

Yield to Commission: Is an OTC Market Model to Blame for Growing Systemic Risk?*

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The intellectual foundations of financial regulation today rest on three pillars: greater transparency, increased disclosure and more rigorous risk management by firms. This trinity, the new Basel consensus, has a widespread, debilitating grip on current thinking. It informs not only the analysis of the bankers' think-tank, the Institute of International Finance, but also the recent proposals of the Financial Stability Forum, endorsed by the Group of Seven finance ministers and central bank governors in their statement of April 11. The limitations of this pervasive consensus are the source of much harm. For not only does the consensus fail to address the problem of systemic risk—and liquidity is above all a systemic issue—it also fails to recognise that the enforcement of a common approach to risk management enhances the homogeneity of the behaviour of market participants and hence exacerbates financial crises.

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Modern economics is based upon the idea that markets tend to be efficient and that when inefficiencies are manifest, new players will enter the market until the supposed imbalance is adjusted. The history of the financial markets in the industrialized nations, however, suggests that market participants deliberately tend to favor opaque markets, at least until such inefficiency causes a public reaction, as in the United States during the 1930s. Over the past 18 months, hundreds of billions of dollars in losses have been recognized by banks and investors due to the liquidity problems of over-the-counter (OTC) structured debt, some of which contained subprime mortgages. The fact that regulators in the U.S. and elsewhere have blessed these opaque, inefficient market structures adds to the concerns regarding transparency and overall efficiency, especially regarding the safety and soundness of global financial institutions.

Just as art dealers prefer private sales to auctions at Christie's, dealers in complex structured assets like collateralized debt obligations (CDOs) or credit default swaps (CDS) have created a

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private, bilateral marketplace where “innovation” is extreme and transparency limited. The principle of maximizing the “yield to commission” is a normal human trait and one that applies to sales in just about any industry. In the OTC world of complex assets containing subprime debt, however, everybody besides the dealers seem to be the losers. Indeed, the OTC market in complex structured assets seems so deliberately opaque and thus difficult to value as to be on the verge of being deceptive by design—that is, a fraud—and yet it has the full blessing and endorsement of politicians in most of the industrialized nations.

This article refers to market failure events, including Long Term Capital Management (LTCM), Amaranth Advisers, and Bear Stearns Companies (BSC), to highlight some of the risks and issues raised by OTC markets for structured assets and derivatives. The author asserts that more transparent, less complex types of market organizations, such as organized OTC markets for the debt issued by GSEs, including Fannie Mae, Freddie Mac and the Federal Home Loan Banks, and multilateral securities exchanges such as the New York Stock Exchange and the Chicago Mercantile Exchange, offer superior market structure models for organizing the trading of both OTC derivatives and complex structured assets.

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In May 2008, Deutsche Börse Chairman Kurt Viermetz said: “One lesson of the crisis is that in the future we will not see so many complex structured products that cannot be traded on-exchange.... Exchanges improve the overall systemic security of capital markets and thereby provide the foundation for functioning markets: confidence,” he said, noting that an exchange is a neutral, regulated venue providing the same transparent information to investors, as well as issuers and intermediaries.¹ The statement by Viermetz may seem obvious, especially since the benefits of multilateral exchanges in terms of liquidity, transparency, and overall risk management efficacy are embedded in the culture of the global financial community and have been since the Great Depression. From economics textbooks to the study materials used by the NASD to test knowledge of markets and regulations for registered persons, the practical benefits to investors and society of organized exchanges are well known and seemingly beyond dispute, so we will not review the basics in this article.²

According to data from the Bank for International Settlements, the OTC derivatives market totaled \$11 trillion in gross market value and \$340 trillion in notional value at June 2007. Over the past decade, the global OTC financial markets have seen a surge in the growth, first in terms of various types of derivative “swap” agreements and more recently involving several trillion dollars in private label securitizations, some of which include subprime mortgage loans as actual collateral or a reference. It is useful to note that a substantial portion of the total issuance of CDOs, in fact, have no collateral at all and are comprised of OTC derivative contracts designed to simulate the performance of a “real” CDO. Thus a discussion of seemingly disparate OTC asset classes like derivatives and structured assets seems to be increasingly appropriate, especially in the context of a dialogue about the systemic risk implications of OTC market structure.

