

# ECONOMIC COMMENTARY

Federal Reserve Bank of Cleveland

## Payment System Risk and Financial Reform

by W. Lee Hoskins

The gathering movement for financial reform in the United States raises complex questions about expanding the powers of commercial banks. Controversy abounds whenever any potential relaxation of a regulatory restriction on banking activity is considered, and the debate only intensifies as the range of activities widens to encompass the universe of financial businesses, and even commerce.

Financial reform cannot be viewed simply as an enlightened attempt to remove artificial restraints on the rational deployment of private capital across lines of business, however. Over the past 60 years, U.S. depository institutions have become the beneficiaries of an expanding federal safety net that, in effect, has become a taxpayer-backed substitute for private capital, liquidity, and contractual arrangements to manage and resolve financial failure.

Ironically, dependence on federal guarantees and on regulatory restrictions protecting depositors appears to have contributed to the low capitalization that places banks at a competitive disadvantage in considering new lines of business. To maintain the current safety net while banks expand into a wider range of activities clearly is inconsistent both with the lessons being gleaned from the unraveling thrift industry and, more generally, with growing concerns about federal credit guarantee programs.

Therefore, it is not *where* to redraw the boundaries between banking and other lines of business, but the *precondition* for redrawing those lines—a matching reform of the federal financial safety net—that will be addressed here. Reform will first require clarification of the objectives of the safety net and its relationship to systemic risk. A review of the payment system risk problem will illustrate that shrinking the existing safety net, not tailoring it to exclude new lines of business, will make financial reform possible.

### ■ Reform and the Safety Net

For many economists, financial reform is synonymous with further deregulation that picks up where the elimination of Regulation Q and the crumbling barriers to interstate banking left off. Normally, we would expect that removing further artificial barriers to competition would enhance efficiency, as the allocation of financial and real resources more fully responds to market signals.

A market system involves both profits and losses. In the ideal free-market economy, property owners, operating within the social fabric of the law, can use their financial property in whatever way their ingenuity—or lack of it—suggests, expecting to enjoy the resulting profits or suffer the losses. We lose the power and safeguards of the market if the safety net intervenes to absorb losses or the risk of losses and passes them on to the taxpayer. Patching up the

**Shrinking the federal safety net must be a precondition of financial reform in the United States, or increasing bank powers will expand the realm of the economy underwritten by the taxpayer.**

system whenever a problem arises, rather than allowing market arrangements to prevent or cope with trouble, skews decisions toward more risk.

To expand the lines of business that banks can enter would extend the realm of the economy underwritten by the federal safety net, which includes deposit insurance and access to both the discount window and to Fedwire. Together, these components ensure that deposits are safe and that overnight and intraday financing are assured, notwithstanding managerial imprudence or exogenous events. In a recent speech, Alan Greenspan, Chairman of the Federal Reserve Board, put the significance of this federal underwriting into clear perspective:

While the historical data are admittedly distorted by a number of factors, it is still instructive to note that in 1840, the average U.S. bank's equity-capital-to-total-asset ratio was around 50 percent....

Such high equity-capital ratios were not the choice of bankers, but rather the result of market pressures to provide comfort to depositors that banks could, in fact, live up to their side of the agreement.... [A] secondary incentive reinforced the primary objective: with so much of the owners' money funding the bank, risk appetites were constrained, strengthening the likely ability of banks to fulfill their obligations....

The driving force that has permitted equity-capital-to-asset ratios in banking to go from a little less than 25 percent in 1890 to a little over 6 percent in 1990 is the set of statutory and regulatory changes that have drastically lowered the risk to depositors.... The major factors reducing depositor risk premiums and permitting banks in the United States to operate with considerably less capital than free market models would imply [are] deposit insurance and access to the discount window and to Fedwire.<sup>1</sup>

Deposit insurance often is rationalized as a legislative effort to forestall bank runs, instituted in reaction to experiences leading up to the bank holiday in 1933. But, had the Federal Reserve discount window and open market operations been managed differently in the years between 1929 and 1933 (as in October 1987, for example), those bank runs probably would not have happened, and if they had, they would not have produced such tragic results.

The discount window was opened in 1913 to provide elasticity to the currency under the gold standard. Today, the Federal Reserve provides elasticity to base money through open market operations. Adjustment borrowing mainly reflects Reserve Bank rules necessitated by a subsidy discount rate.

Although access to Fedwire, in itself, is not part of the safety net, the service has evolved into 100 percent insurance for Fedwire payments by providing banks with automatic access to free credit during the day. This feature originated inad-

vertently when telecommunications innovations outstripped the Fed's control of Reserve Bank credit.

Regardless of origins, the typical rationale for retaining the safety net is that, by protecting individual depositors and banks, we safeguard society against financial panic and collapse, that is, against systemic risk. Some minimal level of deposit insurance might be socially convenient just to protect unsophisticated holders of small deposits against credit risk. Similarly, the discount window might be a convenient way to handle banks when they are unexpectedly short of funds at the end of a day, although reliance on the present penalty rate for overnight overdrafts of Federal Reserve accounts could suffice. It would appear to be the specter of systemic risk, however, that is the principal rationale for maintaining the current expanded safety net.

