Policy Analysis

Cato Institute Policy Analysis No. 283: 10 Myths About Financial Derivatives

September 11, 1997

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Executive Summary

In our fast-changing financial services industry, coercive regulations intended to restrict banks' activities will be unable to keep up with financial innovation. As the lines of demarcation between various types of financial service providers continues to blur, the bureaucratic leviathan responsible for reforming banking regulation must face the fact that fears about derivatives have proved unfounded. New regulations are unnecessary. Indeed, access to risk-management instruments should not be feared but, with caution, embraced to help firms manage the vicissitudes of the market.

In this paper 10 common misconceptions about financial derivatives are explored. Believing just one or two of the myths could lead one to advocate tighter legislation and regulatory measures designed to restrict derivative activities and market participants. A careful review of the risks and rewards derivatives offer, however, suggests that regulatory and legislative restrictions are not the answer. To blame organizational failures solely on derivatives is to miss the point. A better answer lies in greater reliance on market forces to control derivative-related risk taking.

Financial derivatives have changed the face of finance by creating new ways to understand, measure, and manage risks. Ultimately, financial derivatives should be considered part of any firm's risk-management strategy to ensure that value-enhancing investment opportunities are pursued. The freedom to manage risk effectively must not be taken away.

Introduction

Remember the bankruptcy of Orange County, California, and the Barings Bank due to poor investments in financial derivatives? At that time many policymakers feared more collapsed banks, counties, and countries. Those fears proved unfounded; prudent use, not government regulation, of derivatives headed off further problems. Now, however, the Financial Accounting Standards Board, the Federal Reserve, and the Securities and Exchange Commission are debating the merits of new rules for derivatives. But before adopting regulations, policymakers need to separate myths about those financial instruments from reality.

The tremendous growth of the financial derivatives market and reports of major losses associated with derivative products have resulted in a great deal of confusion about those complex instruments. Are derivatives a cancerous growth that is slowly but surely destroying global financial markets? Are people who use derivative products irresponsible because they use financial derivatives as part of their overall risk-management strategy? Are financial derivatives the source of the next U.S. financial fiasco--a bubble on the verge of exploding?

Those who oppose financial derivatives fear a financial disaster of tremendous proportions--a disaster that could paralyze the world's financial markets and force governments to intervene to restore stability and prevent massive economic collapse, all at taxpayers' expense. Critics believe that derivatives create risks that are uncontrollable and not well understood. [1] Some critics liken derivatives to gene splicing: potentially useful, but certainly very dangerous, especially if used by a neophyte or a madman without proper safeguards.

In this paper 10 myths, or common misconceptions, about financial derivatives are explored. Financial derivatives have changed the face of finance by creating new ways to understand, measure, and manage financial risks. Ultimately, derivatives offer organizations the opportunity to break financial risks into smaller components and then to buy and sell those components to best meet specific risk-management objectives. Moreover, under a market-oriented philosophy, derivatives allow for the free trading of individual risk components, thereby improving market efficiency. Using financial derivatives should be considered a part of any business's risk-management strategy to ensure that value-enhancing investment opportunities can be pursued.

Myth Number 1: Derivatives Are New, Complex, High-Tech Financial Products Created by Wall Street's Rocket Scientists

Financial derivatives are not new; they have been around for years. A description of the first known options contract can be found in Aristotle's writings. He tells the story of Thales, a poor philosopher from Miletus who developed a "financial device, which involves a principle of universal application." [2] People reproved Thales, saying that his lack of wealth was proof that philosophy was a useless occupation and of no practical value. But Thales knew what he was doing and made plans to prove to others his wisdom and intellect.

Thales had great skill in forecasting and predicted that the olive harvest would be exceptionally good the next autumn. Confident in his prediction, he made agreements with area olive-press owners to deposit what little money he had with them to guarantee him exclusive use of their olive presses when the harvest was ready. Thales successfully negotiated low prices because the harvest was in the future and no one knew whether the harvest would be plentiful or pathetic and because the olive-press owners were willing to hedge against the possibility of a poor yield.

