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Too Big to Fail?
Long-Term Capital Management and the Federal Reserve

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In September 1998 the Federal Reserve organized a rescue of Long-Term Capital Management, a very large and prominent hedge fund on the brink of failure. The Fed intervened because it was concerned about possible dire consequences for world financial markets if it allowed the hedge fund to fail.

The Fed's intervention was misguided and unnecessary because LTCM would not have failed anyway, and the Fed's concerns about the effects of LTCM's failure on financial markets were exaggerated. In the short run the intervention helped the shareholders and managers of LTCM to get a better deal for themselves than they would otherwise have obtained.

The intervention also is having more serious long-term consequences: it encourages more calls for the regulation of hedge-fund activity, which may drive such activity further offshore; it implies a major open-ended extension of Federal Reserve responsibilities, without any congressional authorization; it implies a return to the discredited doctrine that the Fed should prevent the failure of large financial firms, which encourages irresponsible risk taking; and it undermines the moral authority of Fed policymakers in their efforts to encourage their counterparts in other countries to persevere with the difficult process of economic liberalization.

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Introduction

In September 1998 the Federal Reserve organized a rescue of Long-Term Capital Management, a very prominent U.S. hedge fund on the brink of failure. The Fed intervened because it was concerned about the possibility of dire consequences for world financial markets if it allowed the firm to fail.

The Fed's rescue of LTCM was misguided. The intervention was not necessary to prevent the failure of LTCM. The firm would not have failed, and even if it had, there would not have been the dire consequences that Federal Reserve officials feared. Indeed, letting LTCM fail might well have had a salutary effect on financial markets: it would have sent a strong and convincing signal that no financial firm—however big—could expect to be bailed out from the consequences of its own mismanagement.

The rescue of LTCM also has a number of detrimental consequences. It encourages more calls for the regulation of hedge-fund activities, which would be pointless at best and counterproductive at worst. The rescue also implies a massive and open-ended extension of Federal Reserve responsibilities, without any congressional mandate. In addition, the rescue implies a return by the Federal Reserve to the discredited doctrine of "too big to fail"—the belief that the Fed will rescue big financial firms in difficulty—for fear of the possible effects on financial markets of letting big firms fail. Too big to fail encourages irresponsible risk taking by financial firms, which makes them weaker and financial markets more fragile. Finally, the rescue of LTCM does a lot of damage to the credibility and moral authority of Federal Reserve policymakers in their efforts to encourage their counterparts in other countries to persevere with the necessary but difficult process of economic liberalization.

What Are Hedge Funds?

Hedge funds are private investment funds that aim to make profits for their shareholders by trading securities. Hedge funds vary enormously but fall into two main classes. The first is macro funds, which take speculative (i.e., unhedged) positions in financial markets on the basis of their analyses of financial and macroeconomic conditions. They bet on exchange-rate devaluations, changes in macroeconomic policies, interest-rate movements, and so on. Macro funds are thus "hedge" funds in name only. They make their profits from speculation, and their portfolios are often highly risky. Most macro hedge funds are also highly leveraged—that is, the amounts invested in their portfolios, the firms' assets, are much greater than their share capital, with investments in excess of capital being financed by borrowing. Leverage increases the potential profits of shareholders, but it also increases their risks: the greater the leverage, the bigger the profit to shareholders if investments are successful and the bigger the loss to shareholders if they are not. A highly leveraged fund can therefore make very high profits but also runs a relatively high risk of going bankrupt. Macro funds are highly leveraged relative to most other institutional investors and typically have asset bases five to nine times greater than their capital.[1]

The other main class of hedge funds is relative-value, or arbitrage, funds. Those funds use sophisticated models to detect arbitrage opportunities—differences in the prices of nearly equivalent securities or portfolios—in financial markets. Having detected such opportunities, those funds construct arbitrage trading strategies to profit: they buy securities that are underpriced and sell those that are overpriced, while simultaneously taking offsetting positions to hedge against any risks involved and lock in their arbitrage profits. Financial-market arbitrage is a relatively low-risk activity, so relative-value funds often operate with much higher leverage than do macro funds.[2]

In the United States, hedge funds with fewer than 100 shareholders are exempt from regulation under the Securities Act of 1933, the Securities Exchange Act of 1934, and the Investment Company Act of 1940. Most U.S. hedge funds therefore restrict the number of their shareholders to fewer than 100. Overseas hedge funds are also usually subject to little or no regulation, particularly those operating from offshore centers, such as the Bahamas and the Cayman Islands. The hedge-fund industry is thus largely unregulated.

