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THE CHALLENGE OF DERIVATIVES*

SAUL S. COHEN**

INTRODUCTION

It is commonly remarked that there is no generally accepted meaning to the term derivative.¹ To repeat: there is no agreement as to which financial, commercial or hybrid financial/commercial contracts constitute derivatives.² Thus, an area of business life encompassing contracts with face or notional amounts³ between $14 trillion and $35 trillion, amounting to as much as three-fourths of the world’s publicly

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¹ This essay is adapted from the author’s remarks given on December 8, 1994, at the Fordham University Graduate Colloquium, 1994-95: Financial Services Regulation at Mid-Decade.

² Member of the New York Bar. Adjunct Professor, Broker-Dealer Regulation and Investment Banking, Fordham University School of Law. A.B. 1957, Columbia University; LL.B. 1960, Yale University School of Law.

³ In this article, “derivative” and “derivatives” are used interchangeably except where required by number. “The term ‘derivatives’ does not have any generally accepted meaning.” Roger D. Blanc, Policy Issues Presented by Derivatives Trading, Insights, June 1994, at 10, 10. “[T]he term ‘derivative’ has been so overexposed that it no longer has a meaningful definition.” Karen Spinner, Debunking the Derivatives Bogeyman, N.Y. Times, Oct. 30, 1994, § 3, at 9. “[T]here is a strong case for doing away with the term ‘derivatives’ altogether. This word misleadingly lumps together different classes of instruments, some of which are not ‘derivative’ at all.” A Risky Old World: Financial “Derivatives” Can Make It Safer, But the Word Itself is a Suitable Candidate for Banning, Economist, Oct. 1, 1994, at 18. An alternative definition of a derivative, as “simply a contract that either allows or obligates one of the parties (the ‘end-user’) to buy or sell an asset,” is overbroad and of limited usefulness because it fails to account for the purposes of these instruments. Henry T.C. Hu, Misunderstood Derivatives: The Causes of Informational Failure and the Promise of Regulatory Incrementalism, 102 Yale L.J. 1457, 1464 (1993). Consider the argument that “[n]o entirely satisfactory definition of the term ‘contract’ has ever been devised.” John D. Calamari & Joseph M. Perillo, The Law of Contracts, § 1.1, at 1 (3d ed. 1987). Blanc notes that the term “derivatives” includes, in addition to securities options and commodity futures (which are based largely on the value of underlying securities and thus clearly “derivative”), floaters and principal or interest-only instruments (which are “stripped” from debt instruments) as well as commercial contracts in which one party “swaps” with another certain obligations relative to interest rates or securities markets fluctuations. See Blanc, supra, at 10. Essentially, derivatives fall into two broad categories: those designed to manage risk—to hedge—and those designed to accept risk to create higher return—to speculate. See infra part I.B. (defining derivative instruments by example).

² “Hybrid instruments contain elements of depository instruments or securities and futures or commodity options. Some of these instruments enable issuers to both raise capital and to manage risk.” Report of the Commodity Futures Trading Comm’n, OTC Derivatives Markets and Their Regulation 19 n.7 (1993) [hereinafter CFTC Report]. The Report is an excellent (though becoming quickly dated) sourcebook on derivatives.

³ Notional principal amount is the value of the underlying instrument—a stock, bond, currency or money-market instrument on which the derivative instrument is based. Barbara D. Granito, Assessing the Size of the Market, Wall St. J., Aug. 25, 1994, at A4. See infra text accompanying note 81 (noting that risk exposure of a derivative is usually only a fraction of the notional principal amount).
traded equity securities, bonds, money-market funds and currencies combined, operates without definitional borders. For we lawyers, who spend our lives exploring the interstices in all relationships, defining a derivative is a source of intellectual challenge (and income) inasmuch as a derivative's legal definition dictates whether it will be treated under the securities laws or under another regulatory regime. Definitional tension surrounding derivatives, instruments whose returns are "derived" from changes in the value of other assets, including securities, also concerns government officials and members of the financial press; to the derivatives market, definitional blur has provided protection for growth.

The recent losses of Barings PLC, Orange County, California, Escambia County, Florida, Proctor & Gamble, Gibson Greetings,

4. The broad range attributed to what are termed derivatives is apparent in attempts to measure the size of the market. The $35 trillion figure is taken from a comprehensive analysis of derivatives. Granito, supra note 3, at A4. The Journal noted that its figures are "approximate," id., and estimated interest-rate and currency swaps to represent more than one quarter of all derivatives. Significantly, over-the-counter ("OTC") derivatives (excluding those on securities that were not estimated) amounted to 70% of all derivatives. Id. Another source estimated interest-rate and currency swaps at $6.2 trillion and $0.9 trillion respectively. Graham Bowley, How Borrowers Cut Funding Costs, Financial Times (London), Nov. 16, 1994, at IX; see also CFTC Report, supra note 2, at 16-18 (describing limitations on collecting accurate information regarding derivatives). The CFTC Report also notes the lack of definitional borders in this area: "As the OTC derivatives marketplace does not consist of a distinct category of products having common characteristics, there is no single regulatory treatment applicable to all such products." Id. at 87; Data on Derivatives Offered, N.Y. Times, Oct. 11, 1994, at D16 [hereinafter Data on Derivatives] (estimating the derivatives market at $14 trillion).


6. Leslie Wayne, $1.5 Billion Loss Seen For County, N.Y. Times, Dec. 2, 1994, at D1 (reporting a statement on December 1, 1994, by Robert Citron, the Orange County Treasurer, announcing losses from investing in inverse floaters (defined infra note 72)). The Orange County debacle engaged the country's attention in December 1994. County Treasurer Robert L. Citron's aggressive strategy of betting on lower interest rates, successful for over 15 years, suddenly became a disaster as interest rates continued to rise. See Sarah Lubman & John R. Emshwiller, Before the Fall: Hubris and Ambition in Orange County: Robert Citron's Story, Wall St. J., Jan. 18, 1995, at A1. Every aspect of the Orange County matter underwent scrutiny, and accusations and recriminations plagued both the "usual suspects"—the County's officials, brokers, underwriters, lawyers, accountants—and even the SEC itself. Mark Platte & Matt Lait, SEC Could Have Averted Crisis, Supervisors Say, L.A. Times, Dec. 17, 1994, at A1. The County subsequently filed for bankruptcy, and Wall Street dealers found another way to make money by restructuring and selling the County's faltering portfolio. See Saul Hansell, Wall St. Rescue Squads also Turn a Tidy Profit, N.Y. Times, Dec. 20, 1994, at D8.

7. G. Bruce Knecht, The Aftermath: Hit by Derivatives, Florida County Tries to Decide What to Do, Wall St. J., Mar. 21, 1995, at A1 (discussing the county's losses from investments in collateralized mortgage obligations ("CMOs")).
Odessa Community College,\textsuperscript{10} three banks in the Federal Farm Credit System,\textsuperscript{11} the State of Wisconsin,\textsuperscript{12} various small cities and towns,\textsuperscript{13} the Shoshone Indian Tribe of Wyoming,\textsuperscript{14} several money-market funds,\textsuperscript{15} Askin Capital Management\textsuperscript{16} and others\textsuperscript{17} have highlighted

8. Procter & Gamble reported that it had lost $157 million before taxes ($102 million after taxes) as a result of derivatives transactions. A shareholder derivative action for corporate waste was brought against P & G's officers and directors as a result of the losses. See Joanne Medero et al., \textit{Investing in Derivatives: Current Litigation Issues}, Insights, Nov. 1994, at 5 (citing Drage v. Proctor & Gamble Co., No. A9401999 (Court of Common Pleas, Hamilton County, Ohio, filed Apr. 25, 1994)). Medero provides an excellent discussion of this and other derivatives-related litigation. See id. P & G, which filed suit against Bankers Trust in October 1994 after suffering losses from a Bankers Trust interest-rate swap with the Bank, recently amended its complaint to include a Deutschemark swap with Bankers Trust. First Amended Complaint for Declaratory Relief and Damages, Procter & Gamble Co. v. Bankers Trust Co., No. C-1-94-735 (S.D. Ohio, filed Feb. 6, 1995); G. Bruce Knecht, \textit{P & G Amends Lawsuit Naming Bankers Trust}, Wall St. J., Feb. 7, 1995, at A3 (noting that P & G routinely purchases derivatives to hedge against currency and interest-rate risk).


11. Losses on Derivatives Taken By Three Banks In Farm Credit System, Wall St. J., Nov. 16, 1994, at A5 [hereinafter \textit{Farm Credit System}] (reporting that three banks that are part of the Farm Credit System had lost $23 million in 1994 from derivatives investments, including structured notes). The president of the Federal Farm Credit Banks Funding Corporation was quoted as saying that derivatives are "'very sound tools when used properly.'" \textit{Id}.


13. See Medero, \textit{supra} note 8, at 7-8 (discussing local governments' authority to enter into risky derivatives transactions); Leslie Wayne, \textit{Local Governments Lose Millions In Complex and Risky Securities}, N.Y. Times, Sept. 25, 1994, § 1, at 1 (describing losses at several local government units resulting from mortgage derivatives).


the difficulties associated with classifying derivatives within the existing framework for securities regulation. Such losses have intensified the public scrutiny of derivatives, but unfortunately, media coverage has added little to inform the debate over these instruments. Indeed, the conventional wisdom is that "derivatives are the riskiest securities ever devised." Such characterization has only added to federal lawmakers' urge to construct an elaborate regulatory framework for derivatives.

This Article attempts to dispel some of the myths surrounding derivatives. What follows below is an example of how a derivative contract challenges traditional regulatory classification, a survey of the different types of instruments commonly classified as such and a discussion of the risks and advantages associated with their use. Next, this Article addresses the question of whether Congressional regulation is appropriate in light of the developing self-regulatory apparatus. After weighing the different approaches to regulation, this Article concludes that additional federal regulation of derivative securities would be expensive and counterproductive. Whether a derivative instrument is appropriate for a particular end-user ultimately depends upon an entity's management and internal controls, not upon regulatory policy.


17. According to expert observers, the losses outlined above, see supra notes 5-16 and accompanying text, were caused primarily by the reversal of the steep yield curve (shorter rates much lower than long-term rates) that had prevailed in the early nineties. Floyd Norris, Man of the Year: High-Wire Artist Alan Greenspan, N.Y. Times, Jan. 1, 1995, § 3, at 1. When the Federal Reserve Bank began to raise interest rates in February 1994, those who had speculated on continuing low rates by borrowing short term and selling long term lost heavily. "There was a lot more speculation on the yield curve than anyone imagined." Id. (quoting Edward Yardeni, Chief Economist at C.J. Lawrence).

I. Background

Attempting to define derivatives is very difficult because instruments capable of bearing that label are infinitely protean; they evolve too rapidly to be encompassed under any preexisting regulatory structure. Below is a simplified example that demonstrates this definitional tension, along with a brief introduction to the different financial instruments that are commonly classified as derivatives, followed by a review of the different entities that typically use derivatives.

A. Definitional Tension Surrounding Derivative Instruments

I am doing a lawyer’s work. A client, a major dealer in securities, has asked me to review a term sheet for a derivative contract that it hopes will be viewed as an equity swap rather than an option. Both swaps and options are classified as derivatives, though only the latter are currently regulated. If the proposed individually tailored transaction between the dealer and its customer is classified as an option, (in this case an over-the-counter option) it will be treated as a security, and it is thus subject to regulation by the Securities and Exchange Commission, whose concerns are capital formation, the maintenance of efficient and orderly secondary markets and investor protection. Over-the-counter (“OTC”) options are also subject to the position limit rules established by the National Association of Se-
Simply put, given the size of the proposed transaction, if it is viewed as an option it will violate these position limits and will be illegal. On the other hand, if the transaction is merely viewed as a private swap contract between two parties, it is "home free all"; the contract is exempt from any regulatory regime. The legal concerns are then largely those arising under the common law: agreement on terms and capacity to act.

