}\) *Id.* at 19. In a typical trade, if Krieger wanted to sell one billion British pounds, he would enter a *buy* order below market price and wait for greedy traders to rush in to buy, trying to cut him off. *Id.* at 17. After the traders had driven the price up, Krieger would *sell* the pounds, instead of buying, and profit from the run up in price. *Id.* In one application of this strategy, Krieger sold $1 billion in German
currencies allowed him to leverage his capital, further magnifying his profits (and risk).\(^7\) When Krieger left Bankers Trust in 1988,\(^8\) his currency-option trading group had generated more than $300 million in profits for the bank that year.\(^9\)

Prior to Krieger's arrival, Bankers Trust's derivatives business, like most other commercial banks, had focused mainly on interbank interest-rate hedges known as plain-vanilla swaps.\(^8\) A plain-vanilla swap agreement is essentially a bilateral contract enabling two parties to hedge or speculate on interest rate fluctuations by exchanging interest-rate based payment streams at periodic payment or settlement dates based on a notional amount.\(^8\) With $30 billion in swap revenue, Bankers Trust was the second leading swap dealer at the time.\(^8\)

In 1988, after continued innovation, Bankers Trust developed an OTC stock-index product that enabled Japanese insurance companies, who were proscribed from investing in stocks, to invest in the Nikkei 225 index.\(^8\) Bankers Trust called marks and marks options, betting the U.S. dollar would rise. \(\text{Id.}\) at 25. He made $70 million dollars on the trade. \(\text{Id.}\)

77. \(\text{Id.}\) at 15.
78. \(\text{Id.}\) at 26. Krieger left Bankers Trust because they only paid him a $3 million bonus instead of $15 million he had been promised. \(\text{Id.}\) at 26.
79. \(\text{Id.}\) at 29. After Krieger's departure, Bankers Trust learned that Krieger's profits had been overvalued by $80 million, prompting the bank to manipulate its accounting numbers to avoid posting its first loss in almost 60 years. \(\text{Id.}\) Despite detection by banking regulators, Bankers Trust, and its accountants, Arthur Young, avoided punishment for the illegal expense reporting. \(\text{Id.}\) at 31-32.
80. \text{PARTNOY, supra note 2, at 4.}\n81. \text{Krawiec, supra note 16, at 10.} The notional amount is the number of units of the underlying asset to which the contract applies and is usually used only as a computational factor upon which calculations are based. See Feder, \text{supra note 17, at 683-84; see PARTNOY, supra note 2, at 4.} Partnoy describes these interbank interest-rate swaps as transactions where one party agrees to a fixed rate of interest to another party, and the other party in return agrees to pay a floating rate. \(\text{Id.}\) These fairly simple derivatives are similar to financial instruments used by the ancient Greeks. \(\text{Id.}\)
82. \text{See PARTNOY, supra note 2, at 38.} Citicorp was the number one swaps trader. \(\text{Id.}\) Banks and corporate clients viewed swaps as a desirable investment device because FASB did not treat swaps as an asset or liability, so they did not appear on corporate balance sheets. \(\text{Id.}\) at 45.
83. \(\text{Id.}\) at 40. Through a complex mechanism that involved Canadian and European banks, as well as the Japanese insurers, the Japanese insurance companies ended up owning Nikkei index options and Bankers Trust wound up making substantial fees. \(\text{Id.}\) at 41. Of course, the Japanese insurers were devastated when the Nikkei 225 crashed later that year. \(\text{Id.}\)
this and other matchmaking strategies “equity derivatives.” By 1989, one third of the Bank’s profits came from these instruments.

A further boon to Bankers Trust’s business came in 1989 when the Federal Reserve permitted certain commercial banks, including Bankers Trust, to form investment-banking subsidiaries to engage in the sale of securities. Bankers Trust capitalized on this regulatory change by selling significant quantities of derivative instruments at substantial premiums to corporate treasurers looking for ways to hide investment risks from shareholders and corporate bosses.

From 1990 to 1993, Bankers Trust was the most profitable bank in the U.S. During this time, Bankers Trust generated one third of its profits from derivatives, and another third from trading. These impressive figures were largely due to the mercenary culture that Sanford encouraged at Bankers Trust, where senior managers applauded aggressive salesmen who lured clients into lucrative, complex swap deals that neither the clients nor the salesmen really understood.

84. Id. at 41.
85. Id.
86. Id. at 47; Sec. Indus. Ass’n v. Bd. of Governors of the Fed. Reserve Sys., 839 F.2d 47, 51 (1988) (holding that section 20 of the Glass-Steagall Act does not prohibit bank holding company subsidiaries from dealing in bank-ineligible securities as long as the subsidiaries were not “engaged principally” in such activities, that is, as long as they derive no more than five to ten percent of their total gross revenues from such activities over a two-year period). In 1999, Congress repealed section 20 of the Glass-Steagall Act, 12 U.S.C. § 377 (1999), with the Gramm-Leach-Bliley, Financial Modernization Act of 1999, Pub. L. No. 106-102, 113 Stat. 1338, which permitted financial holding companies to engage in unlimited securities activities.
87. See Partnoy, supra note 2, at 49. Customized derivatives deals with Gibson Greetings and Proctor & Gamble proved extremely lucrative and suspect for Bankers Trust. Id.; see infra note 90.
88. See Partnoy, supra note 2, at 60.
89. Id.
90. Id. at 54-58. Bankers Trust entered into several customized deals with Gibson Greetings and Proctor & Gamble. Id. at 50-58. The deals were ridiculously complex, including one deal which tied the swap payments to the interest rate squared that was in turn tied to LIBOR. Id. at 51. Gibson sustained losses of nearly one million dollars on the transaction. Id. at 52. Bankers Trust encouraged Gibson to enter into twenty-nine additional derivatives deals in which it placed huge interest rate bets. Id. at 50. Bankers Trust made roughly $18 million in fees from Gibson swap business. Id. at 53. Bankers Trust made $8 million on just one of many customized derivative trades for Proctor & Gamble. Id. at 54. Both Gibson
C. CS First Boston

CS First Boston entered the derivatives scene in 1990, after Credit Suisse, a huge Swiss commercial bank, rushed in to save First Boston, an investment bank, from almost certain death. Credit Suisse was hoping to gain a presence in the derivatives market, and conveniently, First Boston had recently hired away a dozen star Bankers Trust traders. The new traders quickly formed CS Financial Products (CSFP), a joint venture between the Swiss commercial bank and First Boston. CSFP, located in London, handled all of the swaps and derivatives activities for both firms, thus avoiding U.S. banking laws.

Credit Suisse’s AAA credit rating gave CSFP a significant advantage over its competition when creating derivative products. Credit ratings from the three recognized credit rating agencies were hugely important to investing because regulators had passed dozens of laws that depended on credit ratings. Effectively, the higher the credit rating assigned by the all-powerful credit rating agencies, the better the regulatory treatment. In addition, high credit ratings were important to banks because many of their regulated clients were prohibited from investing in sub-investment grade instruments. Moreover,

Greetings and Proctor & Gamble went on to sue Bankers Trust for fraud relating to the swap deals. *Id.* at 416-17.

91. *Id.* at 62. Credit Suisse bought a 45 percent stake in First Boston, the most permitted under Glass-Steagall. *Id.* at 62.

92. *Id.* at 63. Allen Wheat was among the Bankers Trust traders hired by First Boston. *Id.* at 62, 64. Wheat had worked at Bankers Trust for nine years and had expertise in swaps, options and private placements, and Asian bank operations. *Id.* Wheat became president and COO of CS First Boston in 1993. *Id.* at 81.

93. PARTNOY, *supra* note 2, at 64.

94. See *id*.

95. *Id.* Most Wall Street investment banks had only single-A credit ratings. *Id*.