Despite its growth in recent years, the industry still is only a very small part of the overall institutional investment sector. A recent International Monetary Fund report estimated that the total amount of capital invested in hedge funds in the third quarter of 1997 was about $100 billion. By comparison, other institutional investors—pension funds, mutual funds, insurance companies, banks, and so on—had a combined capital of well over $20 trillion.[3] Hedge funds therefore account for less than 0.5 percent of the total capital of the institutional investment sector.

Nonetheless, hedge funds have received considerable attention during the last decade, most particularly because of their role in a number of recent exchange-rate crises. Perhaps the best-known example is George Soros's Quantum Fund, a macro fund reputed to have made more than $1 billion at the British government's expense by betting against the pound in the European exchange-rate crisis of September 1992. Hedge funds have also figured prominently in more recent crises, including those in Latin America, the Far East, and Russia in the last couple of years. The activities of hedge funds have led to major controversy over their impact on the world financial system and to calls from some quarters that hedge funds be regulated.[4]

The Story of LTCM

Long-Term Capital Management was founded in March 1994 by John Meriwether, a former Salomon Brothers trading star, along with a small group of associates, most notably economists Robert Merton and Myron Scholes, who received the Nobel Prize in economics in 1997. The fund initially specialized in high-volume arbitrage trades in bond and bond-derivatives markets but gradually became more active in other markets and more willing to speculate. The fund thus started as an arbitrage fund but gradually became more like a macro fund. LTCM was very successful: by the end of 1997 it had achieved annual rates of return of around 40 percent and had nearly tripled its investors' money. That track record and the prestige of its associates made LTCM very popular with investors, and the companies and individuals investing in LTCM "read like a who's who list of high finance."[5] LTCM was the darling of Wall Street.

By that stage, it appears that the fund's assets had grown to about $120 billion and its capital to about $7.3 billion.[6] However, despite that high leverage—an assets-to-equity ratio of over 16 to 1—the management of LTCM concluded that the capital base was too high to earn the rate of return on capital for which they were aiming. They therefore returned $2.7 billion of capital to shareholders, thus cutting the fund's capital to $4.8 billion and increasing its leverage ratio to around 25 to 1. In effect, the management of LTCM had taken a major gamble: they made the firm much riskier, in the hope of bolstering the returns to shareholders.

LTCM Gets into Difficulties

Unfortunately, LTCM's luck ran out not long afterwards. Most markets were edgy during the first part of 1998, but market conditions deteriorated sharply in the summer and led to major losses for LTCM in July. Disaster then struck the next month, when the Russian government devalued the ruble and declared a moratorium on future debt repayments. Those events led to a major deterioration in the creditworthiness of many emerging-market bonds and corresponding large increases in the spreads between the prices of Western government and emerging-market bonds. Those developments were very

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bad for LTCM because the fund had bet massively on those spreads' narrowing. To make matters worse, the fund sustained major losses on other speculative positions as well. As a result, by the end of August LTCM's capital was down to $2.3 billion and the fund had lost over half of the equity capital it had had at the start of the year. By that time, its asset base was about $107 billion, so its leverage ratio had climbed to over 45 to 1—a very high ratio by any standards, but especially in that volatile environment.[7]

As its losses mounted, the fund had increasing difficulty meeting margin calls and needed more collateral to ensure that it could meet its obligations to counterparties. The fund was running short of high-quality assets for collateral to maintain its positions, and it also had great difficulty liquidating its positions: many of its positions were relatively illiquid (i.e., difficult to sell) even in normal times and hence still more difficult to sell—especially in a hurry—in nervous and declining markets.

The fund was now in very serious difficulties and, on September 2, 1998, the partners sent a letter to investors acknowledging the fund's problems and seeking an injection of new capital to sustain it. Not surprisingly, that information soon leaked out and the fund's problems became common knowledge.

LTCM's situation continued to deteriorate in September, and the fund's management spent the next three weeks looking for assistance in an increasingly desperate effort to keep the fund afloat. However, no immediate help was forthcoming, and by September 19 the fund's capital was down to only $600 million.[8] The fund had an asset base of $80 billion at that point,[9] and its leverage ratio was approaching stratospheric levels—a sure sign of impending doom. No one who knew LTCM's situation really expected the fund to make it through the next week without outside assistance.