Aristotle's story about Thales ends as one might guess: "When the harvest-time came, and many [presses] were wanted all at once and of a sudden, he let them out at any rate which he pleased, and made a quantity of money. Thus he showed the world that philosophers can easily be rich if they like, but that their ambition is of another sort." [3] So Thales exercised the first known options contracts some 2,500 years ago. He was not obliged to exercise the options. If the olive harvest had not been good, Thales could have let the option contracts expire unused and limited his loss to the original price paid for the options. But as it turned out, a bumper crop came in, so Thales exercised the options and sold his claims on the olive presses at a high profit.

Options are just one type of derivative instrument. Derivatives, as their name implies, are contracts that are based on or derived from some underlying asset, reference rate, or index. Most common financial derivatives, described later, can be classified as one, or a combination, of four types: swaps, forwards, futures, and options that are based on interest rates or currencies.

Most financial derivatives traded today are the "plain vanilla" variety--the simplest form of a financial instrument. But variants on the basic structures have given way to more sophisticated and complex financial derivatives that are much more difficult to measure, manage, and understand. For those instruments, the measurement and control of risks can be far more complicated, creating the increased possibility of unforeseen losses.

Wall Street's "rocket scientists" are continually creating new, complex, sophisticated financial derivative products. However, those products are all built on a foundation of the four basic types of derivatives. Most of the newest innovations are designed to hedge complex risks in an effort to reduce future uncertainties and manage risks more effectively. But the newest innovations require a firm understanding of the tradeoff of risks and rewards. To that end, derivatives users should establish a guiding set of principles to provide a framework for effectively managing and controlling financial derivative activities. Those principles should focus on the role of senior management, valuation and market risk management, credit risk measurement and management, enforceability, operating systems and controls,

and accounting and disclosure of risk-management positions. [4]

Myth Number 2: Derivatives Are Purely Speculative, Highly Leveraged Instruments

Put another way, this myth is that "derivatives" is a fancy name for gambling. Has speculative trading of derivative products fueled the rapid growth in their use? Are derivatives used only to speculate on the direction of interest rates or currency exchange rates? Of course not. Indeed, the explosive use of financial derivative products in recent years was brought about by three primary forces: more volatile markets, deregulation, and new technologies.

The turning point seems to have occurred in the early 1970s with the breakdown of the fixed-rate international currency exchange regime, which was established at the 1944 conference at Bretton Woods and maintained by the International Monetary Fund. Since then currencies have floated freely. Accompanying that development was the gradual removal of government-established interest-rate ceilings when Regulation Q interest-rate restrictions were phased out. Not long afterward came inflationary oil-price shocks and wild interest-rate fluctuations. In sum, financial markets were more volatile than at any time since the Great Depression.

Banks and other financial intermediaries responded to the new environment by developing financial risk-management products designed to better control risk. The first were simple foreign-exchange forwards that obligated one counterparty to buy, and the other to sell, a fixed amount of currency at an agreed date in the future. By entering into a foreign-exchange forward contract, customers could offset the risk that large movements in foreign-exchange rates would destroy the economic viability of their overseas projects. Thus, derivatives were originally intended to beused to effectively hedge certain risks; and, in fact, that was the key that unlocked their explosive development.

Beginning in the early 1980s, a host of new competitors accompanied the deregulation of financial markets, and the arrival of powerful but inexpensive personal computers ushered in new ways to analyze information and break down risk into component parts. To serve customers better, financial intermediaries offered an ever-increasing number of novel products designed to more effectively manage and control financial risks. New technologies quickened the pace of innovation and provided banks with superior methods for tracking and simulating their own derivatives portfolios.