#### ■ Systemic Risk

The systemic risk rationale is easy to state but difficult to define. The image that comes to mind is one of widespread bank failures, where one bank's failure causes others to fail, and so forth, in a widening wave that reflects the intricate interdependence of credit relationships in a modern banking and financial system.

"Failure," however, can have a variety of meanings. It might refer simply to a delay in making a payment during the day, or perhaps to the premium an illiquid bank must pay through the sale of illiquid assets to balance its books at the end of a day. On the other hand, it could refer to the outright supervisory takeover of a bank that lacks sufficient capital to satisfy regulatory standards.

A cascade of failures is not the automatic result of an individual bank's failure. The systemic problem is more one of gaining time and information for the resolution of potential losses than of a vast evaporation of capital through actual losses.

Exposure of the banking system to systemic risk depends on the prudential

holdings of cash, liquidity, and capital of each bank. As Chairman Greenspan's words remind us, systemic risk is *created* when the safety net is allowed to become a substitute for those holdings, increasing the very risk against which it protects while transferring the increased exposure away from private-market participants toward the taxpayer.

Another factor underlying systemic risk is the extent to which banking and payment system participants estimate and control their susceptibility to potential failures of their counterparties, even when those risks stem from the risk of failure by counterparties' counterparties, and so forth. The myth that exposure to systemic risk can be controlled only by government intervention is called into question by extensive private clearinghouse and other private contractual arrangements that, in the past, seem to have been successful in managing risk exposures among interdependent parties.

In short, systemic risk need not be a catastrophic problem. In the United States, the safety net has been substituted for private capital, liquidity, and cash, making it appear that systemic risk would be extreme in the absence of federal financial guarantees. But without the protection of the safety net, rational bank managers would hold larger cushions of cash, liquidity, and capital, raising thresholds of payments gridlock, electronic bank runs, and interrelated banking insolvencies. Moreover, private risk-control measures would be developed as managers sought to guard against systemic risk by taking precautionary actions that would assure the time and contractual basis necessary for dealing with failures in an orderly way.

#### ■ Fedwire in the Safety Net

Access to Fedwire is a useful case study because it illustrates the challenge of trying to limit the scope of the safety net's coverage. Fedwire provides receiver finality. This simply means that, upon receipt of a Fedwire payment message, a bank acquires irrevocable ownership of an equivalent deposit credit at a Federal Reserve Bank.

Receiver finality, I would argue, was an intentional feature of Fedwire (as we now call it), designed in 1918 to be the telegraphic equivalent of the stagecoach carrying cash balances from one bank to another in settlement of interbank obligations. This was fine when banks' reserve balances were far larger than daily Fedwire payments: Fedwire simply provided a faster alternative than physically moving cash or clearing official checks.

About 25 years ago, the Federal Reserve began making Fedwire payments regardless of whether the payor bank had sufficient collected funds in its Fed account at the time of the transfer. Now, with daily Fedwire volume near \$1 trillion, Federal Reserve Banks automatically provide daylight overdrafts—with daily peak values in excess of \$100 billion—trusting overdrawn banks to top-up their accounts by the time Fedwire closes and the banking day effectively comes to an end.

Providing daylight overdrafts to fund Fedwire payments was unintentional. Apparently, the practice began when the Fed and its customers installed on-line, real-time telecommunications technology without also instituting procedures to check each on-line Fedwire payment against the payor bank's deposit balance. In effect, we failed to notice that our stagecoaches more and more frequently were delivering our own credit to the paying bank before delivering the cash balance from the paying bank.

This safety net feature has assumed growing importance as the first line of defense against failure and systemic risk, providing both time and the contractual basis for resolving potential losses when a bank unexpectedly runs into trouble. The troubled bank can continue to make payments all day on Fedwire, and then, if it cannot balance its books at the end of the day, the Fed is left holding the bag; its only choice is to lend at the window or to work with the deposit insurance system to keep the bank open or to close it. The contractual basis for resolving failure is that smart money can run from the bank during

the day, while the Fed lends to the bank overnight, eliminating systemic risk. If the bank cannot survive, the remaining uninsured creditors are left to work with the deposit insurance authorities to determine their losses.

However, there is no reason why every conceivable transaction should be promised a same-day payment guarantee by the federal government. Withdrawal of that implicit promise would curtail some transactions, but more important, would encourage private arrangements for reducing risk.

#### ■ Payment System Risk Policy

The Federal Reserve has been struggling with this issue as it attempts to fashion a policy for dealing with daylight overdrafts. The emerging policy not only discourages Fedwire daylight overdrafts, but has led to the development of private contractual arrangements for dealing with failure.