96. *Id.* at 66. The three approved credit rating agencies, Moody’s, Standard & Poors, and Fitch Investors, had been in existence since the early 1900’s, but they gained importance in the 1970’s when regulators began tying legal rules to ratings. *Id.* The credit rating of derivative instruments became an enormously lucrative business for the three agencies that were approved for regulatory purposes. *Id*.

97. *Id.* Credit ratings range from AAA (highest) to D (lowest) with BBB signaling the investment-grade cut-off. *Id*.

98. *Id.* The higher the credit rating for an investment instrument, the greater the demand for that instrument. See *id*.
high credit ratings meant lower costs of capital for investment banks and corporations, and insurance companies maintained lower reserves for higher rated bonds in their portfolios.99

In the early 1990s, two major innovations accounted for CSFP’s enormous success in the derivatives business.100 One was structured notes, which were essentially high rated bonds whose payments were linked to complex formulas.101 The other was structured finance, which referred to deals in which financial assets were stripped apart and repackaged to obtain higher ratings.102

A structured note, unlike a typical bond, might have dramatically variable returns with payouts based on any conceivable financial instrument, but usually tied to interest rates or currencies.103 CSFP created structured notes based on Asian currencies — Thailand specifically — which allowed U.S. investors access to a forbidden market.104 Investors coveted structured notes for their favorable regulatory treatment that allowed for off-balance sheet reporting.105 The difficulties associated with pricing the underlying assets on which the structured notes were based enabled CSFP to charge unwitting investors exorbitant premiums for these and many other derivatives investments.106 "By the end of 1993, every major bank sold structured notes."107

Structured finance involves “the repackaging of financial assets in order to reallocate risks and obtain higher credit

99. See PARTNOY, supra note 2, at 66.
100. Id. at 67-68. In 1990, CSFP earned “Options House of the Year” and “Best Derivatives House.” Id. at 67.
101. Id. at 67-68.
102. Id. at 68.
103. Id. “One structured note payout was even linked to the number of victories of the Utah Jazz.” Id.
104. Id. at 68-69. One of CSFP’s most successful products was the Quanto, a “turbocharged version” of a structured note in which investors received payments based on foreign exchange rates, yet the payments were made in the investor’s home currency. Id. at 73-74. The payoffs depended on the correlation of interest rates and currencies. Id. The complexity of Quantos made them difficult for investment banks to accurately price, so investors unwittingly overpaid for them. Id. The allure of Quantos was “they allowed investors who, by law, were not permitted to speculate in a particular currency to do so indirectly without detection.” Id. at 74. U.S. insurance companies were heavy consumers of Quantos. Id.
105. See PARTNOY, supra note 2. at 72.
106. See id., at 72-74.
107. Id. at 70.
ratings.\textsuperscript{108} One of the most notable means of structured finance is the Collateralized Bond Obligation (CBO).\textsuperscript{109} In a CBO, a bank transfers a portfolio of junk bonds to a Special Purpose Entity (SPE) created for the transaction.\textsuperscript{110} The SPE then issues several securities represented and backed by the bonds it received from the bank transfer.\textsuperscript{111} These issued securities are derived from essentially splitting the underlying bonds into pieces and then batching similar pieces together with credit ratings assigned based on the quality of the batch.\textsuperscript{112} Usually three pieces, or tranches, result, including a senior piece, a mezzanine piece, and a low quality sub-investment grade piece.\textsuperscript{113} The two top pieces generally receive investment grade ratings and are easy to sell.\textsuperscript{114} Thus, the CBO produces two highly marketable products from one, making the sum of the pieces worth more than the whole.\textsuperscript{115}

CSFP's senior pieces generally had higher yields than comparably rated investments, thus fund managers who were restricted to buying investment-grade instruments could generate higher returns with senior tranches than they could almost any other way.\textsuperscript{116} CBOs were especially attractive to banks because they did not have to maintain bank reserves for the repackaged highly rated pieces.\textsuperscript{117} Additionally, a typical CBO deal generated

\textsuperscript{108} Id. at 76. For example, some banks sold shares in trusts “backed by customer credit-card payments.” Id. at 77. Unlike bonds that were backed by the issuer of the bond, the trusts were backed only by the assets of the trust. Id. Trusts typically received higher credit ratings, making them more appealing and enabling institutional investors to buy them. Id.

\textsuperscript{109} Id. at 77.

\textsuperscript{110} Id. at 78-81. An SPE is typically a newly created company, partnership or other entity formed specifically for a particular transaction in which an independent outside investor represents at least 50 percent ownership of the SPE, providing at least 3 percent equity. Id.

\textsuperscript{111} See Partnoy, supra note 2, at 78.

\textsuperscript{112} Id.

\textsuperscript{113} Id.

\textsuperscript{114} Id.


\textsuperscript{116} See Partnoy, supra note 2, at 78.

\textsuperscript{117} Id. at 79.
fees of several million dollars. In 1994, CSFP produced $240 million in profits, while CS First Boston made just $155 million. CSFP's clients valued its derivatives products because they enabled them to make risk reallocations (or "place bets") they otherwise would not have been able to make.

In order to compete with First Boston's higher credit ratings, many investment banks set up SPE subsidiaries since a subsidiary could earn a much higher credit rating than the investment bank parent, typically AAA, if the subsidiary adhered to strict limitations. Furthermore, these partnerships were hidden from view, and enjoyed non-disclosure on financial statements. Within a decade, structured finance exploded into a trillion dollar industry.

III. EARLY WARNINGS IGNORED

In 1994, the Federal Reserve unexpectedly raised the overnight interest rate, throwing financial markets into chaos. Because many derivatives are, at their core, bets on interest rates, the rate increase exposed how pervasive the use of derivative instruments had become in the U.S. financial markets. For example, Orange County, California, one of the largest investors in the country with a portfolio value of $7.4 billion, lost $1.7 billion dollars of taxpayers' money primarily due to investments in derivatives instruments. Additionally, several banks were forced

118. Id. at 80. Because the credit rating agencies rated each individual piece, the agencies made bundles on them too. Id. at 79.
119. Id. at 82.
120. Id. at 83.
121. Id. at 70.
122. See Partnoy, supra note 2, at 70.
123. Id. at 80. FASB allowed that as long as an outside investor made a substantial (at least three percent) investment and controlled the SPE, then the other assets and liabilities of the SPE did not have to be disclosed on financial statements. Id.
124. Id. at 68.
125. Id. at 112. Federal Reserve Chairman Alan Greenspan raised overnight interest rates from 3 to 3.25 percent. Id. at 112.
126. See id. at 112.
127. See id at 115-16. Orange County treasurer Robert Citron used structured notes, betting billions of dollars on interest rates. Id. at 116-17. Merrill Lynch was also a culpable party in the Orange County disaster when as underwriter of Orange
to infuse cash to “prop up” money market funds they managed to avoid losses,\textsuperscript{128} while hedge-fund\textsuperscript{129} managers, securities firms, and banks, including Bankers Trust and Salomon, suffered terribly from the rate hike.\textsuperscript{130} Losses for the life insurance industry totaled approximately $50 billion in bonds while property and casualty insurers lost $20 billion.\textsuperscript{131} In 1995, the SEC “compiled a list of institutions that lost money through various derivative instruments during the previous year.”\textsuperscript{132} The list revealed that derivatives had infiltrated every kind of institution from every economic segment.\textsuperscript{133}

Later in 1994, the collapse of the Mexican peso further exposed the vulnerability that derivative instruments created in global markets.\textsuperscript{134} The peso crisis\textsuperscript{135} caused huge losses in Europe,\textsuperscript{136} and Japan.\textsuperscript{137} However, the biggest losers of all after the Mexican crisis were U.S. mutual funds with heavily peso-denominated County bonds, it failed to disclose or warn bond purchasers that it had also sold risky interest rate derivatives to Orange County, arguably a violation of securities laws. \textit{Id.} at 118. The credit rating agencies shared blame as well because they had given Orange County bonds AAA investment ratings even though the credit rating agencies knew, because they had rated them and charged substantial fees, that Orange County was holding derivatives in its portfolio. \textit{Id.} at 118-19.