The Federal Reserve Intervenes

Wall Street and the Federal Reserve had observed LTCM's deterioration with mounting concern. Many Wall Street firms had large stakes in LTCM, and there was also widespread concern about the potential impact on financial markets if LTCM were to fail. The Fed felt obliged to intervene, and a delegation from the New York Federal Reserve and the U.S. Treasury visited the fund on Sunday, September 20, to assess the situation.[10] At that meeting fund partners persuaded the delegation that LTCM's situation was not only bad but potentially much worse than market participants imagined. The Fed concluded that some form of support operation should be prepared—and prepared very rapidly—to prevent LTCM's failure and to forestall what the Fed feared might otherwise be disastrous effects on financial markets.

Accordingly, the New York Federal Reserve invited a number of the creditor firms most involved to discuss a rescue package, and it was soon agreed that this Federal Reserve–led consortium would mount a rescue if no one else took over the fund in the meantime. However, when representatives of that group met on the early morning of Wednesday, September 23, they learned that another group had just made an offer for the fund and that that offer would expire at lunchtime that day. It was therefore decided to wait and see how LTCM responded to that offer before proceeding any further.

A group consisting of Warren Buffett's firm, Berkshire Hathaway, along with Goldman Sachs and American International Group, a giant insurance holding company, offered to buy out the shareholders for $250 million and put $3.75 billion into the fund as new capital. That offer would have put the fund on a much firmer financial basis and staved off failure. However, the existing shareholders would have lost everything except for the $250 million takeover payment, and the fund's managers would have been fired. The motivation behind this offer was strictly commercial; it had nothing to do with saving world financial markets. As one news report later put it:

> Buffett wasn't offering public charity. He was trying to do what he preaches: buy something for much less than he thinks it's worth. Ditto for Goldman Sachs, which made tons of money dealing in bankruptcies, salvaging financially distressed real estate. . . . These folks weren't out to save the world's financial markets; they were out to make a buck out of Long-Term Capital's barely breathing body.[11]

Had it been accepted, that offer would have ended the crisis without any further involvement of the Federal Reserve—a textbook example of how private-sector parties can resolve financial crises on their own, without Federal Reserve or other regulatory involvement.

But that was not to be. The management of LTCM rejected the offer, and one can only presume that they did so because they were confident of getting a better deal from the Federal Reserve's consortium.[12] The Fed therefore reconvened discussions to hammer out a rescue package, which was agreed on by the end of the day. The package was promptly accepted by LTCM and immediately made public. Under the terms of the deal, 14 prominent banks and brokerage houses—including UBS, Goldman Sachs, and Merrill Lynch but not the Federal Reserve—agreed to invest $3.65 billion of equity capital in LTCM in exchange for 90 percent of the firm's equity. Existing shareholders would therefore retain a 10 percent holding, valued at about $400 million. This offer was clearly better for the existing shareholders than was Buffett's offer. It was also better for the managers of LTCM, who would retain their jobs for the time being and earn management fees they would have lost had Buffett taken over. Control of the fund passed to a new steering committee made up of representatives from the consortium, and the announcement of the rescue ended concerns about LTCM's immediate future. By the end of the year, the fund was making profits again.

Was the Federal Reserve Justified?

The immediate reaction of most observers in the financial world was relief that the failure of LTCM had been avoided, and the rescue package was generally well received on Wall Street, although some financial observers expressed concerns about its longer-term implications. Elsewhere, reactions were generally less favorable, and there was considerable criticism of the management of LTCM for getting into difficulties and of the Federal Reserve for bailing out the fund. Responding to those concerns, the House Committee on Banking and Financial Services called a hearing on the issue and invited some of the participants to give evidence. Among those called were the president of the New York Federal Reserve, William McDonough, and the chairman of the Federal Reserve Board, Alan Greenspan. Both officials testified before the House committee on October 1. Their testimony focused on three main issues:

- The rescue package itself,
- The necessity (or otherwise) of Federal Reserve intervention, and
- The consequences for financial markets if LTCM had failed.

The Rescue: Private-Sector Solution or Federal Reserve Bailout?

