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## A Primer on the Trade and Regulation of Derivative Instruments

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# Comments

## A PRIMER ON THE TRADE AND REGULATION OF DERIVATIVE INSTRUMENTS

*Joseph L. Motes III*

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## I. INTRODUCTION

## A. BACKGROUND

Over the past decade, the financial world has been revolutionized by an exponential increase in the use of complex financial tools known as derivatives. The term "derivatives" is used to describe a diverse and rapidly evolving array of privately negotiated over-the-counter (OTC) and exchange-traded financial instruments.<sup>1</sup> These sophisticated instruments are, in essence, financial contracts whose values are linked to (or "derived" from) the value of one or more underlying assets, such as stocks, bonds, or commodities.<sup>2</sup> Derivatives have most often been employed as a sort of "insurance," protecting investors' positions through allocation of risk, but the instruments have also been used to generate profits through speculation on market positions.

While the simpler components of these instruments have existed for hundreds of years, relatively recent innovations in computer and communications technology, coupled with advances in finance theory, have propelled these complex tools into the mainstream of the increasingly mathematics-based world of finance.<sup>3</sup> These improvements in theory and technology spurred unprecedented growth in the derivatives market by facilitating the customization of instruments to meet market players' demand for sophisticated risk-management tools, thereby helping investors compete in the increasingly globalized (and more volatile) financial market.<sup>4</sup>

The majority of growth in the derivatives market has come about since the mid-1980s, when the use of OTC derivatives began to catch on. To-

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1. Daniel P. Cunningham et al., *An Introduction to OTC Derivatives*, in SWAPS AND OTHER DERIVATIVES IN 1994, at 1 (PLI Corp. L. & Practice Course Handbook Series No. B4-7062, 1994).

2. See Andrew Freeman, *Damned Derivatives*, THE ECONOMIST, Apr. 10, 1993, at 9; Randall Smith & Steven Lipin, *Beleaguered Giant: As Derivatives Losses Rise, Industry Fights to Avert Regulation*, WALL ST. J., Aug. 25, 1994, at A1.

3. See Bernard J. Karol & Mary B. Lehman, *Equity Derivatives*, REV. SEC. & COMMODITIES REG., July 1, 1994, at 121. Advances in theory and technology now permit investors to isolate and better evaluate the risk components of a complex transaction, and derivative instruments can then be employed to address these risks. *Id.* at 122; see also Kenneth A. Froot et al., *A Framework for Risk Management*, HARV. BUS. REV., Nov.-Dec. 1994, at 91; Isaac B. Lustgarten & Junling Ma, *Derivative Activities of Banks and Bank Holding Companies*, REV. BANKING & FIN. SERVICES, Dec. 8, 1993, at 1 (noting that since the 1980s, derivatives have grown dramatically in scale, diversity, and complexity); Margery Waxman, *The Lesson of Orange County: It Takes a Crisis to Focus Public Policy on the Need for Adequate Disclosure of Risk*, 63 Banking Rep. (BNA) No. 943 (Dec. 19, 1994) (noting that the over-the-counter derivatives market has experienced a 40% growth rate each year during the past 10 years, with countless numbers of institutions of all sizes and levels of sophistication now entering the market). Figures reported by the General Accounting Office indicate that the use of derivatives between 1989 and 1992 grew 145%. *Id.*; John Greenwald, *The Devil's in the Derivatives*, TIME, Oct. 10, 1994, at 54.

4. Leo Melamed, *In Defense of Derivatives*, BARRON'S, Mar. 7, 1994, at 67. Melamed is the past chairman of the Chicago Mercantile Board.

day, the notional value<sup>5</sup> of the derivatives market is an estimated sixteen trillion dollars, more than double the gross domestic product of the United States.<sup>6</sup> In the words of one commentator, the financial world has now entered the "Age of Derivatives," as it moves from "long-term hedging to on-line risk management."<sup>7</sup>

Not everyone, however, is bullish on the widespread use of derivatives. Many believe that the rapid movement of derivatives to the forefront of financial markets has brought with it the potential for a market disaster of systemic proportion; one that could make the recent savings and loan debacle seem tame by comparison.<sup>8</sup> In addition to the sheer magnitude of the derivatives market, a number of other factors raise legitimate concerns, including the interrelation of markets and institutions derivatives create, inadequate disclosure of risks to investors, inadequate assessment of risk by institutional managers who lack the expertise required to truly understand these complicated instruments, and an increasing pressure on fund managers to produce profits through speculation.<sup>9</sup>

Over the past few years, the debate has intensified between those enjoying the benefits of derivatives and those who feel the instruments threaten global financial stability. The debate eventually reached the floor of the U.S. Congress, as spectacular, high-profile, derivatives-re-

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5. See John A. Lindholm, Note, *Financial Innovation and Derivatives Regulation—Minimizing Swap Credit Risk Under Title V of the Futures Trading Practices Act of 1992*, 1994 COLUM. BUS. L. REV. 73 (1994). The term "notional value" refers to the value of the assets underlying the derivatives contracts. This method of measuring the size of the derivatives market is not entirely satisfactory, as it fails to reflect the streams of income the parties to the agreement are bound to exchange. *Id.* at 77 n.18. Notional value has, however, become the standard measure of the size of the derivatives market simply because no other method is so readily calculated. Another estimation, though seldom employed, is the cost of replacing a defaulting counterparty to a derivatives contract with a new counterparty. Waxman, *supra* note 3, at 944.

6. Carol J. Loomis, *The Risk That Won't Go Away*, FORTUNE, Mar. 7, 1994, at 43. Note that notional value is essentially an approximation, and estimates may vary widely. The point, however, is not whether \$10 trillion or \$16 trillion is the more accurate estimation, but that the derivatives market is so large as to be measured in the trillions in the first place. One recent Wall Street Journal estimate put the market at \$35 trillion, more than twice the amount estimated by the GAO. Experts point out that the true value of the market is impossible to pinpoint because so many derivatives transactions are traded in private OTC deals. See *Derivatives Market Put at \$35 Trillion*, AM. BANKER, Aug. 26, 1994, at 20.

7. Melamed, *supra* note 4, at 67.

8. See Ronald Fink, *Shadow Boxing*, FIN. WORLD, Oct. 25, 1994, at 92. "[B]ecause each derivative transaction typically leverages an investment and brings more than one customer into the deal, the possibility of a domino effect is thought to be much higher in this marketplace than in those for other financial instruments." *Id.* at 95; see also Henry T.C. Hu, *Misunderstood Derivatives: The Causes of Informational Failure and the Promise of Regulatory Incrementalism*, 102 YALE L.J. 1457, 1460-1461 (1993) (noting that financial industry players from both the private and public sectors worry that a failure in the over-the-counter derivatives market could trigger a new banking crisis); Lindholm, *supra* note 5, at 84-86. The size of the derivatives market, coupled with the fact that approximately seven financial institutions account for nearly all of the exposure of American banks, leads some regulators to fear a ripple effect. Under this scenario, a major bank or banks might accumulate losses, default on payments, and set off an interbank financial crisis affecting the entire market. *Id.*

9. Waxman, *supra* note 3, at 943.

lated losses drew the regulatory attention of several congressional committees. The principal players in this controversy now include derivatives market users and trading organizations, federal regulatory agencies, and the U.S. Congress.

The market users and derivatives trading organizations argue that the industry is already adequately regulated, and that any additional congressionally sponsored regulatory action would be not only unnecessary, but devastating to both issuers and users of the instruments.<sup>10</sup> Surprisingly, the majority of federal regulatory entities—including the Securities and Exchange Commission (SEC), Federal Reserve Board (FRB), Commodity Futures Trade Commission (CTFC), and the Office of the Comptroller of the Currency (OCC)—agree that the current regulatory framework, properly applied, is sufficient to safeguard the financial system and the U.S. taxpayer from a derivatives-induced financial crisis.<sup>11</sup> Standing in sharp contrast to the positions taken by industry players and many federal regulators are a number of key members of Congress, particularly those serving on the House Banking Committee.<sup>12</sup> Anxious to avoid another savings and loan-type regulatory disaster, and spurred on by a series of highly publicized losses in the derivatives market,<sup>13</sup> the last two congressional sessions witnessed more than a half-dozen derivatives-related bills, each aimed at clamping down on the derivatives market through increased regulation and oversight.

#### B. PURPOSE OF COMMENT

This Comment examines derivative instruments on two distinct levels. The first section serves as a primer on the nature and function of derivatives, explaining what they are as well as how and by whom they are used. In spite of the important role derivatives now occupy in the financial markets, the instruments are, in general, poorly understood, even among many industry participants. The purpose of the first section, then, is to provide a basic understanding of derivatives in language which is comprehensible to the financial market layperson. The second section is a review of the explosive development of the derivatives market, looking at the important role it has come to play in today's global financial markets, and examining how changes in the economic environment recently resulted in

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10. *Id.*

11. *Id.* at 944. The regulators are hesitant to endorse additional regulations that might negatively impact the value of derivatives contracts linking many of the world's largest financial institutions. *Id.* Note that the term "derivative" applies to a variety of financial instruments, some of which are classified as securities (and thus fall under the oversight of the SEC) and some of which are not (and thus are regulated by entities other than the SEC). Karol & Lehman, *supra* note 3, at 126.

12. Waxman, *supra* note 3. Representatives Henry B. Gonzalez (D-Texas) and Jim Leach (R-Iowa), the past and current chairs of the committee, have been vocal advocates of increased oversight of the derivatives industry. Prior to the mid-term elections of 1994, Leach and Gonzalez had introduced a bill seeking greater regulatory accountability and oversight of the market. *Leach Says House Banking Ready to Tackle Derivatives, Powers, and Consolidation*, 63 Banking Rep. (BNA) No. 906 (Dec. 19, 1994).

13. For a discussion of these high-profile derivatives-related losses, see *infra* part III.C.

spectacular losses for investors who, knowingly or not, invested in derivatives. The section also examines the various arguments put forth in the debate over regulating the derivatives market and explores the potential character of derivatives legislation, which will almost certainly be passed in the near future.

## II. DERIVATIVE INSTRUMENTS PRIMER

### A. DERIVATIVES DEFINED

In spite of the magnitude of the derivatives market and the principal position they now occupy in the global financial system, the instruments themselves, how they are used, and the risks that accompany their use are poorly understood by even the most sophisticated investors.<sup>14</sup> What, then, is a derivative? A derivative is a financial instrument that market traders use to hedge risk and, in some cases, to speculate on market movements. Reduced to its essence, the instrument is simply a "side bet" between two parties on the value of some asset.<sup>15</sup> The contract between the parties is called a "derivative" because the value of the contract is tied to (or "derived" from) the value of the underlying asset; as the value of the underlying asset fluctuates, so too does the value of the derivative contract. While the term derivatives generally encompasses both mortgage-backed securities and collateralized mortgage obligations,<sup>16</sup> the

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14. See Saul Hansell & Kevin Muehring, *Why Derivatives Rattle the Regulators*, INSTITUTIONAL INVESTOR, Sept. 1992, at 49, 50. Former New York Federal Reserve Bank Chairman E. Gerald Corrigan determined, after speaking with various bankers under his supervision, that many did not understand derivatives or the magnitude of possible losses involved with their use. *Id.*; see also Loomis, *supra* note 6, at 49. Many regulators feel that bank CEOs and board members simply do not understand how their own organizations are using derivatives. The Office of the Comptroller of the Currency (OCC) recently sent national banks a set of guidelines emphasizing the role of the banks' boards in responsibly managing the risks inherent in the use of derivatives, yet it is clear that many board members lack the expertise to fully understand the issues. The CEO of one large bank, unable to respond to a basic question regarding his bank's derivatives portfolio, admitted to being in "over [his] head." *Id.*; Waxman, *supra* note 3. "There is no doubt that the complexity of [derivative transactions] has made it more difficult for even the most senior management to understand or evaluate the benefits or the risks associated with using these derivatives." *Id.*

15. Hansell & Muehring, *supra* note 14, at 50; see also Karol & Lehman, *supra* note 3, at 121. Derivatives contracts amount to little more than bets on the direction of a market made by players in a "zero-sum game." Unlike an ordinary stock market transaction, the loss incurred by one party to a derivatives contract, less transaction costs, is the gain realized by the counterparty. *Id.*

16. Mortgage-backed securities and collateralized mortgage obligations are financial instruments that make up the secondary mortgage loan and capital markets. The originator of mortgage loans (such as a commercial bank, mortgage banker, or savings and loan institution) will often place groups of loans having similar characteristics in a pool and "securitize" them. The loans, then, become the collateral for securities which the originator or loan assignee issue and sell in the capital markets. These mortgage-backed securities are sold to attract funds from investors who would otherwise be unlikely to invest directly in an individual mortgage. The funds are then used by the issuer for further mortgage lending. In the standard mortgage-backed security, each investor is the holder of a pro-rata share of all scheduled payments on the securitized mortgages. However, just as the OTC market innovated new products to satisfy the customized needs of individual investors, issuers of mortgage-backed securities began to divide securities issues into classes (or

term is predominately used to describe four types of financial instruments: swaps, options, forwards, and futures.<sup>17</sup> These instruments generally fall into one of four categories: foreign exchange, interest rate, commodity, and equity derivative instruments.<sup>18</sup>

Derivative transactions are actually two-party contracts which can be traded on an exchange,<sup>19</sup> but are far more commonly traded in privately negotiated over-the-counter (OTC) transactions.<sup>20</sup> Exchange-traded derivatives consist of standardized contracts that are traded on the floor of a regulated exchange. The advantages of this type of transaction lie in the standardization of the instruments, which provides liquidity, and in the reduction or elimination of credit risk to the holder of the contract.<sup>21</sup> In the OTC market, the parties to the derivatives contract include the derivatives dealer and the derivatives end-user.<sup>22</sup> The OTC market allows end-users the luxury of obtaining derivative products custom tailored to their needs; nearly any aspect of the agreement can be negotiated, includ-

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"tranches") that repay investors over different time periods or based on different components of the mortgage debt. For example, the interest and principal components of mortgage-backed securities are often stripped apart, allowing the securities to be divided into "interest-only" (IO) and "principal-only" (PO) classes. The term "collateralized mortgage obligations" refers to mortgage-backed securities that have been divided in this manner. GRANT S. NELSON & DALE A. WHITMAN, REAL ESTATE TRANSFER, FINANCE AND DEVELOPMENT 905-06, 947-50 (4th ed. 1992). Although seemingly straightforward in nature, these financial instruments are considered to be some of the most complex ever created. Michael Carrol & Alyssa A. Lappen, *Mortgage-Backed Mayhem*, INSTITUTIONAL INVESTOR, July, 1994, at 81.

