The financial events of the last six months have been sobering, but they give some cause for optimism. The so-called credit crunch, in which virtually the entire world financial system stopped functioning, has provided a frightening example of what can happen when most of the world’s major financial institutions make the same mistake at the same time. But while the financial world was and still is in turmoil, the “real economy”—the manufacturing and service sectors that supply the world’s physical needs—has continued to plug away. The United States has now had two quarters in which business activity slowed, but the economy has not fallen into recession. Some forecasters are predicting a return to strong growth by the end of the year, and a recent Business Roundtable survey found that 70 percent of the CEOs of large companies were expecting to expand their operations in 2008.¹ Perhaps more important, U.S. and foreign equity markets, which reflect the combined views of investors all over the world, have registered only a relatively small decline from their high points—about 10 percent in the case of the Dow Jones industrials. This would be consistent with a slowing of economic growth, perhaps a mild recession, but certainly not the kind of financial downturn that one might ordinarily expect from the bursting of the housing bubble, gasoline at $4 per gallon, and the collapse of trading in the credit markets.

That the real economy—reflected in the equity markets—can remain relatively stable while the financial markets are in crisis should tell us that there are things about the U.S. and the world economies that we do not fully understand. It appears that while the world’s largest commercial and investment banks will not lend freely to one another, they are somehow still able to assemble the resources to finance the real economy. The picture this suggests is of a globalized economy that is far more flexible, diverse, nimble, and robust than most observers would have imagined.

The financial services outlook should persuade policymakers to proceed cautiously in reacting to the credit crunch. A blundering, ill-considered legislative response like the Sarbanes-Oxley Act could do a great deal more harm than good. Moreover, there are a number of

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facts about the financial economy today that call into question whether a traditional legislative and regulatory solution—involving greater government controls and financial obligations—is even feasible.

Nevertheless, the idea that financial regulation will return in force is certainly in the air. Many commentators believe that the Reagan-spawned era of deregulation and less-intrusive government—no matter what it achieved—has now come to an end.2 That may be true; conventional wisdom is a powerful force. But if so, it is returning to a world much different from the one a quarter century ago.

The New World

First, the financial resources of the government today are no longer large in relation to the size of the private sector. One of the most significant unremarked trends of the last twenty-five years has been the growth of private financial markets and private financial institutions in relation to the financial resources of governments. From 1996 to 2006, for example, U.S. GDP grew in nominal terms from $7.8 trillion to $13.2 trillion,3 or 68.8 percent. But the financial economy grew much faster. From 1996 to 2006, the real assets of the ten largest private-sector banks in the world grew in nominal terms from $4.6 trillion to $17.4 trillion,4 a growth rate of 277 percent. It was not long ago that governments routinely intervened in the currency markets to adjust the relationship between, say, the dollar and the yen. This is not done anymore, principally because currency flows are now so large that governments do not have the financial resources to buy and sell sufficient amounts of their own or others’ currencies to move market prices significantly. According to the Federal Reserve Bank of New York, the currency markets now trade an average of $618 billion every day,5 and each day, approximately $2 trillion flows through the international payments system.6

The Federal Reserve’s resources have not grown as quickly as the assets of the ten largest banks in the world—and they are falling further behind. While the world’s largest banks were growing at a 277 percent rate between 1996 and 2006, the Fed’s assets grew only 88 percent.7 The Fed can still have a major effect on macroeconomic conditions by printing money, but in offering credit support to commercial and investment banks in today’s turbulent financial market, the agency is using a substantial portion of its $800 billion balance sheet, which looks increasingly puny when matched against the average of $1.3 trillion in the ten largest commercial banks and $969 billion in the four largest investment banks. The relative differences are even more extreme in other countries. UBS, the largest Swiss bank, has assets several times larger than the entire GDP of Switzerland. As the private financial markets continue to grow in the years ahead, this relative difference in size will also increase. In other words, the world’s most important central bank, like other central banks, is fast losing—if it has not already lost—the ability to control events solely through the size of its asset base.

The private markets have not only become larger than governments, they are making government regulation a less influential part of their activities.

