

Banking, Derivatives, and Regulation

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Derivatives are in the news

Large losses are being attributed to using derivatives

- Mostly losses by non-banks

Banks are affected, however

- Some bank holding companies have felt compelled to make good the losses of their non-bank subsidiaries
- Congress threatens legislation to regulate the use of derivatives
- OCC and Fed have issued new examination guidelines for monitoring banks' use of derivatives

Today, I want to take a fresh look at how banking supervision and regulation should relate to the growing ferment about derivative financial instruments

Regulation is the wrong way to promote the safety and soundness of banks

Banks have a self interest in their own safety and soundness

- Markets will "regulate" bank strategies, rewarding the successful and penalizing the unsuccessful
- Enforcing regulations smother initiative, yet that is the model we have inherited from the 1930s

Deregulation has come a long way in eliminating inefficiencies

- Gone are deposit rate ceilings, reserve requirements on most deposits, restrictions on many lines of business, and branching restrictions

Market discipline alone, however, is not adequate, because the federal safety net distorts choices (depositors needn't monitor risk or liquidity)

- Supervisory monitoring of bank capital therefore is necessary to protect against moral hazard
- Monitoring, and enforcing capital adequacy is the ultimate protection

Depositors needn't monitor, so the supervisory agencies must do it

Supervision can't cling to the outmoded model of rule enforcement when the rules have been removed

Better supervisory monitoring should be designed to reinforce market discipline

- Examination resources should be distributed unevenly

Well capitalized banks: "Trust, but verify"

Failed banks: Close promptly, before draining the safety net

In-between banks: Confer, to ensure effective rebuilding effort

- The emphasis of examination should shift away from enforcing rules, to encouraging markets
- An example of better supervisory monitoring is the Securities and Exchange Commission, which emphasizes information disclosure, rather than permission and directives, to ensure sound market decisions
- Concrete examples of a better supervisory approach

Market value accounting creates a common basis for interbank comparisons

Quarterly release of CAMEL and BOPEC ratings would contribute to informed market judgments about banks

The role of supervision should be to monitor bank management to assure that current and future levels of capital provide an adequate foundation for the risks being taken.

Derivatives

Members of Congress suggest that the legislature must provide rules for using derivatives, if federal supervisory agencies do not.

This is a reflex action, and unsound

- "Go find out what the boys are doing, and tell them to stop it!"
- What needs to be understood: -- Derivatives represent innovations in risk *management*, not innovations in risk itself.
- There is substantial risk in any business endeavor.

- Innovations in risk management should be welcomed

e.g., wheat futures

Some clarifying background about derivatives

- The word “derivatives” means different things to different people

Simple currency swaps versus “toxic waste” mortgage-related instruments

- Broadly, a derivative is any one of a welter of ready-made (exchange-traded), and tailor-made (over-the-counter) financial instruments available to manage risk

Currency risk: options, futures (a single date) and swaps (a series of dates)

Market risk: options, futures, and swaps

Derivatives can be sold “pure” or in combinations, attached to or detached from an underlying debt instrument or index of value

- Derivatives make it possible to deconstruct generalized risk into separate types

Currency swaps remove foreign exchange risk, trading one currency for another

Interest rate swaps remove interest rate risk, trading fixed for variable payments

Collateralized mortgage obligations and index amortizing options isolate prepayment risk

- “Market completion” is the economist’s term for what’s been happening. Markets that once were not feasible, have, within the past decade, become feasible and have begun to operate. Trades that never before had been worth considering, now are cost effective. Why? Computers.

Financial innovations now allow us to trade streams of payments in different currencies, to trade fixed versus floating interest rate obligations, to buy and sell interest payments apart from ownership of the principle on which the payments are based, to buy and sell complex options whose values depend on future levels of interest rates.

- Why use derivatives?

To manage risk at lower cost

- What has been difficult for many people to understand is that derivatives are innovations in risk *management*, not just another possible portfolio investment. Conversations with bankers have left me with an uneasy feeling. I’m not sure

everyone understands that, for example, a \$10,000,000 tranche of a collateralized mortgage obligation created from securities backed by mortgages insured by the federal government is not just a big mortgage loan, only marginally different from a Treasury bond.

In fact, taken by itself, such an instrument might be a safe asset or might be a pure roll of the dice, depending both on the tranche from which it is sold, and on the assumptions one makes about future levels of interest rates. The fact that the outcome “depends” means that this might be quite a risky undertaking, a speculation, if you will, unless it hedges an opposing risk on some other venture.

Whether a derivative is useful or not depends on the risk profile of the portfolio to which it will be attached. Given that risk profile, the relevant business decision is about how much it will cost to hedge definable “buckets” of that risk with derivative financial instruments. For an end-user, most derivative instruments, viewed on a stand-alone basis, would be a speculation, not an investment. For example, why would you buy a DM currency swap if you had no DM exposure to begin with?