Thus, there is great definitional tension in this area; parties and instruments are subject to a sort of Heisenberg principle—changing meaning by reference if not by observation. First the parties: my client is a registered broker-dealer and is subject to the entire panoply of the federal, state and so-called self-regulatory apparatus. The party on the other side of the transaction can be characterized as a "customer," "counterparty," or even more independently, an "end-user" or "participant."


24. See Calamari & Perillo, supra note 1, § 1-6, at 13 ("[T]he basic law of contracts is not codified. Contract law is thus primarily common law, embodied in court decisions.").

25. My client is regulated by the various self-regulatory organizations of which it is a member, including the National Association of Securities Dealers ("NASD"), which regulates all broker-dealers, the New York Stock Exchange ("NYSE"), the Chicago Board Options Exchange ("CBOE"), various regional stock exchanges and the regulatory agencies of all the jurisdictions in which it is registered, including the SEC.

26. What the other party to a derivative contract is termed bespeaks not only regulatory but ethical considerations. It is a longstanding SEC policy that a dealer is "under a special duty . . . not to take advantage of its customers' ignorance of market conditions." Hughes v. SEC, 139 F.2d 434, 437 (2d Cir. 1943) (holding that a dealer that actively solicited customers and then sold them securities at above-market prices committed fraud), cert. denied, 321 U.S. 786 (1944). Thus, the more attenuated denominations—"counterparty," "end-user" and "participant," though descriptively accurate, may offer economic and regulatory protection to dealers. See Federal Reserve Bank of N.Y., Wholesale Transactions Code of Conduct § 1.1 (Draft Jan. 17, 1995) [hereinafter Wholesale Transactions Code] (reflecting this tension in the technology by using the neutral term "Participant"). The Code, coordinated by the Federal Reserve Bank of New York, is a joint effort by the Emerging Markets Traders Association, the Foreign Exchange Committee of the New York Fed, the International Swaps and Derivatives Association, the New York Clearinghouse Association, the Public Securities Association and the Securities Industry Association. It has been circulated among various groups that participate in OTC financial markets. The final draft of the Code will likely be released under the name Wholesale Transactions Best Practices. See Swaps Leader Expects Code of Conduct by Summer, Redemption Dig. & Sec. Indus. Daily, Feb. 23, 1995, at 2; Jeffrey Taylor, Securities Firms Agree to Set Controls on Derivatives, Wall St. J., Mar. 9, 1995, at Cl (noting that six of Wall Street's largest derivatives dealers voluntarily agreed to make regular disclosures to the SEC and CFTC about how they manage their derivatives risks). These banks also agreed to give written risk assessments to companies to which they sell derivatives. Id. The agreement with the SEC and CFTC addresses the same ethical concerns at issue in characterizing a party to a derivatives transaction as "customer," "counterparty," "end-user" or "participant" because it acknowledges that dealers owe "customers" an ethical duty to disclose risks.
The term sheet reflects the following: an institutional customer of the dealer—an unregulated investment partnership familiarly referred to as a hedge fund—owns 2.7 million shares of stock traded on the New York Stock Exchange, which it seeks to hedge over a four-year period against loss. The dealer and hedge fund propose to enter into a non-transferable, that is, not tradeable, contract with performance commencing in June 1995. The contract provides that the customer will, on the fourth anniversary, pay the dealer eighty-one percent of the upside if the stock (now trading at 24) rises above $31.40. The dealer will pay the customer the difference between the then-existing stock price and $20.80 in the event the stock falls below $20.80. The contract refers to these prices as Reference Prices One and Two. Under the agreement, dividends on the shares remain with the customer and reduce any payment that the dealer may have to make to the customer, but increase the amount the customer may have to pay to the dealer if the stock increases in value.

I am not expecting the reader to follow each of these terms nor should the reader luxuriate in their texture. Rather, note the individuality of what has been designed. The contract, an OTC derivative, is unlike the most common derivative, an exchange-traded standardized option. With a standardized option, one contract equals the right, but not the obligation, of a contract owner to purchase from, or sell to, a contract seller one hundred shares of an underlying equity security for a period expiring on a uniform date at a specific price. In this case, however, the contracting parties, with the help of computer models, have created a set of mutual obligations tuned so finely that after four years one or the other (or neither if the security's 1999 market price

27. Hedge funds are typically unregulated investment limited partnerships, which maintain exemption from federal securities laws by complying with § 4(2) of the Securities Act of 1933, 15 U.S.C. § 77d (1988), and Regulation D- Rule 506, 17 C.F.R. § 230.506 (1994). Shares in hedge funds are privately offered on a limited basis, often to wealthy individuals. Despite their cautious-sounding name, such funds are often highly leveraged. Jereski, supra note 16, at A1. Hedge funds are managed by registered and unregistered general partners who commonly receive a management fee to cover expenses and a percentage of profits. Conner Middelmann, Down But Not Out, Financial Times (London), Nov. 16, 1994, at IX. The Financial Times of London reported that there are 800-900 hedge funds worldwide with total capital estimated at $75-80 billion, of which about 35% is managed by fewer than 10 managers. “Originally, hedge funds were US equity funds which ‘hedged’ against market declines by holding short, as well as long, positions. In recent years ... funds started using leverage and derivatives to enhance returns and taking large bets on the direction of markets.” Id.

28. See, e.g., Rules of Fair Practice, supra note 23, ¶ 2183, art. III, § 33(b)(2)(E) (“[A]n option to purchase or sell common stock shall be deemed to cover 100 shares of such stock at the time the contract granting such option is written”); id. § 33(b)(2)(L) (“The term ‘series of options’ means all option contracts of the same class of options having the same exercise price and expiration date and which cover the same number of units of the underlying security or index.”).
falls between the two Reference Prices) will profit or have their loss potential reduced.

Although the usefulness of this instrument to the institution’s portfolio manager lies in its economic advantage rather than in its regulatory classification, regulators approach the transaction differently. Exchange-traded and OTC options are limited as to position size out of concern, derived from the physical or commodity markets that they originated in, that someone could corner a market, thereby exacting monopolistic profits from other traders. Accordingly, regulatory classification is an important concern for the client and what it is I am being paid to determine.

B. Instruments Commonly Described as Derivatives

One of my clients describes derivatives as “any financial product that is difficult to understand.” Derivatives are most commonly defined as “financial arrangements whose returns are linked to, or derived from, changes in the value of stocks, bonds, commodities, currencies,” interest rates, stock indexes or other assets. As the example above demonstrates, classifying a particular instrument may be difficult. In the abstract, derivatives encompass traditional securities such as corporate, municipal and mortgage bonds that have derivative features, that is, cash flows linked to the price of equities, currencies or commodities. Derivatives also include exchange-traded instruments, such as options and futures, with standardized contracts for

29. II Philip M. Johnson, Commodities Regulation § 5.03 (1982). There have been attempts to corner commodities markets in the past. For example, Nelson Hunt and his brother Herbert helped to force silver prices to record levels by taking delivery of huge amounts of silver and buying futures contracts for more in the late 1970s. G. Christian Hill, Hunts Own 59 Million Ounces of Silver Despite Their Promise 4 Years Ago to Sell, Wall St. J., Oct. 18, 1984, at A2. Then-Fed Chairman Paul Volcker testified before Congress on April 30, 1980, that “continued concentration of a massive silver position in the hands of one family or institution is fundamentally unhealthy for the performance of the markets.” Id. In fact, the CFTC investigated whether the Hunt Brothers illegally manipulated the price of silver and silver futures contracts in 1979 and 1980. Id.


31. Taylor, supra note 26, at C1.

32. Chris Kentouris, Talking Derivatives: This Really Isn’t Nuclear Physics, Just Plain Math and Common Sense, Redemption Dig. & Sec. Indus. Daily, Sept. 7, 1994, at 3 (reporting an interview with Lester Wigler, who advises institutions on the management of derivatives operations). Wigler reviews several practical applications of derivative instruments. Id.

33. An option may be exchange-traded or a customized OTC instrument. See supra note 20.

34. Futures and forward contracts both obligate the holder to buy or sell a specific underlying asset at a specified price, quantity and date in the future. Whereas forwards are privately negotiated OTC contracts, futures are exchange-traded instruments. U.S. General Acct. Off., Financial Derivatives: Actions Needed to Protect the
size, maturity and delivery.\textsuperscript{35} Finally, the term "derivatives" embraces OTC instruments, which are privately-negotiated, customized contracts designed to meet the specific needs of counterparties.\textsuperscript{36} OTC derivatives include options,\textsuperscript{37} forwards,\textsuperscript{38} swaps,\textsuperscript{39} swaptions,\textsuperscript{40} caps, floors and collars.\textsuperscript{41} All three categories have existed for periods ranging from years to centuries,\textsuperscript{42} but only the last, which includes computer-designed hybrids\textsuperscript{43} of forwards, options and swaps, the exotic derivatives such as leveraged swaps and structured notes (approx-

Financial System 26 (1994) [hereinafter GAO Report]. Both are used primarily to hedge against future fluctuations in interest rates, foreign currency exchange rates and commodities. For example, an American party to a contract that requires payment to the other party in foreign currency at a future date may arrange a forward or future contract for the purchase of that foreign currency, to guard against a change in the exchange rate between the signing of the contract and the payment date. Counterparties may profit through these instruments by speculating on changes in interest rates or currency exchange rates. \textit{Id.} at 26-27.

35. See Kentouris, \textit{supra} note 32, at 3.
36. See \textit{id.}
37. See \textit{supra} note 20.
38. See \textit{supra} note 34.
39. See \textit{supra} note 19.
40. "Financial engineers in New York" created the swaption in 1987. The swaption, simply an option on a swap, combines the characteristics of a swap and an option, giving a party the right to enter into a swap if it chooses to, without forcing an immediate decision. Institutional investors favor swaps because they enable hedging when there is uncertainty as to the direction of interest rates. Gregory J. Milliman, \textit{The Vandals’ Crown: How Rebel Currency Traders Overthrew the World’s Central Banks} 181 (1995).
41. Caps, floors and collars are all interest-rate products. A cap requires one party (the "purchaser") [to pay] to the other (the "seller") a "premium" for the seller's promise to pay to the purchaser the excess of a floating rate of interest (such as LIBOR, commercial paper, the prime rate, Treasury Bills, or certificates of deposit) applied to a notional principal amount over a fixed rate applied to the same notional principal amount during the term of the contract.
Willard B. Taylor et al., \textit{Interest Rate, Equity and Commodity Swaps, and Other Notional Principal Contracts, in Swaps and Other Derivatives in 1994, at 547, 564 (PLI Corp. L. & Practice Course Handbook Ser. No. B-848, 1994). With a floor, “the purchaser pays the seller for the seller’s promise to pay to the purchaser the difference between a floating rate applied to a notional principal amount and a fixed rate applied to the same notional principal amount to the extent the floating rate is below the fixed rate.” \textit{Id.} at 564-65. A collar sets both “a ceiling and a floor on floating rate interest expense.” \textit{Id.} at 565.

43. A hybrid security is a complex security consisting of virtually any combination of two or more risk management building blocks: a swap, forward, future or option. GAO Report, \textit{supra} note 34, at 26. Structured notes, for example, are issued by government-sponsored enterprises and pay interest that fluctuates based on indexes of interest rates, options or contracts that lock in future interest rates. \textit{See Farm Credit System, supra} note 11, at A5.
imately two percent of all derivatives in notional value—and products of the 1990s), scare anyone silly.

Returning to my client's issue, options and equity swaps are generally considered to be derivatives because their core value ultimately derives from other instruments, in this case a common stock. In a sense, swaps and options serve many of the same purposes across a broad range of investment needs. I must review my client's term sheet to differentiate in terms of an enforceable agreement between the "good" equity swap, which would allow two consenting, sophisticated institutional contracting parties to apportion risk and reward as they wish, or the "bad" option, which, given the size of this transaction (2.7 million shares or 27,000 one hundred share contracts), would exceed position limits and would be illegal. Under the latter classification, it would be illegal notwithstanding my client's lack of intent to affect, let alone corner, the market.