17. Freeman, *supra* note 2, at 9. For a more detailed discussion of the common types of derivative instruments, see *infra* part II.C.

18. Freeman, *supra* note 2, at 9. For further explanation of these types of derivative instruments, see *infra* part II.C.

19. Hu, *supra* note 8, at 1465; see also Freeman, *supra* note 2, at 9.

20. In terms of notional value, exchange-traded derivative instruments account for only a small percentage of the derivatives market. While the growth of the exchange-traded market has been proportional to that of the OTC market, the bulk of the expansion in the use of derivative instruments has occurred in off-exchange transactions. Lindholm, *supra* note 5, at 77.

21. Karol & Lehman, *supra* note 3, at 122-23. Credit risk is the risk that the counterparty to a contract will default. In exchange-traded derivative contracts, the exchange functions as a clearinghouse; it is the counterparty to every transaction. Credit risk is reduced because the financial strength of the exchange is easily assessed, and an exchange is far less likely to default on a contract than the typical non-exchange counterparty. *Id.*

22. "Dealers" are generally banks, securities firms, insurance companies, or their affiliates. "End-users" are market participants who enter into derivatives contracts to manage or profit from financial risks. Thus, end-users, though typically dealers' customers, may also be derivatives dealers themselves. End-users include a variety of investors ranging from banks and commercial market players to municipalities, retail investors, and corporate treasury departments. GOVERNMENT ACCOUNTING OFFICE, PUB. NO. B-257099, FINANCIAL DERIVATIVES: ACTIONS NEEDED TO PROTECT THE FINANCIAL SYSTEM 29 (1994) [hereinafter GAO REPORT].

Although thousands of institutions worldwide are derivatives end-users, OTC dealing is concentrated among a small percentage of major financial firms. By the end of 1992, the top seven U.S. bank OTC dealers accounted for more than 90% of all domestic bank OTC dealing, and the top five U.S. securities firms dealing in OTC derivatives were responsible for some 87% of all derivatives activity by domestic securities firms. *Id.* at 36. With few exceptions, private individuals are seldom able to participate directly in OTC derivative transactions. Hu, *supra* note 8, at 1465 & n.29; see also Lindholm, *supra* note 5, at 75 n.7.

ing terms such as timing of payments and interest rates.<sup>23</sup> This type of transaction, however, lacks the protection afforded exchange-based transactions, leaving end-users to bear the credit risk of a counterparty default. In addition, OTC transactions lack other protective elements associated with exchange-based contracts. For example, transactions made on the exchange are subject to daily market-to-market value adjustments (a means of "fine-tuning" a party's collateral), and counterparties are subject to posting of margin deposits and limitations on price and positions.<sup>24</sup>

The OTC and exchange-traded derivatives markets are at once competitive and mutually beneficial. While the exchange market is in some ways restricted by a more rigorous regulatory structure, the liquidity and creditworthiness it offers has made it a desirable market for OTC dealers. The relationship is symbiotic: OTC dealers look to standardized exchange products as hedges for their customized transactions, and the exchange, in turn, develops standardized products to meet this demand. As a consequence of this interplay, the volume of exchange-traded instruments has grown in direct proportion to the explosive increase in OTC transactions.<sup>25</sup>

#### B. THE FUNCTION OF DERIVATIVE TRANSACTIONS

The unprecedented expansion in the use of derivatives can be seen as the business world's response to the financial risks posed by increasingly globalized financial markets. The primary risks are associated with unpredictable (volatile) movements in foreign exchange and interest rates, as well as in the prices of equities and commodities.<sup>26</sup> Derivatives are a means by which elements of risk can be stripped away from a transaction, providing the user with cost-effective protection from this market volatility.<sup>27</sup> Derivatives are now used by thousands of entities worldwide, typically in the pursuit of one or more of three goals: (1) hedging, (2) reducing funding costs, and (3) speculation.<sup>28</sup>

The term "hedging" refers to the risk management activities investors engage in to reduce their exposure to unpredictable changes in the market. Used as a risk management tool, derivatives allow end-users to reduce inherent market risks, creating a more stable and predictable cash flow that is insulated from market swings. This goal is attainable because derivatives provide a means by which end-users can shift the risks presented by market fluctuations to a player who is willing to bear such risks.<sup>29</sup> The investor protects his position by investing in derivative transactions whose value varies inversely with the value of his assets, so that losses in the value of owned assets will be offset by gains in the value of

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23. GAO REPORT, *supra* note 22, at 24.

24. Melamed, *supra* note 4, at 67.

25. Karol & Lehman, *supra* note 3, at 123.

26. GAO REPORT, *supra* note 22, at 24.

27. *Id.*

28. *Id.* at 25.

29. See Loomis, *supra* note 6, at 41; see also GAO REPORT, *supra* note 22, at 24.



derivative contracts.<sup>30</sup> Transactions of this nature may benefit both parties. End-users gain by shifting risk, thereby creating a sort of "insurance" on their assets; dealers may realize a similar hedging benefit by passing the acquired risk on to yet another dealer or by using the acquired position as a hedge to their own positions.<sup>31</sup> In addition, dealers earn fee income for providing the derivative to the end-user.<sup>32</sup>

The derivative is also used as a tool by which end-users reduce funding costs;<sup>33</sup> in many cases investing in a derivative is considerably less costly than purchasing the underlying asset itself because of reduced transaction costs and the leverage the instrument provides.<sup>34</sup> For example, rather than buying or selling \$100,000 worth of an underlying asset on the cash market, an investor might use a derivatives contract to achieve the same effect for a fraction of the up-front cash required to effect the underlying transaction. The investor might be required to post a deposit of only \$1500 (one and one-half percent of the face value of the underlying asset) but would realize all the same profits or losses as one who actually purchased \$100,000 worth of the underlying asset.<sup>35</sup> As an illustration of the power of derivative transactions, the GAO Report on Financial Derivatives points out that for a mere five to ten percent of the value of the underlying stocks, a derivatives end-user could realize the same gains or losses as a hypothetical investor buying *all* of the stocks listed in the Standard & Poor's 500 Index.<sup>36</sup> An additional benefit realized by derivatives end-users is an enhancement of creditworthiness. An entity that has reduced its exposure to market risks by hedging with derivatives is generally able to obtain more preferable financing terms.<sup>37</sup>

Derivative transactions also serve as a means by which market participants can speculate.<sup>38</sup> Where hedgers seek to protect themselves by transferring risk, speculators take risks by betting on fluctuations in the market value of derivatives or underlying assets. Just as derivatives provide the hedger with an affordable means of protecting his position, a speculator may likewise utilize derivatives to reap the benefits (or losses) of a market movement without having to actually buy or sell the underly-

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30. GAO REPORT, *supra* note 22, at 25.

31. *Id.* at 29.

32. Smith & Lipin, *supra* note 2, at A1.

33. GAO REPORT, *supra* note 22, at 25. Note that end-users can also reduce funding costs by obtaining better debt-financing arrangements utilizing a derivative instrument known as a "swap." For a complete discussion of swaps and other derivative instruments, see *infra* part II.C.3.

34. Hu, *supra* note 8, at 1466; see also Anne Beroza & Robert M. McLaughlin, *What General Counsel Need to Know About Derivatives; Understanding Risks Can Protect Your Company*, CORP. LEGAL TIMES, Oct. 1994, at 14. Derivatives allow investors to make "big market bets" without the huge front-end cash availability such transactions would otherwise require. Smith & Lipin, *supra* note 2, at A1.

35. GAO REPORT, *supra* note 22, at 25-26; see also Smith & Lipin, *supra* note 2, at A1.

36. GAO REPORT, *supra* note 22, at 25-26.

37. *Id.* at 25.

38. The term "speculation" refers to the taking of calculated risks in an attempt to profit by anticipating (or speculating on) changes in the market. *Id.*

ing asset.<sup>39</sup> In general, the participation of speculators enhances the market by providing an outlet onto which dealers can shift the risks they have acquired from hedging end-users, thereby adding liquidity to the market and ensuring that participants can not only take a position but get rid of it as well. Speculation is seen in a negative light, however, when undertaken by public or private fund managers seeking to show profits or above-market rates of return on investment pools. The distinction lies in the nature of the funds that investors put at risk through the speculative activity. When dealers speculate, they subject themselves to an acceptable level of risk in return for the chance to profit. When fund managers undertake such investments, they put at risk the funds needed to pay for schools and municipal improvements (in the case of a public fund investment), or those of private investors who were never informed of the type of risks involved in speculative derivative activities.<sup>40</sup>

### C. DERIVATIVE BUILDING BLOCKS

A wide and continually evolving array of derivative instruments is traded on the modern derivatives markets (particularly on the OTC market), ranging from relatively simple "plain vanilla" varieties to the so-called "hybrid" and "exotic" products, whose market value and risk potential can be calculated only with the aid of sophisticated computer software.<sup>41</sup> In spite of the diversity of instruments available, derivatives contracts are actually constructed from one or more of four basic "building blocks" or components: options, swaps, forwards, and futures.<sup>42</sup> In general, forwards, futures, and options are tools for both hedging and speculation activities, while swaps serve either as hedges or as a means by which more desirable financing can be obtained.<sup>43</sup> Sophisticated dealers trade in these derivative "building blocks," and also combine them to

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39. *Id.*

40. Waxman, *supra* note 3, at 4. See *infra* part III.C for a discussion and examples of the risks speculative derivative activities pose to public and private investment funds.

41. See Hu, *supra* note 8, at 1467-68. Under the appropriate heading "The Need For Clairvoyance," Hu explains the complexities involved in evaluating the risks associated with even the simplest forms of derivative transactions, noting that such computations are far more complex than similar calculations made on bank loans, yet far simpler than those for more complex derivatives. *Id.* OTC dealers in today's market employ elaborate computer systems utilizing mathematical models to simulate market activity, all in the quest to accurately determine the market value and risk qualities of derivative instruments. *Id.* at 1476-77 & n.104; see also Saul Hansell, *The Risk Collectors*, INSTITUTIONAL INVESTOR, Sept. 1991, at 59. In pointing out the complexity of the derivatives market and the instruments themselves, Hansell observes that the type of person drawn to the risk-management field must have a quantitative or spatial ability to comprehend and manage multiple risks. According to Pierre DuPont, head of the equity derivatives section at J. P. Morgan & Co., "[t]he derivatives trader has to have hyperspace inside his head . . . . He has to react to what's in his book, to what's happening in the market and to what comes from clients." *Id.*

42. GAO REPORT, *supra* note 22, at 26; see also Hu, *supra* note 8, at 1466-67; Loomis, *supra* note 6, at 43.

43. GAO REPORT, *supra* note 22, at 26. Swaps are not commonly used to speculate because the associated transaction costs are higher than those of other derivative products. *Id.*

produce the more complex "hybrid" products.<sup>44</sup> An elaboration on the nature and function of these derivatives components appears below.

### 1. *Forwards and Futures*

Forwards and futures are transactions that place obligations on both parties to the contract. In each instance, one party is bound to buy and the other to sell a particular underlying asset at a set price and quantity at an agreed-upon future date.<sup>45</sup> The main difference between a forward contract and a futures contract is that the former is an OTC-traded derivative, the terms of which are highly negotiable, while the latter is a more standardized agreement that is traded on an organized exchange.<sup>46</sup> Parties to a forward or futures contract pay no premium or fee for the opportunity to enter the contract, and no money is exchanged until the due date arrives and the contract expires.<sup>47</sup> In a futures contract, however, since the exchange serves as guarantor of payment, both sides are required to put up collateral to back their obligations.<sup>48</sup>

Either a forward or a futures contract can be used to hedge a position;<sup>49</sup> the appropriate instrument is the one that best matches the end-user's needs. For example, imagine a hypothetical U.S. company which plans to build a factory in Germany, at an estimated cost of \$100 million. The company knows it will need the \$100 million, converted into German marks, in six months' time. By entering into a foreign exchange forward contract, the company can lock in the current dollar-to-mark exchange rate. In this way the company is able to hedge the risk that the dollar will buy less marks in the future when the payment comes due.<sup>50</sup> In this case,

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44. *Id.*

45. *Id.*

46. *Id.* The first derivative products consisted of standard contracts offered by organized markets such as the Chicago Mercantile Exchange and the Chicago Board of Trade. In exchange for a fee, banks and other off-exchange entities began to create more customized instruments, which led to the development and rise of the OTC market. Freeman, *supra* note 2, at 9.

47. Smith & Lipin, *supra* note 2, at A1. Note that when the time arrives for the parties to settle on the contract, cash is often exchanged rather than the actual underlying asset. *Id.*

48. *Id.* As previously noted, collateral requirements are a safety component associated with exchange-traded derivative contracts, and are generally not part of an OTC transaction. See *supra* notes 22-25 and accompanying text for a discussion of exchange-traded versus OTC transactions.

49. Note that both forwards and futures can also be used by speculators. A speculator who predicts a rapid rise in the value of a foreign currency could enter a forward or futures contract, the value of which rises in proportion to the value of that currency. The speculator will suffer a loss if the foreign currency fails to rise in value or rises too slowly in value. If the value of the currency rises at a more rapid rate than the market had expected, the speculator will profit. See GAO REPORT, *supra* note 22, at 27.