\textsuperscript{128} See \textsc{Partnoy, supra} note 2, at 131. BankAmerica infused $68 million; First Boston $40 million; Merrill Lynch $20 million; and Paine Webber $268 million. \textit{Id.}

\textsuperscript{129} \textit{Id.} at 135. Hedge fund is a generic term that refers to any unregulated investment fund provided it has fewer than one hundred investors. \textit{Id.}

\textsuperscript{130} \textit{Id.} Bankers Trust reported its first loss since the 1930s while Salomon reported a pre-tax loss of $371 million. \textit{Id.}

\textsuperscript{131} \textit{Id.} at 135. The losses were not disclosed on the insurers’ financial statements because they recorded bonds at historical cost. \textit{Id.}

\textsuperscript{132} \textit{Id.} at 136.

\textsuperscript{133} See \textit{id.} at 137. George Soros, a successful investment fund manager, cautioned that “many fund managers were using financial alchemy to make otherwise-prohibited bets” and that “some of them [were] so esoteric that the risks involved may not be properly understood by even the most sophisticated investors.”\textsuperscript{134} \textit{Id.} at 114.

\textsuperscript{134} See \textsc{Partnoy, supra} note 2, at 228.

\textsuperscript{135} \textit{Id.} at 238. In 1995, President Clinton bailed out the Mexican government by tapping into an obscure Exchange Stabilization Fund and providing $20 million of structured swap loans, thereby averting the Mexican government from defaulting on its debt, much of which was held by U.S. investors. \textit{Id.} at 239. Mexico repaid the loan in 1997, three years ahead of schedule. \textit{Id.}

\textsuperscript{136} \textit{Id.} at 232. Major European banks lost millions of dollars and faced lawsuits over structured notes and mortgage derivatives sales to its customers. \textit{Id.} For example, Glaxo Holdings, Inc. lost more than $100 million on complex derivatives, including structured notes and CMOs. \textit{Id.} at 232.

\textsuperscript{137} \textit{Id.}
structured notes and options. In 1995, Barings, a 233 year-old British Bank, collapsed after a rogue derivatives trader lost more than one billion dollars trading Nikkei 225 futures contracts. In 1998, the financial markets in Russia and Brazil faltered, leading to an international crisis during which these markets briefly froze before spiraling downward together. Financial engineering and derivative instruments played a central role in all of these international crises, “both contribut[ing] to the problems and exacerbat[ing] the effects.”

The Russian and Brazilian crises eventually destroyed Long-Term Capital Management (LTCM), one of the most respected hedge funds in the U.S. at the time. Following the crisis, LTCM lost nearly all of its investors’ money in a matter of weeks, while holding more than one trillion dollars of derivatives. Derivatives had tightened the connections among international markets, creating enormous financial benefits and making global transactions more cost effective. Alarmingly, they also heightened the possibility of total systemic breakdown.

138. Id. at 237. Structured notes are debt issued by a highly rated company where payments are linked to financial variables, such as the value of foreign currency. Id. During the summer of 1994, U.S., European and Japanese investors made substantial investments in Mexico where the peso was undervalued, thus creating a lucrative currency differential opportunity. Id. at 234-36. As additional security on these currency bets, investors relied on the Mexican central bank maintaining a currency band that kept the peso value stable within an established range. Id. However, as inflation surged the Mexican central bank was forced to abandon the currency band and the value of the peso crashed. Id.

139. Id. at 228. Nikkei 225 futures are financial instruments based on the value of the Japanese stock market index. Id. The Japanese stock market crashed in 1995 when a serious earthquake hit near Kobe, Japan. Id. at 242.

140. See Partnoy, supra note 2 at 228.

141. Id.

142. Id. Jon Meriwether had started LTCM in 1993, two years after having been forced to resign from Salomon Brothers. Id. at 251. LTCM employed some of the top minds in the world of finance, including Robert C. Merton and Myron Scholes, two of Meriwether’s former finance professors, who would go on to win the 1997 Nobel Prize in Economic Sciences for their work in options theory. Id. at 252.

143. Id. at 228.

144. Id. at 229.

145. Id.; see Krawiec, supra note 16, at 47. Systemic risk is the risk that “a disturbance” in one market “will impair the efficient functioning of the financial system and, at the extreme, cause its complete breakdown.” Id. “Systemic risk arises from the danger that the collapse of a single large dealer or end-user could spread in a domino effect, causing serious repercussions for the entire global financial system.” Id.
After the interest-rate market upheaval, the two most influential leaders managing the regulatory response were SEC Chairman Arthur Levitt, Jr., and Mark C. Brickell, a powerful Washington lobbyist for the International Swap Dealers Association (ISDA).\footnote{146} Both men opposed regulation of the derivatives industry.\footnote{147} Levitt argued that regulation was premature and that derivatives were valuable hedging devices.\footnote{148} Brickell echoed Levitt, warning Congress that new legislation could cause “unforeseen damage,” and that “regulators could not possibly understand or control the situation any better than market participants.”\footnote{149} A persuaded Congress enacted no derivatives legislation following the 1994 interest rate crisis, choosing instead to continue allowing the industry to police itself.\footnote{150}

Congress did, however, pass the Private Securities Litigation and Reform Act of 1995 (PSLRA),\footnote{151} further insulating Wall Street from liability and enabling financial firms to self-regulate.\footnote{152} PLSRA aided deregulation of the financial markets because it made securities fraud cases more difficult for plaintiffs to mount by preventing accounting firms, investment banks, and

\begin{itemize}
\item 146. See PARTNOY, supra note 2, at 141. ISDA had been successful since 1985 in persuading Congress to allow derivatives to remain unregulated and financial markets to go unchecked. Id. Not surprisingly, ISDA members were major political donors. Id.
\item 147. Id. at 153.
\item 148. Id. at 150. Levitt did issue an advisory to fund managers telling them to sell certain kinds of structured notes. Id.
\item 149. Id at 141-42.
\item 150. Id. at 142-43. As early as 1992, at least one member of Congress, Iowa Representative Jim Leach, a non-PAC recipient, had concerns and doggedly pursued the derivative regulation cause. Id. at 147-48. As the leading Republican on the House Banking Committee, he produced a 900-page report on the state of derivatives and described the markets as “a house of cards.” Id. In May 1994, the General Accounting Office found many serious problems related to derivatives, including regulatory gaps, antiquated accounting practices, and uncontrolled risk-management. Id. at 150. The GAO suggested a sweeping overhaul of derivatives regulation, including “federal regulation of the safety and soundness of all OTC-derivatives dealers.” Id. Levitt opposed the GAO recommendations, as did most federal regulators, and the reforms were not implemented. Id.
\item 152. PARTNOY, supra note 2, at 173. Congressional legislation followed the U.S. Supreme Court decision in Central Bank of Denver v. First Interstate Bank of Denver, 511 U.S. 164 (1994) (holding that plaintiffs could not sue accounting firms, investment banks, or law firms for aiding and abetting). Id. at 172.
\end{itemize}
law firms from being held liable for aiding and abetting in financial fraud cases.\textsuperscript{153} The complexity of financial malfeasance cases coupled with PLSRA sent the message to the marketplace that there was only a remote possibility of going to jail for financial misdealings.\textsuperscript{154}