The second characteristic of the new financial world is that governments cannot control where financial transactions occur. As the trend toward globalization continues, the ability of governments to control financial markets through regulatory directives will also diminish. Unlike manufacturing and certain services such as transportation, technology now permits financial transactions to occur anywhere in the world. Where, for example, does an electronic securities trade occur—where the executive offices of the exchange are located, where its servers are situated, where the buyer or seller does business, or some place in cyberspace? What country has jurisdiction over this transaction? A regulatory agency that tries to exert control—in a way that does not enhance the value of the regulated activity—will soon find that the exchange or other financial business has moved to a less hostile environment, even if its management stays put. In other words, to a degree never before recognized, financial players can determine where they will be regulated—and by whom. In effect, the private markets have not only become larger than governments, they are making government regulation a less influential part of their activities.

This is not to say that regulation will or should disappear. In fact, regulation is a positive good if it creates sensible ground rules that enhance competition, reduce costs for consumers, and encourage best practices. An example of such a regulatory regime is the corporate law of the state of Delaware. First, the statute itself resolves a number of issues about corporate governance that might otherwise have to be included in a corporate charter and could enhance the power of managements. Shareholders know that if a corporation is chartered in Delaware, these issues have been resolved fairly by the corporate statute...
and court interpretations over the years. Delaware charters, therefore, guarantee shareholder rights while still according management a reasonable degree of discretion. In addition, Delaware and its courts have over many years followed a consistent pattern of steering a middle course between both corporate managements and shareholders. Managements get benefits, but so do shareholders, and maintaining an environment in which both of them derive benefits from the arrangement is the key to Delaware’s success. If the state were too favorable to one or the other, it would drive the disadvantaged party away. It is this balance—coupled with a qualified and skilled judiciary—that keeps Delaware at the forefront of states in chartering new corporations.

In the globalizing market of today, national governments must come to terms with the same facts. Public policies that excessively penalize business will simply result in less business activity to tax and fewer sources of employment for the country’s citizens. High-tax jurisdictions in the European Union, for example, have found that they are losing business to Ireland, where the tax rates bear a closer relationship to the services businesses receive. In the last two years, there have been four reports from respected sources about the decline in the preeminence of the U.S. financial markets. In all four, the costs of regulation and the risks of litigation in the United States have been cited as the cause of this decline. U.S. companies have moved their transactions overseas, and foreign companies have refused to enter the public markets when seeking capital in the United States. But the broader point is that, increasingly, both buyers and sellers of financial services now have a choice about where to operate.

The third feature of the new environment is that financial innovations are making private risk management more effective than government regulation. Regulators have few resources that will materially reduce the risk-taking of the regulated industry. They can insist on more capital, which provides both a cushion against losses and a nest egg to protect, and they can clamp down on innovation, which can always be a source of uncertainty and therefore risk. But beyond that, they are limited to ensuring that banks, securities firms, and insurance companies carefully review the risks they take and have the records to show for it. Moreover, although regulation is advertised as countercyclical, it is in fact the opposite. The classic description of the Fed’s role is that it is supposed to remove the punchbowl just when the party is getting going, but this applies only to monetary policy. On bank or financial regulation, the Fed—like all regulators—is under the thumb of Congress, which does not like interference with a party the country is enjoying. While the dot-com and subprime bubbles were swelling, not a peep was heard in Congress, which is now busily blaming the Fed and other regulators for their inaction. The truth is that if any regulatory agency had tried to stop the distorted growth of either of these bubbles, it would have been slapped down by the people’s elected representatives.

The credit crunch is testimony to the ineffectiveness of regulation; despite being under the most comprehensive oversight of any industry, the banking sector is riddled with bad investments and the resulting losses. In fact, by creating moral hazard, it is likely that the regulation of banks has reduced the private-sector regulatory scrutiny that banks would have received as part of a fully operating system of market discipline.

Deriving Protection

A sophisticated and intelligent regulatory process should now focus on the risk-management innovations that are being developed by the private sector, especially the derivative instruments that have greater potential to control risk than government oversight. A derivative is a synthetic instrument that imitates some of the elements of a real asset or liability in order to permit the shifting of risk. The ability of derivatives to move risk from place to place makes them highly useful to financial intermediaries as hedging devices.