At this point the reader should envision a piece of paper with a vertical line drawn down the center and should place key attributes of an option on one side and attributes of a swap on the other. Attributes of an option include: (1) an option holder is not obligated to exercise the option; (2) an option requires payment of a premium for the creation of the option contract; and (3) an option provides an element of leveraged profit potential because the purchase price of the option is likely to be a fraction of the value of the underlying security. On the other side of the line, an equity swap is (1) non-volitional—self-executing; (2) it does not require any premium (or at least no quantifiable premium); and (3) the swap provides no leverage.

A complete analysis further differentiates the swap from other hybrid derivatives such as caps, floors and collars. After reviewing my client's term sheet, I can conclude that, given the state of the law then prevailing, the lack of manipulative potential or leverage in the arrangement, and the fact that the transaction is self-executing, the transaction, although intrinsically similar to an option, is not an option. It is therefore not a security and accordingly does not involve the securities laws, the SEC or the NASD.

My point in elaborating on this derivatives transaction is to acclimate the reader to modern financial realities. Modernity has been

45. Both instruments are useful for shifting financial risk from a party less willing to bear it to party willing to assume that risk. See infra part II.
46. See supra note 43.
47. See supra note 41.
explained as beginning when the "sum [of human knowledge] grew to exceed the human capacity to understand it." As to derivatives, therefore, we are all modern.

C. Players in the Derivatives Markets

The parties to the term sheet that I have reviewed are rational, sophisticated participants in the risk-shifting transactions that derivatives facilitate: dealers that live to trade and investment partnerships that live to speculate. Dealers include not only securities firms, but also insurance companies and the seven money center banks that undertook ninety percent of bank derivative activity in their transformation as risk managers to corporate America. The players profitably see "a world of risks to be hedged out there . . . [with] derivatives [being] the modern way to hedge risks."

When one adds to the mix such end-user entities as money-market funds, college endowments, municipalities and pension plans, as well as corporate treasurers, the angst of modernity building in the past several years becomes obvious: the assumption is that no one can understand derivatives. That being the case, they pose danger to their users and therefore to the world's interconnected financial markets. Indeed, although derivatives-related losses rarely made headlines in the past, the recent losses noted above illustrate the purported dangers of derivatives to users. Furthermore, Arthur Levitt, Chair-

50. According to one study, the four major American securities firms involved in derivatives dealing are The Goldman Sachs Group, L.P., Salomon, Inc., Merrill Lynch & Co. and Morgan Stanley Group, Inc. GAO Report, supra note 34, app. v, at 188.
51. The three largest American Insurance companies dealing in derivatives are American International Group, Inc., The Prudential Insurance Company of America and General Re Corporation. Id.
54. John R. Dorfman & Stephen Lipin, Don't Derive Too Much Hope from Bankers Trust, Some Say, Wall St. J., Nov. 18, 1994, at C1, C2 (quoting Chuck Freeman, a fund portfolio manager referring to Bankers Trust). The authors note that Bankers Trust is no longer a "traditional bank" because the majority of its earnings are from trading in derivatives, currencies and bonds. Id. at C1.
55. See Hu, supra note 1, at 1462-63 (noting that many regulators and even some bankers believe that bankers know too little about the risks that derivatives may pose to a portfolio and that "[o]bservers agree that regulators know less than the bankers" about derivatives).
56. Albany International, a small company selling fabrics used by papermakers, made headlines in 1988 when it reported a $4 million loss on a swap transaction worth $100 million. Millman, supra note 40, at 182.
57. See supra notes 5-17 and accompanying text.
man of the SEC, predicted that a derivative-driven "accident" would occur at some point, causing "the failure of a large firm [that] could have collateral effects throughout the market." 58 Similarly, a Federal Reserve Board study theorized that the default of a major derivatives dealer with large exposures was more likely in a time of higher-than-average volatility—when the dealer had made a series of bad "bets" across various markets, rendering even a well-diversified portfolio ineffective. 59

Before I discuss the propriety of additional regulation of derivatives, and more importantly, the risks associated with their use, it is best to explain the benefits that relentlessly increase the use of derivatives.

II. THE PURPOSES OF DERIVATIVE INSTRUMENTS

Indeed, derivatives are sound tools when properly used. They are a necessity of business planning for corporate treasurers; they reduce currency risks for those engaged in foreign trade; and they reduce the risks of interest-rate fluctuation to provide a level of financial insurance for everyone. 60 Notwithstanding Chairman Levitt's "inevitable

58. Levitt Says Standards On Affiliates Using Derivatives Due By Thanksgiving, 26 Sec. Reg. & L. Rep. (BNA) 1301, 1303 (Sept. 30, 1994) (reporting Levitt's testimony before the Senate Banking Committee on September 28, 1994). In fact, the failure of Barings, the English merchant bank, in February 1995, was exactly such an event, yet it had no appreciable effects on the financial markets. See The Bank that Disappeared, Economist, Mar. 4, 1995, at 11 [hereinafter Bank that Disappeared] ("Though stirred, financial markets were not much shaken. Some might even say that the [Barings] affair attests to their resilience"); Marcus W. Brauchli & Jeremy Mark, Barings Unlikely to Tarnish Singapore Markets for Long, Wall St. J., Mar. 1, 1995, at Cl (noting that there was no indication that the Barings fiasco would have any long-term effect on Singapore's financial markets).

59. John Connor, Study Faults Risk Analysis of Derivatives, Wall St. J., Sept. 26, 1994, at B12B (reporting a Federal Reserve Board staff study by economist Gregory Duffee that concluded that current methods of assessing the risks of investments in derivatives may "underestimate future exposures substantially").


Are derivatives a high-tech, 1990's version of financial snake oil? Is there anything inherently dangerous about them? The answer is a qualified "no," according to central bankers, economists, commercial bankers and the corporations that use derivatives.

For big companies, in particular, these new financial instruments can be efficient tools that lend greater stability to business operations. They help companies with far-flung international operations reduce their risk from swings in currency values and from interest-rate movements abroad. Hedging against those risks became a far more intricate game during the 80's as more and more nations opened up their financial markets.

Id. The SEC itself has specifically recognized the utility of derivatives to business operations. Accordingly, where it has regulatory authority, it has specifically approved of corporations entering into interest rate swaps, interest rate caps, collars and floors. See National Fuel Gas Co., Supplemental Order Authorizing Trading of Interest Rate Swaps, Exchange Act Release No. 35-26164, 1994 WL 665990 (Nov. 21, 1994). The use of derivatives in corporate takeovers, however, has already raised
The factors that explain the sudden growth in derivatives help to demonstrate why they are useful when properly employed. First, the advent of floating-rate financing decreased the cost of borrowing at a time of low interest rates. Similarly, "sweeping internationalization of trading of currencies, bonds and equities" created other financing opportunities. These opportunities, however, also created risks: a borrower who employed floating-rate financing would be bound to escalating interest payments as market rates rose. Similarly, a manufacturer who contracted to purchase or sell materials from abroad at discounts created by favorable exchange rates could find costs suddenly escalating as exchange rates shifted. Thus, there is the need to hedge against such contingencies. "The primary purpose of [derivatives] is not to borrow or lend funds but to transfer price risks associated with fluctuations in asset values." Today the demand for hedging against such risks has transformed the application of interest-rate, currency and commodity futures into a multifaceted discipline.

Inhibiting regulation is not a realistic prospect because advantages to users of complex customized derivatives are so apparent to every group that has any influence over the legislative-regulatory process. Indeed, such regulation (as various observers have noted) would be to a substantial degree counterproductive because it would raise the cost regulatory concerns. George Sivell, Inquiry Into Use of Swaps in Bids, The Times (London), Mar. 4, 1995, at 1 (discussing the British Takeover Panel's inquiry after the successful hostile takeover of Northern Electric by Trafalgar House).

61. Derivatives Group Sees No Need for New Legislation, Redemption Dig. & Sec. Indus. Daily, Oct. 28, 1994, at 2 [hereinafter Derivatives Group]; see also Leo Melamed, Keeping Risk on Track, Futures Industry, Nov.-Dec. 1994, at 11, 15 (quoting Alan Greenspan, Chairman of the Federal Reserve Board, who noted that "[t]he economic function of [derivatives] is to allow risks that formerly had been combined to be unbundled and transferred to those most willing to assume and manage each risk component"). In addition to shifting risk, derivatives have several other advantages. Derivatives are often less expensive than investments in the underlying assets, and they may also provide the opportunity for end-users to arbitrage differences between the price of the derivative and the price of the underlying asset. Hu, supra note 1, at 1466.

63. Id.
64. Id. (emphasis added).
65. See generally Derivative Instruments, supra note 19 (discussing in detail interest-rate and equity derivatives and investment, hedging and trading strategies).
66. See infra notes 123-24 and accompanying text (discussing how the SEC and CFTC both took measures toward regulation of derivatives); infra note 133 (discussing the settlement between Bankers Trust and the Federal Reserve Bank of New York following large losses by Bankers Trust clients Gibson Greetings and Procter & Gamble).
of managing risk and could create market rigidities that impede the responsiveness and resiliency of markets in times of financial stress. Additionally, such regulation would be largely moot, as businesses can easily move offshore, beyond most regulatory control. More importantly, however, the different forms that derivative products can readily take are limited only by the imagination of creative "financial engineers"; they evolve too quickly to be encompassed in any kind of regulatory net. As I will conclude, the challenge of derivatives is the difficulty they pose to the orthodox and increasingly irrelevant regulatory structure to which we have grown accustomed.

III. Risks Associated with the Use of Derivatives

Yet there are snakes in Eden: just as derivatives can be a cheaper, more effective substitute for other investment and financing instruments, they can create risk or a path for portfolio managers to avoid investment restrictions. For example, ELKs, Salomon's Equity Linked derivatives, or the MITTs, SUNs and SIRS marketed by dealers like Lehman Brothers, Merrill Lynch and Citicorp, allow an investor to receive a portion of the appreciation in a particular stock, basket of securities or stock market index like the Standard & Poor 500. At the same time, these instruments ensure the return of the investor's money plus fixed annual earnings. On the other hand, these instruments also create a way for a more adventurous manager, whose portfolio guidelines limit him to the purchase of dividend-paying common stocks, to, in effect, buy non-dividend-paying common stocks. Of course, a corporate treasurer may, to his own and his employer's ultimate regret, see only a metaphysical line between hedging risk.

67. See Economists Roundtable Calls for No New Derivatives Rules, Redemption Dig. & Sec. Indus. Daily, Oct. 3, 1994, at 2 [hereinafter Economists Roundtable] (noting the view of the Financial Economists Roundtable, comprised of 33 economists primarily associated with academic institutions). These commentators contend that risks associated with derivatives are exaggerated and that banks, currently the largest derivatives dealers, are already well-regulated. Id.

68. These instruments allow investors to forego appreciation above a certain amount on a common stock in return for an interest payment based on the face value of the stock. ELKs have a four-year maturity. Prospectuses are available from Salomon Brothers; currently ELKs are issued on common stocks of Snapple Beverage, Microsoft, Oracle Systems and Digital Equipment, among others. See also Greg Steinmetz, A Derivative Tied To Snapple Shares Takes Sharp Drop, Wall St. J., Nov. 3, 1994, at A3 (noting that Salomon currently has 13 different issues of ELKs, with a total market value over $800 million). These products are designed for stocks that pay low dividends or none at all. In return for receiving an income stream, investors in these products agree to relinquish some of the upside potential of the common stock. See id.


70. See Steinmetz, supra note 68, at A3.

71. Dow Chemical of Midland, Michigan, appears to have mastered this balance. With one-half of its income from foreign operations, Dow has sought to control the effects of currency moves on its business and has established itself as a successful
and using the same types of derivatives to create higher return. Just as some securities pose higher risks than others, the risk involved with the use of different derivative products varies significantly.

These concerns are our introduction to risk in derivatives.