From the simple forward agreements, financial futures contracts were developed. Futures are similar to forwards, except that futures are standardized by exchange clearinghouses, which facilitates anonymous trading in a more competitive and liquid market. In addition, futures contracts are marked to market daily, which greatly decreases counterparty risk--the risk that the other party to the transaction will be unable to meet its obligations on the maturity date.

Around 1980 the first swap contracts were developed. A swap is another forward-based derivative that obligates two counterparties to exchange a series of cash flows at specified settlement dates in the future. Swaps are entered into through private negotiations to meet each firm's specific risk-management objectives. There are two principal types of swaps: interest-rate swaps and currency swaps.

Today interest-rate swaps account for the majority of banks' swap activity, and the fixed-for-floating-rate swap is the most common interest-rate swap. In such a swap, one party agrees to make fixed-rate interest payments in return for floating-rate interest payments from the counterparty, with the interest-rate payment calculations based on a hypothetical amount of principal called the notional amount.

Myth Number 3: The Enormous Size of the Financial Derivatives Market Dwarfs Bank Capital, Thereby Making Derivatives Trading an Unsafe and Unsound Banking Practice

The financial derivatives market's worth is regularly reported as more than $20 trillion. That estimate dwarfs not only bank capital but also the nation's $7 trillion annual gross domestic product. Those often-quoted figures are notional amounts. For derivatives, notional principal is the amount on which interest and other payments are based. Notional principal typically does not change hands; it is simply a quantity used to calculate payments.

While notional principal is the most commonly used volume measure in derivatives markets, it is not an accurate measure of credit exposure. A useful proxy for the actual exposure of derivative instruments is replacement-cost credit

exposure. That exposure is the cost of replacing the contract at current market values should the counterparty default before the settlement date.

For the 10 largest derivatives players among U.S. bank holding companies, derivative credit exposure averages 15 percent of total assets. The average exposure is 49 percent of assets for those banks' loan portfolios. In other words, if those 10 banks lost 100 percent on their loans, the loss would be more than three times greater than it would be if they had to replace all of their derivative contracts.

Derivatives also help to improve market efficiencies because risks can be isolated and sold to those who are willing to accept them at the least cost. Using derivatives breaks risk into pieces that can be managed independently. Corporations can keep the risks they are most comfortable managing and transfer those they do not want to other companies that are more willing to accept them. From a market-oriented perspective, derivatives offer the free trading of financial risks.

The viability of financial derivatives rests on the principle of comparative advantage--that is, the relative cost of holding specific risks. Whenever comparative advantages exist, trade can benefit all parties involved. And financial derivatives allow for the free trading of individual risk components.

Myth Number 4: Only Large Multinational Corporations and Large Banks Have a Purpose for Using Derivatives

Very large organizations are the biggest users of derivative instruments. However, firms of all sizes can benefit from using them. For example, consider a small regional bank (SRB) with total assets of $5 million (Figure 1). [5] The SRB has a loan portfolio composed primarily of fixed-rate mortgages, a portfolio of government securities, and interest-bearing deposits that are often repriced. Two illustrations of how SRBs can use derivatives to hedge risks follow.

First, rising interest rates will negatively affect prices in the SRB's $1 million securities portfolio. But by selling short a $1 million Treasury-bond futures contract, the SRB can effectively hedge against that interest-rate risk and smooth its earnings stream in a volatile market. If interest rates went higher, the SRB would be hurt by a drop in value of its securities portfolio, but that loss would be offset by a gain from its derivative contract. Similarly, if interest rates fell, the bank would gain from the increase in value of its securities portfolio but would record a loss from its derivative contract. By entering into derivatives contracts, the SRB can lock in a guaranteed rate of return on its securities portfolio and not be as concerned about interest-rate volatility (Figure 2).

The second illustration involves a swap contract. As in the first illustration, rising interest rates will harm the SRB because it receives fixed cash flows on its loan portfolio and must pay variable cash flows for its deposits. Once again, the SRB can hedge against interest-rate risk by entering into a swap contract with a dealer to pay fixed and receive floating payments.