The double-digit annual growth in OTC markets over the past decade occurred with remarkably little public debate and is driven by a number of factors, not the least of which is the shrinking profitability of exchange-traded instruments. OTC instruments offer dealers far better profits than exchange-traded contracts, but at a cost in terms of inferior price discovery, a lack of liquidity support from other dealers, and little or no secondary market support for buy-side investors. Unlike conventional mortgage pass-through structures, many complex structured assets can only be modeled by the dealers who create them—if at all. Thus other dealers and third-party valuation services have not been able to support investors when it comes to secondary market trading or valuation of complex structured assets.

Sometime during 2007, when investor concerns about credit quality began to create selling pressure on CDOs and other complex structures, dealers began to back away from making any secondary market prices at all. The bilateral OTC market for complex structured assets collapsed and, not surprisingly, losses recognized and in some cases realized by investors and dealers holding complex structured assets wiped out any profits—and then some—from the previous several years. Mark-downs of structured assets total in the hundreds of billions of dollars, in large part due to the lack of liquidity in OTC markets. In the world of fair value accounting, the default valuation for many illiquid OTC assets is zero, even if the assets are not impaired!³

There is considerable irony in the fact that the U.S. accounting profession, seemingly the last ones to hear about the wonders of efficient market theory, at the end of 2007 imposed a rule regarding “fair value” accounting in the U.S.—this at precisely the time when the expansion of opaque OTC market structures had reached a zenith and were already collapsing. The adoption of the FAS 157 rule by the Financial Accounting Standards Board at the end of 2007 came just as the subprime crisis was unfolding and may, in years hence, be reckoned as one of the cruelest ironies of recent financial history. But the one thing we can say, seemingly without fear of contradiction, is that when a market has a significant percentage of assets traded OTC and for which prices cannot easily be observed, then implementation of a “fair value” rule is unlikely to be a success.

Despite almost two years of wrenching loss recognition and realization in the once \$3 trillion asset market for private label OTC securitizations, there is virtually no discussion of how or whether the growth of the OTC market model contributed to the subprime financial crisis. And with some notable exceptions, nary a word is heard from the U.S. Congress, financial regulators, or the academic community regarding the public policy implications of a growing OTC marketplace. Instead, notwithstanding the financial and human wreckage of the subprime crisis, the consensus behind an OTC market structure remains intact largely, at least beyond proposals to slightly modify the status quo in order to “reduce risk.”

The various industry associations associated with OTC derivatives and securities dealers continue incremental efforts to improve the basic deficiencies of a decentralized, non-standardized OTC market model. Whether improvements in clearing, inter-dealer communication, or other advances, all fall short of the type of standardization and enforced transparency necessary to replicate the efficiency seen in organized OTC markets or exchanges. Having a common clearinghouse for OTC trades, for example, will limit counterparty risk, but current rules may still leave gaping holes and permit leveraged positions that represent a systemic danger to market function. But there are signs that the seeming consensus behind the OTC market model is being reconsidered.

First, as a practical matter, complex structured assets are dead as an asset class. Secondary market trading continues at very low levels, but major dealers have largely stopped making any type of continuous markets in CDOs and other private label securitizations. The primary market for these unregistered, ersatz securities also is basically dead. Buy-side investors as a group have largely foresworn involvement in these assets. As this article goes to press, relatively conventional mortgage securitizations or collateralized loan obligations (CLOs) are finding a good reception from investors, but more complex structured assets are being shunned because the financial and career cost of these instruments is prohibitive.