When an investor buys shares of General Motors on the New York Stock Exchange because he believes that the company will overcome its problems and become as profitable as other car makers, his single fear is loss of some or all of the investment. A speculator has the exact same fear when he purchases an option—a derivative—on the S & P 500 Index on the Chicago Board Options Exchange because he believes that the stock market will rise, or when he buys an inverse-floating-rate derivative from a dealer because he has a "view" that interest rates will move in a particular direction. In either case, the analysis is of risk against possible reward. The analysis, however, should not focus on investors who hedge or speculate, even in derivatives. Instead, the focus must turn to the security underlying a particular derivative. When the highly sophisticated and previously successful Treasurer of Orange County lost $1.5 billion largely in inverse floaters because he "bet" wrong on interest rates, it was the underlying instruments, not the derivatives, that caused the loss. After all, the Orange County Treasurer presumably had available to him the

currency trader, "at a time when even chief executives like Chrysler's Lee Iacocca couldn't resist the temptation to blame the dollar-yen rates for poor car sales." Millman, supra note 40, at 162.

72. An inverse floater is essentially a floating-rate bond whose coupon rate moves in the opposite direction of a benchmark, for example, the London Interbank Offered Rate ("LIBOR"). One author uses the following formula to demonstrate how an inverse floater works:

\[
YIELD = 30 - (4 \times LIBOR)
\]

If LIBOR is 7%, this inverse floater pays only 2% to the holder; if LIBOR falls to 5%, this floater pays 10%. James C. Van Horne, Financial Market Rates and Flows 252 (4th ed. 1994). Properly used, an inverse floater is excellent for institutions with variable-rate bond obligations to hedge against changes in interest rates. Id.

73. Lubman & Emshwiller, supra note 6, at A1 (noting that Robert Citron, the treasurer of Orange County, made highly-leveraged investments in inverse floaters the centerpiece of his investment strategy). Returns on these instruments increase as interest rates fall. Citron financed these investments through reverse-repurchase agreements ("repos"), which allowed the County to sell a security while promising to later buy it back at a higher price. Id. When interest rates rose, the County was left with the obligations on the repos, though the returns on the inverse floaters dropped. Id.: see also Andrew Davidson, Derivatives' Risk Related to Leverage, Wall St. J., Sept. 29, 1994, at A13 ("Derivatives are not necessarily more or less risky than the underlying assets. The degree of risk is related to the degree of leverage."). Davidson notes that any financial instrument poses some risk element and that the label "derivative" should not be associated with high risk, but rather each individual derivative product must be analyzed for its own risk potential. Id.; Spinner, supra note 1, § 3, at 9 (noting that derivatives are essential instruments for any multinational corporation). "Just because these products can produce more dramatic losses than other instruments doesn't mean they're inappropriate for municipalities." Jeffrey Taylor, SEC Is Probing Orange County on Two Fronts, Wall St. J., Dec. 7, 1994, at A3 (quoting Brandon Becker, Director of the SEC Market-Regulation Division).
same computers, analytical tools and executive talent to examine and employ derivatives as do the treasurer's departments at multinational corporations like Dow Chemical, major banks and Wall Street dealers. Therefore, the question is the propriety of a financial officer betting on interest rates, not whether that speculation was effected through the leverage offered by derivatives. Simply stated, derivatives shift risk from parties less able to absorb it to those more able or willing to do so.

In essence, derivatives are responding to an entirely new class of financial market participants—the late twentieth-century equivalent of farmers protecting themselves against lower prices in future months for their soybeans or pork bellies, or of refiners insuring reasonable costs for the oil they will process or perhaps, at worst, of money managers whose gambling instincts are limited to betting the favorite to show in a four-horse race. We are focused on institutions seeking to hedge certain financial matters inherent in their commercial activity; portfolio managers seeking to increase their yields in basis points rather than in full percentages and municipalities that can save ten basis points on $600 million of a debt issuance. Such savings may amount to $600,000 in a year but millions over the life of the debt, as Los Angeles County officials recognize: in October 1994, the County sold variable-rate bonds hedged with interest-rate swaps and other derivatives. Yet paradoxically the risks faced by these cautious deriva-

74. See supra note 71.
75. In 1971... [m]ost [commodity] legal issues related to agricultural commodities and, to a lesser extent, to precious metals. Futures on such exotic items as GNMA securities and Treasury bonds were only in the earliest conceptual stages, and futures on stock indices were not even a gleam in the eye of the most creative economist. The participants in the futures and options markets now include far more than farmers and metals merchants. Banks, savings and loan associations, mutual funds, and pension funds already participate in those markets, and I have no doubt that insurance companies will soon be a significant factor in the markets.

Thomas A. Russo, Regulation of the Commodities Futures and Options Markets vii-viii (1994); see also What Price Turkey Futures?, Economist, Dec. 24, 1994, at 96 ("The world's biggest futures exchanges have their roots in farming... . After little more than two decades [since 1972,] turnover in [financial futures] dwarfs trading in agricultural contracts, which now account for only a quarter of total futures trading in America.").

76. A basis point is a unit of measure for the change in interest rates for bonds and notes. One basis point equals 0.01%, that is, 100 basis points equals one percent. Dictionary of Business & Economics 40 (Christine Ammer & Dean S. Ammer eds., 1984).

77. See Thomas D. Lauricella & Candace Cumberbatch, Big Municipal Bond Issuers Turn to Derivatives In an Effort to Bring Down Borrowing Costs, Wall St. J., Nov. 9, 1994, at C21 (describing several municipalities, including Orange County, California, which have used interest-rate swaps to convert fixed-rate payment obligations into variable-rate payment obligations). The article quotes one commentator as stating, "People have only been hurt [with derivatives] on the investment side and not on the issuer side" and another commentator who stated that municipalities were prudently using derivatives to hedge interest-rate exposure, "not as speculative instru-
tives users come not solely from possible loss of investment or stake but rather in battalions.

I have already alluded to the great risk, the risk that all but alarms legislators and regulators and consumes the press: the risk that the walls of the financial markets will come tumbling down because of an ill-appreciated or unaddressed fault in the system itself—systemic risk. 78 I began by referring broadly to a range of derivatives in notional value of $14 trillion to $35 trillion. Acknowledging the lack of precision is important; it comes from an absence of a reporting mechanism for derivative contracts. Notably, I mentioned notional value, 79 this is the face amount of the contracts, a figure that exaggerates risk. 80 The replacement value of these contracts is a more accurate measure of risk; it is believed to run from one to six percent of face

ments.” Id. The article does not address the use of derivatives to raise funds by speculation, as was done in Orange County. But see Laura Jereski & Thomas T. Vogel, Jr., Orange County Borrowed $1 Billion Even as Its Investment Losses Piled Up, Wall St. J., Dec. 5, 1994, at A3 (reporting that even after Orange County suffered huge losses, the county and several municipal agencies borrowed vast sums to prop up the failing fund); Truell, supra note 12, at D1 (noting losses by the State of Wisconsin from currency speculation on the Mexican peso).

78. See supra note 58 and accompanying text (noting that the failure of Barings did not have any significant collateral effects on financial markets). There are numerous analyses of systemic risk. See, e.g., CFTC Report, supra note 2, at 90-122; Economists Roundtable, supra note 67, at 2 (noting that prominent financial economists agreed that “the use of over-the-counter derivatives ‘does not justify the current fear that they might cause a systemic meltdown.’” The Economists Roundtable also concluded that “the often well-publicized losses from derivatives ‘manifest primarily managerial inadequacies rather than intrinsic problems in the over-the-counter derivatives market.’” Id. See also Melamed, supra note 61, at 15 (“‘Derivatives... do not introduce risks of a fundamentally different kind or of a greater scale than those already present in the financial markets. Hence, systemic risks are not appreciably aggravated.’” (quoting Paul Volcker, former chairman of the Federal Reserve Bank and chairman of the Group of Thirty, a group composed of industry leaders, bankers, central bankers and academics)); Oversight of Derivatives Moving At Acceptable Pace, Fed’s Phillips Says, 26 Sec. Reg. & L. Rep. (BNA) 1313, 1313 (Sept. 30, 1994) [hereinafter Oversight of Derivatives] (noting that Federal Reserve Board Governor Susan Phillips does not believe that derivatives pose danger to the financial markets); Charles W. Smithson, Systemic Aspects of Default Risk, Prepared for Conference: OTC Derivative Markets and Their Regulation (Oct. 27, 1993) (on file with author). Edgar Meister, a senior Deutsche Bundesbank official, has suggested that there should be “stress tests” and “crash scenario[s]” to measure potential system-wide risks from derivative trading. German Central Banker Sees Need to ‘Stress Test’ Derivatives, Redemption Dig. & Sec. Indus. Daily, Sept. 20, 1994, at 1. Stress testing is a key recommendation of the Basle Committee, see infra note 119, pt. III, and the Group of Thirty, see infra note 118, at 11-12; see also Leslie L. Rahl, Caveat Emptor: Lessons from the Derivative’s Losses of 1994, Futures Industry, Nov.-Dec. 1994, at 25, 26-27 (describing thoroughly the breadth of stress testing).

79. See supra note 3 (defining notional principal amount).

80. See CFTC Report, supra note 2, at 18 (noting that “in many OTC derivatives transactions, notional principal is the nominal value used to calculate contract payments. . . . [R]isk exposure will tend to be a small fraction of the notional principal.”).
amount, 81 or from $91 billion to $2.1 trillion. That is real money, of course, but for perspective, remember that these contracts are with many parties in many countries and the potential loss at the low end equals a drop of two percent on the New York Stock Exchange on any given day 82 and at the high end about fifteen percent of the value of all global equity markets combined. 83 I am nonetheless able to quote only a range because a lack of reporting also means that a reasonable estimate of replacement value is unavailable.

Although no one can disprove the possibility that the failure of a major dealer would destroy a leading financial market, which could then carry over to all other financial markets, 84 neither can one disprove the possibility that our atmosphere will be destroyed by a great asteroid. Sensibly, therefore, as we go forward in daily life we ask our scientists to learn more about asteroids. Because derivatives add immeasurably to the strength of our finances and enterprise, we must seek to understand their many discrete risks. 85

The first risk is that internal controls are inadequate to prevent a treasurer of a government unit or corporation from crossing that previously discussed metaphysical line 86 between (1) enhancing profit potential and reducing the risk that an increase in interest rates will

81. The New York Times estimated replacement value, “what would be lost if the other side of the contract defaulted,” at 3-6% of notional principal amount. Hansell, supra note 60, § 3, at 1. The International Swaps and Derivatives Association estimated the mark-to-market value (calculating value by reference to the secondary market for the product, as opposed to the original cost of entering into the contract) of derivatives at 1-2% of notional amount. Derivatives Group, supra note 61, at 2.

82. See Securities Indus. Ass'n, 1994 Securities Industry Fact Book 23 (Grace Toto & George Monahan eds., 1994) (on file with author). The $91 billion figure is arrived at by taking two percent of the 1993 total capitalization of the NYSE, reported as $4,545 billion. Id.

83. See id. at 40. The $2.1 trillion estimate is arrived at by taking 15% of the total global equity markets capitalization for 1993, reported as $14,101 billion. Id.

84. See Bank that Disappeared, supra note 58, at 11 (noting that the failure of Baring Securities after massive losses from trading futures contracts pegged to the Nikkei 225 Index had no appreciable collateral effects on any of the world’s financial markets).

85. See Comptroller of the Currency, Risk Management of Financial Derivatives, Comptroller’s Handbook (1994) [hereinafter Comptroller’s Handbook] (providing extensive guidance to national banks and nationally chartered federal agencies on management of risks from off-balance sheet derivatives); CFTC Report, supra note 2, at 90-123 (providing a general discussion of derivatives-related risks); Davidson, supra note 73, at A13 (“For debt-market derivatives the major sources of risk are duration (a measure of interest-rate sensitivity), convexity (a measure of change in duration), credit quality, spread, volatility, currency and asset-specific risks (such as pre-payments for mortgage-backed securities).”); Joanne T. Medero, Derivatives Risk Management Issues, in Handbook of Seminar, pt. II (National Soc’y of Compliance Professionals, Oct. 5-6, 1994) (describing various risk categories and approaches to controlling them).