Figure 1
Sample Balance Sheet of a Small Regional Bank

Assets		**Liabilities**	
Loans	$3 million	Deposits	
Securities	$1 million	- Interest-bearing	$3 million
Cash and premises	$1 million	- Noninterest-bearing	$1 million
		Equity	$1 million
Total assets	$5 million	Total liabilities and equity	$5 million

Figure 2
Effect of Interest Rates on Securities Earnings of a Small Regional Bank

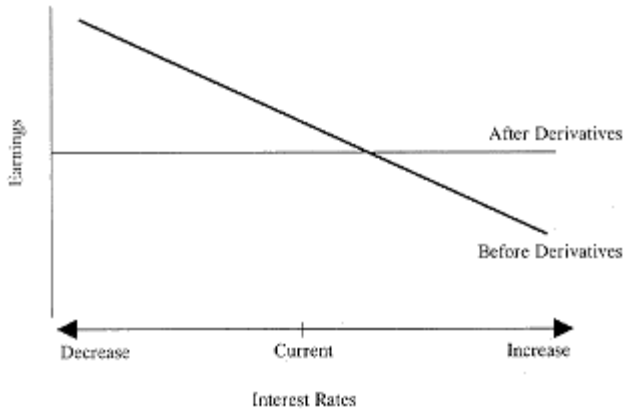


Figure 3
Effect of Interest Rates on Net Interest Margin of a Small Regional Bank

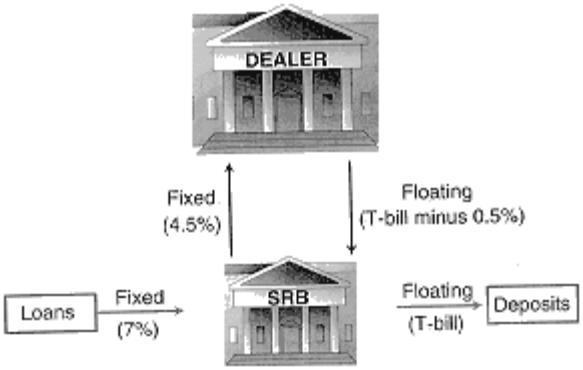
	Rates Drop 300 bps	No Change in Rates	Rates Rise 300 bps
Asset Yield (Loans)	7.00%	7.00%	7.00%
Liability Yield (Deposits)	-1.00%	-4.00%	-7.00%
Net Margin (w/o Swap)	6.00%	3.00%	0.00%
Fixed Swap Outflow	-4.50%	-4.50%	-4.50%
Floating Swap Inflow	0.50%	3.50%	6.50%
Net Swap Flow	-4.00%	-1.00%	2.00%
Net Margin (w/Swap)	2.00%	2.00%	2.00%

Say the SRB currently receives a 7 percent fixed rate from its loan portfolio and pays a variable rate for its deposits that approximates the three-month T-bill rate. The top portion of Figure 3 shows the SRB's net interest margin under three scenarios, all of which assume that the T-bill rate is currently at 4 percent: (1) rates falling 300 basis points, (2) rates unchanged, and (3) rates rising 300 basis points. [6] The SRB's net interest margin would decline with rising rates and increase with falling rates.

To hedge that interest-rate risk, the SRB can negotiate with a swaps dealer to pay 4.5 percent fixed interest in exchange for T-bill minus 0.5 percent (Figure 4). The net swap flow is shown in Figure 3 under the same three scenarios. In this case, the value of the swap increases with rising rates because the SRB receives floating-rate cash flows and pays fixed rates.

As shown on the bottom of Figure 3, the swap provides an effective hedge against interest-rate risk. With the swap, the bank has a guaranteed 200-basis-point spread, no matter what happens to interest rates. Without the swap, the SRB could get badly burned by rising interest rates.

