

## **Roger W Ferguson, Jr: September 11, the Federal Reserve, and the financial system**

Speech by Mr Roger W Ferguson, Jr, Vice Chairman of the Board of Governors of the US Federal Reserve System, at Vanderbilt University, Nashville, Tennessee, 5 February 2003.

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Thank you for the invitation to speak, and thank you all for being here. Certainly most of you have heard of the Federal Reserve and understand that it plays a role in the maintenance of our domestic economy. But that is not what I am here to discuss. I was invited here to speak to you about the actions of the Federal Reserve after the terrorist attacks on September 11, 2001.

As the central bank of the United States, the Federal Reserve seeks to establish through the implementation of monetary policy, an economic environment that encourages stable prices over time, a high level of employment, and moderate long-term interest rates. Additionally, the Fed shares, with a few other regulatory bodies, the duty of overseeing the banking industry. In a broader context, the Federal Reserve also shares the responsibility of maintaining the stability of the financial system and containing systemic risks that may arise in financial markets. And in carrying out that responsibility, we have never been confronted with a situation remotely resembling the grave reality of September 11, 2001.

On that morning, sitting in my office in Washington, I watched television with horror as the second plane crashed into the World Trade Center. Not long after, I could see thick smoke billowing above the trees in the direction of the Pentagon.

As events were unfolding, one could easily envision the risks that confronted the United States - and especially the risks to which the Federal Reserve, as the nation's central bank, would have to respond. It was clear that the loss of so many key resources at the core of the financial capital of the United States would strain markets. If allowed to mount, those strains could prompt a chain reaction drying up liquidity, which, unchecked, could lead to real economic activity seizing-up. The shocks to the financial system and the economy that were possible could have been disastrous to the confidence of businesses and households in our country and, to a significant degree, the rest of the world.

Besides these very visible external risks, the Federal Reserve System had to cope effectively in a threatening environment. The employees of the Federal Reserve Bank of New York, being a few blocks away from "ground zero," had the exceedingly difficult challenge of maintaining operations in the midst of terrifying and chaotic surroundings. All parts of the Fed System, wherever located, faced the challenge of maintaining ongoing operations, including discount window lending and check clearing, in the period of heightened uncertainty that followed those horrific attacks.

In short, on the morning of September 11, the Fed, as monetary authority, as payment system operator, as banking supervisor, and as employer, faced an unfolding crisis, and the risks were all to the downside. The outlook was at best uncertain, and potentially quite bleak.

Against this background, the Federal Reserve System organized a response that emphasized three objectives. First, as central bank we needed to provide sufficient liquidity through as many means as possible to maintain stability. In doing so, we would further our obligation to the broader citizenry to maintain public confidence so that the crisis in New York and Washington, D.C. would not spread across the country. Second, as operator and overseer of key payment systems we had to ensure that our systems, as well as those in the private sector, were operational. Third, we worked with critical public- and private-sector participants to keep markets open or, if circumstances forced them to close, to return them quickly to normal operations. Obviously, we had to balance the need to perform these public functions with the need to be a sensitive and responsible employer.

Recognizing these multiple challenges, we responded in several ways. We attempted to maintain confidence by indicating through our public statement that the Federal Reserve was open and operating and that we were ready to provide liquidity. We issued this statement after consultation with the Reserve Bank presidents, so that it represented a statement of the entire System.

Why were we so concerned about maintaining liquidity in the financial system? Liquidity, as you know, serves as the oil lubricating the engine of capitalism to keep it from burning itself out. The efficiency of our financial system at maintaining adequate liquidity is often taken for granted. But on September 11, it could not be taken for granted. The bottlenecks in the pipeline became so severe that the Federal Reserve stepped in to ensure that the financial system remained adequately liquid. In other words, our massive provision of reserves made sure that the engine of finance did not run out of oil and seize up.

The massive damage to property and communications systems at the hub of financial activity in this country made it more difficult, and in some cases impossible, for many banks to execute payments to one another. The failure of some banks to make payments also disrupted the payments coordination by which banks use incoming payments to fund their own transfers to other banks. Once a number of banks began to be short of incoming payments, some became more reluctant to send out payments themselves. In effect, banks were collectively growing short of liquidity.