But beyond the collapse of the market for complex structured assets, the related market for OTC derivatives contracts is also under attack—and by major voices among buy-side firms. Kenneth Griffin, founder of Citadel Investment Group, told *The New York Times* that he wants the government to require the use of exchanges and clearing houses for credit default swaps and other derivatives, a move that if embraced would almost certainly see a similar regime for OTC structured assets. Griffin noted that an exchange-based model eliminates enormous counterparty risk exposure, risk that ultimately need not exist at all.⁴

Some regulators have also begun to question whether the market for OTC derivatives should be subject to functional regulation. Eric Dinalo, the New York insurance superintendant, has said that CDS should be subject to some type of functional regulation as insurance products. “There are two kinds of CDS,” Mr Dinallo told the *Financial Times*. “As much as 20 per cent of the CDS market consists of protection bought against bonds that are owned, and this could be considered a type of insurance. The rest of the market is used to place bets and is not based around hedging actual positions.”⁵

As Dinallo’s comments suggest, one man’s CDS is another’s insurance contract, but Dinalo’s attention is driven by the increased participation of his industry in the highly leveraged CDS markets. To his example, consider the example of bond insurer MBIA. At the end of Q1 2008, MBI had about \$1 billion in net debt, but there were \$135 billion worth of CDS contracts outstanding on MBI. Thus in Mr. Dinallo’s world, \$1 billion of those positions would be true “hedging,” and the rest merely speculative gaming positions.

There is no right choice in terms of market structure, but the choice of one type of market structure over another is quite significant viewed from the perspective of objective criteria such as transparency, the quality of prices available, and market liquidity. This “qualitative” issue is illustrated not only by the gruesome results of the subprime crisis of 2007, but by U.S. history, specifically in the period leading up to the 1930s. Complex structured OTC assets were not first developed in the 1990s as many might think, but were in fact introduced in the U.S. and Europe in the decades before the Great Crash of 1929. Many of the structured investment vehicles of that day were sold by entities that today would be regulated as insurance companies, illustrating the way in which the U.S. market has changed over the intervening years.

Structured vehicles such as real estate bonds and guaranteed mortgages were sold to retail investors decades before the term “subprime” came to be synonymous with financial pain around the world. Investors in the “group series certificates” based upon pools of mortgages and issued by The New York Title and Mortgage Company of New York, for instance, experienced 82% losses on their investments. A classic description of the time published in 1937 in *False Security: The Betrayal of the American Investor* sets the scene:

In the beginning the companies sold only mortgages, that is, a mortgage on a single piece of property to one investor which they guaranteed. Later, they devised two other securities which were designed to give the investor greater safety by reason of diversification, on the principle that one should never keep all of one’s eggs in one basket.⁶

Newer generations of the complex structured assets that precipitated the subprime crisis descend from these early “innovations” in finance and, more to the point, are merely an imitation of the conforming paper today sold in the GSE (government-sponsored enterprise) markets. But whereas the OTC market for agency debt has clear rules and specifications to aid securitization and secondary market trading, standards that provide liquidity and ease of valuation to investors, the private label market for securitization grew in the undisciplined world of OTC, where anything goes when it comes to deal terms and complexity. Thus the simple explanation of the subprime crisis: Wall Street took the basic GSE model, substituted credit enhancement and a

paid rating from Moody's or S&P for the full faith and credit of the U.S. Treasury, and then made the financial structure impossible for most people to understand.

