Remember—central bankers are paid to worry!

Silas Keehn

The following is a transcription of a speech presented by Mr. Keehn, President of the Federal Reserve Bank of Chicago, to the International Swaps and Derivative Association on March 18, 1994.

It is a pleasure to be here and to have a chance to review my thoughts on the derivatives markets with you. I firmly believe that these exchanges between regulators and industry participants serve an important and mutually beneficial purpose, and I think a good deal has been accomplished by the recent discussions. As you are all aware, the derivative markets are without question the fastest growing and most exciting area in the financial industry, but that growth is beginning to attract some unwanted yet perhaps healthy attention. To put it mildly, your press has not been very good lately. Between Metallgesellschaft, the recent case of Gibson Greetings, the cover of a major business magazine, and a blizzard of government and industry reports, it seems as though everyone is suddenly worried about derivatives.

This shouldn't come as a big surprise. The complexity and rapid pace of change in your markets has simply outstripped the ability of all but the most qualified specialists to keep up. Even sophisticated individuals can feel overwhelmed when confronted with concepts such as digital and embedded options, "swaptions," caps and collars, and the seemingly endless variety of clever new combinations. It's easy to understand why an outsider, or more to the point, a legislator, would find these markets confusing and perhaps even sinister.

But my viewpoint is somewhat different. As a central banker, I am concerned not so much with the complexity of the market but with its underlying integrity. The Federal Reserve, as the nation's central bank, has the ultimate responsibility for the health and efficient operation of the financial system. In that role, our job is not to eliminate risk, but in cases where there are conflicts, to make tradeoffs between risk and efficiency.

Having said that, let me clearly emphasize that I have no doubt that derivatives play a useful role in modern financial strategies. Today, to an extent that would have been hard to imagine just twenty years ago, it is possible for a firm to separate different risks—currency, interest rate, and commodity—and sell off those that the firm doesn't want to retain and keep those it does. The flexibility and low costs of these products have allowed firms to manage risk and pursue new business in ways that were simply impossible in earlier times. The very real and significant advantages of these financial strategies have demonstrated themselves dramatically in the marketplace.

Legitimate concerns

But legitimate concerns have developed, and remember—central bankers are paid to worry, and high growth rates and high concentrations are two hot buttons that always get our attention. One need hardly repeat the standard if admittedly flawed numbers about the incredible growth in derivative activities to understand why there are calls for significant regulatory controls.

In the five-year period ending 1992, the notional value of swap contracts outstanding increased from an estimated $865 billion to some $4.7 trillion. This compares to the $3.6 trillion in total corporate debt outstanding in the U.S. Within the banking system, the use of swaps over this same period increased from a notional value of $705 billion to $2.1 trillion, a level equivalent to seven times the aggregate amount of bank capital. These growth numbers are matched by even more worrisome concentrations of risk in the dealer market. According to the 1993 Swaps Monitor Survey, the ten largest dealers account for about half of the outstanding interest rate swaps, and the ten largest dealers in currency swaps account for 40 percent of the market. Such numbers, even if somewhat overstated, have an unfortunate resonance with previous problems in the financial system. As the historical record demonstrates over and over again, high growth and undue concentration of risk are a recipe for trouble.

Lending to less developed countries (LDCs) in the 1970s is a good example. While it was advertised by some as a low-risk way of recycling the massive inflow of petrodollars, that argument was less than compelling. In hindsight, bankers underestimated the risks and saw an elusive opportunity to increase earnings by aggressively expanding their LDC lending.

Another classic example was the energy area. If you go back to the period when energy lending really began to escalate, bank management was convinced that this was an appropriate way to build up earning assets at comparatively high rates of return and with little perceived risk. Unfortunately for those banks and for the deposit insurance agencies, it turned out that energy prices could go down as well as up. Once again, high growth combined with an insufficient appreciation of the risks involved led to disastrous results for many banks. I am not saying that very rapid growth per se is necessarily fatal, but rather, it is a warning signal. As growth accelerates, even small mistakes can grow into major problems.

Some perspective

But before the parallels between the growth in derivatives and LDC and energy lending become overdrawn, it is important to remember, first, that notional value is at best only a rough guide to the true size of the market and the actual risks being undertaken. Better data, based on market value and segmented by type of contract, and adjusted for double counting and netting, are clearly necessary in order to understand the actual risk exposures that have developed in these markets. Second, it is important to remember that derivatives are primarily a risk management tool, not a risk acquisition tool—and that even what may seem like a significant derivative risk of an individual institution may be offsetting an equivalent but opposite risk in the rest of its portfolio.