\section*{IV. The Enron Backdrop}

In addition to the propagation of complex derivatives in the global financial markets, other legislative and stock market developments in the mid-to-late 1990s strongly influenced the financial machinations that Enron would later employ.\textsuperscript{155} One significant legislative development was a Clinton-backed tax law change that limited the corporate tax deduction for executive salaries to $1 million.\textsuperscript{156} Despite its laudable intent to curb excessive CEO salaries, the bill contained a loophole exempting "performance-based compensation" from the $1 million dollar cap.\textsuperscript{157} The exemption loophole prompted corporations to shift executive compensation from salaries to stock options, a type of performance-based compensation, thus saving companies from expensing the option compensation,\textsuperscript{158} and even more important, conveniently keeping the stock options off corporate books.\textsuperscript{159} The insidious effect of this accounting change was that CEOs shifted their focus from maximizing long-term profitability to

\begin{itemize}
\item \textsuperscript{153} \textit{See Partnoy, supra} note 2, at 173. PLSRA placed other hurdles in front of plaintiffs in securities fraud cases, including: 1) decreasing the statute of limitations period for filing suits; 2) restricting legal fees paid to plaintiffs; 3) eliminating punitive damages provisions from securities lawsuits; 4) requiring a higher burden for plaintiffs to show reckless intent; and 5) exempting "forward looking statements" from liability. \textit{Id.} One money manager later testified before the House Energy Committee that PSLRA was responsible for many of the financial abuses that occurred between 1995 and 2002. \textit{Id.} at 173.
\item \textsuperscript{154} \textit{Id.} at 168-69.
\item \textsuperscript{155} \textit{See id.} at 216.
\item \textsuperscript{156} \textit{Id.} at 156. The Omnibus Budget Reconciliation Act of 1993 amended section (m) of the Internal Revenue Code, Pub. L. No. 103-66, 13, 211 (1993). \textit{Id.} at 425, n.46.
\item \textsuperscript{157} \textit{Id.} at 156.
\item \textsuperscript{158} \textit{Partnoy, supra} note 2, at 157. Since 1972, FASB accounting rules have treated stock options as a non-expense item. \textit{Id.}
\item \textsuperscript{159} \textit{See id.} at 156.
\end{itemize}
obsessing over quarterly earnings expectations.\textsuperscript{160}

Corporate executives easily adapted to "massaging" company accounting numbers\textsuperscript{161} in order to meet quarterly projections, which in turn increased their personal wealth as the value of their stock options climbed in step with corporate stock prices.\textsuperscript{162} Together, the tax change and PLSRA provided opportunities for various gatekeepers — including CEOs, accountants, lawyers, and investment bankers — to exploit conflicts of interest with impunity.\textsuperscript{163} Ultimately, the performance-based, profits-at-any-cost mindset that developed among many corporate executives spread throughout the securities industry,\textsuperscript{164} afflicting investment bankers, securities analysts, accountants, and corporate boards.\textsuperscript{165}

Many new individual investors were oblivious to the breakdown in gatekeeper controls that was occurring during the mid 1990s stock market expansion.\textsuperscript{166} Daytrading\textsuperscript{167} and CNBC's

\textsuperscript{160} See id. at 157.

\textsuperscript{161} Id. at 187. During the 1990s and into 2000, CEOs at CUC International (now Cendant), Waste Management, Sunbeam, and Rite Aid were indicted or forced to resign for accounting improprieties at their respective companies. Id. at 195, 198, 203, 206. The accountants for each of these companies, all Big-Five accounting firms, aided the CEOs in their financial manipulation schemes by knowingly signing-off on the financial statements. Id. at 194, 197, 203, 205. Arthur Andersen served as accountants for Sunbeam and Waste Management, Ernst & Young worked for CUC and KPMG serviced Rite Aid. Id. In 2001, Anderson paid over $100 million to settle these securities fraud suits. Id. at 203. Moreover, in a 1998 survey of chief financial officers of major Wall Street corporations, 12 percent admitted they had misrepresented corporate financial results and 55 percent said they had been asked to misrepresent results. Id. at 206.

\textsuperscript{162} Id. at 287. To further manipulate the market for their stocks, the corporate executives "selectively disclosed" key information to their favorite analysts without general public disclosures, and then they prepared analysts in advance of public announcements so that analysts could adjust their recommendations accordingly. Id.

\textsuperscript{163} See id. at 187.

\textsuperscript{164} See PARTNOY, supra note 2, at 157. Investment bankers who underwrote new IPO stock issues, securities analysts whose job it was to assess the value and risk of the companies on which they reported, accountants who were to audit corporate books for compliance with accepted accounting practices and corporate directors who were to monitor managements' activities on behalf of shareholders were included in those who became susceptible to lax oversight or outright deception. Id. at 187-88.

\textsuperscript{165} See infra notes 170-74 and accompanying text.

\textsuperscript{166} See PARTNOY, supra note 2, at 207.

\textsuperscript{167} Id. at 270. Daytrading, made possible by the prevalence of home and work computers and relatively inexpensive Internet-broker trading fees, allowed individual
expanded coverage of the financial markets fed individual investors’ insatiable appetites for stock ownership and participation in the IPO-dot.com craze. In this speculative period, greed tainted almost everyone associated with the financial markets. During this time, accounting firms developed conflicts of interest with the corporations whose financial books they were charged with monitoring, as they added lucrative consulting services in addition to the auditing functions performed for their clients. Investment banks, meanwhile, were grasping for the enormously profitable initial public offering (IPO) business. Indeed, CS First Boston, the IPO leader, devised a fraudulent scheme to reap even greater profits from these deals. At the
same time, securities analysts were reinventing themselves as their compensation became tied to the investment banking business they generated for their firms. With technology advances and other market efficiencies threatening analysts' job security, they became the mouthpieces for the corporate "pump and dump" scandals that would come to mark the era. Equally culpable in the flourishing malfeasance were the corporate directors and audit committee members who failed to ask the hard questions necessary to properly police corporate accounting practices.

The SEC responded to the IPO scandals with several well-intentioned, but ineffective, rules. Importantly, in 2000, the SEC implemented the Commodity Futures Modernization Act, providing for the regulatory exemption of OTC derivatives.

The deceptive practices of securities analysts and other insiders during this period explained much of the "irrational exuberance" that fueled the market to its peak in 2000. When

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173. See PARTNOY, supra note 2, at 286. Before the 1990s, securities analysis had been a respected profession, and investors relied upon and trusted the quality of analysts' research and the independence of their opinion. Id. at 285.

174. Id. at 287. "Pump and dump" described the process where securities analysts pumped up the price of a stock through "strong buy" recommendations so that investors would flood in and maintain the stock price at a high level for the 180-day lock-up period during which corporate insiders were prohibited from selling their stock, after which the insiders would dump their shares on the market and the price would plummet. Id. New York Attorney General Eliot Spitzer eventually issued subpoenas for the e-mail records of securities analysts at several large Wall Street banks, including Merrill Lynch, where Henry Blodgett worked, and CS First Boston. Id. The documents provided the "smoking-gun" that Spritzer needed to prosecute the players in the IPO kickback and fraud scandal that included the banks, the corporate executives, and the analysts. Id. at 288. The e-mails revealed that analysts publicly touted stocks and privately ridiculed them. Id. Records showed that analysts referred to stocks they had rated "neutral" as "crap," "a dog," and "going a lot lower." Id. Worse yet, stocks with "buy" ratings were described as a "piece of shit," "such a piece of crap," "going to 5" (the lowest "sell" rating), a "piece of junk" or "powder keg." Id. at 289.

175. Id. at 206-07.

176. Id. at 294. From 1998 to 2000, the SEC passed rules that 1) required corporate financial statements to be written in plain English; 2) standardized revenue recognition practices; 3) prohibited intentional misstatements of financial results and required additional disclosures; and 4) prohibited companies from selectively disclosing information to securities analysts. See id. at 294, 361.


