

SPEECH

Stewart: Challenges to the Payments System Following September 11

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Remarks by First Vice President Jamie B. Stewart, Jr. before the Puerto Rico Bankers Association Good afternoon, ladies and gentlemen. I am delighted to join you this afternoon for this meeting of the Puerto Rico Bankers Association. It is a great pleasure to be invited to speak before such a distinguished group of bankers and senior representatives of the financial, economic, and business community on the island.

I would like to focus my remarks on the shocks to the payments system stemming from the events of September 11 and the steps that are being taken to ensure even better performance in any future crises. In particular, I would like to give you some idea of the thinking currently under way about how to improve the resiliency of the payments system, the critical infrastructure that allows the financial system to function smoothly.

The events of September 11 posed unprecedented challenges to the operation of the payments system. Let me be clear on what I mean by the payments system and why it is so important to the health of the financial system. The payments system, in its broadest definition, comprises a network of banks, securities firms, service providers, industry-owned utilities, and the Federal Reserve. Its purpose is to ensure both the smooth transfer of funds for business and financial transactions and the timely settlement of securities transactions. At the core of the network are the two principal wholesale payments systems in the United States--Fedwire and CHIPS, the Clearing House Inter-Bank Payments System. Working with Fedwire and CHIPS are their bank participants, and the securities settlement system. That system includes the two major clearing banks for government securities, the government securities settlement system operated by the Federal Reserve, and the clearing and settlement organizations for corporate and other securities. Given the electronic nature of most securities, the payments system depends on an extensive communications network to maintain transaction flow. Any blockage in one segment of the payments system can cause gridlock throughout the system and have spillover effects on the financial markets and eventually on the real economy.

There are a number of reasons why the attack on the World Trade Center was so devastating for the payments system in New York. For one, the World Trade Center buildings housed several wholesale brokers and large securities trading operations that were relied upon to play essential roles in the financial markets. Moreover, damage to the World Trade Center disrupted the communications network and the primary operations of many payment service providers not housed in the Trade Center itself, as fire, debris, and water destroyed much of the power, telecommunications, and transportation infrastructure serving lower Manhattan's financial district. Workers in the vicinity of the World Trade Center were forced to evacuate their buildings immediately after the attacks occurred. At the New York Fed, a core group of us were able to remain in the building for two days, after which we were obliged to move to our facility in East Rutherford, New Jersey.

Notwithstanding the enormous scale of destruction and damage, the U.S. dollar payments system performed well. Fedwire and CHIPS operated throughout the day of September 11 and in the days that followed. Parts of the clearing and settlement system for U.S. government securities, however, labored under severe difficulties in the days immediately following the attack, as destruction to the infrastructure impaired the ability of firms to complete transactions. Redemptions and rollovers of commercial paper were temporarily disrupted on September 11 and 12, but the three-day processing cycle for equities trades made before September 11 was completed. By September 17, when the major U.S. stock exchanges reopened, payments and securities settlements were flowing sufficiently to accommodate the largest volume of trading that had ever occurred in a single day in New York Stock Exchange history.

The ability of the wholesale payments system to withstand the direct and indirect damage of September 11 is especially noteworthy in light of the system's complex structure. How was the payments system able to recover from such a massive attack? Basically, September 11 revealed that there are three crucial elements that help prevent gridlock in the financial system.

The first crucial element involves contingency planning. Two goals have typically been paramount in contingency planning: one, the ability to promptly resume business activity and, two, the careful safeguarding of transactions and financial information.

Standard contingency planning has generally sought to minimize the length of time business operations are disrupted in the event of a crisis. This goal is especially important when it comes to the payments and settlement system. Namely, contingency plans try to avoid even a momentary interruption of service. To achieve this goal, providers of payments services typically locate contingency sites on electrical and communications grids that are separate from the primary processing site. They also record all transaction data simultaneously at a second site. The availability of real-time data at both processing sites strengthens the ability of service providers to shift processing flows from one site to another during the same day. On September 11, we at the Federal Reserve never had to shift our Fedwire operations. On that day, however, the operations were being managed and monitored by staff at our backup facility, a procedure we undertake regularly. Fedwire was up and running at all times.