This is not to say that there aren't risks, but rather, that much of the risk associated with derivatives arises not from their existence but from their possible misuse—a very important distinction. A product that allows firms to eliminate large risks quickly and easily also allows them to acquire those risks, and thus in turn to expose others in the system. This raises both counterparty and systemic issues that the Federal Reserve cannot ignore.

Certainly the market understands these issues. The development of triple-A-rated subsidiaries, as well as the high capital and collateral requirements that the market is demanding of dealers, is clear evidence of just how seriously the market takes these risk management issues. After all, no borrower would ever require that a bank have a triple-A credit rating before accepting an energy loan from it. From the standpoint of central bankers, the prudence demonstrated by customers in the derivatives markets is a good sign that the market is working and managing risk on its own.

While some would advocate significantly restricting off-balance-sheet activity, I believe we need to avoid burdensome regulation. On the basis of both our supervision of individual banks and our research, it's our judgment that banks are using derivatives to manage risk better, and that if anything, the growth in derivatives represents a positive development in overall portfolio risk management. It is this belief that leads me to try to make clear to you what I think is necessary if these markets are to continue to grow and develop without significant and potentially burdensome regulation being imposed from the outside.

The necessary changes

Let me comment on the changes that I think are necessary on the part of the industry, the Federal Reserve, and others if these markets are to continue to innovate and to meet the growing demand for risk management tools. The critical question we need to answer is how best to deal with the real and perceived risks posed by these markets in a way that will allow the innovation necessary to compete in this very competitive marketplace and yet protect the system from major disruptions.

In my view, we must begin by understanding the difference between regulation and supervision. While some tend to use these words fairly interchangeably, there is a very important distinction between the two. Supervision is institution-specific and relies heavily on the industry and the institution to define and follow good business practice. It is the fundamental element in the examination process. Regulation relies on rules to prevent "bad practices." In my experience, regulation in rapidly evolving markets is either too little too late, frequently overreacting after the problems have already developed—or too much too soon, stifling innovation and hampering the market's ability to provide needed services. While this may be an overgeneralization, I think that for almost any financial activity, the more that official regulation can be displaced by effective supervision and industry standards, the better off the financial system will be.

Self-regulation

In this vein, I would urge that the industry provide for self-regulation to the greatest extent possible. You know the competitive requirements of your markets and the current and future needs of your customers better than we do, and you are in a better position to assess the operational implications of alternative systems of control. I would also urge that you continue to develop and improve standards (regulations) that will provide for safety and soundness in these activities. The Group of Thirty report was a good first step, but only a first step. Eventually, the rules will need to be far more specific.

There needs to be an industry self-policing system that has teeth and that will, through its actions, be respected. Clearly, the International Swaps and Derivative Association has an important role to play in this process. Such an organization will significantly lessen the need for external sources to impose restraining regulations, a very real danger as long as some view these markets, no matter how unfairly, as free-wheeling gambling casinos. In this light, I would also suggest that the industry should spend more time discussing the real economic benefits produced from the use of derivatives and depend less on the general defense of the need to compete. This will help make much clearer the trade-offs implicit in restricting these activities.

The Federal Reserve has been actively doing what we can to help. We have consistently promoted the development of industry groups and provided them with the necessary legislative and regulatory tools to help them manage the risks on their own. Following the passage of the Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA), which altered the treatment of derivatives for bankrupt institutions covered by deposit insurance, the Federal Reserve, among others, sought and achieved significantly broader and more legally secure treatment of netting agreements. The Federal Deposit Insurance Corporation Improvement Act (FDICIA) extended netting to securities brokers, dealers, and nonbank participants on the Clearing House Interbank Payments System (CHIPS), as well as to appropriate financial institutions as determined by the Federal Reserve. On February 1 of this year, we released the final rules for use in determining which institutions will be covered by the FDICIA netting provisions; these new rules took effect on March 7. As a result of these actions, it will be substantially easier for firms to manage their credit risks and to resolve insolvency problems in these markets in the future.

We have also recently approved an extension of the hours that our wires for moving funds electronically will be open in order to reduce temporal risk and to allow institutions to work at reducing Herstatt risk. I am pleased to say that the Chicago Fed played a major role in promoting these changes. But I will also have to admit to having been surprised by the industry's response when the extended hours proposal was going through the comment phase. Particularly in a Chicago context, I had thought that this would be enthusiastically supported, but frankly, the comments we received were underwhelming.