178. See supra note 169, at 207, 276-77.
the bubble finally burst, empty-handed investors slowly sobered up to the realization they had been duped.\textsuperscript{179}

V. ENRON

In March 2002, Enron sent the market tumbling as revelations of corruption surfaced that would scale unimaginable heights when the full story was told.\textsuperscript{180} After Enron’s implosion, its many secrets were exposed.\textsuperscript{181} Among them, the startling disclosure that Enron was not an energy company after all, but rather an enormously profitable derivatives-trading firm.\textsuperscript{182} Moreover, Enron collapsed not because it was insolvent, but because institutional investors, banks, and credit rating agencies abandoned the company when they learned it was a highly leveraged derivatives empire employing extremely complex, though arguably legal, partnership deals.\textsuperscript{183}

The Enron story began in 1985 when Kenneth Lay formed the natural gas production company just as the groundwork for the OTC-derivatives market was being laid.\textsuperscript{184} In 1990, Lay hired Jeffery Skilling\textsuperscript{185} and Andrew Fastow,\textsuperscript{186} both of whom swiftly transformed Enron from a stodgy energy company into an energy trading giant.\textsuperscript{187} During the early 1990s, Lay fostered important banking relationships while Fastow kept a close eye on product

\textsuperscript{179} See Partnoy, supra note 2, at 269. By 2002, ninety-nine percent of all Internet-company IPOs traded below their first-day closing price and more than half were worth less than $1 per share. Id.

\textsuperscript{180} See id. at 295.

\textsuperscript{181} Id. at 297.

\textsuperscript{182} Id.

\textsuperscript{183} Id.

\textsuperscript{184} Id. at 298. Enron resulted after the merger of one of the largest natural-gas companies in the world, Omaha-based InterNorth and Lay’s company, Houston Natural Gas. Id.

\textsuperscript{185} See Partnoy, supra note 2, at 209. Skilling had an M.B.A. from Harvard and worked as an energy-trading consultant at the prestigious firm of McKinsey & Co. when Lay hired him away. Id. Skilling’s vision was to revolutionize Enron into an energy-trading powerhouse based on intellectual capital instead of physical assets. Id. at 300-01.

\textsuperscript{186} Id. at 301. Fastow was a recent Northwestern M.B.A. graduate with training in structured finance. Id.

\textsuperscript{187} Id. These skilled new recruits, together with Lay’s relationship building talents, helped Enron become the seventh-largest company in the U.S. Id. at 296.

Fastow soon became a prolific designer of SPE partnerships that allowed Enron to conduct structured finance deals using non-recourse financing. More importantly, the SPE’s permitted Enron to keep the partnerships’ debt off its balance sheet, protecting Enron’s credit rating and keeping its cost of capital low. Fastow’s special partnerships began as structures to finance the company’s oil and pipeline deals. However, the partnership structures rapidly mutated into transactions of inconceivable complexity, serving to manipulate Enron’s earnings while generating a personal fortune for Fastow.

In 1993, Fastow began devising the Joint Energy Development Investments Limited Partnership (JEDI) deals that would eventually lead to the company’s ruin. Enron’s equal partner in the first SPE involving JEDI was the California Public Employees’ Retirement System (CalPERS). Enron was permitted to exclude JEDI’s assets and liabilities from the company’s financial statements since it controlled only fifty percent of the JEDI-CalPERS SPE, with CalPERS controlling the other half. Fastow quickly adapted the JEDI formula to other uses. In one transaction, Fastow arranged to have Chewco, a phony outside investor, buy out CalPERS in order to create JEDI-Chewco, a new SPE. To qualify as an SPE and avoid consolidation of its debt on Enron’s financial statements, Chewco,

188. Id. Enron had very close relationships with Citibank, J.P. Morgan, and Chase Manhattan. Id.
189. Id. at 302.
190. Id. at 301. Non-recourse financing allowed Enron to borrow money for a project based solely on the assets of the partnership and without recourse to Enron for the partnership debts. Id.
191. See Partnoy, supra note 2, at 301. The accounting requirements for off-balance reporting limited Enron’s ownership of the partnership to fifty percent, thus permitting merely footnote mention of the partnership activities. Id.
192. Id.
193. Id. at 310, 313-14.
194. Id. at 302, 309.
195. Id. at 302.
196. Id.
197. See Partnoy, supra note 2, at 309.
198. Id. at 310.
as the outside investor, had to meet a minimum three percent independent equity requirement.\textsuperscript{199} Fastow rustled up an Enron employee willing to serve as the three percent equity owner, then arranged a loan for the employee to satisfy the remaining debt requirement.\textsuperscript{200} Although Chewco was really not an independent outside investor, Enron’s advisors at Arthur Andersen determined that the JEDI-Chewco partnership qualified as an SPE.\textsuperscript{201} Enron continued to do deals through JEDI substituting one “outside” investor after another, keeping the transactions off Enron’s financial statements, except for footnote entries.\textsuperscript{202}

In the 1990s, in the midst of Fastow’s creative flourish, Enron aggressively expanded outside the U.S.\textsuperscript{203} It then loaded its board and audit committee with members that reflected its new international presence, thereby ensuring diminished oversight and monitoring since many new directors were unfamiliar with U.S. laws and accounting rules.\textsuperscript{204} As Enron’s deals became more arcane, Lay relinquished control of the company to Skilling and Fastow.\textsuperscript{205} In 1996, Lay promoted thirty-five-year-old Fastow to senior vice president of finance after he raised over $5 billion for Enron through structured financings.\textsuperscript{206} In 1997, Skilling was

\textsuperscript{199} Id. at 310-11. The Emerging Issues Task Force of the Financial Standards Board issued EITF 90-15, which allowed companies to move leases off their books if independent, outsider investors “bore at least three percent of the residual risk of the lease.” Id. at 310. This so-called “three percent rule” was applied by companies to transactions other than leases. Id. In 1991, the SEC sanctioned the rule with some caveats. Id.

\textsuperscript{200} Id. at 311. Enron put up cash collateral for the loan so that an employee, Michael Kopper, actually had no risk, which should have disqualified Chewco as an independent investor for the SPE. Id.

\textsuperscript{201} Id.

\textsuperscript{202} Id. at 311-12.

\textsuperscript{203} See PARTNOY, supra note 2, at 303. To fund the expansion, Enron used its own stock shares to pay for its overseas investments, an arguably legal practice, rather than borrow money and hurt its credit rating. Id. at 303-04.

\textsuperscript{204} Id. at 304-05. In 1993, Lay appointed Wendy Grammn as a director and member of the audit committee just weeks after she left her post as Pres. George H.W. Bush’s former Commodities Future Trading Commission (CFTC) chair. Id. at 147, 302. Just prior to her departure she conveniently passed regulatory reporting exemptions for OTC derivatives. Id. at 302.

\textsuperscript{205} Id. Lay concentrated his efforts on building business and political connections. Id. Not only did Lay chair the 1992 Republican National Convention in Houston, he even sat with George H.W. Bush in the presidential box. Id.

\textsuperscript{206} Id. at 305.
appointed president and COO. 207 Skilling immediately set out to make Enron one of the most recognizable names in the world. 208

In 1999, after receiving an award for “unique financing techniques,” Fastow employed his JEDI strategies to mask his most nefarious transactions yet. 209 At about this time, EnronCapital, the company’s venture-capital subsidiary, made a $300 million gain after funding the IPO for Rhythm NetConnections, a start-up technology company. 210 In order to hide the gain and present an image of a steady, growth-oriented company, Fastow devised a scheme whereby Enron ran the IPO profits through an SPE partnership so the gain was not reported on Enron’s books. 211 To accomplish the feat, Fastow set up a highly complex partnership called LJM (and later LJM2). 212 Fastow himself served as the independent, outside investor of LJM in clear violation of regulatory rules 213 and Enron’s Code of Conduct. 214 Without explaining the esoteric financial gymnastics

207. Id. Lay’s attention turned to fostering his social and political ties, which included lobbying his friend, then Texas governor George W. Bush. Id.