50. See Loomis, *supra* note 6, at 43; see also GAO REPORT, *supra* note 22, at 33. Although the company has averted the risk of a reduction in the value of the U.S. dollar, the forward contract will impose an opportunity cost if it is the price of the German currency, rather than the dollar, which falls. In that case, the forward contract obliges the company to pay a higher than market price for the foreign currency. See Loomis, *supra* note 6, at 43.

a forward rather than a future contract was utilized because of the customized nature of the end-user's needs.

## 2. Options

An option is a derivatives contract giving an end-user the right, but not an obligation, to buy or sell a given asset at a certain price during a set period of time.<sup>51</sup> Like forwards and futures, options are available in standardized form, sold through an organized exchange, or as custom-tailored instruments sold on the OTC market.<sup>52</sup> The end-user pays a fee or "premium," usually some percentage of the face value of the underlying asset, to secure the option.<sup>53</sup> Unless the market value of the underlying asset exceeds the price fixed by a call option (or is less than the price fixed by a put option), the end-user has no incentive to exercise the option.<sup>54</sup>

The same hypothetical used to illustrate the use of a forward contract will also serve to show how an option contract works. In the hypothetical, a U.S. company planned to build a factory in Germany, knowing that in six months the equivalent of U.S. \$100 million in German marks would be required for costs. For the price of a call option premium (typically a small percentage of the underlying asset), the company could secure the right to buy the marks at a set rate of exchange. By purchasing an option rather than a forward contract, the end-user has the advantage of being able to buy the foreign currency at the locked-in rate should the market price rise above the contract price, while reserving the right to walk away from the contract should the market price of the currency fall below the contract price.<sup>55</sup> In the event of a decline in the currency price, the buyer stands to lose only the premium paid for the option, and will not be forced to pay a greater-than-market price for the currency as he would have been obliged to do had he entered into a forward rather than an option contract.

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51. GAO REPORT, *supra* note 22, at 27. Options giving the purchaser the right to buy an underlying asset are known as "call options," and options to sell are called "put options."

52. Smith & Lipin, *supra* note 2, at A1; *see also* Hu, *supra* note 8, at 1467. Note that unlike forwards and futures, which place an obligation on both parties to the contract, options do not bind the purchaser to perform. *Id.* This means that a purchaser of an option stands to lose no more than the amount paid for the option, while the dealer's losses are potentially unlimited. *See* GAO REPORT, *supra* note 22, at 27.

53. Smith & Lipin, *supra* note 2, at A1.

54. *See* GAO REPORT, *supra* note 22, at 27-28. In the language used by market traders, a call option is "in the money" if the exercise price is less than the current market price of the underlying asset, "at the money" when the exercise and market prices are the same, and "out of the money" when the exercise price exceeds the market price. In the case of put options, the terminology is reversed; the option is "in the money" when the exercise price exceeds the market price, "at the money" when the prices are equal, and "out of the money" when the market price exceeds the exercise price. Richard R. Howe, *Derivative Securities*, in SEC SECTION 16 RULES 35, 37 (PLI Corp. L. & Practice Course Handbook Series No. B4-6971, 1991).

55. *See* Loomis, *supra* note 6, at 43; GAO REPORT, *supra* note 22, at 28.

Options are also an attractive tool for speculation. When used for speculative purposes, the end-user purchases an option on some underlying asset, such as the foreign currency described in the preceding hypothetical. The option may be set up so that its value will increase as the value of the underlying asset increases, or, alternatively, so that its value will increase if the value of the underlying asset falls. Either way, the speculator will profit only if the value of the underlying asset moves far enough in the anticipated direction to generate profits in excess of the amount paid for the option.<sup>56</sup> Speculators also profit by accumulating the premiums on unexercised options they themselves write. Of course, the speculator who writes an option may suffer losses beyond the value of the premium received if the value of the underlying asset moves substantially in a direction unfavorable to his position.<sup>57</sup>

### 3. Swaps

Swaps, considered to be the quintessential OTC derivative,<sup>58</sup> are a type of forward contract in which two parties agree to exchange a series of payments according to agreed-upon terms over a set period of time.<sup>59</sup> The amount of the payments involved is determined with reference to an agreed-upon notional amount which, aside from currency swap transactions, is seldom actually exchanged.<sup>60</sup> Because the terms of a swap must be carefully tailored to benefit the parties' needs, this type of derivative instrument is a privately negotiated, OTC transaction. These periodic payments may be fixed<sup>61</sup> or floating,<sup>62</sup> and the exchange is made because each party seeks the form of payment held by the other party.<sup>63</sup>

To illustrate how a swap works, imagine two mortgagors holding mortgages with a current interest rate of ten percent. Mortgagor A's mortgage has a floating interest rate, and A is sure that interest rates will rise. Mortgagor B holds a fixed rate mortgage, and he is equally convinced that interest rates will go down. In this case each mortgagor believes his position would be enhanced if only his mortgage carried the form of interest rate (a type of periodic payment) held by the other. A common

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56. GAO REPORT, *supra* note 22, at 28. Speculation is particularly risky because no benefit will be realized if either (i) the market value of the underlying asset does not move enough to create profits in excess of the premium price, or (ii) moves in an unfavorable direction. In any case, by using an option rather than a forward or futures contract, the speculator stands to lose no more than price of the premium and any associated transaction costs. *Id.*

57. *Id.* at 28.

58. Lindholm, *supra* note 5, at 79.

59. See Loomis, *supra* note 6, at 43; GAO REPORT, *supra* note 22, at 28; Hu, *supra* note 8, at 1467; Lindholm, *supra* note 5, at 79; Cunningham et al., *supra* note 1, at 4; Fink, *supra* note 8, at 93.

60. GAO REPORT, *supra* note 22, at 28.

61. "Fixed" payments, as the term implies, are payments of a set amount, and do not vary with reference to any market value or rate.

62. "Floating" payments are variable in amount, changing with reference to market interest or currency rates or the market values of commodities or equities.

63. See Loomis, *supra* note 6, at 43.

swap agreement, known as an "interest rate swap,"<sup>64</sup> would allow each mortgagor to get his wish by, in effect, contractually agreeing to take the other's interest position. At the end of a period of time specified in the contract, the mortgagors would "settle up" between themselves based on the actual movement of interest rates.<sup>65</sup> These payments would normally be calculated and made on the same day, allowing the parties simply to net their payments; the party who, at the end of the given period, holds the higher of the two interest obligations simply pays the other the net difference.<sup>66</sup> If, in the hypothetical above, interest rates increased during the period, mortgagor B would owe mortgagor A an amount equal to the net difference in the amount due under each rate. Had interest rates decreased during the given period, the same obligations would exist, except that it would then be mortgagor A who owed mortgagor B the net amount.<sup>67</sup>

Swaps are commonly used as hedging devices by corporations, banks,<sup>68</sup> and other financial institutions. As an illustration of how swaps can provide such protection, examine the case of a hypothetical bank. The nature of the bank's business makes it an interest rate sensitive entity. The bank has an extensive portfolio of floating rate loans, but is also obliged to pay interest on deposits to attract customers and capital.<sup>69</sup> While the floating rate on the loan is adjusted often, the rate of interest paid on

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64. This type of simple swap arrangement (the exchange of a floating interest rate for a fixed interest rate), and similar straightforward, easily valued transactions are known in the industry as "plain vanilla." See Hu, *supra* note 8, at 1467. In contrast are the so-called "exotic" derivative instruments, which are custom-made for a specific customer for the purpose of managing a specific financial risk. Dean Tomasula, *Derivatives: Defining Exotic Transactions*, AM. BANKER, Oct. 7, 1994, at 15. Tomasula likens the difference between "plain vanilla" and "exotic" transactions to that between custom-tailored and off-the-rack suits. *Id.* Note that interest rate swaps are but one of many types of swaps commonly made in the OTC market. Similar transactions are used to hedge against market fluctuations in currency exchange rates, stock prices, commodity prices, as well as other market indices. Hu, *supra* note 8, at 1467.

65. Loomis, *supra* note 6, at 43.

66. Lindholm, *supra* note 5, at 79.

67. This example illustrates the basic concept of derivative transactions. Note that even after the mortgagors entered into the swap contract, each still held, and was bound by the terms of, his original mortgage agreement. The swap arrangement, however, effectively converted the interest component of mortgagor A's debt from a floating to a fixed rate, and mortgagor B's interest component from a fixed to a floating rate.

68. In addition to their value as a hedging instrument, swaps can also earn income for banks. End-users of swaps are often hesitant to deal directly with one another (usually because each party feels it cannot adequately assess the other party's creditworthiness), creating an opportunity for banks and other financial institutions to act as intermediaries. As intermediary, a bank enters into a swap arrangement with both parties and accepts the risks associated with both transactions. Bearing this risk allows the intermediary to command a higher fixed or floating rate on one swap than it pays on another, the spread between the rates amounting to income. See Lindholm, *supra* note 5, at 79-80.

69. In a "floating rate" loan, the rate of interest paid by the borrower is variable and is typically tied to the market interest rate. When the market rate goes up, so too does the loan interest rate. Banks use the spread between the fixed rates paid on deposits and the floating rates on outstanding loans as a source of revenue.

deposits is adjusted less frequently—say biannually.<sup>70</sup> Because of the time lag in the frequency with which these rates are adjusted, a downturn in market interest rates would expose the bank to potential losses; interest collected on outstanding loans would be adjusted downward to reflect the market fluctuation, but the rate the bank pays on its deposits would not be reduced for some time.

The bank's potential for loss, which in this case would be from what is known as "interest rate risk," could be hedged with a swap contract. Under the terms of such an arrangement, the bank would make payments based on some floating interest rate, and in return would receive payments based on a fixed interest rate from a counterparty, each rate being determined with respect to some agreed-upon (though usually hypothetical) notional amount. Because of the swap, the bank's position is protected whether interest rates rise or fall; if rates go up, the bank's earnings from its floating rate loans increase, offsetting the higher amounts it would then pay on the floating rate obligations acquired in the swap. If, on the other hand, interest rates decline, the bank's fixed-rate payouts will be offset by the fixed-rate stream of income it receives under the swap agreement.<sup>71</sup> Market participants also frequently use swaps to secure more favorable financing terms. In this situation a borrower with low-rated credit can reduce its financing costs by borrowing at a floating rate,<sup>72</sup> which it can obtain relatively cheaply, then swapping the rate for the fixed rate of some counterparty. A transaction of this nature allows parties to, in essence, trade the advantage each enjoys in a given market.<sup>73</sup> To illustrate, assume a bank with a less than superior credit rating has extensive short-term floating rate liabilities but, because of its insufficient credit rating, is unable to obtain more preferable long-term fixed-rate financing. In contrast, a second bank, one with a superior credit rating, has access to relatively low-cost, fixed-rate financing but makes its profits by writing significant numbers of floating rate loans, and consequently requires a large volume of floating rate funds. The smaller bank, therefore, has an advantage in the floating rate market, while the larger bank enjoys an advantage in the fixed-rate market. In short, each party

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70. An interest rate paid on deposits that is adjusted only annually or biannually is considered a "fixed" rate. The mismatch between the adjustment periods of fixed and floating rates were a prime factor in the failure of many domestic savings and loan institutions during the mid-1980s.

71. See GAO REPORT, *supra* note 22, at 28-29. The downside of this arrangement, and of hedge transactions in general, is that when an entity transfers risk, the opportunity for gain is transferred as well. A firm that hedges all its risks is protected from losses but is equally prevented from realizing a gain. The key for a bank or other player in the derivatives market is to achieve a balance between hedged positions and acceptable risks. See Freeman, *supra* note 2, at 10.

72. A company with a low or medium credit rating may want to hedge against rising interest rates by borrowing at a fixed rate; however, companies with other than superior credit ratings must pay a higher premium for fixed-rate borrowing, making it economically unfeasible for them to borrow on such terms. See Cunningham et al., *supra* note 1, at 7; GAO REPORT, *supra* note 22, at 29.

73. Cunningham et al., *supra* note 1, at 7.

holds something the other desires but cannot access directly. A swap allows the more creditworthy bank to exchange a portion of its advantage in the fixed-rate market for a preferred floating rate, while the smaller bank trades some of its advantage in the floating rate market for a preferred fixed rate.<sup>74</sup>

#### D. COMMON OVER-THE-COUNTER (OTC) DERIVATIVE INSTRUMENTS

The four basic “building blocks” described above—forwards, futures, options, and swaps—are used on the OTC market to create an almost infinite variety of derivative instruments.<sup>75</sup> An exhaustive description of these diverse instruments would be impossible to produce; however, certain “core” derivative instruments, those which are most regularly utilized on the OTC market, can be readily summarized. The following is a list of these more common derivative instruments.<sup>76</sup>

- **Interest Rate Swap.** In this transaction, one party makes periodic payments of a specified currency at a fixed interest rate, and the other party makes periodic payments (of the same currency) at a floating rate which is subject to regular adjustment.<sup>77</sup> The interest rate calculations are made with respect to some agreed-upon amount (the “notional” amount) of the given currency.
- **Basis Swap.** One party makes periodic payments of an agreed-upon currency at a given floating rate, and the other party makes regular payments in the same currency at a *different* floating rate. As with the interest rate swap, all payment calculations are made with respect to an agreed-upon notional amount of the given currency.
- **Commodity Swap.** In this arrangement one party makes periodic payments of a given currency at a fixed price, and the other party makes periodic payments of the same currency based on the market price of some commodity.<sup>78</sup> An agreed-upon notional value of the given commodity is used to make payment calculations.
- **Currency Swap.** One party periodically pays a fixed amount of a given currency, and the other party makes regular payments of a fixed

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74. *Id.*

75. See Ida Picker, *The Daffier Side of Derivatives*, INSTITUTIONAL INVESTOR, Feb. 1, 1993, at 94. In Picker's estimation, derivatives are getting “positively wacky,” with the market now offering such instruments as pollution-rights swaps and catastrophe futures. Many of these unusual instruments are, according to Picker, likely to “go the way of the Wankel engine, the Betamax videocassette recorder, and the electric ear muff.” *Id.* at 95; see also Freeman, *supra* note 2, at 9 (noting how, in response to market demands for custom-tailored instruments, a “plethora” of new instruments developed which initiated the subsequent explosive growth of the OTC market).