Initially, the Federal Reserve Board's payment system risk policy was to reach an agreement with each bank about the expected upper limit on its daylight overdraft, with supervisory remonstrance if a bank did not seem to be taking the limit seriously. Then, a year ago, the Board published a more complete set of proposals, including a flat penalty fee of 25 basis points per dollar of daylight overdraft in excess of 10 percent of a bank's risk-based capital. Note that this fee is not actuarially determined, and no actual or shadow reserve fund is contemplated. It is simply a penalty designed to discourage Fedwire daylight overdrafts and to encourage private alternatives for dealing with failure.

A more effective way to prevent daylight overdrafts would be an outright, real-time lock on Fedwire, making it impossible for a bank to send a payment if doing so would create a daylight overdraft, or an overdraft in excess of some limit. This policy already is in effect for certain institutions, including banks known to be in trouble, and there is no reason that it could not be applied to all Fedwire users.

A more important—indeed, critical—point about the safety net must be noted. If federal supervisors act consistently to prevent large banks from failing, little can be gained by reducing Fedwire daylight overdrafts. If the federal government stands ready to assume any risks involved, what incentive is there for private markets to develop careful counterparty risk scrutiny and effective loss-sharing arrangements?

Shrinking the safety net by discouraging Fedwire daylight overdrafts requires a pervasive understanding that neither the Fed nor the deposit insurance system will intervene when trouble arises. Participants in private payment arrangements must expect to bear the costs of failure. Federal Reserve supervisory requirements for loss sharing on private payment networks create the possibility that banks will not fall into the safety net. A more effective incentive for meaningful private loss-sharing arrangements would be precommitment by federal supervisors that any risk of loss will fall on private market participants.

#### ■ Private Contractual Arrangements

Undoubtedly, there is a wide variety of possible private arrangements for dealing with failure. To be effective, they must require that private counterparties will deal with the problem when cash, liquidity, or capital runs out. It is worth noting a few of the ways in which creating an incentive for private contractual arrangements might influence how payments are made.

One alternative to Fedwire daylight overdrafts is cash itself. An adequate cash reserve is the infallible assurance that a bank will be able to make payments during the day. Several years ago, Federal Reserve Governor Wayne D. Angell made a cogent proposal for inducing banks to hold more cash, including the payment of interest on excess reserves; however, his proposal has made little headway.

Another alternative is that banks could use the existing stock of cash more effectively during the day. Many still

incorrectly interpret this to mean "slowing down the flow of payments," as if the existing flow of payments could be resequenced in order to avoid daylight overdrafts. Conceptually, some resequencing is possible, but this alternative is unlikely to have a major impact.

Far more likely — because models already are in place — are contractual agreements by which banks' customers condense their daytime *transactions* into a moving net obligation to be paid by one party to another at the end of the day. If payment cannot be made, damage is limited because the transactions are still good, and only the smaller net debt of the overextended or failed party must be resolved.

Another way to avoid Fedwire daylight overdrafts is for banks themselves to condense the *payments* they make to one another during the day into a single net settlement at the end of the day. In the event of failure, banks participating in the net settlement arrangement cover the failed position of their troubled counterparty, buying time to work out resolutions of the troubled bank's problems and their own potential losses.

An example of the latter alternative is the Clearing House Interbank Payment System (CHIPS). As an electronic foreign-exchange payments network operated by the New York Clearing-

house, CHIPS handles a volume of payments rivaling Fedwire fund transfers. In October, it is scheduled to implement a loss-sharing agreement backed by a \$4 billion pool of participants' liquid collateral.

The crucial feature of any private arrangement must be a contractual agreement that places risk of loss squarely on the parties to the arrangement. Participants would then have an incentive to monitor the creditworthiness of their counterparties and to enforce standards that would limit the risk being assumed. In addition, some of the underlying financial-market transactions that now generate payments may no longer be feasible, because private parties would be unwilling to assume the risks of failure to which they would be exposed.

#### ■ Conclusion

Development of the Federal Reserve's payment system risk policy demonstrates that it is feasible to shrink the safety net and therefore meet the precondition for financial reform. As long as the monetary authorities protect liquidity in the economy as a whole through appropriate open market and discount window policies, protection against failure and systemic risk can be handled by private contractual arrangements, as demonstrated both historically and in emerging private payment arrangements.

The design of effective private arrangements for containing risk will evolve from market ingenuity—with occasional lapses, of course—once the incentive to develop such arrangements is established. Perhaps the most important impediment to shrinking the safety net, and therefore the greatest obstacle to proceeding with financial reform, will be convincing both the beneficiaries and the custodians of the present system that it is in their best interest to limit the safety net and to avoid any temptation to extend it during times of trouble. Removing this hurdle should put us in a position where banks can expand into new lines of business without exposing taxpayers to further risk.

#### ■ Footnote

1. From a speech delivered before the Annual Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, May 10, 1990.

*W. Lee Hoskins is president of the Federal Reserve Bank of Cleveland. This Economic Commentary is based on a speech presented to the New York Association of Business Economists, New York City, on June 19, 1990.*

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