208. Id. at 306. Since Internet technology companies were in vogue at the time, Skilling set out to recast the behemoth Enron as a hip dot.com-like company. Id. Enron issued 16 million stock options to its employees and executives in 1998. Id. From 1999 to 2000, Enron more than doubled the number of options to roughly five percent of Enron’s outstanding shares. Id. To reduce its risk, Enron devised intricate forward purchase arrangements that ensured it would have adequate shares to cover the options without requiring any cash. Id. at 306-07. These repurchase arrangements involved OTC-derivatives so they, too, were off-balance sheet transactions. Id.


210. Id. at 308-09.

211. Id. at 312; see also Steven L. Schwartz, Enron and the Use of and Abuse of Special Purpose Entities in Corporate Structures, 70 U. CIN. L. REV. 1309, 1310-11 (2002) (examining the structure of Enron’s SPEs in contrast to other users of structured finance transactions) [hereinafter SCHWARTZ].

212. PARTNOY, supra note 2, at 312-13. The partnership LJM’s initials stood for the names of Fastow’s wife and two daughters and served to purchase put options for Enron’s Rhythm NetConnections shares while they were in the lock-up period. Id. at 312-14. LJM2 functioned as a trading partner to Enron, enabling it to sell its dark fiber optics cable for a gain even though there was really no market for it. Id. at 316-19.

213. Id. at 312-13.

214. See SCHWARTZ, supra note 211, at 1312, n.19-20 (noting that Enron’s Code of Conduct provided, in essence, that no officer or employee should own a direct or indirect interest in an entity that does business with the Company, unless such interest is previously disclosed in writing to the Chairman and CEO for approval).
involved, Fastow persuaded Enron's hands-off board that the partnerships provided valuable trading partners for Enron. The deceptive partnership transactions were essentially Enron making a market and trading with itself while avoiding disclosure to shareholders, other than through cryptic footnotes. Like a mad scientist, Fastow went on to create "diabolical[ly] intricate" partnerships called "Raptors," using virtually incomprehensible derivatives constructions. In the end, Fastow's shrewdness minted him a $45 million personal fortune, as well as a federal indictment.

During this time, Enron generated enormous profits from its natural gas and electricity derivatives trading business by exchanging billions of dollars of long-term natural gas and electricity derivatives based on commitments to buy or sell energy products of various types for ten years or more. Nevertheless, investors only seemed interested in hot Internet technology companies, not speculative trading firms, and as a result, Enron's stock price suffered. In response, Skilling aggressively set up new technology businesses to appeal to market demand while working Enron's books so that it appeared the company was

215. PARTNOY, supra note 2, at 312-13. Even though Fastow's participation the LJM and LJM2 were obvious conflicts of interest, Enron's directors allowed them without the disclosures required by securities laws. Id.
216. Id. at 314.
217. Id. at 315. Raptor partnerships functioned to inflate the value of Enron's own assets by selling a portion of the assets to a Raptor at an artificially high price then revaluing the remaining major share of the assets Enron still held at the artificially high price. Id. at 316. For a detailed explanation of the mechanics of the Raptors partnerships, see William H. Widen, Enron at the Margin, 58 BUS. LAW. 961, 973-83 (2003).
218. See PARTNOY, supra note 2, at 313.
219. Rebecca Smith, Fastow, Former Enron Officer, Indicted by U.S., WALL ST. J., Nov. 1, 2002, at A2. Fastow was indicted on 78 counts of federal fraud, conspiracy, and money laundering. Id. John R. Emshwiller & Thaddeus Herrick, Fastow Plea Deal May Boost Cases Against Enron's Ex-CEOs, WALL ST. J., Jan. 15, 04, at A3. Fastow plead guilty to two criminal counts, and agreed to a 10-year sentence, forfeiture of $23 million, and cooperation in an ongoing investigation into charges against other former Enron executives. His wife, Lea, also an Enron executive, plead guilty to one criminal tax count, and received a minimum 5-month prison term. Id.
220. See PARTNOY, supra note 2, at 307. Because long-term energy contracts were not traded on organized exchanges, Enron traders profited by exploiting market mispricings as well as less savvy participants. Id.
221. Id. at 307-08.
making money from the technology businesses and not its derivatives trading business.\textsuperscript{222} In 2000, Enron reported more than $1 billion in revenues, a fraction of the real income generated from its derivatives trading business,\textsuperscript{223} which included trading of natural gas, electric power, plastics, metals bandwidth, pollution, and weather commodities.\textsuperscript{224} Profitable to the end, derivatives trading revenues totaled $3.8 billion in 2001, Enron’s final year of trading.\textsuperscript{225}

Enron traders made so much money from derivatives trades they were forced to develop strategies to hide their profits and save them as future reserves, since traders making “smooth, consistent profits received bigger bonuses.”\textsuperscript{226} Enron’s

\textsuperscript{222} Id. at 319-23. The technology businesses included EnronOnline and Enron Energy Services (EES) that, while money losers, gave Enron the appearance of a respectable company that generated consistent revenues. Id. at 323. EnronOnline functioned as an OTC exchange for trading various commodities and derivatives. Id. at 319. “Enron booked EnronOnline’s trades as revenue, even though money paid by buyers went directly to sellers.” Id. It was these false revenues that elevated Enron to seven on the Fortune 500 list of top U.S. companies, based on revenue. Id. EnronOnline did make legitimate profits from selling weather derivatives, which were essentially bets on changes in the weather over a period of time that especially appealed to farming, leisure, insurance, and travel businesses. Id. at 321. EES solicited energy conservation contracts with individuals and corporations seeking to improve energy efficiency and cut costs. Id. at 322. Despite its inability to make money due to poor controls and contract over and under valuations, EES’s investors and securities analysts loved it. Id. at 322. The problem with the approach was that the needs of Enron’s technology companies directly conflicted with the needs of its trading business. Id. at 308. As a technology company, Enron needed to borrow billions of dollars to finance infrastructure and R&D. Id. As a trading company, it needed to keep its debt low to maintain a high credit rating which assured continued access to investment capital. Id.

\textsuperscript{223} Id. at 323. “Enron was also advising other companies on how to create phantom revenue and earnings” during this time. Id. at 358-59. In 1999-2000, Enron entered into long-term fiber optic swaps with Global Crossing (GC), a global telecommunications network company, in order to help GC manufacture income to meet its quarterly earnings expectations and hide its mounting debts. Id. at 359-60. Enron’s collapse cast suspicions on GC, and the company spiraled into bankruptcy just two months after Enron. Id. at 365. Unlike Enron and GC, WorldCom, formerly the world’s second largest provider of long-distance telephone services, was not involved in derivatives schemes, as many in the industry believed. Id. at 367-70. Instead, its demise was due to basic accounting fraud. Id.

\textsuperscript{224} Id. at 347.

\textsuperscript{225} Id. at 323.

\textsuperscript{226} See PARTNOY, supra note 2, at 325. Traders who reported smooth, consistent profits “were perceived as making more money per unit of risk,” according to corporate formulas. Id. Consequently, traders resorted to two strategies to hide trading profits. Id. at 325. Prudency reserves involved complex manipulations that essentially misstated the volatility of the derivatives traded, changing the valuation of
accountants at Arthur Andersen never caught on to these profit manipulation practices, which continued for years. Indeed, the traders' derivative revenue mismarkings, estimated at more than one billion dollars, continued to generate income throughout Enron's bankruptcy, long after the traders were gone. Remarkably, the accounting schemes that triggered Enron's downfall were not really attempts to hide losses, but rather were strategies to conceal its immense energy derivatives bounty while maximizing trader compensation.