Alex Pollock, a Resident Fellow at the American Enterprise Institute and a director of the Chicago Mercantile Exchange, put the issue of market structure in perspective in a May 2008 interview:

Among the various forms of competition is a competition in organizational forms. So, you could think of competition between proprietorships and corporations, or a competition between socialist republics and, more or less, market economy democracies and Singapore style authoritarian regimes with some degree of competition. You can think of organizational types as competing. And one of the most interesting types of organizational competition is between OTC markets and organized exchanges. This competition goes back to the 1920s and one of the results of the bust of the 1930s was that the exchanges were widely recognized as the superior organizational form over what in derogatory terms were called "bucket shops" in those days.⁷

One common thread in the collapses of LTCM, Amaranth, and BSC is that in all three cases, the OTC instruments involved were very similar to the debt traded by the "bucket shops" of the early 1900s. While many other factors led to these events, the role of OTC instruments in terms of liquidity and/or valuation issues seemingly played an important role. An important attribute of the OTC model in this regard is the bilateral relationship between the dealer and the end-investor, a key part of understanding why liquidity is such a problem today. Unlike an exchange, where dealers are only one source of liquidity, OTC markets rely entirely upon dealers for all liquidity. The retrograde nature of the OTC market structure is illustrated by author Martin Mayer, who wrote about the BSC debacle and leverage generally in *Barrons*:

In the OTC derivatives market, people who want to get out of their previous trades have to offset the obligations of that trade by creating a new instrument with a new counterparty. Take a credit-default swap, by which each party guarantees to accept the payout on a debt instrument held by the other party. It's an insurance instrument, with some differences: The holder of the insured instrument can sell it, and the new owner becomes the beneficiary of the insurance. And the insurer may find someone who will accept a lower premium to take the burden of the insurance, allowing him to lay off his risk at an immediate profit. The one trade thus generates two new instruments, with four new counterparties, and as the daisy chain of reinsurance expands, the numbers become ridiculous: \$41 trillion face value of credit-default swaps.... Once you begin to remove

individual flower girls from the daisy chain of credit swaps, you don't know who will wind up with obligations they thought they had insured against and they can't meet.⁸

The use of illiquid and opaque OTC instruments not only was an important factor in the failures of these institutions but also threatened the stability of other firms and in general caused substantial market volatility, both for OTC markets and the traditional exchanges. The broad reaction to these events suggests that the illiquid and fragmented nature of OTC markets, which are served by a relatively small number of dealer banks, may increase overall systemic risk for all markets. Yet over the past decade, regulators and elected officials have worked to prevent greater oversight of OTC markets.⁹

On April 27, 2008, *The New York Times* ran a Sunday business section cover story on Robert Rubin that reviewed Rubin's role in blocking federal oversight of the over-the-counter derivatives markets. The *NYT* described how former Fed Chairman Alan Greenspan, former Treasury Secretary Larry Summers, and Rubin coordinated to undermine efforts by CFTC Chairperson Brooksley Born to impose greater federal oversight of OTC derivatives markets. The *Times* reported: "On at least one occasion, Mr. Rubin lined up with Mr. Summers as well as Mr. Greenspan to block a 1998 proposal by the Commodity Futures Trading Commission under Ms. Born that would have effectively moved many derivatives out of the shadows and made them subject to regulation."¹⁰

While Robert Rubin and Alan Greenspan worked to make the world safe for OTC derivatives, regulators warned of the consequences of such a choice in market structure. In a speech on November 13, 1998, Ms. Born emphasized the role of OTC instruments in the LTCM failure:

The events surrounding the financial difficulties of Long-Term Capital Management L.P. ("LTCM") raise a number of important issues relating to hedge funds and to the increasing use of OTC derivatives by those funds and other institutions in the world financial markets. The issues most directly posed by LTCM include lack of transparency, excessive leverage, insufficient prudential controls, and the need for coordination and cooperation among international regulators. I welcome the heightened awareness of these issues that the LTCM matter has engendered and believe it is critically important for all financial regulators to work together closely and cooperatively on them.