86. See supra text accompanying note 71.
affect payments on floating-rate debt obligations; and (2) being a profit center in itself.\(^8^7\)

The second risk is caused by a lack of understanding of the cost, efficacy and loss potential of the product being employed. In simple terms, customized derivatives are built with complex mathematics and when losses occur the immediate reaction, as in the Orange County matter, is that the entity must have lacked the expertise to make the required analysis.\(^8^8\)

Related to this is the third risk, that of an off-balance-sheet item—the derivative contract—reducing without public awareness the increase in value of an item on the balance sheet that the derivative is intended to hedge.\(^8^9\)

Fourth is operational risk; a party may not have adequate controls to book and monitor the transaction, enabling it to stay informed of the extent of its potential loss.\(^9^0\)

Fifth is intellectual risk. Given the complexity of some instruments, it is economically feasible for only relatively few individuals at a company to understand such transactions, and if one or more leave, the company's ability to manage its transaction risk will be compromised.\(^9^1\)

\(^8^7\). See Taylor, supra note 73, at A3 (noting remarks by SEC Commissioner Roberts in the wake of the Orange County fiasco). Roberts stated that the propriety of a municipality's derivatives purchases should be a matter for state and local legislation rather than for the SEC. Id.

\(^8^8\). Lubman & Emshwiller, supra note 6, at A1 (noting County Treasurer Citron's claims that due to inexperience, he heavily relied on the securities dealers who sold the County the ill-fated instruments). Citron's claimed inexperience, however, has been widely disputed. See id. Notwithstanding claims that derivatives pose risks to the financially unsophisticated, see, e.g., SEC Commissioner Wants Rules for Pension Plans on Derivatives, 26 Sec. Reg. & L. Rep. (BNA) 1421, 1428 (Oct. 28, 1994), the Orange County, Odessa Community College and P & G debacles are clearly those of sophisticated managers. See Lubman & Emshwiller, supra note 6, at A1; Knecht, supra note 10, at A1; Medero, supra note 8, at 5. Many investors are aware of the risks associated with certain derivatives. Emphasizing the complexity of some derivative instruments and the uncertainty involved with reliance on mathematical models that attempt to evaluate relationships between securities, Addison L. Piper, Chairman of Piper Jaffray, a Minneapolis based brokerage firm, noted, "We got caught in a market that we thought we understood." Knecht, supra note 15, at C1 (reporting losses as high as $700 million from Piper Jaffray's "aggressive investments in derivatives," including CMOs).

\(^8^9\). Shadow Financial Regulators Discuss Derivatives, Fair Trade, Branching, 26 Sec. Reg. & L. Rep. (BNA) 1301, 1317-18 (Sept. 30, 1994) [hereinafter Shadow Financial] (citing discussion on September 26, 1994, between reporters and Professor Edward J. Kane, Boston College, a member of the Shadow Financial Regulatory Committee, noting that derivatives are off-balance-sheet activities and therefore a bank may use a derivative product to hedge against another risky product in its portfolio with only one part of that strategy being apparent; in other words, "'There is not symmetry of gains and losses.'"); see infra note 117 (noting proposed changes in accounting treatment of derivatives on balance sheets).

\(^9^0\). See Melamed, supra note 61, at 15.

\(^9^1\). See id. at 13 (noting the "radical technological advancement" that transformed derivatives valuation into a multifaceted discipline).
The sixth risk is legal in nature: There is always the possibility that a derivative contract will be unenforceable because of a lack of authority by the individual who committed a party to an agreement, as two Chinese trading firms claimed after Lehman Brothers sued them for their failure to repay loans of $53.5 million for foreign-exchange transactions— or as in the case where the House of Lords held that an English municipality's entry into interest-rate swaps was ultra vires— or that at a later point a regulator or court will find that the contract itself, rather than the capacity of any party, violates a regulation or law.

The seventh, credit risk, is largely a concern of dealers; the end-user or counterparty may be financially unable to meet the terms of the contract or may become insolvent and default.

Eighth, the enforceability of a contract in the event of a party's insolvency is uncertain, as, for example, in the recent Orange County fiasco.

Ninth is event risk, which is the possibility that a political upheaval or natural catastrophe will make completion of the contract impossible.


93. Hazell v. Hammersmith & Fulham London Borough Council, [1992] 2 App. Cas. 1, 27-28, 37 (appeal taken from Q.B.) (noting that the swaps at issue were for speculation, not for hedging); Millman, supra note 40, at 250-52 (noting that Hammersmith and Fulham borrowed funds from the British government at low fixed rates and then entered into swaps, a strategy that remained profitable until rates rose steeply in 1988); see also Andy Pasztor & Laura Jereski, Orange County Sues Merrill for $3 Billion, Wall St. J., Jan. 13, 1995, at A3 (noting that the County's suit seeks to nullify its derivatives transactions with Merrill by claiming that state legal precedent prohibits any municipality from incurring debt greater than that year's revenue without the consent of two-thirds of the electorate); id. at A10 (noting that Morgan Stanley is currently appealing an order to pay to the State of West Virginia over $30 million because of several reverse-repurchase agreements with the state later held to violate state law); Leslie Wayne, Big Risks, Big Losses, Big Fight, N.Y. Times, Apr. 23, 1995, § 3, at 1 (noting that oral argument on the Morgan Stanley case before the West Virginia Supreme Court begins on May 10, 1995).

94. See supra part I.B. (demonstrating by example how a financial instrument is capable of different regulatory classifications, each with dramatically different implications for the parties involved).

95. See Hu, supra note 1, at 1468-69 (reviewing credit risk); infra note 126 (noting steps taken by two commodity exchanges to reduce credit risk).

96. Michael Siconolfi & Anita Raghavan, Wall Street Races to Sell $10 Billion in Collateral, Wall St. J., Dec. 8, 1994, at A13 (discussing the concerns of brokerage firms that held collateral for loans to Orange County and noting that “Orange County officials insist that the municipality's Chapter 9 bankruptcy-law filing . . . prevents firms from dumping the securities held as collateral for repurchase agreements with the County”). At issue is whether § 559 of the Federal Bankruptcy Code, which permits holders of collateral under repurchase agreements to close out these contracts, applies to a petition filed under Chapter 9 of the Bankruptcy Code. Id.

Tenth is the risk of early termination of the contract; this may require the counterparty to move from a variable rate to a higher fixed rate or from a lower fixed rate to a higher variable rate.98

Eleventh is the uncertainty in various instruments of when prepayments will occur; this results in irregular cash flows.99

The twelfth risk is that derivative activity may affect a participant in another market. For example, in August 1994, the Dow Jones Industrial Average closed up seventy points largely because trading in options on the American Stock Exchange Institutional Index prompted options brokers to buy stocks on the New York Stock Exchange in the last half-hour of trading.100 The options at issue in that case were known as flex option contracts (contracts that can expire on any agreed-upon day rather than on standard expiration days).101

The thirteenth and final risk, at least for this analysis, is price behavior in the market: customized derivatives are by their nature illiquid instruments. They do not suit all parties in the market and therefore a party to a customized derivatives contract may be unable to obtain even a clearing price and thus would be unable to “exit” a position.102

IV. Regulation

The growth of derivatives in the past few years has not gone unremarked and analysis has not lacked willing hands.103 In one corner there are instruments that contracting parties are willing to deal with in the common-law no-man’s land beyond regulations—structured notes,104 interest-rate and equity swaps,105 swaps with embedded options (“swaptions”),106 issues with indexed caps107 and collars.108 In the other corner are nervous central bankers, legislators and financial

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98. Uncertainty as to when prepayments will occur is the primary risk associated with mortgage-backed securities. If interest rates decline, a mortgagor may refinance at a lower rate, forcing the investor in the related CMO to reinvest at the prevailing lower interest rates. See Taube & Whittaker, supra note 16, at 34-35.
99. Id.
101. See id.
102. See Medero, supra note 85, pt. II.B. (“Market risk is the price behavior of an instrument when market conditions change. Liquidity risk is a subset of market risk that also encompasses cash flow and the inability to exit or unwind a position.”); Hu, supra note 1, at 1468-69 (reviewing credit and market risk).
103. Indeed, major financial publications, including the Wall Street Journal, the Financial Times, the New York Times, Insights and Institutional Investor have closely covered derivatives-related developments. There are also several industry magazines, including Derivatives Week, Derivatives Operations & Regulation, Futures Week and Derivatives Engineering & Technology.
104. See supra note 43.
105. See supra note 19.
106. See supra note 40.
107. See supra note 41.
108. See supra note 41.
regulators. And again, "rocket scientists" or "financial engineers" can parse any financial situation with existing risk or profit potential to create an instrument to help manage that risk for one party while the counterparty accepts some or all of that risk, hoping to create higher returns for itself or to control other risks. Nevertheless, many interested parties, including dealers themselves, are considering approaches to derivative risk that range from the good advice found on needlework samplers, "Know Thy Counterparty" to legislation. As stated by Representative Leach, Chairman of the House Banking and Financial Services Committee, "[a] commonality of standards can't be achieved without legislation."\(^{109}\)

Given the risks associated with derivatives, there are three regulatory possibilities. First, derivatives could be regulated through a system of voluntary compliance by dealers, complemented by at least eighty initiatives that various groups recently implemented.\(^{110}\) Second, derivatives regulation could be subsumed under existing federal securities laws. Third, Congress could regulate derivatives through new legislative initiatives that call for special oversight committees. Each of these options is examined below.

**A. Indirect Regulation and Voluntary Dealer Compliance**

Congress has consistently avoided direct regulation of derivatives, preferring to regulate them indirectly through a regulatory nexus with dealers, as, for example, with the Government Securities Act of 1986\(^{111}\) and the Futures Trading Practices Act of 1992.\(^{112}\) The former—enacted after the failure of three non-regulated government securities dealers through repurchase-agreement fraud threatened to undermine the financing of the federal deficit—requires registration of government securities dealers with the SEC while prohibiting regulators from applying securities industry standard-sales-practice rules. The latter act reflects the increased anxiety over derivatives in a market that has spread to smaller institutions and smaller investors. Ironically, that act focuses on sales practice rules while exempting the very customized transactions that created such concerns.

Given the extensive list of meaningful risks underlying the use of derivatives, few of which are found in everyday stock market trading, it is not surprising that approaches to reduce risk have come from an equally extensive group of industry, national and international inter-

\(^{109}\) *Oversight of Derivatives*, supra note 78, at 1315.

\(^{110}\) *See infra* notes 113-35 and accompanying text.


ested parties, including contract participants themselves. A recent report indicates that various groups took nearly eighty actions in 1993 and 1994 to reduce derivatives-related risk.113

These groups include the United States Congress,114 the Treasury Department,115 the President's Working Group on Financial Markets,116 the Financial Accounting Standards Board117 and the Group of Thirty.118 Broken down by industry, for banks, the Basle Committee on Banking Supervision,119 the Federal Reserve System,120 the Of-


114. See Oversight of Derivatives, supra note 78, at 1315 (noting that "the regulatory gap that allows insurance companies to engage in derivatives operations in separate subsidiaries outside the purview of state insurance commissioners would be closed by [federal] legislation").

115. The National Currency Act, which provided for the organization of national banks, also established a separate bureau within the Department of the Treasury, the Office of the Comptroller of the Currency, which has the authority to approve formation of national banks. Act of Feb. 25, 1863, ch. 58, 12 Stat. 665 (codified at 12 U.S.C. § 93a (1988)). The OCC, jointly with the Federal Reserve Board and the FDIC, announced new sales practice rules for banks that sell derivatives. See infra note 121.

116. See President's Working Group, supra note 113.

117. See Financial Accounting Standards Bd. ("FASB") Statement No. 119: Disclosure About Derivative Financial Instruments and Fair Value of Financial Instruments (1994) (calling for voluntary disclosure in financial statements of the amounts, nature and terms of derivatives). The heightened disclosure obligations vary according to whether the derivatives are held or issued for trading purposes or for purposes other than trading, such as hedging. See Lee Berton, S&P Takes Rare Stand Against FASB Over Plan to Assess Risk of Derivatives, Wall St. J., Mar. 15, 1995, at A4 (discussing a FASB proposal to require companies to list in their financial reports the current market value of derivatives contracts that they buy, instead of carrying the contracts at cost, as is currently permitted); Roberts Discusses Regulatory Developments With Respect to Derivatives, The SEC Today, Nov. 10, 1994, at 1 [hereinafter Roberts Discusses Developments] (noting that Commissioner Roberts, Chairman Levitt and Federal Reserve Board Governor Susan Phillips are disappointed with the voluntary nature of disclosure requirements under FASB Statement No. 119, and that the SEC is considering guidance to supplement the FASB statement).