76. The information in this list appears in Cunningham et al., *supra* note 1, at 4-5.

77. The most commonly used floating rate is the London Interbank Offered Rate (LIBOR), which is the rate at which the most creditworthy banks loan money to one another. See Lindholm, *supra* note 5, at 79 & n.29.

78. Typical commodities would be commonly traded goods such as oil, natural gas, or precious metals. Commodity swaps whose notional commodity is out of the ordinary fall into the category of “exotic” derivatives. See generally Picker, *supra* note 75 (a general discussion of the development of exotic OTC derivatives).



amount of a *different* currency, again calculated with respect to a predetermined notional amount. Unlike most other swap arrangements, the notional amount is actually exchanged upon termination of the currency swap contract.<sup>79</sup> A common variation of the currency swap is the cross currency rate swap. In that transaction, one party makes periodic payments of a given currency at a predetermined fixed or floating rate, and the other party makes regular payments in a *different* currency based on a floating rate. In this arrangement, payment calculations are made with respect to agreed-upon notional amounts of *both* currencies, and, like the regular currency swap, the notional amounts are typically exchanged when the contract expires.

- **Equity/Equity Index Swap.** One party periodically pays an amount of a given currency based on a fixed rate or price, in exchange for periodic payment of the same (or, if so specified, a different) currency in an amount determined with respect to the performance of a given type of stock.<sup>80</sup>
- **Forward Rate Transaction.** In this arrangement, one party pays a fixed rate for a specified time period in exchange for payments from the other party at a rate to be determined at some given time in the future. As with most derivative transactions, an agreed-upon notional amount is used to calculate payments; however, in the forward rate transaction, payments made at the forward-determined rate are adjusted with respect to other factors, such as the gap between the agreed-upon forward rate and the market rate at the time of payment.
- **Interest Rate Option.** Under this arrangement, one party receives a premium for granting the other party the right, but not the obligation, to receive a payment determined by the amount by which the market interest exceeds (a "call" option) or is less than (a "put" option) some interest rate agreed upon by the parties.
- **Commodity Option.** In a commodity option transaction, one party receives a premium in exchange for granting the right, but not the obligation, to buy (a call option) or sell (a put option) a given quantity of a commodity at an agreed-upon price.<sup>81</sup> If the option is exercised, the granting party may actually deliver the commodity in exchange for the option price, or simply pay the option holder the difference between the market and option price.

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79. GAO REPORT, *supra* note 22, at 28 n.7. In the usual swap contract, the value of the underlying asset on which the contract is based is truly a notional amount, that is, the value is used solely to determine the amount of payments to be exchanged and is never itself actually exchanged. *Id.*

80. The payment amount may be tied to the performance of a single type of stock, or a combination of several stocks. The amount may also be determined by reference to an equity index, such as the Dow Jones Industrial Index or the Standard & Poor's 500 Index. Cunningham et al., *supra* note 1, at 5.

81. The price at which an option can be exercised is referred to as the "strike price." Thomas L. Hazen, *Rational Investments, Speculation, or Gambling?—Derivative Securities and Financial Futures and Their Effect on the Underlying Capital Markets*, 86 Nw. U. L. REV. 987, 989 (1992).

- **Currency Option.** Here one party is given a premium for granting another party the right, but not the obligation, to buy (a call option) or sell (a put option) a given amount of a given currency at an agreed-upon price.
- **Equity Option.** In this transaction, one party receives a premium for granting another party the right, but not the obligation, to buy (a call option) or sell (a put option) shares of a specified type of stock (or a combination of types of stock, known as a “basket”) at a specified price at a specified future date. In exchange for this right, the granting party is paid a premium. Settlement may be made by delivery of the stock in return for the strike price, or the grantor of the option may pay the holder the difference between the strike and market price. A related instrument, the equity index option, gives the holder the right, but not the obligation, to receive an amount of cash equal to the difference between a specified equity index and a specified strike price. A call equity index option pays the amount by which the index exceeds the strike price, while a put equity index option pays the amount by which the strike price exceeds the index.
- **Bond Option.** In exchange for a premium, the grantor of a bond option gives the other party the right, but not the obligation, to buy (a call option) or sell (a put option) a specified issuer bond at a specified price at some agreed-upon future date. Like most other options, the contract may be settled either by delivery of the bond in exchange for the strike price, or by a payment to the option holder of the difference between the market and strike price at the date the option is exercised.
- **Swap Option.**<sup>82</sup> Also known as a “swaption,” this transaction gives one party, in exchange for a premium, the right, but not the obligation, to enter into a swap contract on preset terms within a limited period of time. Like the currency swap, the swap option may actually be settled by a transfer of the notional amount of the underlying asset.
- **Cap Transaction.** In this transaction, one party pays a fixed amount of a specified currency (either periodically or in a single transfer, depending on the contract) in exchange for periodic payments of the same currency by a second party. The second party’s payments are based on the excess, if any, of an agreed-upon floating rate (interest rate cap) or commodity price (commodity cap) over a specified interest rate (in the case of an interest rate cap) or commodity price (in the case of a commodity cap).
- **Floor Transaction.** This transaction is essentially the opposite of the cap transaction. Here, one party pays an amount of a given currency (either periodically or in a single payment) and receives periodic payments of the same currency based on the excess, if any, of an agreed-

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82. The swap option is one of a number of instruments created by combining two (or more) of the derivatives “building blocks.” These combined instruments are known as “hybrid” derivatives. GAO REPORT, *supra* note 22, at 26.

upon floating interest rate (an interest rate floor) or commodity price (commodity floor).

- **Collar Transaction.** This arrangement is a combination of the cap and floor transactions. One party makes payments based on the floating rate or commodity price in excess, if any, of a specified rate or price (cap), and the other party makes payments on the excess, if any, of a specified interest rate or commodity price over a floating rate or commodity price.

#### E. HYBRID DERIVATIVE TRANSACTIONS

In addition to the traditional derivatives building blocks, the OTC market also trades in a variety of instruments that are hybridized versions of the more straightforward transactions described above. These instruments, known generically as "hybrids" or "exotics," are produced to meet the risk management needs of a specific client, and, as such, will normally have limited appeal to the general market.<sup>83</sup> The term is applied to an instrument not because of its complexity, but rather because the transaction is not in keeping with one or more of the parameters used in standard derivatives contracts.<sup>84</sup> Use of the term "hybrid" has created some degree of confusion in that it has often been applied improperly to "plain vanilla" instruments which, on their face, appear quite complex, and because banks and other dealers often give new names to what are essentially the same products.<sup>85</sup> The persistent re-naming of the same products has created an inflated perception regarding the diversity of hybrid instruments and the portion of the overall OTC market for which they account. There is, in fact, a great variety of hybrid derivative instruments in use, but it is estimated that such instruments make up only about two percent of the total market.<sup>86</sup>

In light of the relatively small portion of the market that hybrid derivatives make up, these instruments have been the subject of a seemingly disproportionate share of industry attention over the past several years. Two reasons account for this interest: first, the bulk of the recent dramatic, derivatives-related losses reported in the financial (and mainstream) press have involved hybrid instruments;<sup>87</sup> and second, the use of hybrid instruments has proven to be extremely profitable, producing high

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83. Tomasula, *supra* note 64, at 15. The term "exotic" is often incorrectly applied to derivative instruments that are in no way out of the ordinary. According to Frederick Chapey, senior vice-president of global derivatives at Chase Manhattan Corp., the term should not be used in reference to an instrument just because it is new, untested, or not fully understood. Chapey feels the term "exotic" has a negative connotation and prefers the term "non-traditional." *Id.*

84. *Id.*

85. *Id.* In some instances a single financial instrument may be known by as many as a dozen different names. For example, a product properly known as a "covered option security" ("cops") has also been called a "rate differential swap," "differential swap," "yield differential swap," "cross-index swap," and an "interest rate index swap." *Id.*

86. Smith & Lipin, *supra* note 2, at A1.

87. *Id.*

yields for banks and other investors.<sup>88</sup> In that sense, hybrid instruments differ from the “plain vanilla” transactions, which are primarily used to hedge market risks, and which tend to produce relatively small profits for dealers. Exotic derivatives are big moneymakers.<sup>89</sup> In a typical “plain vanilla” swap, involving an underlying asset value of \$100 million, a dealer might earn around \$100,000 over a five-year period, while an exotic swap on the same terms could earn the dealer ten times that amount.<sup>90</sup>

In an article on exotics written for *The American Banker*, Dean Tomasula created an “annotated dictionary” of exotic derivatives which helps explain the composition and function, as well as the nomenclature, of some of the more common exotics in use today.<sup>91</sup> Highlights from that “dictionary” follow:

- **Accreting Principal Swap.** In this swap transaction, the notional (underlying) principal amount increases over time. Compare this to the traditional, “plain vanilla” swap, in which the notional value is fixed at the outset of the transaction. This instrument may also be referred to as a “dragdown swap,” “accumulation swap,” “staged drawdown swap,” or “step up swap.” The accreting principal swap is especially well-suited to banks or other lenders with increasing capital requirements.
- **Basket Option.** Similar to a “plain vanilla” option, this instrument gives the dealer a premium in exchange for granting the purchaser the right, but not the obligation, to buy (call option) or sell (put option) a given amount of a group (or “basket”) of currencies at an agreed-upon price. Used to hedge multi-currency exposures, these options may be cheaper than their “plain vanilla” counterparts, which option the purchase of a single type of currency. In addition, the basket option may also be cheaper because the contract expirations vary, making some “in-the-money” and some “out-of-the-money.”<sup>92</sup>
- **Blended Interest Rate Swap.** This derivative combines two or more standard interest rate swaps, in which payment calculations are made based on a weighted average of the rates involved. The payments on these instruments are often less than those required by an individual interest rate swap.
- **Boost Structure.** This term is used to describe any number of standard derivative instruments (swaps, options, etc.) whose payoff is increased (“boosted”) by a limit placed on the allowable price range of the underlying asset. If the value of the underlying asset moves outside the agreed-upon range, the note becomes worthless.

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88. Tomasula, *supra* note 64, at 15.

89. Smith & Lipin, *supra* note 2, at A1.

90. *Id.* According to Paul Spraos, publisher of the *Swaps Monitor* newsletter, some U.S. dealers made more than half of their revenues through the use of exotics—an impressive figure considering the small market share exotics command. *Id.*; see also Tomasula, *supra* note 64, at 15.

91. Tomasula, *supra* note 64, at 15.

92. For an explanation of these terms, see *supra* note 54.

- **Covered Option Security.** These instruments are short-term notes with a high coupon and an embedded put, giving the issuer the right to pay interest and principal in a given foreign currency, at an exchange rate fixed at the time the note is issued. These derivatives present the advantage of a payout rate which is known at the time the transaction occurs.
- **Differential Swap.** These instruments allow the purchaser to pay a floating interest rate on one currency while receiving a floating interest rate on another, different currency. The purchaser uses the differential swap to take advantage of interest rate differentials in various currency markets without exposure to changes in currency rates.
- **Digital Swap.** This swap allows the purchaser to pay a set, fixed interest rate, but if floating rates rise above a predetermined level, the borrower's payments will increase to a level above the fixed rate.
- **Dynamite Warrant.** A warrant that pays off only if the rate at which two currencies are exchanged remains within a predetermined range throughout the life of the warrant.
- **Exploding Option.** This instrument is a collar-type structure in which the short option expires and the long option pays off when the underlying structure trades through an outstrike price.
- **FX Range Floating Rate Note.** This derivative has a payout (usually with a one-year maturity) which is tied to the length of time the value of the underlying asset remains within a predetermined range. The note pays for each day the underlying asset value remains within the agreed upon range, but pays nothing for each day the value of the underlying asset moves outside the range.
- **IO Inverse.** This instrument is a collateralized mortgage obligation<sup>93</sup> (interest only strip) whose coupons lose value as interest rates rise.
- **Index Amortizing Swap.** This instrument is an interest rate swap whose notional amount declines at short-term money rates (such as LIBOR<sup>94</sup>) or the yield on constant maturity Treasury bills. These widely used exotics serve as an alternative to mortgage-backed securities and are often used by banks as a hedge for the risks associated with savings deposit interest.
- **Kitchen Sink Bonds.** Also known as "by-product bonds," these instruments are created by packaging many different underlying pools of mortgages with a variety of different expected cash flows—essentially the leftovers of other mortgage transactions.

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93. For a discussion of mortgage-backed securities and collateralized mortgage obligations, see *supra* note 16.