Figure 4
Effect of Interest-Rate Swap on a Small Regional Bank



The economic benefits of derivatives are not dependent on the size of the institution trading them. The decision about whether to use derivatives should be driven, not by the company's size, but by its strategic objectives. The role of any risk-management strategy should be to ensure that the necessary funds are available to pursue value-enhancing investment opportunities. [7] However, it is important that all users of derivatives, regardless of size, understand how their contracts are structured, the unique price and risk characteristics of those instruments, and how they will perform under stressful and volatile economic conditions. A prudent risk-management strategy that conforms to corporate goals and is complete with market simulations and stress tests is the most crucial prerequisite for using financial derivative products.

Myth Number 5: Financial Derivatives Are Simply the Latest Risk-Management Fad

Financial derivatives are important tools that can help organizations to meet their specific risk-management objectives. As is the case with all tools, it is important that the user understand the tool's intended function and that the necessary safety precautions be taken before the tool is put to use.

Builders use power saws when they construct houses. And just as a power saw is a useful tool in building a house--increasing the builder's efficiency and effectiveness--so financial derivatives can be useful tools in helping corporations and banks to be more efficient and effective in meeting their risk-management objectives. But power saws can be dangerous when not used correctly or when used blindly. If users are not careful, they can seriously injure themselves or ruin the project. Likewise, when financial derivatives are used improperly or without a plan, they can inflict pain by causing serious losses or propelling the organization in the wrong direction so that it is ill prepared for the future.

When used properly, financial derivatives can help organizations to meet their risk-management objectives so that funds are available for making worthwhile investments. Again, a firm's decision to use derivatives should be driven by a risk-management strategy that is based on broader corporate objectives.

The most basic questions about a firm's risk-management strategy should be addressed: Which risks should be hedged and which should remain unhedged? What kinds of derivative instruments and trading strategies are most appropriate? How will those instruments perform if there is a large increase or decrease in interest rates? How will those instruments perform if there are wild fluctuations in exchange rates?

Without a clearly defined risk-management strategy, use of financial derivatives can be dangerous. It can threaten the accomplishment of a firm's long-range objectives and result in unsafe and unsound practices that could lead to the organization's insolvency. But when used wisely, financial derivatives can increase shareholder value by providing a means to better control a firm's risk exposures and cash flows.

Clearly, derivatives are here to stay. We are well on our way to truly global financial markets that will continue to develop new financial innovations to improve risk-management practices. Financial derivatives are not the latest risk-management fad; they are important tools for helping organizations to better manage their risk exposures.

Myth Number 6: Derivatives Take Money Out of Productive Processes and Never Put Anything Back

Financial derivatives, by reducing uncertainties, make it possible for corporations to initiate productive activities that might not otherwise be pursued. For example, an Italian company may want to build a manufacturing facility in the United States but is concerned about the project's overall cost because of exchange-rate volatility between the lira and the dollar. To ensure that the company will have the necessary cash available when it is needed for investment, the Italian manufacturer should devise a prudent risk-management strategy that is in harmony with its broader corporate objective of building a manufacturing facility in the United States. As part of that strategy, the Italian firm should use financial derivatives to hedge against foreign-exchange risk. Derivatives used as a hedge can improve the management of cash flows at the individual firm level.

To ensure that productive activities are pursued, corporate finance and treasury groups should transform their operations from mundane bean counting to activist financial risk management. They should integrate a clear set of risk-management goals and objectives into the organization's overall corporate strategy. The ultimate goal is to ensure that the organization has the necessary funds at its disposal to pursue investments that maximize shareholder value. Used properly, financial derivatives can help corporations to reduce uncertainties and promote more productive activities.

Myth Number 7: Only Risk-Seeking Organizations Should Use Derivatives

Financial derivatives can be used in two ways: to hedge against unwanted risks or to *speculate* by taking a position in anticipation of a market movement. The olive-press owners, by locking in a guaranteed return no matter how good or bad the harvest, hedged against the risk that the next season's olive harvest might not be plentiful. Thales speculated that the next season's olive harvest would be exceptionally good and therefore paid an up-front premium in anticipation of that event.