Note that Born's comments of a decade ago regarding the LTCM collapse highlights those issues that contributed to the collapse of BSC earlier this year, namely the systemically unstable nature

of an OTC market structure. Note too that over the intervening decade nothing happened in Washington to effectively address these issues. To the contrary, Greenspan, Summers, and Rubin all acted to enable Wall Street's quest for higher profits via the opaque OTC market structure model, a decision that apparently came at the expense of investors and the public interest. The lack of accountability by the Fed for its policy actions regarding issues of market structure is remarkable but not unusual and follows a broader pattern of deception and abuse of public trust by Alan Greenspan and the Fed's unelected Washington staff.¹¹

Instead of a truly free and transparent OTC market for derivatives and securitizations, today's OTC jungle seemingly ensures the destruction of a significant portion of capital deployed by dealers and investors both. Banks and broker dealers have to recognize huge economic losses on OTC securitizations. When you consider the time and other resources that all manner of financial institutions have spent and are spending to deal with the valuation and operational issues arising from the collapse of the OTC securitization market, it seems reasonable to ask: How does such a market structure serve the interests of investors or the marketplace?

Unfortunately, you are unlikely to hear such questions asked in Washington. The U.S. Congress, the major regulators and such industry groups as the President's Working Group on Financial Markets, and two presidential administrations from different political parties, all collaborated to bring the financial crisis involving subprime debt and OTC securities to fruition. While talking about "innovation" and "competitiveness," the U.S. political elite and Wall Street authored the subprime crisis from beginning to end, specifically by allowing the OTC marketplace to develop in such a way as to threaten the safety and soundness of large banks. And the real irony is that the OTC market structure has been a catastrophe for many dealers, some of which laid out tens of millions of dollars in lobbying fees to make the OTC market a reality, but then took billions of dollars in losses on OTC securitizations!

In the case of LTCM, the record suggests that excessive leverage, combined with the sudden withdrawal of market liquidity for OTC and exchange-traded contracts used by the fund for its investment strategy, led to its failure and famous rescue orchestrated by the Federal Reserve Bank of New York. Many of the fund's positions were subsequently traded profitably by the successors, suggesting to some observers that the short-term deprivation of liquidity caused the

failure of what was a profitable strategy. While many factors were involved, an important element in the failure, however, seems to have been the collapse in the liquidity of LTCM's OTC positions.¹²

The Corrigan Group report published in the wake of LTCM noted that “the interrelationship between leverage, market risk and liquidity provided an enduring lesson of the LTCM crisis.” Specifically, “The Report of the Counterparty Risk Management Policy Group II” (CRMPG-II) noted that the tendency of dealers to congregate around similar trading strategies, so-called “crowded trades,” and the propensity of such behavior to understate risk, led many institutions to make errors in calculating exposure, “leading to misleadingly low risk calculations in conventional value at risk (VaR), including liquidity-adjusted VaR, and other risk models” (p. 48). As the CRMPG-II noted:

Reflecting mergers and acquisitions among major financial institutions in recent years, there is now a relatively small number of very large and complex institutions at the core of the global financial system. Collectively, these institutions are dominant participants in many segments of financial markets, including the OTC derivatives markets. Clearly, life-threatening financial problems at any one of these institutions would create a major challenge to financial markets in general.¹³

While the Corrigan Group's recommendations were ostensibly aimed at fostering greater stability in the OTC markets for derivatives, the same comments are applicable to exchange-traded instruments. The ultimate objective of the CRMPG-II and other industry efforts to address “risk,” a cynic might say, was to fend off the few but growing objections to the OTC model, particularly OTC derivatives contracts. Remember too that at the time of the LTCM rescue a decade ago, the threat from OTC complex structured assets was not yet in view.

On May 8, 2003, Alan Greenspan made the following remarks to the Federal Reserve Bank Chicago Conference on Bank Structure and Competition:

Concentration of market making has the potential to create concentrations of credit risks between the dealers and the end-users of derivatives as well as between the dealers themselves. This latter concentration of risk results from dealers frequently managing their market risks through derivatives transactions with a limited number of other dealers. As mentioned earlier, critics of derivatives often raise the specter of the failure of one

dealer imposing debilitating losses on its counterparties, including other dealers, yielding a chain of defaults. However, derivatives market participants seem keenly aware of the counterparty credit risks associated with derivatives and take various measures to mitigate those risks.