94. For an explanation of LIBOR, the London Interbank Offered Rate, see *supra* note 77.

### III. DERIVATIVES AND THE MODERN FINANCIAL MARKET

#### A. DEVELOPMENT OF THE DERIVATIVES MARKET

While the concept of hedging risk has been around for some time,<sup>95</sup> the development and expansion of the modern derivatives market has come about, at least in part, in response to fundamental changes in global financial markets that have taken place over the past few decades.<sup>96</sup> Increases in the volatility of foreign and domestic interest rates, currency exchange rates, and commodity and equity prices<sup>97</sup> produced a corresponding demand in the financial community for a cost-effective means of managing risk.<sup>98</sup> It was precisely this demand that led to the striking levels of growth witnessed in the use and evolution of financial derivatives.<sup>99</sup> At the root of this increasing market volatility was the global shift to the floating exchange rate system, under which the value of world cur-

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95. See Froot et al., *supra* note 3, at 92. Froot relates the story of an extremely early implementation of risk management theory—directly from the Old Testament. The Egyptian Pharaoh was concerned over a dream he had in which seven healthy cows were consumed by seven sickly cows, and seven healthy ears of corn were consumed by seven sickly ears. The Pharaoh called upon Joseph to interpret the dream. Joseph explained that the dream indicated seven years of plenty, to be followed by seven years of famine. The financially astute Pharaoh, wanting to hedge the risk of famine, proceeded to buy and store huge quantities of corn, allowing Egypt to prosper during the years of famine. *Id.*

96. GAO REPORT, *supra* note 22, at 24; see also Freeman, *supra* note 2, at 9. While the concept of using the basic derivatives building blocks is not a new one, the implementation of today's complex instruments as financial risk management tools is theorized to have developed only recently because, in addition to the lack of technical and theoretical innovations, such tools were simply not needed. Sykes Wilford, a director in the risk management group at Chase-Manhattan, likens the situation to that of man-made rubber. The product had been synthesized in the laboratory long before shortages of natural rubber supplies, caused by World War II, made its use an economically viable alternative. Likewise, only after financial risks became "endemic," and financial institutions realized their customers would pay to reduce volatility risks, did a full-fledged market for these products develop. GAO REPORT, *supra* note 22, at 24.

97. To illustrate this volatility, consider the following examples. During the first half of 1986, world oil prices dropped by 50%, while energy prices overall fell 24%. Companies like Dresser Industries, a supplier of machinery and equipment to the energy industry, could have employed derivatives as a means of insulating themselves from these fluctuations. Because Dresser lacked such risk management protection, the company saw its profits decline from \$292 million in 1985 to \$139 million in 1986, while the price of its stock fell from \$24 to \$14 a share. Caterpillar, a U.S. producer of earth-moving equipment, suffered similarly because of fluctuations in the value of U.S. currency. The dollar, which had appreciated by 50% during the first half of the 1980s, dropped back to its starting point by 1988. To remain competitive in the global market, Caterpillar reacted to the strong dollar by cutting prices on its exports, reducing the companies short-term profits and long-term competitiveness. The result was a real-dollar sales decline of 45% between 1981 and 1985, during which time Caterpillar lost market share to its foreign competitors. As was the case with Dresser, Caterpillar could have avoided this fate by insulating itself from exchange rate risks with derivatives. Froot et al., *supra* note 3, at 91.

98. GAO REPORT, *supra* note 22, at 24.

99. Nowhere has the development of new financial tools been more rapid or sophisticated than in the over-the-counter derivatives market. Hu, *supra* note 8, at 1459. Because, in many instances, these customized products are so complex, the Wall Street wizards who create and introduce the new instruments have come to be known as "rocket scientists." Loomis, *supra* note 6, at 41.

rencies vary in response to the market forces of supply and demand.<sup>100</sup> In addition to this new demand for risk-hedging instruments, the explosion of the derivatives market was catalyzed by important technological advances, such as the widespread use and availability of sophisticated desktop computers,<sup>101</sup> and theoretical innovations which allowed for a more accurate assessment of the value of derivative instruments.<sup>102</sup>

The theoretical breakthrough that paved the way for the development of the broad derivatives market came in 1973, when Fischer Black and Myron Scholes introduced their option pricing model.<sup>103</sup> The essence of the theory lies in the realization that the price of an option is dependent on the volatility of the market; the greater the level of market price fluctuations, the more likely it becomes that a given option will be exercised, and the greater the price the option should command.<sup>104</sup> The Black-Scholes theory provided the financial world with a means of assessing the variables which affect an option's theoretical value, which in turn allowed options to be priced in a relatively uniform manner.<sup>105</sup> Relatively simple derivative instruments, such as stock options, were traded as non-standard OTC instruments prior to the development of the Black-Scholes model, but the pricing of such instruments lacked any legitimate theoretical basis.<sup>106</sup> The publication of the Black-Scholes formula, which was almost immediately embraced by the financial community, coincided with another important event—an experiment in exchange-based options trading undertaken by the Chicago Board Options Exchange.<sup>107</sup> This experiment was the creation of the Chicago Board of Trade, which was created to list and trade standardized option contracts utilizing the same exchange-based trading principles which the exchange had successfully employed in the trading of futures.<sup>108</sup>

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100. GAO REPORT, *supra* note 22, at 24 & n.1. Prior to 1973, global exchange rates were stabilized under the Bretton Woods system, which fixed the value of foreign currencies to the U.S. dollar. This was possible because the dollar was, at that time, convertible into gold (at the rate of \$35 per ounce). In 1971, the U.S. moved away from the gold-backed dollar, and within two years' time, the global market had shifted to a floating exchange rate system. Market volatility was increased by numerous other factors, including a shift in U.S. monetary policy away from attempting to control interest rates to prevent inflation, as well as the general globalization of markets. *Id.*; see also Hu, *supra* note 8, at 1466.

101. Karol & Lehman, *supra* note 3, at 122.

102. Froot et al., *supra* note 3, at 91. Froot points out that, although these innovative valuation techniques resulted in an "arsenal of risk-management weapons," the techniques did not provide guidance on how the "weapons" should be used. *Id.*

103. Hu, *supra* note 8, at 1469. The model provided a rational, though not necessarily accurate, means of pricing option contracts. *Id.*

104. Hansell, *supra* note 41, at 58.

105. Hu, *supra* note 8, at 1475. For a detailed discussion of the Black-Scholes option pricing formula, see Fischer Black & Myron Scholes, *The Pricing of Options and Corporate Liabilities*, 81 J. POL. ECON. 637 (1973).

106. Karol & Lehman, *supra* note 3, at 123.

107. Hu, *supra* note 8, at 1474.

108. Karol & Lehman, *supra* note 3, at 123. These techniques included the trading of options in an auction conducted on the floor of the exchange, with the exchange acting as counterparty to every transaction (the clearinghouse function). In an option contract, the holder has no financial obligation beyond payment of an initial premium. In a futures

The earliest trading of modern derivative instruments in a standardized (and thus liquid) form, then, were those contracts traded on organized exchanges such as the Chicago Board of Trade and Chicago Board Options Exchange.<sup>109</sup> Such exchange-traded standardized contracts predominated during the infancy of the modern market, but as end-users demanded more customized instruments, ones which would more exactly meet their risk management needs, the exchange-based market was supplanted by the emerging over-the-counter (OTC) market.<sup>110</sup> Today, the volume of OTC traded derivatives dwarfs that of their exchange-traded counterparts. OTC derivatives are generally preferred over exchange-traded instruments because of their longer maturity periods and the flexibility they offer with respect to contractual terms.<sup>111</sup>

Since its inception, the modern derivatives market has experienced steady, and more recently, phenomenal growth. According to one recent study, between the years 1989 and 1992, the use of derivatives grew by 145%.<sup>112</sup> By the end of 1991, the estimated notional value of the exchange-traded derivatives market had grown to approximately \$4 trillion, representing an eight-fold increase over its level just five years earlier.<sup>113</sup> In that same year, the notional value of the OTC market was put at approximately \$8 trillion.<sup>114</sup> Although complete information is not available, the estimated global notional volume of outstanding derivatives at the end of fiscal year 1992 was over \$12 trillion.<sup>115</sup> Currently, the notional value of the entire derivatives market (including both exchange-traded and OTC-traded instruments) is an estimated \$16 trillion, of which OTC derivatives account for an estimated \$10 trillion.<sup>116</sup> The notional

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contract, however, the exchange requires participants to put a deposit (some percentage of the face value of the contract) into an escrow account. As the value of the contract fluctuates in response to the market value of the underlying asset, the participant either pays or receives the amount of money necessary to maintain the original level of the deposit. If a participant fails to maintain this margin, known as a "cushion," the exchange cancels the contract. *Id.*

109. Lindholm, *supra* note 5, at 77; see also Freeman, *supra* note 2, at 9.

110. Freeman, *supra* note 2, at 9.

111. Lindholm, *supra* note 5, at 77.

112. Froot et al., *supra* note 3, at 91. Corporations accounted for a large share of this growth, with an estimated fourfold increase in their use of some types of derivative instruments between 1987 and 1991. *Id.*

113. Hu, *supra* note 8, at 1459.

114. Lindholm, *supra* note 5, at 77. Lindholm estimates the notional value of the exchange-traded derivatives market for 1991 to be approximately \$3 trillion, \$1 trillion less than the estimate cited by Hu. *Id.*

115. GAO REPORT, *supra* note 22, at 34. This estimate excludes more than \$5 trillion worth of foreign exchange forward contracts, but includes more than \$2 trillion in forward rate agreements. *Id.* at 34 & n.2. Recall that the notional amount, which is the value of the underlying asset in a derivative contract, is not necessarily indicative of the amount of money at risk in the transaction. See *supra* note 5.

116. Loomis, *supra* note 6, at 43. Note that other sources have put the estimate as low as around \$11 trillion, and others estimate the total notional value of all outstanding derivatives contracts at \$35 trillion—an amount which approximates the value of three-quarters of all the world's stocks, bonds, money-market securities and currencies combined. See Greenwald, *supra* note 3, at 55 (citing the lower estimate); Smith & Lipin, *supra* note 2, at A1 (citing the higher estimate).



value of swaps alone now exceeds the value of all shares listed on the New York and Tokyo stock exchanges combined.<sup>117</sup>

As these figures indicate, derivatives have, in many ways, become the centerpiece of the global financial market, serving as both an invaluable hedging tool and as Wall Street's newest profit source.<sup>118</sup> These instruments have come to occupy a position so central to the workings of the financial world as to merit such superlative descriptions as the "linchpin of global commerce,"<sup>119</sup> "the basic banking business of the 1990s,"<sup>120</sup> "modern finance in its latest incarnation,"<sup>121</sup> and "the bleeding edge of technology."<sup>122</sup> Moreover, the instruments are "quintessentially global,"<sup>123</sup> linking markets and institutions throughout the world in a complex web of financial interrelations—a web which many fear could make an otherwise isolated financial crisis impossible to contain.<sup>124</sup>

## B. DERIVATIVES AND RISK

That derivatives serve a wide variety of useful and legitimate purposes, such as lowering funding costs, providing risk-management benefits, and, in some instances, providing the opportunity to profit through speculation, cannot be denied. There are, however, serious and unavoidable elements of risk inherent in the use of these products—risks posing a potential threat not only to investors, but to the financial system itself. The fundamental danger inherent in the use of derivatives lies in the fact that transferring financial risk from one entity to another, however beneficial such a transfer might be, does not eliminate that risk.<sup>125</sup>

### 1. Systemic Risk

The potential hazards that derivatives create for global financial markets are a function of numerous variables, including the size of the derivatives market, the concentration of derivatives trading among a relatively small group of major OTC dealers, and the expansion of linkages derivatives have produced between various markets and financial institutions.<sup>126</sup> In today's financial market, risk simply passes from one entity to another, and another, and so on, resulting in a global market of intercon-

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117. Hu, *supra* note 8, at 1459.

118. See Hansell, *supra* note 41, at 58. According to Hansell, nearly every major bank and brokerage firm lacking a derivatives department has scrambled to establish one. By 1990, major players in the equity derivatives market were earning in excess of \$100 million a year, with returns on equity of as much as 40%. According to one London-based headhunter, the demand for skilled risk managers is high, with top traders earning \$700,000 a year or more. *Id.* at 59.

119. Greenwald, *supra* note 3, at 55.

120. Loomis, *supra* note 6, at 40 (quoting an unnamed Citicorp executive, in the context of describing the magnitude of the derivatives market).

121. Smith & Lipin, *supra* note 2, at A1.

122. Loomis, *supra* note 6, at 40.

123. *Id.*

124. *Id.* at 41; GAO REPORT, *supra* note 22, at 37-39.

125. Loomis, *supra* note 6, at 41.

126. GAO REPORT, *supra* note 22, at 37-40.

nected participants where the failure of one institution could potentially lead to a system-wide crisis.<sup>127</sup>

According to some financial industry regulators, two "worst derivative nightmare"<sup>128</sup> scenarios are of particular concern. In the first scenario, a localized financial disaster is fomented when bankers, using derivatives without fully understanding their risks, deplete the capital reserves of a major bank, thereby causing it to fail.<sup>129</sup> The second scenario suggests a more devastating, potentially system-wide disaster. Here, the interconnections created by the use of derivatives creates a chain of obligations between financial institutions worldwide, and a seemingly isolated failure to meet interbank payment obligations produces a domino effect among market dealers and participants, precipitating a major systemic financial crisis.<sup>130</sup>

The fear that activity in the derivatives market could lead to a destabilization of the U.S. (or even the global) financial system is based on a series of factors, all of which contribute to the potential for a large scale crisis. One important element is the sheer size of the derivatives market. As previously discussed, the multi-trillion dollar notional value of outstanding derivatives contracts is so large that the derivatives activities of the ten largest American commercial banks alone amount to more than double the gross domestic product of the United States, which in turn is "more money than all the money in the world."<sup>131</sup> The fact that obligations for such unimaginable quantities of money exist, with few, if any, known loss reserves to help diffuse a payment crisis, constitutes a formidable and legitimate concern.<sup>132</sup>

Of even greater concern is the fact that the bulk of derivative dealing activity is concentrated among a relatively small number of firms.<sup>133</sup> According to the International Swaps and Derivatives Association (ISDA), only 150 firms were derivatives dealers worldwide as of December 1992.<sup>134</sup> Furthermore, dealing activities were concentrated among a small percentage of these institutions.<sup>135</sup> At the end of 1991, as few as eight U.S. banks were responsible for fifty-six percent of the worldwide

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127. *Id.* at 39; Hansell & Muehring, *supra* note 14, at 51, 52; Hu, *supra* note 8, at 1461-62.

128. Hansell & Muehring, *supra* note 14, at 51, 52.

129. *Id.*

130. See Lindholm, *supra* note 5, at 84-85.

131. Thomas G. Donlan, *Wolf at the Door? Fear of Derivatives May Be More Threatening Than Derivatives*, BARRON'S, Dec. 5, 1994, at 62 (quoting U.S. Representative James Leach (R-Iowa)); see also Loomis, *supra* note 6, at 42.