The swift decline of Enron began in October 2001 when several securities analysts discovered Fastow's personal "related parties" disclosures in the company's annual report footnotes. When they demanded Fastow's removal from the partnerships, Enron promptly complied and took a one-time $35 million charge relating to the partnerships. The analysts' exposure triggered an SEC inquiry and the dominos began to fall. The analysts, furious that they had been misled, pursued the legitimacy of the partnership dealings. Lay quickly fired Fastow, fearing not that the analysts would downgrade the company's stock rating, but that the credit rating agencies would downgrade Enron's credit rating and cut-off its access to capital.

A credit rating downgrade would have destroyed Enron by triggering an immediate call on nearly $4 billion in loans.

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227. *Id.* at 325-26. Forward curves involved mismarking trade dates into the future. *Id.* at 326. Additionally, derivatives traders felt compelled to conceal profits made during the California energy crises to avoid the scorn of members of the energy industry. *Id.* at 329, 323.
228. *Id.* at 327.
229. *Id.* at 330.
230. *Id.* at 327-30.
231. See PARTNOY, *supra* note 2, at 331. Global Crossing entered into so many "related parties" transactions "it made Enron look like a nunnery." *Id.* at 356-57.
232. *Id.* at 331.
233. *Id.* at 332.
234. *Id.* at 333. Now that Eliot Spitzer was prosecuting securities analysts for conflict of interest violations, they wanted to be sure they had accurate information on the companies they were covering. *Id.*
235. *Id.* at 334, 336.
236. *Id.* at 336. Lay sent out a call to all of his political cronies, including Paul O'Neill, Don Evans, Alan Greenspan, and various Bush administrative officials, but none would agree to help. *Id.* at 335-36.
Incredibly, despite an income restatement reflecting $600 million of overstatements, resulting from the JEDI, Chewco, and LJM partnership schemes that had been used to hide certain losses over a four-year period, the credit rating agencies did not react.\textsuperscript{237} The brief reprieve ended when the credit agencies learned that Enron had disguised $8 billion of "loans" as cash flow from operations, leaving them no choice but to downgrade Enron's credit rating.\textsuperscript{238} The downgrade locked Enron's traders out of the capital markets, making it impossible for them to sustain trading operations.\textsuperscript{239} With its core business destroyed, Enron filed for bankruptcy in early December 2001,\textsuperscript{240} and Ken Lay stepped down in January 2002.\textsuperscript{241}

Meanwhile, partners\textsuperscript{242} at Arthur Andersen who had consulted on and approved the suspicious SPE partnerships "powered-up the firm's shredders."\textsuperscript{243} Andersen had failed to properly audit Enron's books and allowed the substantial consulting fees it was earning to cloud its judgment in monitoring the company's accounting practices.\textsuperscript{244} Ultimately, Andersen was convicted of obstruction of justice for destroying Enron-related documents and was itself forced to dissolve.\textsuperscript{245} Enron's collapse

\begin{itemize}
\item \textsuperscript{237} See Partnoy, supra note 2, at 337. After the revision, Enron's net income was substantial and its debt manageable, reflecting a profitable company. \textit{Id.} In fact, after the restatement, Citigroup and J.P. Morgan Chase loaned Enron $1 billion in secured loans. \textit{Id.} at 336.
\item \textsuperscript{238} \textit{Id.} at 338-39. Enron's bankruptcy examiner would eventually find another $25 billion of debt. \textit{Id.} at 339.
\item \textsuperscript{239} \textit{Id.} at 341.
\item \textsuperscript{240} \textit{Id.} at 343. Before it declared bankruptcy, Enron paid out $55 million in advance bonuses to its top energy derivatives traders so they would stay on long enough for Enron to sell off its trading business. \textit{Id.} at 342-43. This was arguably in violation of bankruptcy law. \textit{Id.} at 343. Amazingly, J.P. Morgan Chase and Citigroup loaned Enron an additional $1.5 billion to sustain its dwindling operation. \textit{Id.} Enron wound up essentially giving its trading operations away to Union Bank of Switzerland, who agreed to receive Enron's assets but not its liabilities. \textit{Id.}
\item \textsuperscript{241} \textit{Id.}
\item \textsuperscript{242} \textit{Id.} at 335. Following his swift firing, David Duncan, the lead Andersen partner for Enron left with six boxes full of Enron records that had escaped the shredders and would later prove instrumental in the criminal investigation of Enron. \textit{Id.}
\item \textsuperscript{243} See Partnoy, supra note 2, at 335.
\item \textsuperscript{244} \textit{Id.} at 334, 336. Enron was Andersen's most important Houston client, generating $52 million in fees in 2000, mostly for consulting advice. \textit{Id.} at 334.
\item \textsuperscript{245} \textit{Id.} at 347.
\end{itemize}
cast a bright light on the widespread use of off-balance sheet activities and deceitful practices at the world’s leading corporations, including most notably WorldCom and Global Crossing.246

In addition to the direct participants responsible for Enron’s collapse, those equally culpable included credit-rating agencies that failed to perform their due diligence in assessing Enron’s leverage and risk, investors who had not scrutinized Enron’s financial statements and footnotes, and legislators and regulators who enacted and implemented the rules that permitted Enron for years to engage in its manipulative, “reprehensible practices.”247 Enron’s demise was the culmination of the corporate cultural ills that had developed in the financial markets over the preceding decade.248 The complex and obscure nature of Enron’s derivatives deals and financial statements frustrated the ability of the appropriate gatekeepers, including its accountants, board of directors and the credit-rating agencies, to perform their functions properly.249 Furthermore, the deregulatory climate made it such that no corporate executive, banker, or accountant realistically feared any “substantial punishment for misleading investors.”250

VI. LESSONS LEARNED

In 2000, corporate defaults reached a record $42 billion, with the number tripling in 2001.251 Yet, U.S. commercial banks seemed unscathed by the carnage, thanks in large part to credit derivatives.252 Credit derivatives are essentially “bets on the creditworthiness of a particular [borrower]” that enable banks to
sell-off risky debt, thereby hedging their loan portfolios. Additionally, credit derivatives permit banks to eliminate loans from their balance sheets, thus freeing up capital reserves they would otherwise be required to maintain.

Collateralized Debt Obligations (CDOs) and credit default swaps are two basic types of credit derivatives. In a typical CDO, a banking institution sells loans or bonds to an SPE where the debt is then split into pieces and new securities linked to each piece are sold. Credit rating agencies rate the various pieces and all but "the lowest quality pieces" receive investment grade ratings. In 2002, over one half trillion dollars in CDO's existed.

Credit default swaps are essentially a bet between two parties that a certain borrower will default. The party betting the borrower will default "buy[s] protection;" whereas the party betting the borrower will pay "sell[s] protection." If the borrower misses a loan payment, the seller of protection must pay the buyer a preset amount. Commercial banks buy credit protection by paying a fee to investors in "exchange for the right to receive payment[s] if a particular company default[s] on its debts." By 2002, banks had hedged hundreds of billions of dollars of loans throughout the world using credit default swaps,

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253. See id.
254. Id. at 384. Banks used this new available capital in their securities trading activities, which had become far more lucrative for banks than the traditional business of lending. Id.
255. Id. at 374.
256. See PARTNOY, supra note 2, at 383-89. The typical CDO is comprised of at most 100 companies. Id. at 389.
257. Id. at 383. CDO's perform similarly to the CMO's developed by Salomon and the CBO's created by CSFP in the mid 1990s. See supra note 54 and accompanying text.
258. See PARTNOY, supra note 2, at 383.
259. Id.
260. Id. at 374.
261. Id. at 375.
262. Id.
263. Id. Citigroup's credit risk strategy involved the creation of SPEs through which it issued a special type of credit derivative that allowed investors to keep AAA-rated bonds if the borrower repaid its loan, but in the event of non-payment the AAA-bonds would be replaced by the bonds issued by the defaulting borrowing, which would in all likelihood be essentially worthless. Id. at 376.
which meant that any resulting losses were borne by worldwide investors. Banks and bank regulators hailed the utility of credit derivatives in keeping banks afloat and reasonably safe despite the simultaneous and massive loan defaults by Enron, Global Crossing, WorldCom and others.