Without mentioning the OTC markets directly, Greenspan describes their attributes: a limited number of dealers, poor liquidity, and thus a concentration of credit and counterparty risk. As this writer learned years ago working in the market for German government bonds, liquidity in an OTC market only extends as far as the willingness of other traders to pick up the phone. Moreover, because OTC contracts are varied and unique, they reduce market efficiency and increase spreads, but at the expense of most market participants—other than those parties involved in the trades. The employees of the dealers are arguably the only beneficiaries of the OTC model since they can move from one institution to another, but the risks of the OTC transactions remain with their firms for the duration of the transactions, often many years.

In the case of Amaranth, the fund used exchange-traded and OTC contracts to construct a position in natural gas that was not only excessive and ill-advised in terms of the market fundamentals but actually began to approximate a large subset of the entire physical market in natural gas with a margin position estimated at \$1.5 billion. Without the use of OTC contracts and the leverage they enable, it would not have been possible for Amaranth to accumulate such a large overall position. Ultimately, the basis of the trades was called into question by the marketplace and the fund's liquidity disappeared when JPMorgan Chase essentially cut the fund off from its collateral.¹⁴

Were it not for the existence of the OTC market in structured energy derivatives, a cash settlement market with no connection to the physical energy market basis save pricing, Amaranth could never have accumulated such a large overall position and lost \$6 billion of its clients' money so quickly. At a minimum, in an exchange-traded market, the other clearing firms would have been pressuring JPM's management over the size of the Amaranth positions. It is this fact of collective disclosure and collective responsibility by the clearing members of an exchange over each other that provides a vital market discipline—a classical “checks and balances” sort of restraint that OTC markets entirely lack.

The Amaranth failure illustrates that exchange rules on spread trades can still allow for leverage that is a multiple of outright positions. Most major blow-ups arguably have involved spread trades (LTCM, Amaranth, the Carlyle funds) where a lack of liquidity and/or good pricing for OTC instruments resulted in “surprise” losses. But are such losses really a surprise or “unexpected” in an OTC market?

The failure of BSC in March 2008 arguably illustrates the worst single instance of OTC market failure in the new era of complex structured assets. BSC’s trouble began in the summer of 2007, when two hedge funds sponsored by the firm encountered severe losses on private-label mortgage paper, collateralized mortgage obligations, and related derivatives. The markets for such paper had become badly dysfunctional after worries about losses on subprime mortgages slowly eroded investor confidence in the AAA ratings from Moody’s or S&P carried by many deals. The blow up of the BSC funds was one of the first such events and within weeks an entire asset class became illiquid.

By March of 2008, BSC had endured months of bad press and growing unease among counterparties. The firm was facing a liquidity run driven by the fact of thousands of bilateral, OTC positions with its clients. From an operational perspective, dealing with the flood of incoming OTC instructions was impossible, even for the veteran operations staff at BSC. The firm was literally swamped with requests for return of funds or collateral or both, a situation made all the more difficult by the peculiar requirements of OTC derivatives and structured assets.

Some observers claim BSC was the victim of a concerted “bear raid” by a number of hedge funds, which actively worked to undermine the BSC’s liquidity while shorting the firm’s stock and debt. Hedge funds reportedly were buying OTC counterparty risk positions with BSC from other parties and then demanding immediate payment or the return of collateral, deliberately accelerating the firm’s collapse while at the same time selling its securities and derivatives short.¹⁵

Other observers, however, tell a different story, whereby the dealer community, and not vicious hedge funds, actually caused BSC to fail by refusing to face the struggling bank in the interdealer market. As all manner of clients tried to trade out of or novate OTC counterparty positions with BSC to other firms, other OTC dealers began to refuse to take further exposure with BSC. By the close of business on Thursday, March 13, BSC effectively lost access to the repo and interdealer markets—the death knell for any investment bank.

