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# Payment system disruptions and the federal reserve following September 11, 2001<sup>☆</sup>

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## Abstract

The monetary and payment system consequences of the September 11, 2001, terrorist attacks and the Federal Reserve's response are reviewed. Interbank payment disruptions appear to be a central feature of many US banking crises, and interbank payment disruptions seem likely to recur. Federal Reserve credit extension following September 11 succeeded in massively increasing the supply of banks' balances to satisfy the disruption-induced increase in demand and thereby ameliorate the effects of the shock. Relatively benign banking conditions helped make Fed credit policy manageable. An interbank payment disruption that coincided with less-favorable banking conditions could be more difficult to manage, given current

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daylight credit policies. Paying interest on reserves would facilitate improvements in daylight credit policy.

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## 1. Introduction

One of the most visible effects of the terrorist attacks of September 11, 2001, aside from the appalling loss of life and sizable loss of property, was the disruption to the workings of the financial system. The destruction of the World Trade Center towers in New York inflicted severe damage on banking and financial institutions in Lower Manhattan; markets closed, participants relocated to backup sites, communications links failed or were unreliable, settlement instructions were lost, payments were delayed, and the Federal Reserve at one point injected more than \$100 billion in additional liquidity, an unprecedented sum. At the core of it all was the disruption of interbank payments.

This paper reviews the effects of the September 11 attacks on banking and financial institutions, with a focus on the monetary, payment and settlement system consequences and the Federal Reserve's response. Government securities settlement was especially hurt by the attacks. Cantor Fitzgerald, a key interdealer broker, was devastated, losing 658 employees. Many market participants were forced to relocate to backup sites, where internal systems and communications were not as reliable. Several banks had difficulty processing payment instructions, and the resulting accumulation of large balances drove net balances in the remainder of the banking system negative, necessitating the Fed's huge injections.

Interbank payment disruptions following September 11 were similar in some respects to several historical U.S. banking crises. In some cases, insolvency concerns caused banks to pull back from extending credit in interbank payments. The banking crises of the National Bank Era (1863–1914), the settlement problems during the stock market crash of 1987, and the settlement strains after the failure of Bankhaus Herstatt in 1974, all fit in this category. In other cases the trigger was a technological shock, analogous to the damage resulting from the September 11 attacks.<sup>1</sup> Examples include the 1985 software “glitch” at Bank of New York that led to a \$22.6 billion advance from the Federal Reserve Bank of New York, and to some extent the 1987 crash. Impediments to transferring balances between banks were common to all.

A brief appraisal suggests that the probability of future interbank payment disturbances is not negligible. Despite substantial investments in reliability and security and an impressive record of performance and innovation, the heavy dependence of interbank payment arrangements on automated payment processing

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<sup>1</sup> I use the term “technological shock” loosely here to encompass destruction of capital and loss of labor inputs as well as malfunctions and outages.

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