119. The Committee, which meets in Basle, Switzerland, consists of senior representatives of bank supervisory authorities and central banks from 10 major countries including the United States. See Basle Comm. on Banking Supervision, Risk Management Guidelines For Derivatives ¶ 1 n.1 (Preface) (1994) [hereinafter Basle Committee] (on file with the author). The Guidelines "bring together practices currently used by major international banks in a single framework." Id. ¶ 4.

120. The Federal Reserve System regulates state member banks and bank holding companies. Among other actions, the Fed has proposed an increase in minimum capital standards for dealing with derivatives. See infra text accompanying note 150-51. William McDonough, the President of the Federal Reserve Bank of New York, has also warned bankers to implement risk management and internal control systems to address derivatives. New York Fed Chief Warns Banks on Risks of Derivatives, Redemption Dig. & Sec. Indus. Daily, Sept. 19, 1994, at 3; see infra note 133 (discussing
fice of the Comptroller of the Currency and the Federal Deposit Insurance Corporation also took action. For securities and commodity dealers, domestically, the SEC, the Commodities Futures Trading Commission, the National Association of Securities Dealers and the Bankers Trust agreement with the Federal Reserve Bank of New York).

121. The Federal Reserve Board, the OCC and the FDIC (which regulates state non-member insured banks) jointly announced new sales practice rules for banks that sell derivatives. The rules deal primarily with suitability matters and address CMOs and structured notes. See Robyn Meredith, Regulators Act to Protect Derivatives Customers, American Banker, Nov. 18, 1994, at 1.

122. See id.

123. The SEC has taken or considered action over a broad range of derivatives regulation. The Commission implemented a risk assessment program following the collapse of Drexel Burnham Lambert. See 17 C.F.R. § 240.17h-1T (1994) (“Risk Assessment Recordkeeping Requirements for Associated Persons of Brokers and Dealers”); 17 C.F.R. § 240.17h-2T (1994) (“Risk Assessment Reporting Requirements for Brokers and Dealers”). The Commission has also proposed amendments to the net capital rules addressing the pricing of listed options, and it has announced that it expects to adopt a unified computation of market risk capital charges along the lines suggested by the Basle Committee. Roberts Reviews Current Regulatory Developments for Derivatives Products, The SEC Today, Nov. 21, 1994, at 1; see supra note 119. The SEC has launched investigations into use by public companies of derivatives, see supra note 9 & infra note 143 (discussing Gibson Greetings), suggested changes in disclosure for public issuers, see infra note 138, and issued a staff report regarding the use of derivatives by mutual funds, focusing on disclosure of portfolio risk profiles, how to quantify that risk and lowering existing limits on illiquid assets including derivatives. The SEC has hectored the FASB and the NASD. See Roberts Discusses Developments, supra note 117, at 1. The SEC and CFTC jointly fined Bankers Trust $10 million in settling its investigation into Gibson Greetings. BT Sec. Corp., Exchange Act Release No. 35136 [1994-1995 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 85,477 (Dec. 22, 1994). The Commission has announced that it is considering changes in accounting rules for public companies involved in complex swaps transactions. Abby R. Schultz & Jeffrey Taylor, SEC May Change Accounting Rules For Derivatives, Wall St. J., Aug. 25, 1994, at A4 (discussing the proposed change, which would require companies engaging in certain derivative transactions to recognize gains and losses in the market value of these contracts on their earnings statements, rather than carrying them at cost, as many companies currently do); see infra text accompanying note 147. The SEC has amended Rule 10b-10 to supplement trade confirmation disclosure and warning requirements regarding derivatives. See infra text accompanying note 144. Perhaps most importantly, the Commission has consistently emphasized the need for good management controls. Brandon Becker, Regulatory Talk, Compliance Rep., Nov. 14, 1994, at 10. In fact, effective management controls are viewed as the “unifying theme” among all regulators addressing derivatives. Becker Calls Management Controls ‘Unifying Theme’ in Derivatives Response, 26 Sec. Reg. & L. Rep. (BNA) 1301, 1308 (Sept. 30, 1994) (quoting Brandon Becker, SEC Director of Market Regulation). Federal Reserve Board Governor Susan Phillips echoes the same point, noting that “[s]upervisors of individual institutions must continue to ensure that senior management of those institutions understand the risks and are implementing appropriate risk management procedures regarding complex financial products.” Oversight of Derivatives, supra note 78, at 1314.

124. The CFTC has participated in studies and actions taken by other agencies. See supra note 123. Although CFTC member Joseph Dial, in discussing the Banker’s Trust settlement, stated that “federal regulatory agencies are going to maintain strict oversight and will take prompt action to deal with improper conduct” as to OTC derivatives, see Bankers Trust to Settle SEC, CFTC Charges for $10 Mln, Bloomberg
ers,125 the Chicago Board of Trade and Chicago Mercantile Exchange126 also took action. Overseas, the International Organization of Securities Commissions,127 the Hong Kong Securities and Futures

News Service, Dec. 22, 1994, the matter was most remarkable for both Commissions' care not to address derivatives too broadly. See infra note 179. The Bankers Trust case was handled as the fraud of one Bank employee. The CFTC's Chairman, Mary Schapiro, however, who took office on October 13, 1994, has made it clear that the CFTC is reviewing its current swaps exemption criteria. She stated her concern as "whether we have drawn the circle [of exemptions] too wide. Do we have participants in the swaps market who are not sufficiently sophisticated and without sufficient resources? I'm particularly concerned about municipalities and pension funds." Mary Schapiro, Regulatory Talk, Compliance Rep., Dec. 12, 1994, at 10.

125. National Ass'n of Sec. Dealers, NASD Notice to Members 94-62, at 387, 388-90 (Aug. 1994) [hereinafter NASD Notice 94-62]. This Notice provides an excellent presentation of key issues relating to the sales and pricing of derivatives, including suitability requirements, that is, a "member's relationship with the customer gives rise to a duty to help the customer determine" the appropriateness of a given instrument for that customer. Id. at 388. In the face of strong negative comment by the SEC, however, ("[Commissioner] Roberts remarked that he is inclined to oppose any proposal that would sharply limit the coverage of suitability protection to customers, even institutional ones.") the NASD announced a hasty retreat. Roberts Discusses Developments, supra note 117, at 1. Walter Robertson, the NASD's Director of Compliance, explained that "the proposal . . . will be rewritten to clearly reflect that a [broker-dealer] has suitability obligations to all investors . . . . The interpretation will clarify the different standards some institutional investors may require for evaluating risk when they develop their own resources to evaluate investment decisions." NASD To Clarify Suitability Interpretation of 94-62, Compliance Rep., Dec. 12, 1994, at 3 (noting that some members originally interpreted 94-62 to mean that suitability rules do not apply to institutional customers). See also National Ass'n of Sec. Dealers, NASD Notice to Members 95-21, at 131-34 (Apr. 1995) (requesting comments from members on the suitability proposal discussed in NASD Notice 94-62, which has since been substantially redrafted).

126. The MERC is creating an agency to manage collateral for interest-rate swap dealers and the CBOT may create a clearinghouse to guarantee swaps and other derivatives transactions. These steps, expected to be effected in mid-1995, will address credit risk in exchange-traded products and will increase competition with OTC derivatives dealers. The MERC has also planned to provide valuations of swap positions and collateral at current market prices. Steven E. Levingston, CBOT, Chicago Merc Plan To Better Monitor Swaps, Wall St. J., Dec. 15, 1994, at Cl; see supra text accompanying note 95 (defining credit risk).


- An established framework of risk management policies, procedures and controls;
- market and credit risk management functions independent of the trading function;
- in-house expertise and resources;
- use of appropriate risk reduction techniques;
Commission\textsuperscript{128} and the International Swaps and Derivatives Association\textsuperscript{129} all took steps toward reducing the risk of derivatives. This does not purport to be a complete list.

Notably, beyond certain industry-specific areas such as capital standards, the approaches taken by these parties toward derivatives dealers and users have been largely process-oriented. Parties' approaches include activity and examination guidelines,\textsuperscript{130} focusing on management's ability to control risk\textsuperscript{131} and adequacy of internal controls.\textsuperscript{132} More specifically, in the Bankers Trust enforcement agreement, the Federal Reserve required greater risk disclosure and price information.\textsuperscript{133} Most significantly, six of Wall Street's largest derivatives dealers voluntarily agreed to make regular disclosures to the SEC and CFTC about how they manage their derivatives risks.\textsuperscript{134} These dealers also agreed to give written risk assessments to customers to whom

\begin{itemize}
\item appropriate valuation and risk exposure measurement techniques;
\item systems to ensure adequate information and reporting, both internal and external; and
\item appropriate funding and liquidity policies.
\end{itemize}

\textit{Id.}

\textsuperscript{128} "[T]he SFC intends to issue final guidelines which will represent minimum best practice for dealers engaged in OTC derivative activities and will then require firms to demonstrate compliance." \textit{IOSCO Guidance, supra} note 127, at 1.

\textsuperscript{129} The ISDA, the trade association of derivatives dealers, is an important observer and source of trade practice in the derivatives market. In fact, the ISDA recently completed a "standard trade confirmation form" for use by counterparties entering into OTC equity options contracts. \textit{Derivatives Group Creates New Confirm, Redemption Dig. & Sec. Indus. Daily, Nov. 18, 1994,} at 1. The purpose of the form is to address contingencies such as the disappearance of options issuers through merger, nationalization or bankruptcy. \textit{Id.}

\textsuperscript{130} An unnamed "senior Treasury Official" acknowledged consistency among the regulators as to these steps. \textit{Administration's Financial Chiefs Report on 80 Actions to Reduce Derivatives Risk, 26 Sec. Reg. & L. Rep. (BNA) 1421, 1429-30} (Oct. 28, 1994) [hereinafter \textit{Financial Chiefs Report}]; see also \textit{Group of Thirty, supra} note 118, at 11-12, 22 (1993) (advocating the use of stress simulations and netting agreements to reduce credit risk).

\textsuperscript{131} "The safe and sound use of derivatives is contingent upon effective board and senior management oversight." Comptroller's Handbook, \textit{supra} note 85, at 3.

\textsuperscript{132} \textit{See id.} (noting that examiners should review procedures that are designed to "[d]etermine the effectiveness of controls").

\textsuperscript{133} Following large losses by Bankers Trust clients Gibson Greetings and Procter & Gamble, Bankers Trust signed an agreement with the Federal Reserve Bank of New York requiring Bankers Trust to provide risk analyses and other information on leveraged derivatives transactions to enable customers to better understand the risks involved with these products. Steven Lipin & Jeffrey Taylor, \textit{Bankers Trust Signs Accord On Derivatives,} Wall St. J., Dec. 6, 1994, at A3. The accord, a Federal Reserve enforcement action regarded nearly as severe as a cease-and-desist order, requires Bankers Trust to provide daily quotes to ensure "reasonable transparency of pricing and valuation." \textit{Id.} at A12 (citation omitted); \textit{see also New Derivatives Safeguards Imposed As Bankers Trust, Fed Reach Agreement, 26 Sec. Reg. & L. Rep. (BNA) 1649, 1655-56} (Dec. 9, 1994) (discussing how the Fed defines in detail "leveraged derivative transactions" in the accord).

\textsuperscript{134} Taylor, \textit{supra} note 26, at Cl.
they sell derivatives. Sensibly, the purpose of these approaches has not been to shield market participants from economic risk or to limit the use of certain derivative products.