As BSC was being shut out of the interdealer market, Lehman Brothers was also being shunned by other OTC dealers and attacked by the hedge fund hordes in the same fashion as BSC. Several veteran traders in the CDS market told this writer that Lehman was essentially in danger of failing as well. Indeed, the only reason that Lehman did not, claims one well-connected trader, was a conference call on that Monday with the top 10 dealers organized by the Fed of New York. During that call, the Fed of New York reportedly told the other dealers that it would lend Lehman “whatever is necessary” to keep that leading OTC mortgage-backed security underwriter and CDS house afloat.

So great were the liquidity pressures on BSC even after the diligence process by JPM had begun, that the firm was still in danger of failing and filing bankruptcy. Right up until JPM formally agreed to stand behind all of BSC liabilities, the lawyers for the crippled broker-dealer prepared for a bankruptcy filing. The inability of BSC to trade or finance its inventory of OTC securities in the marketplace caused one of the great names of Wall Street to fail.¹⁶

The failure of BSC and the near-failure of Lehman illustrate the fact that an OTC market shifts the focus of market attention regarding risk to individual counterparties. Had the clients of BSC held positions that were traded on an exchange or at least standardized and centrally cleared, the issue of bilateral credit risk would not have existed at all and the run on BSC may have never occurred. It was the understandable concern by counterparties regarding bilateral credit exposures with BSC in the OTC market for complex structured assets and credit derivatives that seemingly drove the run and led to yet another near-systemic event in the mold of LTCM and Amaranth.

CHOICES FOR MARKET STRUCTURE

At a meeting sponsored by Professional Risk Managers International Association in May 2008, two dozen chief risk officers from some of the largest financial institutions and funds in the world met to discuss market issues, particularly as it affects valuation of OTC structured assets. During the discussion, several participants mentioned that their organizations were convening valuation committee meetings *daily*, involving the CRO, CFO, and other top executive suite members and their direct reports, in order to keep abreast of issues regarding existing investments or questions about new investments. In previous years, valuation committee meetings had been weekly or less frequent for most participants.

At a meeting attended by this author in March 2008 of advisors and chief investment officers from the insurance industry, a similar story was heard. CIOs were being forced to spend huge amounts of time on valuation processes, reviews of said processes by internal and external auditors, and also pre-approving new investments via a similar process. In nearly every case, the CIOs were unable to obtain prices that were reliable, if at all, for all manner of complex structured assets, forcing them and their colleagues to perform laborious manual valuation and comparative analyses to comply with internal control requirements for illiquid assets. The combination of attention from auditors and the requirements of new accounting rules such as FAS 157 were adding enormous cost and inefficiency to the investment process.

Based on these limited but certainly relevant examples, it seems fair to ask whether the direct and indirect costs being borne by financial institutions as a result of the inefficiencies in the OTC markets are commensurate with the benefits. Since it is hard to identify many benefits of the OTC model, other than to the dealers who trade in this opaque dealer market, the costs to investors in terms of pricing issues and sheer human resources being devoted to remediation of the pricing issue seem unreasonable. Why is the global financial system willing to tolerate a market structure that generates such costs and risks, and that caused such massive financial losses and other dislocations, including tens of thousands of redundancies?

“The thing people are not focusing on is that the model is broken in the U.S. banking industry,” says veteran Washington policy observer Robert Feinberg, who spoke to the author for this

article. “The industry says that we’re going to be good boys again, but there’s no money in being good,” he observes, adding that the Congress and regulators have been entirely complicit in allowing the vast growth in the markets for derivatives and complex structured assets, ironically because of concerns about bank profitability.