We recognized this disturbing trend toward illiquidity in the pattern of funds movement among the accounts held by commercial banks at the Federal Reserve. Before September 11, banks held approximately \$13 billion in their Fed accounts. In the days after September 11, these balances ballooned to more than \$120 billion because some banks could not move funds out of their accounts. The large buildup of Federal Reserve account balances was limited to only a few banks, but it meant that a number of other banks were running huge negative positions in their Federal Reserve accounts and needed to find other sources of liquidity before the close of business.

Further evidence of disruption in the flow of payments among banks at this time is quite clear from data for the Federal Reserve's large-value electronic payment system, known as Fedwire. Banks use Fedwire to make payments to one another to settle their customers' as well as their own transactions. Just before September 11, the number of transfers sent over Fedwire on a normal day was around 430,000, with a total value of \$1.6 trillion. On September 11, the number of transfers was down more than 40 percent, with fewer than 250,000 transfers being sent over Fedwire, and the total value was down 25 percent.

If liquidity had continued to dry up, both business and consumer confidence could have been severely affected. Imagine businesses unable to promptly withdraw funds from checks deposited in their banks, even though those checks paid for goods or services already provided. Imagine international banks running out of dollars, a serious impediment to international trade and finance. As we know now, the situation never reached those extreme conditions because, fortunately, the Federal Reserve System has numerous means providing liquidity.

One tool used to provide needed liquidity was the discount window, through which the Fed lends in certain circumstances to help banks maintain smooth day-to-day operations. In essence, in more normal times the discount window serves a function similar to that of a pressure valve. During the crisis, as the volume of borrowing requests increased dramatically, the discount window served as something closer to the floodgates of a great dam. On September 12, lending to banks through the discount window totaled about \$46 billion, more than two hundred times the daily average for the previous month. The flood of funds released into the banking system reduced the immediate need for banks to rely on payments from other banks to make the payments they themselves owed others.

Open market operations were a second tool at our disposal for pumping additional liquidity into the system. Indeed, as you may know, open market operations are the chief tool employed by the Federal Reserve to affect the global supply of dollars in circulation. In these operations, our trading desk at the Federal Reserve Bank of New York enters the market daily to buy or sell Treasury securities. Contrary to one of the early fears, most of our counterparties in these transactions, the community of primary dealers, were generally functioning starting on September 12. Our trading desk in New York met all propositions at the intended funds rate from September 12 through September 17, and the System engaged in a record level of open market operations through overnight repurchase agreements. To accommodate these demands, the trading desk operated later in the day than normal, giving dealers an opportunity to assess their financing needs. Also, the Fed's securities lending program expanded its provision of securities to the marketplace, and those securities in turn could be used as the collateral for private-sector liquidity arrangements. The staff of the Federal Reserve Bank of New York, having evacuated its main site and gone to its backup facility, performed heroically in running the open market operations.

Despite the increased liquidity resulting from discount window lending and open market operations, some institutions still had difficulty exchanging payments and lending or borrowing funds because of connectivity problems and the closure of key markets. As a result, many depository institutions

incurred larger-than-usual daylight overdrafts on their accounts at the Federal Reserve. To help in this situation, the Federal Reserve waived the overdraft fees it normally charges. Between September 11 and September 21, peak and average daylight overdrafts incurred by depository institutions were approximately 35 percent and 30 percent higher than normal levels, respectively. On September 14, daylight overdrafts peaked at \$150 billion, more than 60 percent higher than usual, despite Federal Reserve opening account balances of slightly more than \$120 billion.

The destruction of infrastructure in Lower Manhattan meant that some foreign financial institutions might not be able to provide sufficient collateral to underpin funding from their usual counterparties and correspondent banks. These foreign firms turned to their national central banks for dollar-based liquidity. The Federal Reserve arranged for the availability of reciprocal currency facilities of up to \$50 billion with the European Central Bank and \$30 billion with the Bank of England, both in the form of thirty-day swaps. We also lifted the ceiling of a preexisting swap with the Bank of Canada to \$10 billion.

The Federal Reserve's role as a provider of check collection services presented another opportunity for providing liquidity. Check collection relies on a fleet of airplanes to fly checks all around the country so that the checks can be presented to their home bank for payment. Though U.S. airspace was closed for several days after the attacks, the Federal Reserve Banks continued to provide credit for checks on the usual availability schedules. This accommodation allowed businesses and consumers that depended on the prompt availability of their check deposits to withdraw the proceeds of these check deposits as they expected.

