

# Financial System Robustness

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**E**leven weeks ago tonight, we were all in a state of shock. Initial estimates indicated that about 6,000 people had perished in the attacks on the World Trade Center and Pentagon. U.S. financial markets were closed and all civilian aircraft were grounded. Some banks had closed some offices earlier in the day. No one knew the full extent of the damage, and no one knew when the stock and bond markets would reopen. Many firms, both financial and nonfinancial ones, were uncertain how they could meet their obligations coming due in the days ahead, given their uncertainty over selling securities to raise funds or even receiving payment on obligations due them.

How the financial system dealt with this unprecedented situation is not the most important part of the story of how the nation responded. Still, the way in which the financial system responded is a tale worth telling, for, without doubt, a spreading wave of defaults and fears of inflation would have severely complicated the nation's efforts to regain equilibrium and get on with the new war against terrorism.

Before proceeding, I want to emphasize that the views I express here are mine and do not necessarily reflect official positions of the Federal Reserve System. I thank my colleagues at the Federal Reserve Bank of St. Louis, especially Alton Gilbert, for their comments, but I retain full responsibility for errors.

## VULNERABILITIES AND STRENGTHS

The operation of our nation's financial system proved to be vulnerable to the attacks of

September 11. Key operations located at the World Trade Center included several of the important dealers who made markets in federal government securities, traders who made markets in foreign exchange, and brokers who linked the banks that wanted to borrow and lend federal funds. The people who performed these functions in our financial system and the communications infrastructure they used for making trades and settling transactions were located in one place. In addition, the New York Stock Exchange and the Federal Reserve Bank of New York are located a few blocks from the World Trade Center. Our national system for clearing checks was also vulnerable to disruption. Even a temporary suspension of air transportation had potential to disrupt the operation of a significant component of our payments system, since a large share of the checks written in the United States move through air transport to the paying banks.

Efforts of our nation's financial institutions and the Fed limited the degree of disruption in the operation of the payments system and financial institutions. Success in limiting the damage to the payments system and the operation of financial markets and institutions rests upon the financial strength of our banks and other financial institutions and the quality of their management.

The vulnerability turned out to be the physical infrastructure of payments and trading systems, and not the underlying strength of financial services firms. These firms and their suppliers proved to have the capital and the technical resources to restore damaged infrastructure. It is worth reflecting on this point, as it is not a trivial one. Countries that have seen the solvency of their financial firms threatened, such as the United States in

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the early 1930s and several Asian countries beginning in 1997, suffered far worse economic damage than did the United States in the wake of September 11.

### COPING DURING THE FIRST WEEK

Developments during the first week after September 11 were especially important for limiting the impact of the attacks on the operation of our payments system and financial institutions. Some parts of the financial system did have their operations shut down by the collapse of the Twin Towers, but other parts of the system continued to function normally. The depth of operational resources, the capacity to call on backup systems, and the role of the Federal Reserve in providing massive amounts of liquidity reflect the robustness of the U.S. financial system.

The electronic payment networks operated by the Federal Reserve System—Fedwire and the automated clearinghouse (ACH)—remained in operation without interruption. Operation of these systems facilitated the operation of other segments of the payments system and the settlement of transactions among financial institutions.

The attacks temporarily disrupted market mechanisms through which banks increase their reserves, including borrowing in the federal funds market or selling federal government securities held as secondary reserves. The Federal Reserve made large loans through the discount window to provide liquidity to banks that could not raise adequate funds through normal mechanisms. Short-term discount window loans, called adjustment credit, were \$99 million on September 5, but rose to over \$45 billion on September 12. By September 26, adjustment credit had declined to \$20 million; the system had returned to normal operations.

Extra liquidity injected into the banking system flowed to where it was needed. Banks increased their loans to other banks substantially. Interbank loans increased from \$300 billion on September 5 to \$442 billion on September 12. By

early October, interbank loans had declined to just above \$300 billion. The willingness of banks to increase their loans to each other by this large amount on short notice was based on the confidence that they were lending to banks that were strong financially. The strong capital positions enjoyed by most banks permitted them to deal successfully with the disruption of the payments system.

Trading in the markets for foreign exchange resumed on September 12. The operation of the federal funds market and the functions of making markets in government securities and settling these transactions resumed within a few days after September 11. The New York Fed's main building, a few blocks west of the World Trade Center, was undamaged but access was limited to all but essential personnel because of fear that a neighboring building might collapse, the large amount of smoke in lower Manhattan, and the difficulty of getting people to the building. The New York Fed's Open Market Desk, which conducts monetary policy through transactions with government securities dealers, was able to operate out of the main building for a time, but on September 13 relocated to a Fed backup facility in New Jersey and conducted open market operations from that office for a time.

The credit card, debit card, and ATM networks continued to function after the terrorist attacks. The flow of information among participants in these systems, including banks and merchants, occurs over electronic communication networks. Participants in these systems settled their net positions over the Fed's electronic payments networks (Fedwire and ACH) in the usual manner. Our nation's infrastructure for electronic payments not only worked but worked well.

Operation of the nation's check collection system was a greater challenge during the first week after September 11. Banks could not collect checks through air transport. In this crisis situation, the Fed adopted a policy to minimize potential disruptions to the use of checks in transactions. The Reserve Banks accepted checks from banks for deposit to their reserve accounts as usual and credited their reserve accounts for the proceeds

of the checks on the usual time schedule. Float of the Reserve Banks increased substantially because the Fed could not collect the checks on the usual schedule. Federal Reserve float added a fairly typical \$2 billion to bank reserves on September 5, but \$23 billion on September 12. The Fed's policy of accepting checks for deposit and crediting the accounts of collecting banks on the usual availability schedule facilitated the relatively smooth operation of one important phase in check collection: banks accepting checks from customers and crediting their accounts on the basis of the usual collection schedule.