In his testimony, McDonough defended the rescue package as "a private sector solution to a private-sector problem, involving an investment of new equity by Long-Term Capital's creditors and counterparties." He bristled at the claim that the Federal Reserve had "bailed out" LTCM, pointing out that control had passed to the 14-member creditor group and that "the original equity-holders [had] taken a severe hit." He also stressed that "no Federal Reserve official pressured anyone, and no promises were made. Not one penny of public money was spent or committed."[13] Greenspan echoed that argument and

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claimed that the LTCM episode was one of those "rare occasions" when financial markets seize up and "temporary ad hoc responses" are required. He also compared the LTCM rescue to the famous occasion when J. P. Morgan convened the leading bankers of his day in his library to discuss how they were going to resolve the financial crisis of 1907.[14]

There is a certain irony in central bankers' defending their resolution of the LTCM problem on the grounds that it was much the same as a purely private-sector solution to the same problem. If the central bank merely mimicked the private sector, then why did it need to get involved at all? Why couldn't it have sat back and let Warren Buffett and his associates in the private sector do the job? Indeed, what would be the point of having the Federal Reserve regulate financial institutions at all? The arguments put forward by McDonough and Greenspan thus undermine the very actions they were trying to defend.

McDonough's testimony also invites the response that an intervention led by a federal body can hardly be described as a "private sector solution to a private-sector problem." The Federal Reserve did intervene, and pointing out that it did not pressure institutions to participate or spend or commit public money does not alter that fact.

For his part, Greenspan overlooks the point that the 1907 crisis was resolved by private-sector parties operating on their own—as they had to, because there was no central bank at the time—while the LTCM crisis was resolved by a rescue package put together by the central bank. The lesson to draw from a comparison of the two crises is therefore *not* that the LTCM rescue was justified because it was like the resolution of 1907. Instead, the appropriate lesson is almost the opposite: that if private-sector parties operating on their own could resolve the crisis of 1907, then there was no need for the Fed to intervene in 1998. If 1907 tells us anything about the LTCM episode, it suggests that the private sector could have resolved the crisis on its own—a conclusion that is also borne out by the plain facts of the case itself.

Did the Federal Reserve Need to Intervene to Stop the Failure of LTCM?

Both officials also argued strongly that the Federal Reserve was obliged to prevent the failure of LTCM by fear of the adverse effects that LTCM's failure might have had on financial markets. As Greenspan put it:

> Financial market participants were already unsettled by recent global events. Had the failure of LTCM triggered the seizing up of markets, substantial damage could have been inflicted on many market participants, including some not directly involved with the firm, and could have potentially impaired the economies of many nations, including our own. . . . Moreover, our sense was that the consequences of a fire sale triggered by cross-default clauses, should LTCM fail on some of its obligations, risked a severe drying up of market liquidity. . . . In that environment, it was the FRBNY's [Federal Reserve Bank of New York's] judgment that it was to the advantage of all parties—including the creditors and other market participants—to engender if at all possible an orderly resolution rather than let the firm go into disorderly fire-sale liquidation.[15]

The Federal Reserve, therefore,

> moved more quickly to provide their good offices to help resolve the affairs of LTCM than would have been the case in more normal times. In effect, the threshold of action was lowered by the knowledge that markets had recently become fragile.[16]

There is no denying that Federal Reserve officials were genuinely concerned about the impact that LTCM's failure might have on financial markets. Nonetheless, Greenspan's argument begs the central question: it presupposes that LTCM would have failed if the Fed had not intervened, and yet it is manifestly the case that LTCM would not have failed in the absence of the Fed's intervention.

If the Federal Reserve had washed its hands of LTCM early on the morning of September 23, 1998—and made clear to LTCM that it was doing so—the management of LTCM would have faced a set of alternatives very different from the one they actually faced at the time. Instead of choosing between the Buffett offer and the likelihood of a better offer later in the day, they would have had to choose between the Buffett offer and almost certain failure. The Buffett offer was not a generous one: it would have cost the management of LTCM their remaining equity, their jobs, and any future management fees they might have obtained from LTCM, but it would at least have left them with a $250 million "exit" payment. The alternative would have been to lose their equity, their jobs, and their management fees and get nothing in return—in short, to lose everything. They would therefore have been crazy to turn Buffett down, and we must suppose they would not have done so. There is thus a very strong argument that the Fed could have abandoned the rescue as late as the morning of September 23 without letting LTCM fail. However, if that is the case, it could also have abandoned its rescue bid earlier without letting LTCM fail. Indeed, the Federal Reserve could have abstained completely from intervening, and LTCM would still not have failed.