Accounting standards

Beyond Federal Reserve actions, there is a lot to do in terms of the functioning of market mechanisms and just as importantly, improving the public's perception of these markets, if they are going to be free to prosper in the future. At the broadest level, I think we need to see better accounting standards. Hopefully, the Financial Accounting Standards Board's new recommendations on derivatives and hedge accounting will be a significant first step in this direction. Well-designed accounting standards can substantially aid both the supervisors' and the market's ability to monitor these activities. If market discipline rather than regulation is to provide the basic control mechanism for these markets, then it is imperative that financial reporting provide the information required for informed assessments.

Good financial reporting standards with extensive disclosure can also help reassure the markets that derivatives are in fact assisting financial institutions and customer firms to manage their risks better rather than allowing them to gamble with their stockholders' money. Further, good accounting practices will help taxing entities get a better handle on the appropriate tax treatment of derivative activities. Such changes will allow market participants, supervisors, and legislators to understand and monitor the markets better as well as provide a basis for the outside auditing of these activities. But this is not the whole solution, since such accounting information is available only at specific points in time.

The strength and weakness of the derivatives market is that it allows institutions to make radical changes in their market exposure almost instantaneously. But this advantage must be supported by the development and enforcement of internal procedures within individual institutions so that problems do not develop between financial statements. With this as a lead-in, let me shift from broad industry concerns to some important institution-specific issues.

At the firm level

To limit the development of potentially damaging problems, some absolutely essential elements must be a part of any organization's basic thinking.

First, risk measurement systems are paramount. The institution simply has to know on a current basis the magnitude of the risks that are going onto its books. For many of the newer participants in these activities, this may seem very complicated, but without a good risk measurement system an institution is bound to get into very serious trouble.

Second, effective controls need to be in place. Management needs to establish limits for various categories of risk, and the controls dealing with these risks must be adequate to the task.

Third, there must be clear organizational separation for those generating the risks (the marketing or sales side of the business) from those approving the risks or changing the limits for individual categories. While this may seem pretty basic, there have been any number of banks that have gotten into trouble—sometimes fatally—because they did not effectively separate these two fundamental aspects of the credit or risk extension process.

Fourth, the management information systems must be accurate, understandable, and available on a current basis at senior levels of the organization. With activities evolving at very great speeds as derivatives do, a 200-page report two weeks after the fact just won't do. A real-time exposure monitoring system, or at the very least, an end-of-day monitoring system that provides accurate, understandable reports of risk and exposure measurement to senior management is a sine qua non.

Fifth, for any of this to work in practice, senior management must have a fundamental understanding of these derivative activities. Choosing the right people to work in and manage these areas is important, but it is not enough. It is too easy and far too simplistic to view derivatives as a purely specialized function that the specialists can be trusted to do right. For some, I will admit that esoteric derivative activities are very complex and very challenging. But as a management precept, it just makes sense that if you don't understand it, don't get involved.

Sixth, as a related management issue and a thought that will probably strike this group as totally unacceptable, if I were in the senior management of an organization dealing heavily in these activities, I'd very carefully watch the compensation schemes that are in place. While bonus and incentive plans that are driven by the institution's overall success are appropriate and beneficial, those that provide for very heavy incentive motivation on a highly individual basis, almost regardless of the institution's total results, are fraught with peril. And finally, I also think it is important for the industry to develop outside auditing standards for firms' risk management procedures. Prudent management practice, as well as the demands of public and investor confidence, will require that such audits be done in a credible and regular fashion.

The Federal Reserve's role

Even with the best control mechanisms and procedures in place, there are still concerns at both the institutional and system level, particularly those that relate to the integrity of the payments mechanism—the pipeline through which our entire economy flows. We at the Federal Reserve, who in my view have the ultimate responsibility for the integrity of the financial system, cannot in good conscience ignore these issues.