Similarly, organizations today can use financial derivatives to actively seek out specific risks and speculate on the direction of interest-rate or exchange-rate movements, or they can use derivatives to hedge against unwanted risks. Hence, it is not true that only risk-seeking institutions use derivatives. Indeed, organizations should use derivatives as part of their overall risk-management strategy for keeping those risks that they are comfortable managing and selling those that they do not want to others who are more willing to accept them. Even conservatively managed institutions can use derivatives to improve their cash-flow management to ensure that the necessary funds are available to meet broader corporate objectives. One could argue that organizations that refuse to use financial derivatives are at greater risk than are those that use them.

When using financial derivatives, however, organizations should be careful to use only those instruments that they understand and that fit best with their corporate risk-management philosophy. It may be prudent to stay away from the more exotic instruments, unless the risk/reward tradeoffs are clearly understood by the firm's senior management and its independent risk-management review team. Exotic contracts should not be used unless there is some obvious reason for doing so.

Myth Number 8: The Risks Associated with Financial Derivatives Are New and Unknown

The kinds of risks associated with derivatives are no different from those associated with traditional financial instruments, although they can be far more complex. There are credit risks, operating risks, market risks, and so on.

Risks from derivatives originate with the customer. With few exceptions, the risks are man-made, that is, they do not readily appear in nature. For example, when a new homeowner negotiates with a lender to borrow a sum of money, the customer creates risks by the type of mortgage he chooses--risks to himself and the lending company. Financial derivatives allow the lending institution to break up those risks and distribute them around the financial system via secondary markets. Thus, many risks associated with derivatives are actually created by the dealers' customers or by their customers' customers. Those risks have been inherent in our nation's financial system since its inception.

Banks and other financial intermediaries should view themselves as risk managers--blending their knowledge of global financial markets with their clients' needs to help their clients anticipate change and have the flexibility to pursue opportunities that maximize their success. Banking is inherently a risky business. Risk permeates much of what banks do. And, for banks to survive, they must be able to understand, measure, and manage financial risks effectively.

The types of risks faced by corporations today have not changed; rather, they are more complex and interrelated. The increased complexity and volatility of the financial markets have paved the way for the growth of numerous financial innovations that can enhance returns relative to risk. But a thorough understanding of the new financial-engineering tools and their proper integration into a firm's overall risk-management strategy and corporate philosophy can help turn volatility into profitability.

Risk management is not about the elimination of risk; it is about the management of risk: selectively choosing those risks an organization is comfortable with and minimizing those that it does not want. Financial derivatives serve a useful purpose in fulfilling risk-management objectives. Through derivatives, risks from traditional instruments can be efficiently unbundled and managed independently. Used correctly, derivatives can save costs and increase returns.

Myth Number 9: Derivatives Link Market Participants More Tightly Together, Thereby Increasing Systemic Risks

Financial derivative participants can be divided into two groups: end-users and dealers. As end-users, banks use derivatives to take positions as part of their proprietary trading or for hedging as part of their asset/liability management. As dealers, banks use derivatives by quoting bids and offers and committing capital to satisfy customers' needs for managing risk.

In the developmental years of financial derivatives, dealers, for the most part, acted as brokers, finding counterparties with offsetting requirements. Then dealers began to offer themselves as counterparties to intermediate customer requirements. Once a position was taken, a dealer immediately either matched it by entering into an opposing transaction or "warehoused" it--temporarily using the futures market to hedge unwanted risks--until a match could be found.