However, critics warned that banks were passing on loan risks to less sophisticated investors that the banks were in a much better position to evaluate and monitor. Others argued that credit derivatives "distorted global investment by leading parties to misprice credit risk" and stressed that higher costs associated with these investments would depress corporate expansion projects and cause economic growth to suffer. However, even with these shortcomings, it is clear today that credit derivatives helped immunize banks from ruin in the wake of Enron and other bankruptcies. Equally true, however, is that any potentially destabilizing effects that credit derivatives may have on the world's financial markets remain unexamined.

Infectious Greed concludes by reviewing the market destabilizing aspects of OTC derivatives. Partnoy returns to his concerns about the susceptibility of OTC derivatives to abuse by

264. See Partnoy, supra note 2, at 375-76. The biggest sellers of credit default swaps were U.S., European and Japanese insurance companies and pension funds that were able to use the unregulated instruments to leverage their portfolios and avoid legal rules that limited their investments from taking on too much risk. Id. at 377. Estimates indicated that insurance companies had exposure to over $10 billion of WorldCom debt. Id.

265. Id., at 375-76. Commercial banks extended an estimated $10 billion dollars of credit default swaps on WorldCom loans alone. Id. at 375. After entering into 800 credit default swaps involving $8 billion dollars of Enron, J.P. Morgan Chase lost "only" $456 million dollars on those loans. Id. at 376.

266. Id. at 381-82.

267. Id. Another troubling aspect of credit derivatives system was its dependence on the increasingly powerful credit rating agencies who rated the debt pieces which thereby made the pieces of loan more valuable than the original loans. See id. at 384-85. What concerned observers was that credit rating agencies relied on the banks' computer models to assess the values of CDOs, so naturally the debt pieces were overrated. Id. at 386.

268. See id. at 374.

269. Id. at 389. In 2002, Sarbanes-Oxley legislation required securities regulators to study how credit-rating agencies fit within the framework of financial regulation. See id. at 389, 393. To date, no substantial rules or changes in practice for credit rating agencies have been made. Id.

270. See Partnoy, supra note 2, at 393-96.
rogue traders as the result of managements' loss of control and push for short-term profitability.\textsuperscript{271} He stresses the importance of regulatory reform of OTC derivatives to correct the current regulatory environment allowing off-balance sheet reporting of such instruments, which serves as an incentive for managers to engage in financial deception to avoid legal rules.\textsuperscript{272}

Derivative proponents argue that derivatives are "vital," "indispensable,"\textsuperscript{273} "effic[ient]," even "elegan[t]," architectures that allow managers to isolate risks and transfer them to other contracting parties.\textsuperscript{274} Other noted non-speculative uses for OTC derivatives include helping investors "gain information, hedge, change their financial positions without trading, raise or invest cash, change yields, calm corporate customers, profit from relative mispricing, diversify, customize payoffs, and insure against disasters."\textsuperscript{275} Regardless of the differing views on the utility of derivatives in the financial markets, like them or not, the more than $100 trillion derivatives market\textsuperscript{276} is likely here to stay.

With acceptance of that reality, Partnoy proffers several recommendations for regulatory change.\textsuperscript{277} First, he proposes that derivatives be treated like "equivalent financial instruments," thereby requiring disclosure on corporate and institutional balance sheets.\textsuperscript{278} Additionally, he suggests that a shift from rules to standards would eliminate the bright lines that technically compliant accountants, lawyers and corporate executives have proved so adept at sidestepping and exploiting.\textsuperscript{279} He further argues for expanding the scope of securities fraud liability to include aiding and abetting by all professional gatekeepers and the elimination of the oligopoly of credit rating agencies by opening

\begin{footnotesize}
\begin{enumerate}
\item Id. at 394.
\item See id.
\item See Krawiec, supra note 16, at 2, 14.
\item See Feder, supra note 17, at 678, 682.
\item Peter H. Huang, \textit{A Normative Analysis of New Financially Engineered Derivatives}, 73 S. CAL. L. REV. 471, 491 (2000).
\item See \textsc{Partnoy}, supra note 2, at 399.
\item Id. at 397-409.
\item See id. at 397.
\item Id. at 399. \textit{See generally} William H. Widen, \textit{Enron At The Margin}, 58 BUS. LAW. 961 (2003) (arguing vigorously for changes in regulatory oversight from compliance with technical rules to general standards).
\end{enumerate}
\end{footnotesize}
up the credit rating market to competition.\textsuperscript{280} Finally, he points out the merits of encouraging short selling by investors and increased prosecutions in complex financial fraud cases.\textsuperscript{281}

**VII. CONCLUSION**

The years leading up to the devastation of Enron and the effects it had on the world’s financial markets were marked by a period of furious financial innovation.\textsuperscript{282} As executive compensation became intertwined with performance, corporate leaders were desperate to find an edge to beat the competition and meet stock analysts' earnings expectations.\textsuperscript{283} Demand for unregulated derivatives flourished as institutional investors and corporate executives saw them as a means to reallocate specific risks, increase profitability, and hide speculative positions from shareholders.\textsuperscript{284} Brilliant mathematicians and financial whizzes responded by engineering derivative instruments of mind-boggling complexity for hedging risk, speculation, and arbitrage.\textsuperscript{285} The complexity of these instruments along with deregulation presented price valuation and monitoring problems that prevented both sophisticated and unsophisticated investors from accurately evaluating the magnitude of risk exposure associated with these holdings.\textsuperscript{286} Without proper controls and understanding of risk, derivatives trading destroyed numerous powerful, prominent institutions, most notably Enron.\textsuperscript{287} Enron's downfall exposed it as a huge energy derivatives trading company that utilized complex


\textsuperscript{281} See Partnoy, supra note 2, at 405-06.

\textsuperscript{282} See supra notes 43-124 and accompanying text.

\textsuperscript{283} See supra notes 155-161 and accompanying text.

\textsuperscript{284} See supra notes 53, 120, 123 and accompanying text.

\textsuperscript{285} See supra notes 90, 101-02, 127, 217 and accompanying text.

\textsuperscript{286} See supra notes 60, 79, 204, 244, 267 and accompanying text.

\textsuperscript{287} See supra notes 127, 140, 143, 223, 240 and accompanying text.
derivatives schemes to manipulate its earnings, hide its lucrative derivatives trading business, and amass insider fortunes.288

The banking industry's ability to avert financial crisis after Enron, through the use of derivative instruments, revealed an effective role for their continued use in the financial markets.289

Demand for derivative instruments is a signal to regulators and market investors that these products serve desirable purposes for end-users.290 As risk reallocation tools,291 they enable market players to reposition risk, thereby freeing up capital for other uses.292 The parties taking on the risks function as deconcentrating forces within the market by spreading the risks among various willing parties.293 Fears that risk valuation and pricing difficulties associated with these novel, complex devices will destabilize U.S. and global financial markets are realistic294 but can be effectively alleviated with improved pricing and monitoring systems. With focused risk studies, increased education of market participants, and regulatory improvements, OTC derivatives can offer the financial markets and investors greater effectiveness and even wider acceptance.

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288. See supra notes 180-250 and accompanying text.
289. See supra notes 251-269 and accompanying text.
290. See Kraweic, supra note 16, at 8, 14.
291. See Feder, supra note 17, at 683.
292. See PARTNOY, supra note 2, at 384.
293. See Krawiec, supra note 16, at 15.
294. See id. at 3-4.