So what did Federal Reserve intervention actually achieve? The answer depends on what offers would have been forthcoming for LTCM in the absence of Federal Reserve intervention. There would have clearly been an offer from the Buffett consortium, because that consortium was operating independent of the Fed. However, it is not clear whether the consortium led by the Federal Reserve would have come together and made an offer in the absence of the Fed's involvement. If it had, the outcome would have presumably been substantially the same as the outcome that actually occurred, but without the Fed's involvement. However, if there had been no other offers, the management of LTCM would probably have accepted the Buffett offer as the only way to avoid failure. In that case, the net effect of the Fed's intervention would have been a better deal for LTCM's shareholders and managers, at the expense of Buffett and his associates who were thereby deprived of an opportunity to make a profit from LTCM's difficulties. That leads one to wonder whether Buffett has a case against the Federal Reserve for loss of income.

What If LTCM Had Failed?

There still remains the hypothetical issue of what might have happened if LTCM *had* failed. Were the Federal Reserve's fears plausible? I would suggest not. Central bankers are always worried about the impacts of the failures of large financial firms on market "confidence," and the argument that they had to intervene to prevent the knock-on effects of such failures has been used to justify every bailout since time immemorial. Nonetheless, no one can deny that financial markets were in a particularly fragile state in September 1998. Moreover, LTCM was a big player that was heavily involved in derivatives trading; it also had large exposures to many different counterparties, and many of its positions were difficult and costly to unwind. One can therefore readily appreciate why the Fed was nervous about the prospect of LTCM's failing.

There are, nevertheless, a number of reasons to suggest that financial markets could have absorbed the shock of LTCM's failing without going into the financial meltdown that Federal Reserve officials feared:

- Although many firms would have taken large hits, the amount of capital in the markets is in the trillions of dollars. It is

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therefore difficult to see how the markets as a whole could not have absorbed the shock, given their huge size relative to LTCM. The markets might have sneezed, and perhaps even caught a cold, but they would hardly have caught pneumonia.

- When firms are forced to liquidate positions in response to a major shock, there are usually other firms willing to buy at the right price. Sellers may have to take a loss to liquidate, but buyers can usually be found, and competition for good buys usually puts a floor under sellers' losses.
- Market experience suggests that the failure of even a big derivatives player usually has an impact only on the markets in which that player was very active. Worldwide market liquidity has never been threatened by any such failure. It follows, then, that the failure of LTCM might have had a major negative impact on some of the derivatives markets in which the fund was active, but it would not have caused a global liquidity crisis.
- In any case, even in those rather extreme and unusual markets where liquidity might be paralyzed in the immediate aftermath of a major shock, participants have every reason to resume trading as soon as possible. Time and time again in the 1990s, derivatives markets have shown a remarkable ability to absorb major shocks and quickly return to normal, and there is no reason to suppose that the market response would have been much different if LTCM had failed.
- Last, but by no means least, there have been major developments in derivatives risk management over the last few years.[17] Those developments include the widespread adoption of value-at-risk systems to measure and manage overall risk exposures, the increasing acceptance of firm-wide risk management guidelines,[18] the rapid growth of methodologies for stress testing and scenario analysis,[19] and "credit enhancement" techniques to keep down exposures to counterparties. Those techniques include the use of netting agreements, periodic settlement provisions, credit triggers, third-party guarantees, and credit derivatives.[20] As a result, most firms' "true" exposures are now only a small fraction of what they might otherwise appear to be.

The Federal Reserve's nightmare scenario—a mass unwinding of positions with widespread freezing of markets—is thus farfetched, even in the fragile market conditions of the time.

There is also another reason why the Fed was ill-advised to intervene, even if it was right in its assessment that LTCM would otherwise have failed. If the Federal Reserve is to promote market stability, it needs to ensure that market participants have strong incentives to promote their own financial health—to avoid excessive risk taking, to keep their leverage down to reasonable levels, to maintain their liquidity, and so forth. However, the best incentive of all is the fear of dire consequences if they do not manage themselves properly and, consequently, default on their obligations. If the Fed wishes to encourage institutions to be strong, it should make an example of those that fail. In that context, LTCM provided the Federal Reserve with an ideal opportunity to make such an example and send out the message that no firm, however prominent, could expect to be rescued from the consequences of its own mistakes. Other firms would have taken note and strengthened themselves accordingly, and financial markets would have been more stable as a result. Throwing LTCM to the wolves would have strengthened financial markets, rather than weakened them.