Today dealers manage portfolios of derivatives and oversee the net, or residual, risk of their overall position. That development has changed the focus of risk management from individual transactions to portfolio exposures and has substantially improved dealers' ability to accommodate a broad spectrum of customer transactions. Because most active derivatives players today trade on portfolio exposures, it appears that financial derivatives do not wind markets together any more tightly than do loans. Derivatives players do not match every trade with an offsetting trade; instead, they continually manage the residual risk of the portfolio. If a counterparty defaults on a swap, the defaulted party does not turn around and default on some other counterparty that offset the original transaction. Instead, a derivatives default is very similar to a loan default. That is why it is important that derivatives players perform with due diligence in determining the financial strength and default risks of potential counterparties.

For banking supervisors in the United States, probably the most important question today is, What could go wrong to engender systemic risk--the danger that a failure at a single bank could cause a domino effect, precipitating a banking crisis? Because financial derivatives allow different risk components to be isolated and passed around the financial system, those who are willing and able to bear each risk component at the least cost will become the risk holders. That clearly reduces the overall cost of risk bearing and enhances economic efficiency.

Furthermore, a major shock that would jolt financial markets in the absence of derivatives would also affect financial markets in which the use of derivatives was widespread. But because the holders of various risks would be different, the impact would be different and presumably not as great because the holders of the risks should be better able to absorb potential losses.

Myth Number 10: Because of the Risks Associated with Derivatives, Banking Regulators Should Ban Their Use by Any Institution Covered by Federal Deposit Insurance

The problem is not derivatives but the perverse incentives banks have under the current system of federal deposit guarantees. Deposit insurance and other deposit reforms were first introduced to address some of the instabilities associated with systemic risk. Through federally guaranteed deposit insurance, the U.S. government attempted to avoid, by increasing depositor confidence, the experience of deposit runs that characterized banking crises before the 1930s.

The current deposit guarantee structure has, indeed, reduced the probability of large-scale bank panics, but it has also

created some new problems. Deposit insurance effectively eliminates the discipline provided by the market mechanism that encourages banks to maintain appropriate capital levels and restrict unnecessary risk taking. Therefore, banks may wish to pursue higher risk strategies because depositors have a diminished incentive to monitor banks. Further, federal deposit insurance may actually encourage banks to use derivatives as speculative instruments to pursue higher risk strategies, instead of to hedge, or as dealers.

Since federal deposit insurance discourages market discipline, regulators have been put in the position of monitoring banks to ensure that they are managed in a safe and sound manner. Given the present system of federal deposit guarantees, regulatory proposals involving financial derivatives should focus on market-oriented reforms as opposed to laws that might eliminate the economic risk-management benefits of derivatives. [8]

To that end, banking regulators should emphasize more disclosure of derivatives positions in financial statements and be certain that institutions trading huge derivatives portfolios have adequate capital. In addition, because derivatives could have implications for the stability of the financial system, it is important that users maintain sound risk-management practices.

Regulators have issued guidelines that banks with substantial trading or derivatives activity should follow. Those guidelines include

- active board and senior management oversight of trading activities;
- establishment of an internal risk-management audit function that is independent of the trading function;
- thorough and timely audits to identify internal control weaknesses; and
- risk-measurement and risk-management information systems that include stress tests, simulations, and contingency plans for adverse market movements.

It is the responsibility of a bank's senior management to ensure that risks are effectively controlled and limited to levels that do not pose a serious threat to its capital position. Regulation is an ineffective substitute for sound risk management at the individual firm level.

Should My Company Use Derivatives?

Financial derivatives should be considered for inclusion in any corporation's risk-control arsenal. Derivatives allow for the efficient transfer of financial risks and can help to ensure that value-enhancing opportunities will not be ignored. Used properly, derivatives can reduce risks and increase returns.

Derivatives also have a dark side. It is important that derivatives players fully understand the complexity of financial derivatives contracts and the accompanying risks. Users should be certain that the proper safeguards are built into trading practices and that appropriate incentives are in place so that corporate traders do not take unnecessary risks.

The use of financial derivatives should be integrated into an organization's overall risk-management strategy and be in harmony with its broader corporate philosophy and objectives. There is no need to fear financial derivatives when they are used properly and with the firm's corporate goals as guides.