In terms of the payments system, contingency planning advanced substantially in the run-up to the century date change, Y2K, two years ago. In the period leading up to Y2K, senior management and the boards of directors in firms throughout this country were actively engaged in directing their managers to consider how they would operate their businesses--and not just their back office businesses--in the event of a Y2K-related disruption. The results of these efforts were detailed contingency plans that analyzed the effects of potential system failures on core business processes as well as assessments of minimum levels of output and services for each core business process.

Furthermore, the Y2K planning led to significant improvements in decision making and communication channels among senior management, corporate communications officials, and business units. One result of these efforts was a decision to maintain lists of contact numbers for financial institutions, regulators, and key infrastructure providers. In responding to September 11, we were fortunate that all of the preparations for Y2K had been done so recently.

The scope of the disruption on September 11, however, challenged the regularly used scenarios for contingency planning. Certainly, the preparation of back-up sites, the testing of contingency plans, and the simulations of disasters enabled many firms to grapple initially with extraordinary circumstances. Nonetheless, the size, scope, and suddenness of the September 11 disaster and the heavy death toll required a substantial reordering of the priorities embodied in standard contingency plans.

The first priority became the safety of people, of those directly affected by the Trade Center's destruction and of New Yorkers more generally. Access to lower Manhattan was severely restricted in the immediate aftermath of the attack and in the weeks that followed to facilitate the rescue and recovery effort and to prevent injury.

As a result of these restrictions, a large number of institutions lost access to their premises, were obliged to activate their contingency plans, and had to arrange to transport staff to back-up sites. Usual business operations were broken off suddenly, creating reconciliation problems, especially in the recording and processing of trades in the government securities market. Businesses had little opportunity to make the preparations they might have been able to make during another type of disaster, such as a storm or a flood for which there likely would have been advanced warnings. The result was that employees found it difficult to travel to contingency locations.

The loss of access to premises highlighted the value of having contingency sites far enough away from the area of destruction so that financial institutions could continue to do business in safe surroundings. "Hot" sites that continuously replicated transactions at the primary site proved especially valuable.

Efforts to sustain payments activity in light of the extensive and largely unprecedented damage to communications channels stemming from September 11 were exceedingly difficult. Once staff was in place at contingency sites, the reestablishment of voice and data communications linkages was necessary to keep the payments system operational. The large-scale relocation of firms and the disruption of communications on September 11 made the process of simply finding counterparts at other financial institutions very difficult. Initially, industry associations facilitated the distribution of updated contact information.

Connectivity was a related major issue. The simultaneous activation of individual contingency plans by many firms meant that for the first time one firm's back-up site needed to connect to another firm's back-up site. Up to this time, standard contingency plans envisioned that only one firm would be incapacitated at any given time. On September 11, however, the untested connections between one firm's back-up site to another firm's back-up site sometimes presented problems that had to be worked through.

While contingency planning is the first crucial element in preventing gridlock in the financial system, a second element relates to liquidity. It is important to keep in mind that the payments system is not only a transaction-processing system but also a complex liquidity-management system. Trillions of dollars in transactions are processed each day through the payments system, yet the base of liquidity used to facilitate these transfers of funds is a fraction of that volume. In large part, liquidity needs are economized through the timing of electronic payments--the receipt of funds from one source provides the funds to send to another recipient. Temporary imbalances in the flow of payments can be accommodated in some systems, such as Fedwire, through intraday credit.

However, any operational blockage in the payments system can disturb a finely calibrated balance, such that some market participants can end up with excess liquid funds while others experience shortages. In short, a single blockage can trap liquidity in one corner of the payments system and this disruption can quickly spill across the entire financial system.

We faced a situation like this on September 11. Large imbalances, resulting from problems in settling government securities transactions, developed that day, in some cases involving many billions of dollars. These imbalances persisted all week as a result of connectivity and other operational problems.