Consequences of the Bailout

Calls for More Regulation

One of the most immediate consequences of the LTCM affair was calls for more regulation of hedge-fund activities. Among the people calling for more regulation was then–secretary of the treasury Robert Rubin, who called for an interagency study to look at ways of making the activities of offshore hedge funds more transparent. Many others made similar suggestions. However, as one observer wrote, "Many of these calls have been pure reflex actions rather than a carefully considered response to the issues—if any—which hedge funds pose for the world financial system."[21]

Those calls were met with widespread disbelief offshore. Many people familiar with offshore operations pointed out that there was very little that U.S. regulators could actually do about them. Some pointed out that attempts to regulate U.S. hedge funds might drive more of them offshore where they would be even further out of the reach of U.S. regulators. The skeptics included Greenspan himself:

> It is questionable whether hedge funds can be effectively regulated in the United States alone. While their financial clout may be large, hedge funds' physical presence is small. Given the amazing communication capabilities available virtually around the globe, trades can be initiated from almost any location. Indeed, most hedge funds are only a short step from cyberspace. Any direct U.S. regulations restricting their flexibility will doubtless induce the more aggressive funds to emigrate from under our jurisdiction.[22]

He concluded:

> The best we can do . . . is what we do today: Regulate them indirectly through the regulation of the sources of their funds. . . . If the funds move abroad, our oversight will diminish.[23]

Greenspan went on to suggest that the primary defense against the problems posed by the failures of hedge funds is for their counterparties to be careful in their dealings with them (e.g., not extend too much credit). Greenspan's assessment is surely correct. Moreover, since it is also in the interests of those counterparties to be careful, there would appear to be no need for (and no point in) regulating those dealings. In an efficient economy, parties should be free to make whatever deals they want with hedge funds, and it is in their interest not to overexpose themselves to those or any other risky counterparties.

Massive Extension of Federal Reserve Responsibilities

The LTCM rescue implies a very large and problematic extension of the Federal Reserve's responsibilities. The LTCM bailout indicates that the Fed now accepts responsibility for the safety of U.S. hedge funds, despite the fact that it has no legislative mandate to do so. Moreover, the Fed accepts that responsibility even though it has no regulatory authority over hedge funds and even though the chairman of its board explicitly argues that it should not have any such authority. The Federal Reserve thus maintains the extraordinary position that it should have responsibility for hedge funds but no power over them. Even if it is legally sound, which is questionable, that position is patently untenable, as it subjects the Fed to a moral hazard problem over which it has no control. That position allows large hedge funds to take risks that the Federal Reserve cannot control; yet the Fed picks up the tab if the funds get themselves into difficulties. Heads they win, tails the Federal Reserve loses. Responsibility and power cannot be separated indefinitely, however, and at some point the Fed would have to abandon its responsibility for hedge funds or, if its past empire building is any guide,[24] seek regulato-

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ry authority to control them.

But there is also a deeper problem. Where does the Federal Reserve draw the line between U.S. hedge funds and overseas ones? What is the difference between a U.S. hedge fund based in Greenwich, Connecticut, which also operates in the Cayman Islands, and a Caymans-based hedge fund, which also operates in Greenwich? The two are indistinguishable for all practical purposes, and the Fed cannot realistically support "American" hedge funds without also supporting other hedge funds as well. If the Fed supports large "U.S." hedge funds, it could easily find itself supporting all large hedge funds, regardless of their "real" nationality. To make matters even worse, if the Fed becomes responsible for the hedge-fund industry, where and how will it draw the line between hedge funds and other investment firms, particularly those that might be similar to hedge funds? Where would the Fed's responsibility actually end? Is the logical implication, as one industry commentator asked, that the Federal Reserve will "now try to shore up the Japanese banking system? After all, this is a lot more central to the fate of the world's economy and markets than one particular Greenwich, Connecticut hedge fund manager." The LTCM bailout thus implies a very large and ultimately intolerable increase in Federal Reserve responsibilities—without any legislative mandate whatsoever from Congress.