132. See Melamed, *supra* note 4, at 67. Because there are no exchange-style clearing-house safeguards for players in the OTC market, the question of whether parties to a derivatives contract have adequate reserves in case of loss becomes pertinent. In the OTC market, the creditworthiness of a counterparty presents a major risk. *Id.*

133. GAO REPORT, *supra* note 22, at 36-37.

134. *Id.* at 32. The International Swaps and Derivatives Association is a trade group composed of more than 150 investment, commercial, and merchant banks that participate in the OTC market. *Id.* at 32 n.18.

135. Melamed, *supra* note 4, at 67. The "inner circle" of major derivative end-users includes Bankers Trust, Citicorp, J. P. Morgan, Chemical Bank, Chase Manhattan, Swiss

notional amount of interest rate and currency swaps.<sup>136</sup> By the end of 1992, the top seven U.S. banks (with respect to notional amount of outstanding contracts) accounted for ninety percent of all U.S. bank derivatives activity.<sup>137</sup> The potential problem brought on by this concentration of dealing activities is clear to both regulators and market participants; the abrupt failure or withdrawal from the market of even one major dealer could seriously degrade market liquidity, undermining the stability of numerous markets simultaneously.<sup>138</sup> This instability could then cause other major dealers to withdraw from the market, or even to fail themselves. According to a study conducted by the Group of Ten, even a technological malfunction at a major dealer could trigger events that might threaten the stability of the global financial system.<sup>139</sup> Results of a study conducted by the Bank for International Settlements (BIS) suggested that the concentration of credit exposures in a few large dealers would, in the event of a major player failure, result in larger losses to market participants than would otherwise be sustained in a more dispersed dealer market.<sup>140</sup>

In addition to the concerns raised by the size of the derivatives market and the concentration of market volume among a few major players, the financial linkage that derivatives create among user institutions and the markets in which the instruments are traded also contributes to the potential for a major market "meltdown." Market linkage occurs when a firm uses derivative products in one market to hedge risks created in another market.<sup>141</sup> The potential problem here is that instability in one market will cause similar disruptions in numerous otherwise unrelated markets. Institutional linkage is the result of user firms' trade amongst themselves.<sup>142</sup> Again, the concern is that when the major players in a global market are linked by extensive interfirm obligations, an otherwise isolated default could set off a chain reaction of instability, one that would be particularly difficult to predict and thus seemingly impossible

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Bank Corp., Deutsche Bank, Societe Generale, Merrill Lynch, Goldman Sachs, and Salomon Brothers. *Id.*

136. GAO REPORT, *supra* note 22, at 36 & n.5. These results appeared in a study presented by the Group of Thirty, an international financial policy think tank whose members represent the financial industry and academia. *Id.*

137. *Id.* at 36 & n.6. This information was taken from the reports of U.S. bank regulators.

138. *Id.* at 39.

139. *Id.* The Group of Ten is a policy coordination group composed of the central banks of 11 industrialized countries. *Id.* at 36 n.7; *see also* Hu, *supra* note 8, at 1463 n.24.

140. GAO REPORT, *supra* note 22, at 39.

141. GAO REPORT, *supra* note 22, at 37. The report cites an actual example to illustrate how linkage occurs. A bank sold derivative instruments which required it to pay U.S. dollars to counterparties if the price of oil products, denominated in yen, rose in Japan. The bank used foreign currency derivatives to hedge the risk of movements in the dollar/yen exchange rate, and commodities derivatives to hedge potential movements in the price of petroleum products. *Id.* at 37-38.

142. *Id.* at 38. Respondents to a GAO survey of derivatives dealers showed that, on average, 37% of these firms' obligations arising from derivatives were owed on contracts with other dealer firms. *Id.* at 38.

for regulators to prevent.<sup>143</sup> Regulators feel that the linkage element would make a financial crisis difficult to contain,<sup>144</sup> if one of the major dealers failed to meet its obligations, the chain of affected parties would extend well beyond the counterparties to the defaulted contracts.<sup>145</sup> The reactions of other major dealers to such a failure would be likely to result in a dangerous reduction in market liquidity, adversely affecting thousands of entities worldwide.<sup>146</sup> This type of self-accelerating crisis is exactly what some members of Congress, still feeling the sting of the savings and loan debacle and the stock market crash of 1987, fear most.<sup>147</sup> If federally insured banks fail, they reason, it will be the U.S. taxpayer who foots the bill. As a result, no fewer than five separate derivatives reform bills were presented to committees during the 103rd congressional session.<sup>148</sup>

## 2. Investor Risk

While the chances of a derivatives transaction inducing a systemic financial disaster are open to debate, there is little doubt that investors face the possibility of sustaining enormous losses when the instruments are used. In the OTC market, both dealers and investors may be end-users of derivative products. Of the two, it is logical to assume that the dealer will, in most instances, be the more sophisticated party with respect to the function and risks associated with derivatives.<sup>149</sup> Since the dealer either

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143. Hansell & Muehring, *supra* note 14, at 57. Industry regulators fear that the market and institutional interlinkage could produce financial crises on several fronts simultaneously. A disruption in one market could cause industry-wide panic, potentially causing a stock market crash, an interbank payment crisis, and an interest rate leap all at one time. Part of the threat caused by derivative-induced linkage is that the resulting interconnections are not apparent; regulators are simply unable to determine where linkages exist. *Id.*

144. Loomis, *supra* note 6, at 42. According to Gerald Corrigan, former president of the Federal Reserve Bank of New York, federal regulators are equipped to handle almost any crisis—provided they are able to isolate the failed institution from the rest of the financial market. The market and institutional linkages derivatives create make walling off a troubled institution a much more difficult task. Non-banking institutions, such as securities firms, may also be affected by such linkages, and, in the event of a major dealer failure, might also need to be covered by federal “safety nets.” *Id.*

145. GAO REPORT, *supra* note 22, at 39.

146. *Id.* In the event of a major dealer’s failure, other dealers would be likely to withdraw from the market, or, alternatively, attempt to protect their positions with hedges on other markets, causing large price swings that could result in huge losses for market participants. A serious disruption in the OTC market would put potentially manageable pressure on domestic exchanges in their effort to maintain orderly markets. *Id.*

147. See Smith & Lipin, *supra* note 2, at A1; Fink, *supra* note 8, at 92. The 500-point market decline suffered in the stock market crash of 1987 was exacerbated by high-volume sales of stock index futures by portfolio insurers who relied entirely on derivatives. Loomis, *supra* note 6, at 42.

148. Smith & Lipin, *supra* note 2, at A1. See *infra* part III.C for a discussion of the positions taken by members of Congress, the financial industry, and federal regulatory agencies, respectively, on the issue of derivatives regulation.

149. Waxman, *supra* note 3, at 3. In some instances, transactions may be so complex that even the most senior financial managers are unable to adequately assess the potential benefits and risks associated with using derivatives. *Id.*

is or should be aware of the risk, it is the investor who is often left out of the loop when it comes to understanding derivative transactions.

It is for this reason—the lack of sophistication of the consumer—that disclosure of derivatives-related risks by dealers is so important. At present, there are no mandatory regulatory or industry standards requiring dealers to evaluate their customers' capacity to understand the risks inherent in the use of derivatives in an investment portfolio.<sup>150</sup> As a result, many customers invest funds with little understanding of what derivatives are or how they work. Moreover, in the case of the individual putting private money in a purportedly safe investment, such as a money market or mutual fund, there may be no knowledge that fund managers are even using derivatives.

Municipalities and other investors of public funds are also subject to investor risk when derivatives are employed.<sup>151</sup> In addition to the risk of inadequate disclosure, many pension funds and municipalities lack the sophistication, both in a business and technological sense, needed to invest wisely in derivatives. Local boards are often composed of prominent citizens who, though well respected in their community, lack the financial expertise needed to properly manage risk. Nor are pension fund boards or municipalities likely to have access to the sophisticated computer hardware and software dealers employ to evaluate risk. Compounding these investment risks is the pressure for fund managers to show an impressive return on investment. This pressure leads fund managers to move toward increasingly riskier and less well-understood investments—and the result, as witnessed recently in Orange County, may be disastrous.<sup>152</sup> In light of these risks, and the apparent lack of ability on the part of many private and public fund investors to fend for themselves, many commentators feel that, as a matter of public policy, the derivatives industry must be subject to new, consumer-friendly regulation.<sup>153</sup>

It should be noted, however, that many industry insiders feel that, while the previously discussed risks are real, there has yet to be any evidence or "warning tremors" foretelling the type of systemic meltdown predicted by the critics.<sup>154</sup> Industry players and even many regulators believe the likelihood of a derivative-induced financial crisis has been blown far out of proportion.<sup>155</sup> Derivatives proponents argue that major dealer banks could withstand in excess of \$1 billion of derivatives-in-

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150. *Id.*

151. *Id.* Both municipalities and public pension funds have dramatically increased their use of derivatives during the past five years. According to GAO estimates, as many as 50% of local government entities and 40% of state government entities are involved in the use of derivatives, as are the majority of large pension plans. *Id.*

152. Orange County recently declared bankruptcy after losing billions of dollars in an investment scheme that relied primarily on derivatives. Leah N. Spiro et al., *Today, Orange County . . . The Muni Mess on Wall Street: How Bad?*, Bus. Wk., Dec. 19, 1994, at 28; see *infra* part III.C.2 for a full discussion of the Orange County bankruptcy.

153. Waxman, *supra* note 3, at 4.

154. Hansell & Muehring, *supra* note 14, at 51; see also Fink, *supra* note 8, at 95.

155. See Hansell & Muehring, *supra* note 14, at 51; Lindholm, *supra* note 5, at 87-89.

duced losses before the risk of failure becomes real.<sup>156</sup> Furthermore, derivatives proponents believe past history demonstrates that the financial system can survive the type of disruptions derivatives have the potential to cause.<sup>157</sup> There is also a feeling among some industry players that derivatives are too valuable a resource, both in terms of benefits to the domestic economy and with respect to U.S. competitiveness abroad, to be limited by overzealous regulation.<sup>158</sup>

Some objective support for the proponents' positions has been advanced. Traditional, non-derivative financial products have, historically, been the cause of far greater losses and market disruptions than derivatives.<sup>159</sup> Nor is there evidence clearly to support the contention that derivatives-related activity presents any greater risk than more traditional financial activities.<sup>160</sup> A number of financial regulators agree that the magnitude of the threat derivatives pose to the stability of financial markets has been greatly exaggerated. In the words of Securities and Exchange Commission chairman Richard Breeden, "There is too much alarmist rhetoric involving these products . . . . We've seen 2,500 banks fail because of credit risk.<sup>161</sup> We have a long way to go before the swaps market is as threatening."<sup>162</sup> Dealers also point to the fact that no one is more desirous of avoiding a "meltdown" than the industry itself.<sup>163</sup>

### C. DERIVATIVES AND RED INK

Whether the threat of a national or global financial market meltdown sparked by activity in the derivatives industry is real or imagined, there is no question that derivatives had much to do with recent spectacular losses experienced by major market participants.<sup>164</sup> Since early 1993, a

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156. Lindholm, *supra* note 5, at 88. At the time Lindholm wrote this, no single institutional participant had lost more than half this amount. *Id.*

157. *Id.* at 89. When large-scale failures occurred at Drexel Burnham Lambert, Olympia & York, and the Bank of New England, each firm's derivatives portfolio was successfully transferred or liquidated. *Id.*

158. Lindholm, *supra* note 5, at 89.

159. Hansell & Muehring, *supra* note 14, at 51.

160. *Id.* Hansell and Muehring claim that traditional activities such as real estate development loans and trading in mortgage-backed bonds are actually riskier ventures than trading in the derivatives market. The difference between traditional activities and derivative dealing is that the former is more rigidly regulated. *Id.*

161. Credit risk is the risk that a counterparty to a contract will default. Beroza & McLaughlin, *supra* note 34, at 5.

162. Hansell & Muehring, *supra* note 14, at 51.

163. Loomis, *supra* note 6, at 42. Dealers argue that the major institutions are exercising due diligence in the monitoring of their respective risk exposures. J. P. Morgan & Co. vice-president Mark Brickell points out the fact that even the most complex derivatives involve the same risks banks have dealt with for years. Hansell & Muehring, *supra* note 14, at 53. Major financial institutions have, in fact, been praised by the likes of former New York Federal Reserve Bank president Gerald Corrigan for their efforts with respect to improvement of internal risk management. Corrigan notes that many dealers have worked hard to perfect their risk management systems, investing in technological improvements and even lobbying for laws which will improve the safety of their financial products. Loomis, *supra* note 6, at 42.

164. See Smith & Lipin, *supra* note 2, at A1; Greenwald, *supra* note 3, at 54.

diverse range of derivatives market participants, ranging from major corporations, municipalities, colleges, investors in ostensibly conservative money market funds, and even the sophisticated Wall Street dealers themselves have suffered cumulative losses of at least \$6 billion.<sup>165</sup> In nearly every case, the excessive losses occurred when investment strategies utilized derivatives to "bet" that interest rates would stay low. When interest rates began to rise, these strategies failed. An examination of some of the more prominent derivatives-related debacles follows.