If there is a proper way to look at a derivative instrument in isolation, on a stand-alone basis, it must be to combine it with a hedge that removes its risk. The hedge undoubtedly will cost enough to produce a net expected return on the combined investment that makes it too low to consider. Only dealers can afford to accept exposures and then hedge them, because dealers have developed such broad and deep markets on both sides of exposures that they can exist on the bid/ask spread.

Banking and Derivatives

Some people view financial innovations like derivatives as potentially destabilizing challenges to policymakers and regulators. Such people are likely to believe that a modern financial system can be stable only when buttressed by wise regulation and other government interventions. I, on the other hand, am convinced that new legislation and new regulation to deal with derivatives should not be a policy priority today.

My view is that financial innovation tends to be inherently stabilizing, not destabilizing. Modern financial systems--and, for that matter, market economies based on

private property and price systems--are inherently resilient. Financial innovations reinforce the natural discipline and stabilizing forces at work in a market economy.

People say they “reduce risk,” “minimize risk,” “eliminate risk,” or “avoid risk.” However, risk is shed largely by passing it along to someone else. Financial derivatives are simply innovations that allow us to buy and sell risks in new ways, in many cases by cutting risk loose from ownership of an underlying asset and creating indexes of risk exposure that dealers or organized exchanges agree to accept.

The beauty of a market economy is that innovations like derivatives that endure can be expected to have good results, as the invisible hands of market supply and demand mediate among the self interests of potential users. Adam Smith’s economic theory, however, seems at variance with the spectacular losses being attributed to derivatives activity in recent years. Current proposals to regulate derivatives are, at least in part, a reaction to those losses. Is self interest really a sufficient basis for further development of derivatives markets?

One reason for spectacular losses on derivatives undoubtedly has been a lack of familiarity with the new financial technology. These losses have been associated, for the most part, with so-called “exotic” derivatives like tranches of CMOs and index amortizing options that comprise only a small fraction of the market. Also, most losses on derivatives contracts *to date* have been absorbed from the capital of the exposed party, its parent, or its sponsor, and *not* from any haircut on the value of the contract to the party “in the money.”

This is as it should be. Market discipline depends just as much on losses as on profits. Losses can be a powerful educator. In fact, the lesson about derivatives to be learned from many of the recent highly publicized losses seems clear. Of course, they have refreshed our memories about things we already knew, like “interest rates are not a one way bet,” and “leveraging assets leverages risk.” But the unique lessons about derivatives seem to be, first, that interest rate risk and extension or prepayment risk are correlated, not independent, giving rise to what is called “negative convexity.” (In legal terms, this simply means that, as interest rates rise or fall, losses mount substantially faster than on most other securities.) In addition, lest anyone be lulled into a false sense of security,

OTC markets can be quite thin. Apparently, it has been difficult to dump holdings fast enough to avoid substantial losses on ill-considered derivatives positions.

We as banking supervisors must learn similar lessons. Monitoring capital adequacy means that we must incorporate the off-balance-sheet risks of derivatives into estimates of capital adequacy. In the case of exchange-traded derivatives contracts, risk is not so contentious an issue. Daily marking-to-market and margin requirements protect the exchange, while the strength of the exchange protects the counterparty in-the-money. OTC derivatives, in contrast, cannot be marked to market directly, because there is no centralized market facility. Nonetheless, bank examiners must estimate the adequacy of a bank's capital in order to monitor the risk it poses to the safety net and, as I said earlier, someday, to make their judgments public.

No cookie-cutter approach will do. The so-called "stress-testing" of a bank's derivatives position depends on both the model being used and on the degrees of stress being tested. Learning about these matters has become a worldwide effort, involving the Basle Committee of central banks, commercial banks and other dealers who produce derivatives in the OTC market, supervisory agencies, and derivatives end-users.

In this environment of innovation and learning, there is a lot of unfinished business associated with derivatives. Information disclosure and accounting are problems. Where does the public, the shareholder, the director, or the examiner find a record of the bank's hedging strategy? That is, if there are gains or losses on derivatives being used in risk management, where are the losses and gains those derivative positions were intended to offset? Who is keeping track of the degree of success of risk management? Are both derivative positions and the position they hedge being reported simultaneously and on the same valuation basis? Will their results show up simultaneously and on the same basis?

Rules to live by

Banking is undergoing a gradual evolution in the United States, from regulated utility to global competitor. In a sense, banking is moving away from your world as practitioners and custodians of the law and its enabling regulations, and toward my economist's world of market forces and their enabling signals of profit and loss. I don't

know whether the entire landscape of new derivative instruments will endure. I do know that their survival should depend on whether they are profitable, not on whether they pass arbitrary political and regulatory tests. Therefore, I think that your counsel about derivatives will be concerned less with your bank's conformity to regulatory requirements than with your bank's conformity to sound processes of management.

Certainly that management process is a major concern of bank examiners. What is the process for identifying and quantifying risk exposures? What methods of insuring or hedging those exposures are available, how effective might they be, and what dangers do they contain? What is the legal status of new derivative instruments? Who's in charge, who should know of, and approve of, risk management practices. How will results be measured, evaluated, and communicated, and to whom? These are some of the questions I would hope you are asking as counsel to your bank.