The strong financial condition of U.S. banks and securities firms made it clear that the imbalances reflected a liquidity problem and not credit strains. This is an important element in the success of the payment system's recovery after September 11 in that there were no real credit problems in the financial industry.

Thus, to meet these liquidity needs, the Federal Reserve injected tens of billions of dollars into the financial system through discount window loans and open market operations. On September 12, we arranged open market transactions of \$38 billion and had \$46 billion outstanding at the discount window. Daily open market operations peaked at \$81 billion on September 14. In addition, the Federal Reserve made other adjustments to facilitate liquidity. For example, it suspended charges for intraday overdrafts and penalty charges for overnight overdrafts. It also relaxed rules on the volume of securities it would lend to the market from its portfolio.

On the international front, the Federal Reserve took further measures. To cope with potential shortages of dollar liquidity outside the United States that could not be met through the correspondent banking network, the Federal Reserve entered into temporary swap arrangements with the European Central Bank or ECB and the Bank of England. It also temporarily augmented its existing swap arrangement with the Bank of Canada. The ECB drew on its swap line in the three days following September 11, with the amount outstanding peaking at \$19 billion. I am very proud of the role that the Federal Reserve System played in quickly alleviating this liquidity crisis that clearly had systemic risk if it had continued much longer.

The third crucial element in preventing gridlock in the financial system has to do with collective problem solving. Every crisis produces unexpected problems. The ability to solve these problems is immeasurably strengthened by the ongoing dialogues among financial institutions and regulators that take place virtually on a daily basis.

In the U.S. market, industry associations, such as the Bond Market Association, and committees, such as a Foreign Exchange Committee and the Payments Risk Committee, both of which are sponsored by the Federal Reserve Bank of New York, are key forums for dialogue. These industry groups traditionally have played an important role in identifying and addressing issues related to market practices and supporting infrastructure. The contacts and interactions developed in normal times have proved to be invaluable in times of crisis.

In the days after September 11, telephone meetings and coordination efforts led by industry associations were critical. Knowledgeable people who knew and trusted each other made real time decisions to keep the system operating. Industry officials decided when to reopen the financial markets after meeting with government officials to discuss the options. Industry associations organized conference calls to provide market-wide status reports and to identify emerging problems. For example, the Bond Market Association sought to ease strains in the settlement of government securities by recommending that firms temporarily extend the normal settlement cycle from one day to five days. This adjustment allowed firms more time to work through operational problems, even though it meant doubling up on processing loads when the market reverted to one-day settlement.

So where do we go from here? Today's management of payments risk reflects in substantial part the accumulated learning from past experience. The lessons learned from September 11 have not yet been fully implemented. Nonetheless, I believe these lessons will undoubtedly take contingency and liquidity planning to a new level that will ensure continuity of business and financial operations in the event of a crisis of similar severity. Within a week after the destruction of the World Trade Center, the public and private sectors began to assess how financial institutions generally and the payments systems in particular responded to the September 11 crisis. In this effort, we are all trying to take a fresh look at such issues as the placement of contingency sites and key personnel, the methods available for coping with widespread disruption to communications systems, and the necessary degree of redundancy to ensure that payments systems continue to operate at an adequate level even in a severe emergency.

The crisis of September 11 has made us all more aware of the vulnerabilities in modern payments systems. In the short run, reducing vulnerability invariably involves costs. A key question for financial institutions and the financial industry in the near term will be how best to balance costs and risks in reducing vulnerabilities.

The crisis of September 11 has also underscored the importance of a well-functioning payments system to the banking system and to the overall health of our economy in allowing for the smooth transfer of funds for business and financial transactions and the timely settlement of securities transactions. In responding to the terrible tragedy to our nation, we were indeed fortunate in some very important respects: first, that our preparations for Y2K were so fresh; second, that we did not face any serious credit problems in our banking system; and third, that we had the cooperation of key players in the financial markets.

These fortuitous circumstances, however, make clear that as we plan for the future, we must rely more on thoughtful preparation. Only by these means can we create the solid underpinnings that will enable us to meet the challenges that inevitably lie ahead for the banking industry.

Thank you.