### 1. *Metallgesellschaft*

One of the highest profile derivatives-induced disasters occurred at Metallgesellschaft, Germany's fourteenth-largest industrial corporation, whose subsidiary MG Corp. had estimated losses for 1993 of at least \$500 million.<sup>166</sup> Over the course of several years, MG entered into a series of long-term, fixed-price contracts, agreeing to supply petroleum products to various counterparties. The subsidiary failed, however, to negotiate agreements to buy oil products in an amount sufficient to fulfill the supply contracts, leaving the subsidiary vulnerable to fluctuations in the price of oil for at least some portion of the amount of product it had contracted to supply to its counterparties. MG then purchased oil derivatives contracts both on the OTC market and through organized exchanges, the strategy being that an expected rise in the price of oil would create profits through the derivatives which would offset the losses MG would take buying high-priced oil to fulfill its supply contract obligations. Unfortunately, the attempted hedge was improperly planned, and the derivatives MG purchased were suitable hedges only for short-term oil price fluctuations. When the spread between the long and short-term price of oil increased, the derivatives MG had purchased as protection ended up costing the company about \$500 million, and may eventually run up \$800 million in additional losses.<sup>167</sup>

### 2. *Orange County*

In December of 1994, Orange County, California sent shock waves through the U.S. financial markets. With its \$7.4 billion investment fund facing losses of \$1.5 billion, the county filed for bankruptcy, the largest such filing ever by a municipality.<sup>168</sup> Under the supervision of County Treasurer Robert L. Citron, the County's fund were used in a highly leveraged investment strategy that attempted to use interest-sensitive de-

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165. Greenwald, *supra* note 3, at 54; see also Smith & Lipin, *supra* note 2, at A1; Spiro et al., *supra* note 152, at 28. The \$6 billion figure is probably a gross underestimate of the losses suffered during this time frame. Recent derivatives-related losses by Orange County and several other counties alone total nearly \$2 billion. *Id.*

166. Loomis, *supra* note 6, at 50; see also Lindholm, *supra* note 5, at 88 & n.70.

167. Loomis, *supra* note 6, at 50. More recent reports have put the estimated loss as high as \$1.6 billion. William Glasgall & Greg Burns, *Hedging Commandments*, Bus. Wk., Oct. 31, 1994, at 98, 99.

168. Spiro et al., *supra* note 152, at 28.

rivative contracts to boost the funds yield.<sup>169</sup> Citron's operation has been compared to a mutual fund that failed to reduce its share price to reflect a stock market plunge.<sup>170</sup> Until relatively recently, Citron's fund, which offered a return of between seven and eight percent annually, was an attractive investment to recession-ridden local governments and public entities whose primary alternative was a conservative state-run fund paying around four percent per year.<sup>171</sup>

Taking in approximately \$7.5 billion from nearly 200 local governments and agencies, Citron then borrowed aggressively, bringing the value of the investment pool to \$20 billion.<sup>172</sup> This money was then invested in volatile structured notes issued by quasi-governmental agencies like the Federal National Mortgage Association (FNMA) and Federal Home Loan Banks, which effectively leveraged the entire pool by a factor of three.<sup>173</sup> Citron had planned to earn around five percent on his base investment, and secure an enhanced yield on the leveraged portion of the fund (around \$14 billion) based on the difference between what the bonds paid (five percent) and the cost of financing them (three percent).<sup>174</sup> Unfortunately for Citron, his strategy relied on a bet that interest would stay low; most of the funds derivatives were inverse floaters, instruments whose yields move counter to market interest rates.<sup>175</sup> The strategy paid well while rates remained low, but when rates climbed, Citron's portfolio began to earn below market rates, forcing Citron to pay more on the money he had borrowed than his fund could now earn.<sup>176</sup> When the Federal Reserve Board raised the discount rate in November, Citron's pool could no longer sustain the cost of the leveraged portion of its fund, and shortly thereafter the county filed for bankruptcy protection.<sup>177</sup>

In spite of the apparent red flag the Orange County bankruptcy raises with respect to derivatives, some commentators have placed the blame on Citron's management rather than on the financial instruments he used. Critics fault Citron for failing to adjust the value of his securities in ac-

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169. *Id.*

170. Andrew Bary, *Peter Pan Portfolio: Orange County Bet That Interest Rates Would Stay Low Forever*, BARRON'S, Dec. 5, 1994, at 17. This disastrous loss will effect more than Orange County alone, which held 37% of the portfolio. The Orange County Transportation Authority, with a 15% share, 37 school districts with an aggregate 13% share, and numerous other Orange County public entities that, all told, held more than 90% of the funds investments, will all feel financial pinch of the catastrophic investment. *Id.*

171. *Id.* Some municipalities were so impressed with the Citron pool that they sold short-term debt to raise additional funds for investment. *Id.*

172. *Id.*

173. *Id.*

174. *Id.*

175. *Id.* A typical derivative held in the Citron portfolio would adjust based on the following formula: 10 minus LIBOR (the London Interbank Offered Rate, discussed *supra* note 77). This meant that when LIBOR was low, for example 3%, Citron's portfolio could earn 7% on its derivatives. *Id.*

176. Spiro et al., *supra* note 152, at 28.

177. *Id.*



cordance with fluctuations in market interest rates.<sup>178</sup> Citron's apparent reliance on a never-ending period of low interest rates, coupled with a mistaken "ya gotta believe" reporting technique, have led some to call his investment the "Peter Pan Portfolio."<sup>179</sup> Others, however, claim the lesson of the Orange County debacle is not that a fund manager used risky derivatives to boost investment earnings, but rather that public funds, which were thought by most county taxpayers to be invested conservatively, were in fact being put at great risk in speculative trading.<sup>180</sup> This lack of proper disclosure, they claim, is a perfect example of why the derivatives industry needs to be brought under a more stringent set of regulatory requirements.<sup>181</sup>

### 3. *Bank of America*

If federal regulators are uncomfortable with the type of losses described above, they are terrified of derivatives horror stories such as the one that recently took place at Bank of America. The bank was the sponsor of the Pacific Horizon Prime fund, a money-market fund that used derivatives to boost its yield to well above the market average. The fund's high yield was tied to derivatives issued by federal agencies, including a \$40 million interest in a five-year note which would not mature until 1998. During the first year of the fund, the note paid an above-market rate of 4.5%, but after the first year the rate was to be reset quarterly to reflect the higher of either 4.125% or 50% of the rate paid on ten-year treasury-bills plus 1.25%. When interest rates began to rise, the note's coupon rate was restricted, and its resale value was impaired. Investors, attracted to better rates available elsewhere, began to withdraw their money, shrinking the fund's assets by nearly half in one month's time. Bank of America was forced to sell much of the note at a loss, and it added nearly \$70 million of its own money to this and one other fund to prop up share prices.<sup>182</sup> From the federal regulators' perspective, this situation is more serious than those that occurred at the big brokerage firms like Piper Jaffray, because unlike the investment houses, the Bank of America is a federally insured institution. The distinction is an important one: in this instance, the losses at both the bank and the brokerage houses were paid for out of shareholder equity, but if an FDIC-insured bank failed because of derivatives it would be taxpayers, not shareholders, who would ultimately pay the bill.<sup>183</sup>

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178. Bary, *supra* note 170, at 17. Critics claim that when interest rates rose Citron did what fund managers must never do: pretend that nothing was wrong. *Id.*

179. *Id.*

180. Waxman, *supra* note 3, at 3-4.

181. *Id.*

182. See Smith & Lipin, *supra* note 2, at A1; Fink, *supra* note 8, at 92-93.

183. *Id.*

#### 4. *Barings Bank*

In what might be the only derivatives-related disaster to achieve even greater notoriety than the Robert Citron debacle in Orange County, a twenty-eight-year-old futures trader managed to bring down a 230-year-old investment bank in just a few weeks of reckless trading.<sup>184</sup> The trader, Nick Leeson, operated out of the Singapore office of Barings Securities Ltd., the trading arm of the venerable British merchant Barings Bank. Leeson got into trouble buying and selling “straddle” futures tied to the level of Japan’s Nikkei 225 stock index—“betting,” in effect, that the market level would stay within a certain trading range.<sup>185</sup> On January 17, 1995, an earthquake struck the city of Kobe, causing the Nikkei to tumble—and Leeson’s losses to mount.

In spite of the falling index, Leeson was confident the market would soon stabilize, buying thousands of additional derivatives contracts in a desperate “double-or-nothing”-style bet.<sup>186</sup> After several weeks of literally throwing good money after bad, Leeson’s losses exceeded \$1 billion. The loss, more than twice Baring’s available capital, left the bank, which had financed the Louisiana Purchase, hopelessly insolvent.<sup>187</sup> Analysts agree that Leeson’s disastrous trades could never have occurred had Barings been diligent in its exercise of management control.<sup>188</sup>

#### 5. *Other Derivatives-Related Losses*

The well-publicized losses incurred by Metallgesellschaft, Orange County, and Bank of America are merely the more high-profile examples in what has become a stream of derivatives-related horror stories—stories which have set off alarms regarding the use and regulation of these instruments. Corporate giants on the list of derivatives-induced losers include Procter & Gamble, with losses in 1994 of over \$157 million; Glaxo Holdings,<sup>189</sup> at approximately \$115 million; Gibson Greetings of Ohio, with more than \$20 million in red ink; Dell Computer Corp., with an estimated pre-tax loss of \$35 million; Caterpillar Financial Services Corp., at over \$13 million; and Mead Corp., with a \$12 million pre-tax loss.<sup>190</sup>

Nor was the tide of red ink limited to big corporate players; Odessa College of Texas put the bulk of its funds in derivatives and lost nearly half of the \$22 million invested.<sup>191</sup> Prior to the disaster in Orange County, municipalities throughout the country reported losses of millions

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184. See Howard G. Chua-Eoan, *Going for Broke: The Ego of a 28-Year-Old Trader and the Greed of His 232-Year-Old Bank Combine to Destroy an Investment Empire, Stunning the Business World*, TIME, Mar. 13, 1995, at 40; Paula Dwyer, *The Singapore Slinger: A Cautionary Tale*, BUS. WK., Jan. 15, 1996, at 16; Floyd Norris, *Market Watch: Is It Now Time for Gun Control on Wall Street?*, N.Y. TIMES, Mar. 5, 1995, § 3, at 1.

185. Dwyer, *supra* note 184, at 16; see also Chua-Eoan, *supra* note 184, at 40.

186. *Nicholas Leeson; The Man Who Broke the Bank*, NEWSWEEK, Nov. 1995, at 40.

187. *Id.*

188. See Dwyer, *supra* note 184, at 16; Norris, *supra* note 184, § 3, at 1.

189. Glaxo is a British pharmaceutical company. See Greenwald, *supra* note 3, at 54.

190. See Greenwald, *supra* note 3, at 54, 55; Beroza & McLaughlin, *supra* note 34, at 4.

191. Greenwald, *supra* note 3, at 54.

of dollars, with more to come should interest rates continue to rise.<sup>192</sup> In December, Texas reported derivatives-related losses in its state investment pool of approximately \$70 million, while the Florida's State Treasurer and San Diego County announced a combined loss of \$550 million.<sup>193</sup>

Small, private investors, too, were shocked when they found the supposedly conservative mutual funds into which they had placed their money were actually based on portfolios heavy with derivatives. Over the past year, funds run by major financial institutions like PaineWebber, Kidder Peabody, and Bank America sustained unprecedented losses.<sup>194</sup> In each instance, the firm prevented the loss from reaching its investors by bailing out the bad investment with an influx of the firm's own funds.<sup>195</sup> October of 1994 saw a \$90 million fund run by Community Asset Management, Inc. of Colorado set a precedent as the first money market fund to shut down as a result of losses brought on by derivatives.<sup>196</sup>

#### D. A QUESTION OF REGULATION

It is, therefore, less than happenstance that the recent flood of derivatives-related red ink has coincided with an extreme interest on the part of Congress and numerous federal regulatory agencies in the workings of the derivatives industry.<sup>197</sup> As a result of this heightened interest, a growing controversy has ensued, pitting dealers and other members of the financial industry (and even many regulators) against federal agencies and policymakers in a battle to determine the regulatory future of derivative instruments.

The position of the financial market participants is clear: derivatives are an invaluable tool to the industry, and the industry itself is both motivated and well-equipped to avoid any "market meltdown" that derivatives have the potential to induce.<sup>198</sup> As Mark Brickell, a derivatives expert with J.P. Morgan put it, "It's in our own self-interest to make sure

192. Waxman, *supra* note 3, at 3.

193. Spiro et al., *supra* note 152, at 29.

194. Under similar circumstances, a Piper Jaffray & Co. prospectus enticed investors to place their money in what was touted as a "low risk, triple-A-rated" fund known as the Institutional Government Income Portfolio. When the Federal Reserve engineered a rise in interest rates, this so-called safe investment began to bleed red ink because of the volatile derivatives which accounted for over half the fund's assets. With the fund losing over one quarter of its value in 1994 alone, Piper stemmed the loss by pouring in over \$10 million of its own money as a "gesture of good will." See Greenwald, *supra* note 3, at 56; Fink, *supra* note 8, at 91, 95; Smith & Lipin, *supra* note 2, at A1.

195. See Greenwald, *supra* note 3, at 54, 55. As of October, 1994, these firms had spent more than half a billion dollars rescuing mutual funds whose values had plummeted because of derivatives. *Id.* at 54-55.

196. Fink, *supra* note 8, at 97. Investors in the fund (primarily institutional rather than private investors) are the first to be saddled with losses a fund sponsor refused to absorb. As a result, investors will collect only 94 cents for each dollar invested in the fund. Greenwald, *supra* note 3, at 55.