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The Return of Too Big to Fail

The LTCM rescue marks a return to the discredited doctrine of too big to fail: the doctrine that the Federal Reserve cannot allow very big institutions to fail, precisely because they are big, out of fear of the consequences of their failure for the financial system. That doctrine is a direct inducement for large institutions to act irresponsibly, and ever since the bailout of Continental Illinois in 1984, Federal Reserve officials have been trying to convince large institutions that they cannot count on Federal Reserve support if they got themselves into difficulties. That message seemed to be slowly getting through to financial firms, and then the LTCM rescue wiped out all that progress at a stroke. Not only did the Fed intervene to rescue a large firm, but the reason given for the intervention—the Fed's fears of the effects of LTCM's failure on world financial markets—was nothing less than an emphatic restatement of the doctrine. Too big to fail was back again, with a vengeance.

The return of too big to fail has serious consequences for longer-term stability. If the financial system is to be stable, individual institutions must be given incentives to make themselves financially strong. Rescuing a firm in difficulties then sends out the worst possible signal, as it leads others to think that they, too, may be rescued if they get into difficulties. That weakens their incentive to maintain their own financial health and so makes it more likely that they will eventually get into difficulties. Bailing out a weak firm may help to calm markets in the very short term, but it undermines financial stability in the long run.

Damage to the Moral Authority of the Federal Reserve

Perhaps the worst consequence of the LTCM affair was the damage done to the credibility and, more important, moral authority of Federal Reserve policymakers as they encourage their counterparts in other countries to persevere with the necessary but difficult and painful process of economic liberalization. Rep. Jim Leach (R-Iowa), chairman of the House Committee on Banking and Financial Services, was absolutely correct when he pointed out that "the LTCM saga is fraught with ironies related to moral authority as well as moral hazard. The Federal Reserve's intervention comes at a time when our government has been preaching to foreign governments, particularly Asian ones, that the way to modernize is to let weak institutions fail and to rely on market mechanisms, rather than insider bailouts."[26] Allan Sloan put the same argument more colorfully in *Newsweek:*

> For 15 months, as financial markets in country after country collapsed like straw huts in a typhoon, the United States lectured the rest of the world about the evils of crony capitalism—of bailing out rich, connected insiders while letting everyone else suffer. U.S. officials and financiers talked about letting market forces allocate capital for maximum efficiency. Thai peasants, Korean steelworkers and Moscow pensioners may suffer horribly as their local economies and currencies collapse—but we solemnly told them that was a cost they had to pay for the greater good. . . . Cronyism bad. Capitalism good.
>
> Then came the imminent collapse of Long-Term Capital . . . , the quintessential member of The Club, with rich fat-cat investors and rich hotshot connected managers. Faster than you can say "bailout," crony capitalism U.S. style raised its ugly head. . . . John Meriwether and the rest of the guys who ran the fund onto the rocks got to keep their jobs. The fund's investors, whose stakes would have been wiped out in a collapse, salvaged about seven cents on the dollar. . . . The rescuers even agreed to pay a management fee on their rescue fund.[27]

The most damaging consequence of the LTCM episode is therefore the harm done by the perception that Federal Reserve policymakers do not really have the faith to take their own medicine. How can they persuade the Russians or the Japanese to let big institutions fail, if they are afraid to do the same themselves? At the end of the day, economic liberalization is just as necessary as it always was, but in the wake of the LTCM rescue, one can understand why many of those who have to pay the price for it might have their doubts.

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Notes

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1. See International Monetary Fund, *World Economic Outlook* (Washington: International Monetary Fund, May 1998), chap. 1, p. 4.

2. For more information on hedge funds, see, for example, Stephen J. Brown, William N. Goetzmann, and Roger G. Ibbotson, "Offshore Hedge Funds: Survival and Performance, 1989–95," *Journal of Business* 72, no. 1 (January 1999): 91–117; and Andrew Webb, "Hedge Fund Fever," *Derivatives Strategy* 3, no. 10 (October 1998): 33–38.

3. See International Monetary Fund, chap. 1, p. 4. Further details can be found in Barry Eichengreen et al., "Hedge Funds and Financial Market Dynamics," International Monetary Fund Occasional Paper 166, 1998.