A simple example of effective risk-shifting is the interest rate swap, which was developed by a consortium of financial intermediaries known as the International Swaps and Derivatives Association, founded in 1985. Interest rate swaps have been an important and useful risk-management device in the financial markets for at least twenty-five years. The value of an interest rate swap is that it allows financial intermediaries to match their assets and their liabilities and thus to reduce their interest rate risks. Say a bank has deposits on which it must pay a market or “floating” rate of
interest, but it also holds mortgages on which it receives only a fixed monthly interest payment. This is a typical position for a bank, but it is a risky one. If interest rates rise, it may be forced to pay more interest to its depositors than it is receiving from the mortgages it holds and thus suffer losses. Ideally, it would want to trade the fixed rate it receives on its mortgage portfolio for a floating rate that will more closely match what it has to pay its depositors. That way, it is protected against increases in market rates. An interest rate swap, in which the bank pays a fixed rate to some counterparty, and receives a floating rate in return, is the answer; it matches the bank’s interest rate receipts to its payment obligations.

But what kind of entity would agree to such a swap? Consider an insurance company that has fixed obligations to pay out a certain sum monthly on the fixed annuities it has written. The insurance company tries to match this obligation with bonds and notes that are the ultimate source of the funds for meeting its fixed obligations, but these do not necessarily yield a fixed return for periods long enough to fully fund its annuity commitments. Instead, they mature well before its annuity obligations expire and may—if interest rates decline—yield less than it is required to pay out to recipients. The insurance company, then, would be able to avoid some of this risk with a swap that is the exact mirror image of what the bank needs. Into this picture steps a securities firm, which arranges a fixed-for-floating interest rate swap between the bank and insurance company. The notional amount can be set at any number—it does not represent a real thing—so the parties agree on $100 million. The bank agrees to pay the insurance company a fixed amount monthly—say, 5 percent—on the notional amount of $100 million, and the insurance company agrees to pay the bank monthly a floating rate of interest on the same notional amount. If interest rates rise to 6 percent, the insurance company pays the bank the one percent difference, and if they fall to 4 percent, the bank pays the insurance company 1 percent.

The important thing to notice about this transaction is that both the bank and the insurance company are better off—both have reduced their risks. The bank now gets a floating payment that assures it of the funds necessary to pay its depositors no matter how high interest rates rise, and the insurance company is better off because it gets a fixed payment from the bank that allows it to pay its annuitants no matter how far interest rates fall. Both parties have hedged their interest rate risk through use of a derivative. The notional amount of interest rate swaps currently outstanding was $382.3 trillion by the end of 2007. This is a frighteningly large number, but it is important to remember that it is only notional or imaginary—it is only the basis on which counterparties are exchanging fixed for floating rates. No one actually owes anyone any portion of this $382.3 trillion.

The interest rate swap is a classic example of a private-sector mechanism for risk management that could not have been developed or implemented by a regulatory agency. It is also a good way to think about an even more important derivative instrument. A credit default swap (CDS) is much like an interest rate swap in that it can be based on a notional amount, but the similarity ends there. The “swap” is really a contract involving mutual promises; party A promises to make a series of payments to party B in exchange for B’s promise to indemnify A against the losses that may result from a default by C. In other words, the CDS bears a strong resemblance to a guarantee. Counterparty A has purchased “protection” from counterparty B against the losses A might incur because of the default of C. The CDS is primarily used as a risk-management tool, and it allows financial intermediaries to exchange risks without actually selling assets to one another. Like the interest rate swap, the CDS is also growing in popularity. By the end of 2007, the notional amount of CDSs outstanding was $62.2 trillion, a growth rate of 81 percent from the $34.5 trillion notional amount that was outstanding at the end of 2006.

The reason for the popularity of the CDS is, once again, its risk-management qualities. Assume that a bank holds a loan to a corporate customer that makes oil field equipment. The bank is receiving a stream of payments on the loan with which it is satisfied, but it concludes as a matter of risk management that it has too much credit exposure to the oil business. If oil prices fall, its loans may be in jeopardy. One of the objectives of risk management is to hold uncorrelated assets—that is, assets that do not rise or fall in value or marketability at the same time. Even better, from the risk-management perspective, are assets that are negatively correlated—that rise in value when others are falling. For example, a bank would like to hold loans to both an auto manufacturer and an oil company; as

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oil prices rise, the auto manufacturer becomes weaker, but the oil company becomes stronger; other things being equal, the bank’s risks are balanced.