Derivatives and other innovations in the financial industry have generated an explosion in the flows through the payments system. What was once a simple loan involving monthly payments between two parties can turn into a veritable parade. Starting with a loan, an interest rate swap, and maybe a currency swap, the loan can then be sold off directly or securitized. Each of these contracts in turn may spur offsetting hedges on the part of the financial intermediaries, or secondary loans as the pieces are sold off to investors. To get some idea of the potential systemic implications of this explosion in financial activity, you only have to look at the massive increase in transactions running through the payments system. In 1970, there were $15 of financial transactions for every dollar of gross domestic product (GDP). By 1980 the ratio had increased to $30 to one, and by 1990 it was $78. Over half these transactions are cleared through CHIPS, which didn't even exist in 1970. And this is not solely a U.S. phenomenon. In Japan, for example, the growth in financial transactions has been even more staggering, going from 15 yen of financial transactions for each yen of their GDP in 1970 to a ratio of over 115 yen to one by 1990. Almost all of the growth has been in large dollar settlement systems related to securities and foreign exchange transactions.

One can only imagine the chaos that would ensue if anything seriously impeded these rapid movements of money in which the equivalent of our annual GDP flows every three business days. Clearly, there is sufficient risk here to warrant careful monitoring and extreme care on the part of Federal Reserve to make sure that no single failure or pattern of financial entanglements can seriously damage the payments system. It is precisely this risk that clearly and dramatically explains why the Federal Reserve remains so interested in the orderly development of the financial system and why we continue to argue that our responsibility for monetary policy and for the underlying stability of the financial system implies a direct and continuing role in the supervision and regulation of the major players.

Regulatory consolidation

Let me conclude with a few comments about the Federal Reserve's future role in the supervision and regulation of financial activity. As you know, the Administration has proposed that the current federal regulatory process for depository institutions be consolidated into a single agency. If this were done, the Fed would cease to have supervisory responsibilities but would continue, of course, to have responsibility for monetary policy. We have strongly objected to this proposal and have counterproposed a structure that would simplify the current fractionalized system and eliminate duplicative examinations for most institutions. Our view on this issue stems from our monetary policy responsibilities and our need to react to a variety of events and circumstances with an appropriate monetary policy response.

As the nation's central bank, the Federal Reserve System has the overriding responsibility for the integrity of the financial system in its many dimensions. This responsibility extends into parts of the system where we do not have specific supervisory or regulatory authority. Over the years that I have been president of the Federal Reserve Bank of Chicago, I have seen any number of examples where this authority and responsibility, either explicitly or implicitly, has been important in dealing with some genuinely systemic issues. Happily, most of the instances that come to mind have been invisible because we were able to contain them before they exploded onto the public scene. But they had the potential of becoming damaging in a systemic sense and would have become so had we not responded. In 1987 and again in 1989, in both Chicago and New York, the Federal Reserve through its supervisory apparatus played an important role in making sure that the financial system continued to function.

As you well know, the state of the art in derivative activities is rocketing ahead at breathtaking speed as depository institutions become more heavily involved in these increasingly complex activities. Our supervisory responsibilities, already very difficult, will become even more so, but by having the level of involvement that we do, we can reach judgments on the safety and soundness of individual institutions as well as the controls, procedures, and management information systems that are in place. This involvement is essential to maintaining the integrity of the financial system, which in turn directly relates to our overriding monetary policy responsibilities.

In my view, and it's one that I feel very strongly about, there is an absolutely direct interrelationship between these two very fundamental and very important responsibilities. If anything, the increased rate of innovation and interconnection between markets and the phenomenal speed at which modern trading systems operate argue that the Federal Reserve needs, at the very least, to maintain its current level of involvement in order to live up to our obligations to the financial community and to the country. We need to be able to count on the sound and continued smooth operation of the payments system and on our ability to unwind problems and continue to operate even under severe stress. Our margin for error is continually narrowing, and careful monitoring is necessary.

I believe that the Federal Reserve's approach based on supervision and on industry input, combined with our strong desire to promote economic efficiency, will lead to the best solutions. It has been argued that such responsibilities are inconsistent with our role in monetary policy. Personally, in addition to the obvious and important connections I just noted, I think it's a good thing to have a supervisor who cares about economic outcomes as much as safety. As Chairman Greenspan commented at the Federal Reserve Bank of Chicago's Bank Structure Conference last year, "zero bank failures is not the optimal number"; the system needs to provide for risk and innovation. The key is to stop problems that develop at individual institutions from growing into larger systemic problems. Supervision must always be tempered by the desire for growth, both in the financial sector and in the economy as a whole.

While it is difficult to judge just how the legislative process on this issue will develop, I think the proposal that the Fed has put forward is a good one, and I hope that wisdom and sound judgment will prevail.

Again, it has been a very great pleasure for me to be with you this morning, and I appreciate having this opportunity to review my thoughts with you. Thank you.