4. Malaysian prime minister Mahathir Mohammad has called repeatedly for greater controls on the activities of international "speculators." Indeed, Mahathir has blamed hedge funds for causing the recent economic meltdown in South East Asia and has repeatedly singled out George Soros, in particular, as being personally responsible for many of the region's problems. See, for example, "Mahathir Blasts Speculators," *CNNfn*, January 30, 1999, http://www.cnnfn.com/worldbiz/europe/9901/30/davos_mahathir/. Those claims cannot be taken seriously, and one suspects that Mahathir is seeking scapegoats for his own policy failures.

5. Amy Feldman, "Investment Titan's Fall," *New York Daily News*, September 28, 1998, p. 2, http://www.nydailynews.com.

6. These figures are derived from those given on p. 4 of the testimony of David Lindsey, director of the Securities and Exchange Commission's Division of Market Regulation, before the House Committee on Banking and Financial Services on October 1, 1998, when the committee was hearing evidence on the activities of hedge funds. This testimony is available at http://www.hedgefunds.net /testimony.htm.

7. Ibid., pp. 4–5.

8. Ibid., p. 5.

9. Allan Sloan, "What Goes Around," *Newsweek*, October 12, 1998.

10. A detailed account of the rescue is given in William J. McDonough, president of the New York Federal Reserve, Statement before the House Committee on Banking and Financial Services, October 1, 1998, http://www.bog.frb.fed.us.

11. See Sloan.

12. Since LTCM insiders have still to fully reveal their side of the story, one can only speculate on why the management of LTCM rejected the Buffett offer. However, they would have been confident at this point that another offer would be forthcoming, and there are good reasons why they might have expected this second offer to be more generous than the first. For one, Buffett had a fierce reputation for buying up firms at rock-bottom prices and was clearly driving a very hard bargain. In addition, they could reasonably infer from its recent behavior and record in past crises that the Federal Reserve was determined to prevent the firm's failure, and if the Fed was to do so, it needed to give the fund's managers some incentive to cooperate. In other words, they had some bargaining power with the Federal Reserve, which was clearly desperate to prevent the failure of LTCM, but they had no such bargaining power with Buffett. If they turned Buffett down, the management of LTCM could therefore be fairly confident of getting a better deal shortly afterwards. From their point of view, rejecting the Buffett offer made good sense, but only because they could expect a better offer later.

13. McDonough, p. 4.

14. Alan Greenspan, chairman, Board of Governors of the Federal Reserve System, "Private-Sector Refinancing of the Large Hedge Fund, Long-Term Capital Management," Testimony before the House Committee on Banking and Financial Services, October 1, 1998, p. 5, http://www.bog.frb.fed.us.

15. Ibid., pp. 1, 3.

16. Ibid., p. 1.

17. For more on developments in risk management, see, for example, Carol Alexander, ed., *Measuring and Modelling Financial Risk*, vol. 2 of *Risk Management and Analysis* (New York: John Wiley, 1998); and Kevin Dowd, *Beyond Value at Risk: The New Science of Risk Management* (New York: John Wiley, 1998), pp. 3–37.

18. These include the Group of Thirty's report of July 1993, *Derivatives: Practices and Principles* (New York: Group of Thirty, 1994); and U.S. General Accounting Office, "Financial Derivatives: Actions Needed to Protect the Financial System," May 1994. Dowd, p. 16, provides a list of reports by other interested parties.

19. See ibid., pp. 121–31.

20. These practices are explained in Lee Wakeman, "Credit Enhancement," in Alexander, pp. 255–75. For more on the use of credit derivatives, see Janet M. Tavakoli, *Credit Derivatives: A Guide to Instruments and Applications* (New York: John Wiley, 1998).

21. Benedict Weller, "Betting with Hedges," *Financial Regulator* 3, no. 3 (December 1998): 21.

22. Greenspan, p. 5.

23. Ibid.

24. See, for example, Richard H. Timberlake, *Monetary Policy in the United States: An Intellectual and Institutional History* (Chicago: University of Chicago Press, 1993), pp. 416–18.

25. Patrick Young, "Lessons from LTCM," *Applied Derivatives Trading*, October 1998, p. 1, http://www.adtrading.com.

26. James A. Leach, "The Failure of Long-Term Capital Management: A Preliminary Assessment," Statement to the House Banking and Financial Services Committee, October 12, 1998, pp. 5–6, http://www. house.gov/banking/101298le.htm.

27. Sloan.

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