Using this strategy, the bank would like to divest some of its oil industry exposure and instead balance its portfolio with exposure to the risk of, say, auto sales. Its theory is that if oil prices fall, auto sales will rise. In a world where CDSs are available, this is easily done. Again, an intermediary such as a securities firm arranges a CDS in which an insurance company agrees, in exchange for a monthly payment by the bank, to indemnify the bank against loss if the oil field equipment company defaults. Through this transaction, the bank has eliminated the credit risk of a loan to the oil industry, but the loan remains on its books, and it keeps the oil company’s stream of payments. Now the bank enters another CDS, this time with a hedge fund, in which the bank promises to indemnify the fund against losses on a portfolio of auto loans. For this protection, the hedge fund makes a monthly payment to the bank. After these two transactions, the bank has somewhat diversified and balanced its portfolio by reducing the credit risk of too much exposure to the oil industry and substituting the credit risk of a portfolio of auto loans. Because the portfolio of auto loans is negatively correlated with the oil industry risks the bank retains, the bank’s portfolio is now likely to be more stable. Again, a derivative has operated as an effective hedging tool, reducing the bank’s credit risk profile.

Lessons for Policymakers

The proponents of greater regulation are pushing for new controls over financial markets in the wake of the Bear Stearns bailout, but the blithe assumption that Congress can pass a law and the Securities and Exchange Commission or the Fed can step in to control how the big investment banking firms do business is misplaced. Today, given the limitations on its scope and scale of actions, the watchword for government regulation should be modesty. Enlarging access to the Fed’s discount window would be a mistake. The Federal Reserve’s resources are limited and will only become more so in relation to its obligations as the private sector continues to grow. Allowing investment banks to have access to the Fed’s discount window will introduce moral hazard into the securities business and reduce the effectiveness of market discipline, which is an important alternative to government regulation. As shown by conditions in the banking industry today, conventional regulation has proven itself to be ineffective in preventing excessive risk-taking. Reducing market discipline will impair the only other way to control risk-taking by financial intermediaries. Accordingly, in formulating regulatory policies, policymakers should focus on making market discipline more, not less, effective. This means regulation should focus on enhancing transparency of financial intermediaries—so that the market knows more about their internal conditions—rather than controlling their risk-taking through conventional regulatory means.

Regulation of financial markets and financial intermediaries should be sensitive to the ease with which financial transactions can migrate from one jurisdiction to another. Regulation can improve markets by enhancing competition and promoting best practices, but when it imposes costs that outweigh its benefits, financial intermediaries will find it easy to move their activities to other jurisdictions. This phenomenon will only become more visible in the future as improvements in global communications make it increasingly simple to locate a financial transaction where there is limited—or no—regulatory oversight. Accordingly, in considering regulatory changes, U.S. policymakers should recognize that imposing more costs and controls on financial intermediaries will only drive more financial activities out of their jurisdiction.

Moreover, excessive regulation can suppress the innovation and appropriate risk-taking that is responsible for the extraordinary growth of the private sector and private markets over the last quarter-century. The credit crunch has many causes, but—as shown by the activities and subsequent losses of commercial banks—a lack of regulation was not one of them. Increasing the amount of regulation—especially of investment banks—in an effort to prevent a repeat of the events that produced the credit crunch will either drive the industry out of the United States or reduce its ability to innovate and create value.

Finally, regulation should encourage the development of private tools for risk management, not treat private-sector developments as a source of risk. Since the bailout of Bear Stearns, there have been many suggestions that CDSs have increased the total amount of risk in the

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financial markets or that they made the bailout necessary because the interconnections they created have made the markets more susceptible to systemic risk.\textsuperscript{10} Neither of these contentions is plausible. First, as we have seen, CDSs simply transfer risk from one place to another; they do not increase the total amount of risk that is on the books of financial intermediaries. Indeed, they reduce the risks of intermediaries by allowing them to assemble uncorrelated and diversified portfolios.

The interconnectedness point is also fallacious. In the example discussed earlier, what happens if oil prices decline and the bank's loan to the oil service company defaults? In that case, the insurance company that has promised to indemnify the bank must pay the bank, from which it acquires the right to recover whatever it can from the borrower's remaining assets. There is nothing unusual about that transaction—in fact, financial intermediaries routinely provide guarantees in the ordinary course of business, and they have for centuries. The difference in the case of CDSs is that the insurance company—the seller of protection in the example—might fail, either before or after the oil service company defaults. If the insurer's failure occurs before the oil service company defaults, the bank is left without coverage. Its recourse in that case is to find another counterparty to pick up the risk or to simply take the service company's risk back on its books. The bank has suffered no loss, except for the payments it made to the insurance company before the insurance company went out of business.