197. See generally Beroza & McLaughlin, *supra* note 34, at 14.

198. See Loomis, *supra* note 6, at 41; Fink, *supra* note 8, at 97; Smith & Lipin, *supra* note 2, at A1.

that no big problems develop.”<sup>199</sup> Certainly derivatives dealers would suffer if the instruments did precipitate a large-scale financial crisis, not only in terms of short-term profit losses, but also because over the long term any such disaster would undoubtedly result in the passage of exactly the type of stifling legislation the industry seeks to avoid.<sup>200</sup> Industry lobbyists argue that additional regulatory legislation will not alter those characteristics of the derivatives market with which the regulators are concerned. They believe the industry as a whole will function in fundamentally the same manner, with one major difference—it will move offshore, and out of the reach of U.S. regulatory jurisdiction. Moreover, any bill that imposes further restrictions on banks will send investors to derivatives created by securities firms or other financial businesses whose activities are less well regulated than those of banks.<sup>201</sup> Thus, the net effect of increased regulatory scrutiny, claim the derivatives proponents, will be the unintended consequence of increasing the risks posed by derivatives.<sup>202</sup>

At the other end of the spectrum are the congressional committees charged with overseeing the financial industry and protecting U.S. taxpayers. A series of bills brought up during the 103rd congressional session is indicative of Congress' concern over the state of the industry and the magnitude of losses market participants have recently sustained. A similar series of bills was presented to the 104th Congress during its recently completed first session. One of the prime forces pushing for legislative action has been Congressman James A. Leach (R-Iowa), who until recently served as the ranking Republican on the House Banking Committee, now elevated to the Chairmanship.<sup>203</sup> Leach co-sponsored (along with Committee Chairman Henry B. Gonzalez) the Derivatives Safety and Soundness Supervision Act of 1994 (H.R. 4503),<sup>204</sup> which proved to be the closest thing to a viable derivatives-regulation bill put forward during that legislative session.<sup>205</sup> Although the bill was tabled at the last

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199. Loomis, *supra* note 6, at 42.

200. *Id.*

201. Fink, *supra* note 8, at 94.

202. *Id.* at 95. That the derivative dealers are taking the legislative debate seriously is evidenced by the lobbying effort the industry has mounted in Washington. The International Swaps and Derivatives Association, for example, has hired the premier Washington lobbying firm of Patton & Boggs to represent its interests before Congress. See Smith & Lipin, *supra* note 2, at A1.

203. Outgoing House Banking Committee Chairman Henry B. Gonzalez (D-Tex) has also been a major proponent of legislative action to contain the risks posed by derivatives. In November of 1994, Republicans captured control of both houses of Congress. At the beginning of the new congressional session in January, 1995, Leach replaced Gonzalez as chairman of the committee.

204. H.R. 4503, 104th Cong., 1st Sess. (1994).

205. The Derivatives Safety and Soundness Supervision Act of 1994 (H.R. 4503) was scheduled for “mark-up” during September of 1994. At the urging of a bipartisan group of House Banking, Finance, and Urban Affairs Committee members, Committee Chair Gonzalez canceled the subcommittee meeting, effectively halting the chance of passage of derivatives legislation for the year. Insiders report that Gonzalez and bill co-sponsor Jim Leach wanted to postpone action pending further study of the issues. *Derivatives Disclo-*

minute, the redistribution of congressional power resulting from the mid-term elections of 1994 make it more likely than ever that some form of derivatives reform legislation will eventually become law. With Leach now at the helm of the Banking Committee, it would be safe to presume such legislation will reflect the key points of H.R. 4503.

Leach outlined the central provisions of the bill before a hostile audience of industry insiders at a securities industry conference in September 1994. The centerpiece of the bill was to have been the creation of an interagency commission to devise appropriate accounting, disclosure, and financial requirements<sup>206</sup> for industry participants.<sup>207</sup> In addition, the bill sought to augment the authority of federal regulators in supervision of the derivatives industry, make corporate boards of directors and managers more accountable for the responsible use of the instruments, and enhance the Federal Deposit Insurance Corporation's power to manage derivatives upon the insolvency of a financial institution.<sup>208</sup> In his speech, Leach affirmed his belief that derivatives are "invaluable tools that are being used effectively and prudently in a majority of circumstances, and that limited problems require constrained solutions."<sup>209</sup> The tenor of this language was far more conciliatory than Leach and other congressmen had previously been prone to use in reference to derivatives.<sup>210</sup> Members of the International Swaps and Derivatives Association had hoped that Leach's softened rhetoric, coupled with the postponement of further action on the bill, portended a "growing consensus that this legislation is not needed."<sup>211</sup>

Such an optimistic interpretation of these events on the part of the swaps dealers appeared to have amounted, however, to so much wishful thinking. Prior to the beginning of the new congressional session, incoming Chairman Leach renewed his hostile rhetoric, while announcing that derivatives legislation would be among the committee's top priorities in the coming session.<sup>212</sup> Leach went on to focus his remarks on the recent derivatives disaster in Orange County, placing blame on both Congress

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*sure Legislation Dead for This Congressional Session*, 26 SEC. REG. & L. REP. (BNA) No. 1280 (1994).

206. The term "financial requirements" refers to the concept of setting standards with respect to the amount of capital financial institutions have available to deal with potential derivatives-related problems. See generally Fink, *supra* note 8, at 94.

207. *Leach Explains His Derivatives Control Bill*, AM. BANKER, Oct. 6, 1994, at 22.

208. *Id.*; see also Derivatives Safety and Soundness Supervision Act of 1994, H.R. 4503, 103d Cong., 2d Sess. (1994).

209. *Leach Explains His Derivatives Control Bill*, *supra* note 207, at 22.

210. See Smith & Lipin, *supra* note 2, at A1.

211. *Congress Puts off Legislation on Derivatives Until Next Year*, INVESTMENT DEALERS' DIG., Sept. 26, 1994, at 7.

212. *Leach Says House Banking Ready to Tackle Derivatives*, *supra* note 12, at 906. Leach noted that the Republican Party's "Contract With America" would dominate the agenda during the first hundred days of the new session, but that derivatives and other banking issues would be a part of his "phase II agenda." *Id.* In a later speech, Leach said he would introduce derivatives oversight legislation on the first day of the new congress. *Incoming House Banking Chair Holds First Press Conference on His Agenda*, 26 SEC. REG. & L. REP. (BNA) No. 1711 (Dec. 23, 1994).

and the administration for not pursuing the derivatives bill he introduced during the prior legislative session.<sup>213</sup> Referring again to Orange County, Leach said the situation was symbolic of "what could become systemic risk."<sup>214</sup> Leach has made it clear that the Republican-led House will not be satisfied by promises from the SEC and others to produce guidelines for derivatives dealers, leaving little room for doubt that some form of new derivatives regulation is at hand.<sup>215</sup> More recently, however, Leach has backed off his aggressive pursuit of derivatives reform, focusing instead on Glass-Steagall reform legislation and other banking issues.<sup>216</sup>

While Chairman Leach's intent, if not his timing, seems clear, not all in Washington agree with him. The suggestion that no further regulation is currently needed has received at least some support from all parties to the regulatory debate, excepting, of course, Chairman Leach.<sup>217</sup> Clearly financial market players would like the current regulatory scheme to remain in place, but, more surprisingly, so would many financial regulators. In fact, the Banking Committee members who helped convince Chairman Gonzalez to delay further action on H.R. 4503 may now represent the prevailing position in the regulatory debate—one which recognizes the value of derivatives and seeks only to ensure their safe use with a minimal amount of regulatory tinkering. This position seeks to strike a balance between economic efficiency and proactive protection of the financial system through measured regulation applied only after full and careful consideration of the issues.<sup>218</sup>

The Clinton Administration has taken a similar hands-off approach to the issue, as demonstrated by current Treasury undersecretary and soon-to-be Treasury deputy secretary Frank Newman, who also urged Chairman Gonzalez to postpone action on H.R. 4503. In a letter to Gonzalez, Newman wrote, "We acknowledge the complexities posed by derivatives and the legitimate congressional interest in these important issues. In light of the progress the private sector and financial regulators are mak-

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213. *Leach Says House Banking Ready to Tackle Derivatives*, *supra* note 12, at 906. Leach placed blame for the Orange County bankruptcy on "Washington's failure to provide adequate oversight of the derivatives market," claiming that "with regard to the Orange County bankruptcy, blunt questions must be asked in and of Washington. Where was the [Securities and Exchange Commission]? Where was Treasury? Where was Congress?" *Id.*

214. *Incoming House Banking Chair Holds First Press Conference on His Agenda*, *supra* note 212, at 1711.

215. Jeffrey Taylor & Albert R. Karr, *Bank-Law Overhaul, Not Whitewater, to Be House Panel Priority*, *Leach Says*, WALL ST. J., Nov. 16, 1994, at C19. Leach said his legislation "would be friendly to the industry." *Id.*

216. *U.S. Rep. Leach Says Derivatives Off Front Burner*, REUTERS, Jan. 31, 1996.

217. Leach is not alone among prominent congressmen who are worried about the regulation of derivatives. Edward Markey, ranking Democrat on the House Telecommunications and Finance Committee, has also aggressively fought for rigid, mandatory regulation of the industry. See 141 CONG. REC. E447-01 (daily ed. Feb. 1995) (statement of Rep. Markey).

218. In their letter to Chairman Gonzalez, the congressmen expressed their opinion that the American taxpayer would be better served if the committee took the time to more fully understand the bill and the issues it addressed. *Id.*

ing and the further progress we anticipate, the Administration has not identified a need for legislation regarding derivatives at this time."<sup>219</sup> This position is echoed in comments by Federal Reserve Board Governor Susan Phillips, who says there is no reason to believe that derivatives activities are jeopardizing individual institutions or the stability of the financial system as a whole, and adds that internal procedures and risk management techniques exist that can successfully contain the risks of derivatives.<sup>220</sup> While Chairman Leach seems to be at least temporarily comfortable with the regulatory regime, his pursuit of derivatives reform will probably be revived in the near future. Whether Leach's next bill will be tempered by the more moderate position adopted by industry players and federal regulators—a position which seems to have gained broad support—remains to be seen.

Perhaps the best snapshot of the current consensus with respect to derivatives regulation is provided by the findings of the GAO in its study of financial derivatives.<sup>221</sup> Released in mid-May of 1994, the report was prepared at the request of Congress for the benefit of both Congress and the federal regulatory establishment. The report was based on an exhaustive study of the global derivatives industry, including the results of numerous other major derivatives studies as well as responses to extensive survey questionnaires completed by market participants. The report concluded with a series of recommendations, including a suggestion that new legislation, both limited and focused in its scope, be passed to safeguard the OTC market.<sup>222</sup> The report emphasized the critical role derivative instruments now play in the financial markets, but also noted that OTC dealers were subject to few, if any, of the type of federal regulatory requirements needed to ensure proper risk-management practices.<sup>223</sup> To remedy this regulatory gap, the GAO suggested enacting legislation which would place non-bank OTC dealers under the authority of an existing regulatory agency, such as (but not necessarily) the SEC. Beyond this immediate need, the report concluded that the sound use and management of derivatives was primarily the responsibility of the industry players themselves, strong corporate oversight by boards of directors and senior management being the key to preventing a financial market calamity.<sup>224</sup> To ensure such oversight actually occurs, the report suggested several innovative steps which would facilitate proper risk-management by

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219. *Derivatives Disclosure Legislation Dead for This Congressional Session*, *supra* note 205, at 1280. Newman excepted from his recommendation amendments to the Bankruptcy Code relating to foreign exchange contracts. *Id.*

220. *Oversight of Derivatives Moving at Acceptable Pace*, 26 *SEC. REG. & L. REP.* (BNA) No. 38, at 1313, 1314 (Sept. 30, 1994).

221. GAO REPORT, *supra* note 22.

222. *Id.* at 126-29.

223. *Id.* at 6. Unlike banks, OTC dealers are not subject to examination by federal regulators, nor are they required to hold specific amounts of capital as a cushion against potential derivatives-related losses. In addition, disclosure requirements for such firms are far less stringent than those for banks performing the same or similar derivatives transactions. *Id.* at 7.

224. *Id.*

OTC dealers, including increased disclosure regarding derivatives activities, development of uniform capital requirements, implementation of a uniform set of audit and internal control standards, and annual examination of all major dealers.<sup>225</sup>

#### IV. CONCLUSION

Derivative financial instruments have revolutionized the financial industry, providing both dealers and end-users with sophisticated risk-management capabilities and other benefits as well. Along with the rapid expansion of the derivatives market has come the potential for substantial disruptions, not only among individual market players but throughout financial markets worldwide. The primary sources of this risk include the sheer volume of the derivatives market, the interlinking of markets and market participants, the lack of regulatory supervision of the OTC market, and the concentration of derivatives activity among a relatively small number of major dealers. Investors also face serious risks arising primarily from a lack of sophistication and inadequate disclosure by dealers. Recent large and highly publicized derivatives-related losses have heightened the ongoing debate over the need for stepped-up regulation of derivative instruments. End-member parties to the debate include industry players and many regulators, who want no additional regulation, and members of Congress, who feel increased regulation is essential to the protection of the financial system and the U.S. taxpayer. As of this writing, the consensus opinion among these parties as well as members of the federal regulatory community seems to be in line with the findings of the GAO, as summarized in its report on derivative instruments. Representing the middle-ground between no action and heavy-handed legislation, the report suggests placing relatively unsupervised OTC dealers under the power of some existing regulatory agency, and implementing set standards with respect to accounting procedures, capital reserves, and corporate oversight within the OTC industry.

The watershed elections of 1994, which radically altered the congressional balance of power, make it almost certain that derivatives legislation will eventually come out of the House Banking Committee. While indications prior to the elections suggested that even ardent supporters of derivatives legislation might have moderated their positions, Chairman Leach of the House Banking Committee has made his intention to pass some form of legislation clear. Leach and past Committee Chairman Henry B. Gonzalez had sponsored a bipartisan derivatives bill during the prior legislative session which was put on hold prior to the mid-term elections, but congressional sources speculate that a new bill will be much broader and more detailed than prior efforts.<sup>226</sup>

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225. Steve Cocheo, *Push and Pull on Derivatives*, 1994 ABA BANKING J. 10.

226. *Leach Says House Banking Ready to Tackle Derivatives*, *supra* note 12, at 906. Insiders believe a new bill will be broader than previous bills as a result of the continuing



The conventional wisdom, then, suggests that derivatives legislation will be passed during the 104th Congress, and that the legislation will most likely take a firmer regulatory stance than that reflected in the recommendations of the GAO report. Exactly what treatment Congress will give the derivatives industry remains unknown, but it is certain that these financial instruments will hold the attention of Congress for some time to come.

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derivatives-related losses experienced in the public sector. Sources expect the new legislation will emphasize suitability standards. *Id.*