B. Bringing Derivatives Under the Existing Regulatory Regime

The introductory example demonstrates that derivative products are difficult to categorize under the existing securities laws, and therefore, regulating derivatives under the present framework of securities laws is impractical. Simply stated, the existing regulatory network is incapable of accommodating derivatives. In addition, a consensus is forming that well-publicized derivatives-related losses are more a function of poor management than inadequate regulation or "'intrinsic problems in the [OTC] derivatives market.'" The times throw up a technology: Risk must be marshalled in an era that prizes the earning power or cash flow of assets higher than the assets themselves and when economic well-being requires the continued expansion of world trade. It logically follows that parties' exposure to currency and interest fluctuations will increase. These developments coincide with the accepted use of advanced computational power, thus allowing financial risk to be divided into any number of discrete components. These conclusions are evident in an SEC staff comment to the Management’s Discussion and Analysis ("MD&A") section of one public company's Form 10-K. Noting the company's overseas manufacturing activities and supplier arrangements, the SEC inquired about "the extent of the company's exposure to currency risk; [and] the mechanics and extent of any foreign currency . . . hedging arrangements." Most revealingly, the company was required to "disclose management’s rationale for any unhedged exposure." Indeed, unhedged...
exposure to exchange-rate fluctuation has sparked at least one class-action lawsuit.\textsuperscript{141}

However, as one might expect, rationality does not always rule and the influence of certain interested parties reflects their organizational biases and traditions. Accordingly, at the moment, both the FASB and the SEC encourage, but do not require, MD&A disclosure of quantitative information by issuers about the risks undertaken in their derivative transactions.\textsuperscript{142} The SEC, however, indicated the intensity of its "encouragement" by commencing an investigation of Gibson Greetings, because, in the Commission's view, Gibson's derivatives transactions prior to its losses may have overstated the company's reported net income in 1993.\textsuperscript{143} The Commission has mentioned having all but "plain-vanilla" derivative contracts labeled as securities. It has also announced new disclosure requirements on mortgage-backed securities confirmations that will now include a "Surgeon General" type warning: "[Y]ields are subject to fluctuation depending on the speed in which the underlying note or receivable prepays."\textsuperscript{144} This warning reminds securities dealers to adhere to high standards in their sales practices.\textsuperscript{145} To set the enforcement tone, SEC Commissioner Roberts has on two recent occasions referred to derivatives as having been "'dreamed up more in a boiler room than a conference room.'"\textsuperscript{146}

The SEC is also considering a change in accounting rules to require publicly traded banks to mark to market\textsuperscript{147} unhedged index amortizing swaps,\textsuperscript{148} a $120 billion substitute designed to compensate with high yields for the prepayment risk of mortgage-backed bonds.\textsuperscript{149} Addressing the same area, the Office of the Comptroller of the Currency

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\textsuperscript{141} Millman, supra note 40, at 159 & n.7 (reporting that a class-action lawsuit was filed against Compaq in 1991, alleging that the company "'lacked sufficient and adequate foreign currency hedging mechanisms.'" (citation omitted)).
\textsuperscript{142} See supra note 117.
\textsuperscript{143} Gibson itself disclosed the investigation in its 10-Q filing for September 30, 1994. Anderson & Taylor, supra note 9, at C27.
\textsuperscript{144} Confirmation of Transactions, Exchange Act Release No. 34-34962 [1994-1995 Transfer Binder] Fed. Sec. L. Rep. (CCH) \$ 85,455, at 85,947 (Nov. 10, 1994) (summarizing amendments to Rule 10b-10). The amended Rule requires broker-dealers to disclose written information to customers regarding the terms of the transaction, whether the broker-dealer is an interested party and other relevant facts. \textit{Id}.
\textsuperscript{145} See Becker, supra note 123, at 10.
\textsuperscript{146} Wayne, supra note 6, at D1 (quoting SEC Commissioner Roberts' comments on the Orange County debacle).
\textsuperscript{147} See infra note 158.
\textsuperscript{148} "Index-amortizing swaps are derivatives designed to act as substitutes for mortgage-backed bonds; their interest and principal payments, which change in line with interest rates, are devised to behave more predictably than those of actual mortgage securities." Schultz & Taylor, supra note 123, at A4. These swaps provide for the exchange of floating interest-rate payments for fixed-rate payments over time. Unlike normal swaps, however, the underlying principal in these arrangements decreases ("amortizes") over time, and the rate of decrease speeds up when interest rates fall and slows when rates rise.
\textsuperscript{149} See \textit{id.} (noting that banks hold an estimated $120 billion of these instruments).
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and the Federal Reserve Board have proposed capital regulations that through haircutting\textsuperscript{150} would make the most speculative derivatives—multi-year interest and currency rate derivatives and those tied to commodity or stock markets—more expensive to dealers. Dealers have readily accepted this proposal because the regulations would allow haircuts to be reduced by hedging over an entire portfolio—the method used by dealers—rather than one transaction at a time.\textsuperscript{151}

At the same time, the bank regulators have taken what is for them a radical path. Banking regulation is aimed at institutional safety and soundness and at the institutional capacity to perform banking functions to protect that industry, rather than at the markets in which banks function.\textsuperscript{152} Yet, in treating derivatives, the banking authorities are shifting focus. For example, in the Bankers Trust matter, banking authorities developed and required sales practice rules and suitability guidelines to protect bank customers.\textsuperscript{153}

In following this traditional securities regulatory practice, the Fed and the Comptroller of the Currency may have concluded that existing banking regulation is no longer fitting for banks that have diversified and evolved into financial services companies. Indeed, the growth of derivatives is evidence of this metamorphosis. The National Association of Securities Dealers, however, in a rare bow to marketplace realities, recently proposed to relieve dealers' suitability obligations to institutions that have the "resources and procedures that provide them with the sophistication to make independent investment decisions."\textsuperscript{154} Reality requires that institutions use derivatives to further their commercial purposes. Those customers engaging in the bulk of derivatives transactions do not rely on dealers to help them "determine reasonable investment parameters."\textsuperscript{155} Whether the end-users' derivatives activities fit their enterprise needs will ultimately depend on their management practices, not on regulatory policy.

While the absence of any current trade reporting system for swaps, hybrids and structured derivatives positions cannot be ignored, the exotic derivatives that create the most concern are also those that have severely limited order exposure and trade transparency—necessities

\textsuperscript{150} "A 'haircut' is a deduction taken in a firm's capital computation in order to account for specific risks and uncertainty and is enumerated in regulatory capital rules. It is, in effect, a regulatory reserve." CFTC Report, supra note 2, at 60 n.27.

\textsuperscript{151} See Keith Bradsher, U.S. To Order Higher Bank Reserves, N.Y. Times, Sept. 1, 1994, at D1 (noting that the new regulations are intended to discourage banks from speculating in derivatives).

\textsuperscript{152} "Bank regulators are generally described as regulating banks or financial institutions, not markets." CFTC Report, supra note 2, at 56.

\textsuperscript{153} SEC Commissioner Roberts, predictably, has praised the federal banking agencies, noting that "'[t]he notion of protecting bank customers is a responsibility that bank regulators are stepping up to.'" Meredith, supra note 121, at 1; see also Wholesale Transactions Code, supra note 26, § 4.3.1. (addressing suitability concerns).

\textsuperscript{154} NASD Notice 94-62, supra note 125, at 388.

\textsuperscript{155} Id.
for accurate pricing. Consequently, because of the complexity of these instruments, there are wide variances between price quotations and actual executions. As a result, in considering approaches to control the risks of derivatives, calls for “transparent accounting” of derivatives activity and normally effective capital controls like marking the value of positions to market have limited or even illusory utility.

These shortcomings in the trade reporting system are even more evident when one considers that, in the words of one enthusiastic expert, the positions are “managed through... dynamic hedging—an inexact science that can heighten price movements and produce unknown consequences.” J.P. Morgan recently made public its methodology for calculating risk on more than three hundred derivatives tied to securities and currencies in more than fifteen major markets around the world. It claims that this information allows companies to understand up to ninety-five percent of the risk of their positions. Dealers and end-users also employ sensitivity reports to measure risk through probability analysis or duration-weighted average models. Ultimately, however, all is still approximation, “Kentucky windage.”

C. Formal Congressional Oversight

Several bills regarding derivatives regulation have been introduced in Congress recently. For example, Senator Riegle introduced the “Derivatives Supervision Act of 1994” in the 103d Congress. The

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156. See Kentouris, supra note 32, at 3 (reporting Lester Wigler’s discussion of these variances. Such variances are characteristic of all illiquid securities).

157. See Millman, supra note 40, at 257 (defining transparency as disclosure of risks to investors in a fund or taxpayers of a municipality); Oversight of Derivatives, supra note 78, at 1314 (summarizing transparency as a function of proper accounting, reporting and disclosure).

158. See Shadow Financial, supra note 89, at 1317-18 (explaining mark-to-market procedures). OTC derivatives and other illiquid instruments cannot be readily valued by reference to a secondary market (mark-to-market analysis). Id. Accordingly, many derivatives are priced by using computer-based models that estimate profits or losses from the time of purchasing the instrument. Such mark-to-model accounting, however, is uncertain, because not all models employ the same economic assumptions. Id. Wigler analyzes the difficulties of mark-to-market procedures with regard to complex derivatives. See Kentouris, supra note 32, at 3 (noting that mark-to-market analysis is inadequate because, in an active market with constantly changing values, rarely will one be able to execute a contract at the mark-to-market value).

159. See Melamed, supra note 61, at 17.

160. Michael R. Sesit, Morgan Unveils the Way It Measures Market Risk, Wall St. J., Oct. 11, 1994, at C1 (noting that the release of this proprietary information is “an aggressive attempt to supply the benchmark by which banks, institutional investors and corporations measure their risks”). The Bank stated that it released its method for calculating market risk to increase transparency in markets and to establish a common standard for measuring risk. Id.; see Levingston, supra note 126, at C1 (discussing the CBOT and the MERC’s systems for monitoring OTC derivatives transactions).

Federal Reserve Board and other organizations, however, opposed that legislation, arguing that the existing regulatory framework provided sufficient information to regulators.\textsuperscript{162} As expected, several bills regarding regulation of derivative securities have been introduced in the 104th Congress.\textsuperscript{163} One such bill, the "Risk Management Improvement and Derivatives Oversight Act of 1995,"\textsuperscript{164} calls for the establishment of a "Federal Derivatives Commission,"\textsuperscript{165} composed of members of the Federal Reserve Board, the Office of the Comptroller of the Currency, Office of Thrift Supervision, Federal Deposit Insurance Corporation, Securities and Exchange Commission, Commodities Futures Trading Commission and Secretary of the Treasury,\textsuperscript{166} to "establish principles and standards to improve risk management and the prudent use of derivative financial instruments by financial institutions."\textsuperscript{167}

Opposition to Congressional initiatives has appeared on several fronts in the last year. For example, Jack Fields, Chairman of the House Subcommittee on Telecommunications & Finance, concluded that there was no need for legislation to address the supervision of OTC derivatives.\textsuperscript{168} After careful study, Deputy Treasury Secretary Frank Newman "reiterated what federal regulators and industry representatives have been saying all year: that banking and securities regulators have adequate authority to oversee dealers and users of derivative products and that they already have put substantial guidelines in place."\textsuperscript{169} Several other groups have voiced opposition to ad-

\textsuperscript{162} Fed's LaWare Reiterates Stand on Derivatives: No New Laws Needed, Redemption Dig. & Sec. Indus. Daily, Nov. 30, 1994, at 2.
\textsuperscript{164} Id. § 101(a).
\textsuperscript{165} Id. § 102(1).
\textsuperscript{166} Id. § 104(a).
\textsuperscript{168} See Financial Chiefs Report, supra note 130, at 1429-30; see Oversight of Derivatives, supra note 78, at 1313 (noting that Federal Reserve Board Governor Phillips does not believe "that derivatives activities are jeopardizing individual institutions or the financial system as a whole"). Phillips opposes legislation governing derivatives because, in her view, the internal controls and risk management techniques developed thus far will contain derivatives-related risk. Id. at 1314.
ditional legislation, including Federal Reserve Chairman Alan Greenspan.\textsuperscript{170}

Notably, lawmakers' desire for additional oversight of derivatives is reminiscent of the calls for "costly regulatory overkill"\textsuperscript{171} of the GNMA ("Ginnie Mae")\textsuperscript{172} market in the early 1980s. Events during that period closely parallel headlines today concerning derivatives: Some Ginnie Mae traders were accused of improper trading practices,\textsuperscript{173} and there was "speculation inappropriate for financial institutions."\textsuperscript{174} Just as lawmakers today propose a "Federal Derivatives Commission," Senator Williams proposed the formation of a "Government Securities Rulemaking Board" to monitor Ginnie Mae trading.\textsuperscript{175} Ultimately, however, a prudent regulatory response mooted the need for more extravagant legislative initiatives: the SEC "deployed its anti-fraud arsenal against overreaching by dealers, and the New York Stock Exchange . . . established margin requirements applicable to transactions in Ginnie Maes."\textsuperscript{176} Government securities dealers established a system of self-regulation that included suitability requirements and provided for additional disclosure.\textsuperscript{177} In addition, accounting procedures developed to reflect more accurately the value of Ginnie Mae transactions.\textsuperscript{178} Indeed, the events surrounding the development of the GNMA market invite lawmakers today to take a step back and allow the existing derivatives regulatory apparatus to establish itself.