What happens, however, if both the oil service company and the insurance company default? In that case, the bank suffers a loss—as it would anyway if it had retained the risk of the loan to the oil service company. But the interconnectedness argument assumes that the failure of the insurance company harms more than the bank—that it somehow causes losses to all the other financial intermediaries to which it had sold protection. But this is not true. None of the intermediaries that bought protection from the insurance company has suffered any losses unless or until the underlying obligation that the insurance company has guaranteed also defaults. In other words, no buyer of protection through a CDS suffers a loss unless there are two defaults—the underlying obligation that is guaranteed by the CDS and the seller of protection under the CDS.

Thus, to take a real life example, what losses would have occurred if Bear Stearns had been allowed to fail? The answer is none for those who were protected by a CDS written by Bear, since these counterparties would have suffered a loss only when the underlying obligation guaranteed by Bear defaulted. The only losses from Bear's failure would have been to those who had written a CDS protecting against default by Bear itself. Those losses would have been real, of course, but it is important to keep in mind that the losses suffered by these counterparties would have simply indemnified the losses of others who had purchased protection from them and would have suffered these losses themselves. Again, all the CDSs have done is shift risks and losses from one place to another; they have not created any new losses.

From time to time, it is also argued that companies are purchasing CDS protection from sellers that do not have the resources to meet their obligations, or that CDSs are routinely transferred from financially responsible companies to companies with weak balance sheets. Neither of these statements is likely to be true. There is no reason that a company would purchase protection from a counterparty that is unable to meet its obligations. In fact, 63 percent of CDSs are collateralized to ensure that the assets are there in the event that the CDS guarantee is called upon. Moreover, under common law that prevails in every state, one cannot assign an obligation without the approval of the beneficiary of the obligation. Thus, a CDS counterparty cannot assign its indemnification obligation without the express approval of the indemnified counterparty.

Accordingly, the contention that CDSs should be regulated or banned because they either create new risks or foster systemic risk through interconnectedness is without any logical foundation. CDSs are in fact a valuable tool for reducing the risks of financial intermediaries and should be expanded rather than suppressed or regulated.

Conclusion

In a recent speech to the Economic Club of New York, New York Federal Reserve Bank president Tim Geithner noted:

We have to recognize that poorly designed regulation has the potential to make things worse. We have to distinguish carefully between problems the markets will solve on their own and those markets
cannot solve. We have to acknowledge not just that regulation comes with costs, but that if not carefully crafted it can distort incentives in ways that may make the system less safe. And we have to focus on ways regulation can mitigate the moral hazard risk created by actions central banks and governments have taken and may take in the future to avert systemic financial crises.11

The advocates of more comprehensive regulation of securities firms after the Bear Stearns bailout blithely assume that this will enhance market stability and allow the Fed to deal with systemic risk. Why, after all, should the government regulate securities firms unless it expects it might have to bail them out someday? But in reality, it will introduce moral hazard into the securities business and thus reduce market discipline. It is not clear, given the size of the major financial institutions relative to the assets of the Fed, that this is a risk the Fed should be expected to undertake. In addition, badly designed and intrusive regulation, as several reports have shown, can drive financial transactions to places where regulatory costs are lower or where regulation is more cost-effective. Finally, the private sector has been developing risk-management tools like CDSs that are in many respects more effective than government regulation.

Regulatory policy, then, as Geithner suggests, should focus on things markets themselves cannot solve, not on those problems markets—and market discipline—can effectively address. This means policies that enhance transparency to make market discipline more effective, avoid moral hazard, and encourage the development of clearinghouses for CDSs. Above all, it means that government regulatory policies should not make things worse by failing to recognize government’s own limitations in an era when private markets have grown so large.

Notes

7. The data on the assets of the ten largest banking companies were aggregated from “World’s Largest Banking Companies by Assets,” American Banker, October 4, 2007; and “The Top 200 World Banking Companies,” American Banker, July 29, 1997.
10. See, for example, Shannon D. Harrington and Oliver Biggadike, “Fed, Banks Agree to Default-Swap Changes to Cut Risk,” Bloomberg, June 10, 2008.