With other regulators and supervisors, the Federal Reserve issued a statement on Friday, September 14, encouraging state member banks and bank holding companies to work with customers affected by the events of September 11. The Board has a long-standing policy of encouraging bankers to work flexibly with customers affected by disasters. That policy recognizes the need for taking prudent steps to make credit available to sound borrowers and for adjusting terms and conditions of loans and transactions to take account of the stresses during a crisis. I am sure that several Reserve Bank Presidents and Directors of Supervision communicated this message directly to commercial bankers in their Districts. We also recognized that the banks' balance sheets might expand as businesses and consumers turned to banks for funding. Through an interagency statement, we invited banks that experienced such an expansion of their balance sheets to contact their regulator to discuss ways to respond.

Ultimately, to further increase liquidity, on the morning of September 17, the policymaking body of the Federal Reserve System, the Federal Open Market Committee, met by teleconference and then publicly announced a 50 basis point decrease in the intended federal funds rate from 3.5 percent to 3.0 percent.

The Federal Reserve also worked with other regulators through the President's Working Group on Financial Markets to monitor developments in financial markets. As you know, the government securities market postponed settlements for a few days, the commercial paper market experienced significant problems, and the New York Stock Exchange remained closed until September 17. We supported fully restoring financial markets to normal operations as soon as practical. However, in working with the Securities and Exchange Commission, the Department of the Treasury, market participants, and other stakeholders to reopen these markets, we had to balance the benefit of a prompt return to business against the risk that the supporting infrastructure would be unable to handle what would certainly be a record volume of trades. Paramount in that consideration was the safety of the men and women working in Lower Manhattan. The SEC and the New York Federal Reserve Bank, along with the leaders in these various markets, deserve a great deal of credit for ably managing the process of reopening, making judgments that allowed all markets to return to normal functioning quickly and effectively.

As I look back, I am comforted that the financial and monetary effects of the horrible and tragic events on that day were less severe than one might have imagined. The aftershocks were less sizable than one might have feared they might be, largely because of the action taken by major market participants and the regulatory community, including the Federal Reserve System.

The incidents of September 11 taught us many lessons relating to central banking and financial stability. First and foremost, they reinforced the importance of the Federal Reserve's role as lender of last resort. Second, we again saw that the multiple roles the Federal Reserve plays - in this instance, central bank, supervisor and regulator, and payment systems operator - give us many tools to apply during a crisis. While I have been a member of the Board, I have from time to time heard some

question the wisdom of our central bank's being involved in supervision and regulation and continuing to provide payment services, particularly retail payment services. To my mind the events of September 11 should put such question to rest. From our experience, we should recognize the benefits of a central bank that can influence the economy and enhance financial stability through several mutually reinforcing tools.

A third lesson is that having diversified forms of risk intermediation makes the financial system more robust. In this instance, having markets and banks that performed similar financial intermediation roles accounted for much of our financial system's ability to withstand the shock of September 11.

Fourth, the attacks remind us that operational risk, which is hard to quantify with any model, may at times be the paramount risk. We recognized this in the abstract in our planning for the Y2K century-date change. Now we have seen the real results of a massive disruption in infrastructure. Fortunately, the preparations for Y2K helped the financial system of our country withstand the September 11 crisis. Even now, financial institutions are working hard to update their contingency plans on the basis of a new understanding of the risks that confront our country. Having layers of redundancy, each calibrated to a different level of emergency need, is one potentially successful strategy.

A fifth lesson is the importance of ongoing communication and, when required, coordination among domestic authorities and across borders. The ability to communicate seamlessly with other members of the President's Working Group and with fellow central bankers, in both cases on the basis of trust developed in the course of pre-existing relationships, proved to be very helpful. Obviously, even without those well-established relationships, we would still have reached decisions. The decisions may not have come as quickly nor been as well informed, however. The amount of trust needed to successfully coordinate in the midst of stressful situations is high, and coordinating with familiar colleagues is much easier than working with relative strangers.

Finally, in the wake of those events, we must address the possibility of major disruptions in areas in which financial markets or operational centers are concentrated. We will not accomplish our task if one or two organizations strengthen their resilience and others do not. Instead, we need to work hard to adopt consistent strategies for reducing risks that together address prevention, management, and testing.

In conclusion, I must admit that the farther we move away in time from the tragic events of September 11, 2001, the more the lessons come into focus. We in the United States are very fortunate to have created, through the efforts of private industry at times pushed by regulators, the most robust, most efficient financial system in the world. But at the same time, it is clear that the events should remind us to redouble our efforts to make our financial system even stronger.

It has been a pleasure to address you all this afternoon. Thank you.