The collection of many checks was delayed for several days. The contrast between the uninterrupted operation of the credit card and debit card systems, which occurs primarily over electronic communication systems, and the temporary disruptions in the check collection process, illustrates the potential benefit of shifting check collection to an electronic system.

Only a relatively few people withdrew more cash than usual from their bank accounts. The Fed was able to help banks meet this demand for cash by providing additional cash from the vaults of the Reserve Banks. Because the banks and the Fed made clear to the public that cash was and would remain readily available, the unusual demand for cash never became very large and quickly subsided.

## AFTER THE FIRST WEEK

Our nation's financial system returned to more normal operation during the second week after September 11. Although the government bond market reopened Thursday, September 13, normal market functioning could not be re-established until the equity markets reopened, which occurred on Monday, September 17. Market averages declined when the trading of shares resumed, but the operation of the markets did not show signs of panic selling. Stock prices tended to change in a rational pattern, with the largest percentage declines in the prices of the shares of companies that appeared to be most adversely affected by the

attacks. Settlement of trades occurred in almost the usual orderly fashion. To provide extra time for processing in the Treasury securities market, trades conducted on September 13 and 14 were settled three days after the trades, and five days after for trades on September 17 through September 21; starting Monday, September 24, trades were settled on the normal next-day basis.

The large increases in bank reserves during the first week after September 11 were reversed during the second week, as more checks reached the paying banks and banks repaid their loans from the Fed's discount window. Interbank loans declined as the temporary disruptions in the operation of the financial markets ended.

One of the reasons why payments systems worked in a crisis situation is that these systems have implemented arrangements for limiting the risk assumed by each participant through credit extended to counterparties in the payments systems. In addition, banks have relatively high ratios of equity to total assets. Although relatively large banks have experienced an increase in problem loans since 1997, bank capital ratios remain substantially higher than during the last period of major problems in the banking industry, in the late 1980s and early 1990s. One of the factors that could have caused disruptions in payments arrangements would have been an unwillingness of participants to extend credit to each other. I am not aware of evidence that this problem occurred.

The supervisory authorities in the United States are committed to keeping our banking industry in sound financial condition. Banks that suffer losses that compromise their capital positions are closed or reorganized unless their shareholders inject additional equity. The experience of the United States savings and loan industry in the 1980s, and of other nations, especially Japan, demonstrates the problems inherent in the alternative supervisory policy of forbearance when losses deplete the capital of financial firms. An economy cannot grow if its major financial institutions remain in weak financial condition for an extended period of time. Moreover, such firms would not have the strength to withstand a shock of the magnitude of September 11.

## IMPLICATIONS OF THIS EXPERIENCE FOR THE FUTURE

While we cannot know whether we have more terrorist attacks in our future, the operation of our payments system and financial institutions after September 11 gives us a basis for optimism about our nation's ability to cope with future events. This capacity rests on a continuing commitment to some basic principles.

First, the Fed as the central bank must inject additional reserves into the banking system temporarily during a financial crisis. This point is so well understood in the country and certainly within the Fed that I have no doubt that liquidity would flow freely as needed even if, horrible to contemplate, a significant fraction of the Fed's leadership were lost in terrorist attacks.

Second, our government supervisory agencies must maintain a commitment to policies that promote the financial strength of our financial institutions. This strength includes sound capital positions and robust contingency plans for maintaining or restoring operations. The Fed and financial firms across the country had prepared extensively for possible disruptions during several years of Y2K preparations. Those preparations were so successful that the century rollover occurred with practically no problems whatsoever, and the extensive contingency plans remained on the shelf. The contingency plans did pay off, however, on September 11 and the days that followed. I'm willing to speculate that every financial firm in the country, and many others as well, are now re-examining and strengthening their contingency plans. The U.S. financial system is being made even more robust.

My remarks have focused implicitly on the banking system and to a lesser extent on the securities trading system. I would be remiss, however, if I did not mention explicitly the insurance industry. Insured losses from September 11 will be immense, and yet insurance firms have maintained such strong capital positions and such carefully controlled risks, through reinsurance and other devices, that to my knowledge no insurance companies face the risk of insolvency from

these losses. That fact is a fine testament to the quality of financial management of these firms.

People are always interested in my thoughts about the probable direction of the economy in the months ahead, and so I'll offer a few reflections on that subject. As you may know, the National Bureau of Economic Research announced yesterday that its Business Cycle Dating Committee had reached the conclusion that a recession is in progress; the Committee dated the cycle peak in March of this year.

There is no way to tell now when the recession trough will occur. We face many uncertainties, including the possibility of further terrorist attacks. Such attacks, if they occur, will obviously be negative for the economic outlook. The uncertainties, however, are not all on the negative side. The campaign in Afghanistan seems to be going well, and there is some probability that the FBI will get to the bottom of the anthrax attacks. Success on those fronts would help to clear the air and would be positive for the economy.

Although the U.S. economy is in a recession, I am certainly not pessimistic about our economic prospects. Indeed, I am optimistic because we have such great strengths in our situation. We are a resourceful people, and, because our economy is largely organized through competitive markets, we are responding quickly to the new situation. Bank capital positions are strong; inflation is low and expected to remain low. In some past periods of stress, weak bank capital and rising inflation considerably complicated the situation. The federal government entered this period in strong fiscal condition, which means that the resources are available to meet our security needs without concern that a budget deficit is out of control. Finally, both monetary policy and fiscal policy had turned expansionary before September 11.

There is no way to provide a reliable forecast of how quickly these fundamental strengths will show themselves in a clear revival of economic growth. But they will, within a matter of a few months or few calendar quarters. Of that, I'm confident.