Whatever factors have ultimately fueled the explosive growth in OTC markets, the risks associated with these markets, as evidenced by the factors highlighted in this article and others, seem to suggest that a discussion need occur as to what form of market structure best balances the interests of innovation and market efficiency. Just as a civil society establishes laws to govern the behavior of its citizens or transact commerce with other nations, societies also need to set basic minimum rules for selling securities—especially when intended for sale to banks, pensions, and mutual funds, who ultimately represent unsophisticated individuals.

The non-dealer public also has an interest in the choice of financial market structure and, as in the 1930s, that public opinion hopefully will be heard in Washington and within the financial services industry. Based upon the conversations that this writer has had with clients and peers, including as a regional director of PRMIA’s DC chapter, it strikes me that there is a substantial “silent majority” of investors, advisers, and risk professionals who would be very pleased indeed to see much of the OTC market flows in derivatives and structured assets move back into the daylight of open price discovery and liquidity that an exchange-based model provides. It remains unclear, though, whether any politician in Washington has the intelligence and the courage to address this issue in the face of likely opposition from Wall Street.

¹See “Deutsche Börse sees OTC losing ground to exchanges,” *Reuters*, May 7, 2008.

²For a review of the costs and benefits of an organized exchange, see Lester S. Telse and Harlow N. Higinbotham, “Organized Futures Markets: Costs and Benefits,” *The Journal of Political Economy*, vol. 85, no. 5 (October 1977), pp. 969–1000.

³For a further discussion of FAS 157 and Fair Value Accounting, see Christopher Whalen, “Banks Wallow in the Muddy Waters of ‘Fair Value’ Rules,” *Financial Times*, March 6, 2008.

⁴Andrew Ross Sorkin, “A Wish List for Fixing Wall Street,” *The New York Times*, May 13, 2008, p. C1.

⁵Aline Van Duyn, "New York Watchdog Wants Derivative Controls," *Financial Times*, May 13, 2008.

⁶For an excellent discussion of the players and structured transactions of the early 1900s, see Bernard J. Reis and John T. Flynn, *False Security: The Betrayal of the American Investor* (Equinox Cooperative Press, 1937).

⁷See "Conflicted Agents and Platonic Guardians: Interview with Alex Pollock," *The Institutional Risk Analyst*, May 13, 2008, www.institutionalriskanalytics.com.

⁸See Martin Mayer, "The Fed Has Power, But No Will," *Barron's*, April 14, 2008.

⁹As early as 2004, federal regulators were sufficiently concerned about complex structured financial instruments to promulgate a statements regarding "sound practices," at least partly due to the reputational and operations risks involved in creating such instruments, but these rules finally were made into mere "guidelines" and not binding, a measure of the banking industry's vast lobbying clout.

¹⁰Eric Dash and Nelson Schwartz, "Where Was the Wise Man?" *The New York Times*, April 27, 2008, Sunday Business section, p. 1.

¹¹For an excellent study of the mismanagement of the Federal Reserve Board under Alan Greenspan, see Robert D. Auerbach, *Deception and Abuse at the Fed* (University of Texas Press, 2008).

¹²See Richard Lindsey, "Testimony Concerning OTC Derivatives in the U.S. Financial Markets," *Senate Committee on Agriculture, Nutrition, and Forestry* (December 1998). Lindsey notes: "Clearly, the extraordinary leverage employed by LTCM and furnished by its investors and lending institutions, invites further examination not only of LTCM's operations and strategies, but also those of its counterparties."

¹³See "Toward Greater Financial Stability: A Private Sector Perspective," *The Report of the Counterparty Risk Management Policy Group II* (2005), p. B-13

¹⁴See Hillary Till, "EDHEC Comments on the Amaranth Case: Early Lessons from the Debacle," *EDHEC Research Center* (2006).

¹⁵See "Novated Bears & the Education of Ben Bernanke," *The Institutional Risk Analyst*, March 31, 2008, www.institutionalriskanalytics.com.

¹⁶See Roddy Boyd, "Bear Stearns Second Brush with Bankruptcy," *Fortune*, May 2, 2008.