With respect to the financial markets, dealers and end-users have recognized that they are part of the modern world; the world of quantum mechanics and Harold Pinter plays; a world where we do not know everything about anything; a world of uncertainty. As in all human endeavors, however, adjustments will be made. Uncertainties or not, derivatives overlap with the management of enterprise and commerce and the continuing need to finance the national debt. The existence of other dealers and experts throughout the world who can act as counterparties in the United States and the growth of world

\textsuperscript{170} Melamed, supra note 61, at 15 (citing Greenspan's opposition to "fundamental changes in regulatory structure"); Derivatives Group, supra note 61, at 5 (reporting that the International Swaps and Derivatives Association opposes legislation governing derivatives and attributes large recent losses to "lack of sufficient knowledge of the products and [lack of] proper disclosure").


\textsuperscript{172} The Government National Mortgage Association ("GNMA") guarantees securities backed by pools of mortgages guaranteed by the Veterans Administration or insured by the Federal Housing Administration or Farmers Home Administration. Id. at 39.

\textsuperscript{173} Id. at 75.

\textsuperscript{174} Id. at 70.

\textsuperscript{175} Id. at 89.

\textsuperscript{176} Id. at 77.

\textsuperscript{177} Id.

\textsuperscript{178} Id.
trade mean that derivatives will be spared inhibiting legislation, notwithstanding the consumerist orientation of the SEC and the states. The steps to address perceived concerns will continue to be incremental, disclosure-oriented, good business practices. There will be no challenge to the derivative product. No one will threaten this financially engineered, commercially necessary golden goose. It is derivatives, however, that pose a challenge to our present regimes of financial and securities regulation. Securities regulations exist in layers like an archeological dig, haphazardly created by states, the federal government, self-regulatory organizations and Congress, each reacting to whatever “crisis” was at hand. Examples of such crises

179. But see Lipin & Taylor, supra note 133, at A3 (quoting William McLucas, director of the SEC’s Enforcement Division speaking about the SEC’s Bankers Trust-Gibson Greetings investigation: “‘Some of these instruments have been used so as to make them fall within the definition of securities’ and ‘we’re going to say they’re effectively securities.’”); Saul Hansell, Settlement By Bankers Trust Unit, N.Y. Times, Dec. 23, 1994, at D6 (also quoting McLucas, who stated, following the Commission’s settlement with Bankers Trust, that “[t]his is not a case about the suitability of any particular securities sold to Gibson, nor is it an action by the S.E.C. which announces any new regulatory regime with respect to derivatives’”); id. at D6 (noting that the financial industry and bank regulators had “pressed” the SEC (and CFTC) not to claim broadened authority over derivatives). See supra notes 123-24. Concerns that the SEC would, for the first time, claim that swaps were securities and therefore subject to its jurisdiction, were realized in a footnote in the Bankers Trust settlement release. BT Sec. Corp., Exchange Act Release No. 35136 [1994-1995 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 85,477, at 86,112 n.6 (Dec. 22, 1994). However, the SEC concurrently issued an order providing relief until September 30, 1995 from broker-dealer registration regarding certain OTC derivative transactions. Order Exempting Certain Brokers and Dealers from Broker-Dealer Registration, Exchange Act Release No. 35135, [1994-1995 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 85,476, at 86,108 (Dec. 22, 1994).

180. This approach is evident in the Wholesale Transactions Code, supra note 26, and standards for controls that six major derivatives dealers developed in cooperation with the SEC and CFTC. Taylor, supra note 26, at C1.

in this generation include standardized options in the seventies, and the activities of investment advisors today. Indeed, the instinct of regulators is often Luddite, placing market practice on a matrix of regulatory theory rather than effecting the lightest layer of regulation that furthers market efficiency.

One example of imposing regulatory theory occurred in November 1994, when the SEC amended Rule 10b-10, its confirmation disclosure regulation, in part to add a "warning label" about certain derivatives. In so doing, the Commission overturned its own previous policy as well as decades of securities industry practice. Prior to the amendment, it was possible for a customer to instruct his broker in writing not to send him execution reports. Last year, however, a number of municipalities, after so instructing their brokers, lost money due to the trading activities of their financial advisor. Thus, the rule has been amended. Now, in addition to providing execution information to the advisor, it requires a broker to supply such information to the advised account even if the customer does not want it.


183. See supra note 111 and accompanying text.


185. See CFTC Report, supra note 2, at 56 ("The development of OTC derivative markets has had to fit into [a] pre-existing regulatory framework.").

186. See supra note 144 and accompanying text.

187. 17 C.F.R. § 240.10b-10 (1994); see New York Stock Exch., Rule 409, N.Y.S.E. Guide (CCH) ¶ 2409, at 3700 (1994) (requiring members to send reports of a customer's account only on a quarterly basis).

188. Steven D. Wymer, an investment advisor to several small municipalities, was sentenced to over 14 years in prison on May 11, 1993, for defrauding his clients. He was also ordered to pay $91 million in restitution. In a prior SEC civil action arising under the same facts, Wymer was ordered to return $209 million to his defrauded clients. Adviser Who Defrauded Municipalities Sentenced to Over 14 Years in Prison, 25 Sec. Reg. & L. Rep. (BNA) 706 (May. 14, 1993). Wymer later testified before Congress in connection with a proposed amendment to the Investment Advisers Act of 1940, which would require investment advisors to disclose additional information to clients and would increase funding for SEC oversight of investment advisors through fees from registrants and applicants. See Investment Adviser Industry Reform: Hearing Before the House Subcommittee on Telecommunications and Finance, 103d Cong., 1st Sess. (Mar. 4, 1993). The bill at issue, The Investment Adviser Regulatory Enhancement and Disclosure Act of 1993, H.R. 578, 103d Cong., 1st Sess. (1993), passed in the House in May 1993, but "was killed in late sessions of the Senate." Senate Fails to Act After House Passes Investment Adviser Reform Bill, 26 Sec. Reg. & L. Rep. (BNA) 1365 (Oct. 14, 1994).
This is the SEC as nanny; the regulatory ethic that requires mature individuals and independent institutions to do something for their own good, whether or not the parties find it useful.

A second example of imposing regulatory theory involves the NASDAQ regulation of short sales. NASDAQ is the proprietor of NASDAQ, the largest OTC stock market. That market successfully relies on competing dealers to make markets in securities, rather than on specialists, as does the New York Stock Exchange. Although each of these stock markets has strengths and weaknesses, the public has been trained to regard only the Exchange as authentic. Therefore, NASDAQ periodically twists itself into a simulacrum of the Exchange to give the public unnecessary "comfort." Short-sale regulation is one such area. It has long been regarded as vestigial and subversive of the pricing mechanism. Nevertheless, because the New York Stock Exchange has such regulation, NASDAQ has recently followed suit to enhance its competitive position: NASDAQ has implemented an "uptick rule"; it will soon also require short sales to be identified upon order entry, and there must be proof that the seller can deliver borrowed securities to settle the transaction. Thus, the NASD has determined that an audit trail is necessary to evidence that the seller can borrow to make delivery at the exact moment of order entry. The NASD requires this information on the order entry report. In the recent past, this would have been merely a nuisance. Today, however, it is impossible. Stock market participants short sell baskets composed of dozens of securities at a time; systems proliferate that auto-

189. See supra note 144 and accompanying text.
191. Id. at 2578-79.
193. For example, an "uptick rule," which permits short sales only in an advancing market, impedes short selling. Macey, supra note 192, at 800-01. NASDAQ is exempt from the current uptick rule, Rule 10a-1 (17 C.F.R. § 240.10a-1 (1994)). Short sales provide a method by which investors who know that a security is overvalued may trade on that information, thereby promoting more efficient pricing. Macey, supra note 192, at 800; see also J. Randall Woolrich, An Economic Analysis of Short Selling and Security Prices (Sept. 1991) (on file with author) (concluding that an uptick rule is unnecessary and only increases trading costs and results in higher bid-offer spreads).
196. Id. On January 6, 1995, however, NASDAQ delayed implementing this rule until August 1, 1995. Until then, members are permitted to comply by reviewing lists transmitted among dealers by facsimile of securities available for borrowing.
matically execute orders, without assistance from traders. Borrowing is a necessity of a short sale; evidencing that it has been accomplished amounts to over-regulation.

These and other examples of unnecessary or anti-competitive regulation have, until now, lacked any mechanism of systemic review. One commentator noted that the ability of unregulated foreign dealers to act as counterparties in the United States places a "hole [in] the . . . heart of the derivatives market[s]." However, it is the fact that derivatives markets function internationally, largely beyond the reach of regulators, which is a hole in the heart of the regulatory structure (as are derivatives themselves). The system seeks all-encompassing regulation without regard to cost, and until now, market participants have not objected. As Comptroller General Bowsher stated:

[The nature of derivatives activities clearly demonstrates that [the current regulatory system] has not kept pace with the dramatic and rapid changes that are occurring in domestic and global financial markets. Banking, securities, futures, and insurance are no longer separate and distinct industries that can be well regulated by the existing patchwork quilt of Federal and State agencies.

CONCLUSION

Recently implemented voluntary compliance systems and the myriad informal approaches to risk reduction indicate the direction that regulation in this area will proceed, and also provide additional proof that there is no need for costly and counterproductive federal oversight of derivatives. These initiatives signal that derivatives users (and regulators) receive enough information about derivatives-related risk


199. The SEC, along with other government agencies, is required under the Paperwork Reduction Act of 1980, Pub. L. No. 96-511, 94 Stat. 2812 (codified at 44 U.S.C. §§ 3501-3520 (1988)) to consider the costs of proposed regulations. Thus, in promulgating amendments to Rule 15c2-12—regarding the provision of information by brokers concerning municipal securities—the Commission "anticipated that approximately 12,003 brokers, dealers, municipal securities dealers, issuers of municipal securities, and nationally-recognized municipal securities information repositories will spend a total of 95,860 hours complying with Rule 15c2-12 annually." SEC Estimates Compliance Load of New Muni Disclosure Rules, Redemption Dig. & Sec. Indus. Daily, Dec. 7, 1994, at 1 (quoting Commission filing with White House Office of Management and Budget). Without debating the accuracy of the estimate or its cost, to my knowledge no regulation deemed important by regulators has ever been abandoned because of cost borne by the regulated.

to make informed decisions. In addition, commentators continue to conclude that recent derivatives-related losses stem from poor management rather than from problems intrinsic in derivatives markets or from inadequate regulatory oversight. Indeed, the dramatic growth of derivatives over the past few years has changed the context of financial regulation. Notwithstanding the many risks inherent in derivatives, their importance to commerce insures for the first time that the costs that regulation places on the use of information are being questioned. The challenge of derivatives, ultimately, is to regulatory extravagance.