What Should Regulators Do?

Believing the 10 myths presented here, indeed, believing just one or two of them, could lead one to advocate legislative and regulatory measures to restrict the use of derivatives. [9] Derivatives-related disasters, such as the Orange County bankruptcy and the collapse of Barings, have led to questions about the ability of individual derivatives participants to internally manage their trading operations. In addition, concerns have surfaced about regulators' ability to detect and control potential derivatives losses.

But regulatory and legislative restrictions on derivatives activities are not the answer, primarily because simple, standardized rules most likely would only impair banks' ability to manage risk effectively. A better answer lies in greater reliance on market forces to control derivatives-related risk taking, together with more emphasis on government supervision, as opposed to regulation.

The burden of managing derivatives activities must rest squarely on trading organizations, not the government. Such an approach will promote self-regulation and improve organizations' internal controls through the discipline of market mechanisms. Government guarantees will serve only to strengthen moral-hazard behavior by derivatives traders.

The best regulations are those that guard against the misuse of derivatives, as opposed to those that severely restrict, or even ban, their use. Derivatives-related losses can typically be traced to one or more of the following causes: an overly speculative investment strategy, a misunderstanding of how derivatives reallocate risk, an ineffective internal risk-management audit function, and the absence of systems that simulate adverse market movements and help develop contingency solutions. To address those concerns, supervisory reforms should focus on increasing disclosure of derivatives holdings and the strategies underlying their use, appropriate capital adequacy standards, and sound risk-management guidelines.

For the most part, however, policymakers should leave derivatives alone. Derivatives have become important tools that help organizations manage risk exposures. The development of derivatives was brought about by a need to isolate and hedge against specific risks. Derivatives offer a proven method of breaking risk into component pieces and managing those components independently. Almost every organization--whether a corporation, a municipality, or an insured commercial bank--has inherent in its business and marketplace a unique risk profile that can be better managed through derivatives trading. The freedom to manage risks effectively must not be taken away.

Notes

[1]. In May 1994 the General Accounting Office released a two-year study, "Financial Derivatives: Actions Needed to Protect the Financial System," GAO/GGD-94-133, which sounded a call for stiffer government regulation of financial derivatives markets. General Accounting Office, "Derivatives: Actions Taken or Proposed since May 1994," GAO/GGD/AIOMD-97-8, reviewed progress made by financial regulators and industry participants.

[2]. Aristotle, *Politics*, trans. Benjamin Jowett, vol. 2, *The Great Books of the Western World*, ed. Robert Maynard Hutchins (Chicago: University of Chicago Press, 1952), book 1, chap. 11, p. 453.

[3]. Ibid.

[4]. See, for example, the recommendations outlined in Group of Thirty Global Derivatives Study Group, "Derivatives: Practices and Principles," July 1993. The Group of Thirty is an international financial policy organization made up of representatives of central banks, international banks, securities firms, and academia.

[5]. This example was inspired by Gregory P. Wilson, "BAI/McKinsey Survey on the Usage of Derivative Products," Paper presented at Bank Administration Institute Conference on Derivative Products--From A to Z, Chicago, December 6-7, 1993.

[6]. A basis point is a percentage point, or 0.01 percent. The difference between a yield of 5.50 percent and one of 4.00 percent is 150 basis points.

[7]. This point is reinforced in Kenneth A. Froot, David S. Scharfstein, and Jeremy C. Stein, "A Framework for Risk Management," *Harvard Business Review*, November-December 1994, pp. 91-102.

[8]. See Thomas F. Siems, "Financial Derivatives: Are New Regulations Warranted?" *Financial Industry Studies*, Federal Reserve Bank of Dallas, August 1994, pp. 1-13.

[9]. See Thomas F. Siems, "Derivatives: In the Wake of Disaster," *Financial Industry Issues*, Federal Reserve Bank of Dallas (1995): 2-3.