

For release on delivery  
1:00 p.m., E.D.T.  
June 19, 1990

**PAYMENT SYSTEM RISK AND FINANCIAL REFORM**

W. Lee Hoskins, President  
Federal Reserve Bank of Cleveland

New York Association of Business Economists  
New York, New York  
June 19, 1990

## PAYMENT SYSTEM RISK AND FINANCIAL REFORM

The gathering movement for financial reform in the United States is creating controversy. Expanding the powers of commercial banks raises complex questions for the potential legislative reworking of long-standing regulatory divisions between commercial banking and investment banking, between banking and insurance, between domestic and foreign financial institutions, even between banking and commerce.

Financial reform, however, cannot be viewed simply as an enlightened attempt to remove artificial restraints on the rational deployment of private capital across lines of business. Over the past 60 years depository institutions in the United States have become the beneficiaries of an expanding federal safety net which in effect has become a taxpayer-backed substitute for private capital, liquidity, and contractual arrangements to manage and resolve financial failure. To maintain the safety net as banks engage in a wider range of lines of business clearly is inconsistent both with the lessons we are learning from the unraveling thrift industry and, more generally, with growing concerns about federal credit guarantee programs. Ironically, dependence on the safety net and regulatory restrictions to protect depositors appear to have contributed to low capitalization and the competitive disadvantage of banks in considering new lines of business.

What I want to talk about today, therefore, is not where to redraw the lines between banking and other lines of business. Instead I want to talk about the precondition for redrawing those lines. The precondition should be a matching reform of the federal financial safety net currently serving as a backstop for the operations of banks and other depository institutions. Reform will require clarification of the objectives of the safety net and how it relates to systemic risk. I also want to review the payment system risk problem as an example that illustrates the challenges involved in meeting the safety net reform precondition for financial reform. The over-riding point I want to stress is that shrinking the existing safety net, instead of tailoring it to exclude new lines of business, will make financial reform possible.

## **Reform and the Safety Net**

For many economists, contemplating financial reform is synonymous with further financial deregulation that picks up where elimination of Regulation Q and crumbling barriers to interstate banking have 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 the play of market signals.

In a free-market economy, property owners, operating within the social fabric of the law, would be able to use their financial property in whatever way their ingenuity or lack of it suggests -- as long as they can expect to enjoy the profits and suffer the losses. A market system involves both profits and losses. We lose the power and the safeguards of the market if the safety net intervenes to absorb losses or the risk of losses and passes them along to the taxpayer. Patching up the system whenever trouble arises, rather than allowing market arrangements to prevent or cope with trouble, skews decisions toward more risk.

Expanding the lines of business that banks can enter extends the realm of the economy underwritten by the federal safety net. Alan Greenspan, in a recent speech, put the significance of this federal underwriting in 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. banks' 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. As with many market solutions, its 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. A complete list might be rather lengthy, but...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."

I define the safety net to include deposit insurance and access to both the discount window and Fedwire. Access to the safety net assures that, regardless of managerial imprudence or exogenous events, deposits are safe, and overnight financing and intraday financing are assured.

Deposit insurance often is rationalized as a legislative effort to forestall bank runs, in reaction to experience 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 the tragic results of that earlier period.

Access to the discount window was designed 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 mostly reflects Reserve Bank rules made necessary by a subsidy discount rate.

Access to Fedwire, in a formal sense, is not part of the safety net, but it has become 100 percent payment insurance for Fedwire payments through automatic access by banks to free credit during the day. This component of the safety net originated inadvertently when telecommunications innovations outstripped the Fed's control of Reserve Bank credit.

Regardless how the safety net came to be pieced together, the typical rationale for maintaining this set of federal programs now is that, by protecting the individual depositor and the individual bank, they protect society against financial panic and collapse - - against systemic risk. Some minimal level of deposit insurance might be socially convenient just to protect unsophisticated holders of small deposits against credit risk. 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 might do the job just as well. However, it would appear to be the specter of systemic risk that is the principal rationale for the current expanded safety net.

### **Systemic Risk**

The systemic risk rationale is easy to state but difficult to define. The image which comes to mind is one of widespread failures of banks, where one bank's failure causes other banks to fail, and so forth in a widening wave of failures reflecting 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 has to pay in selling illiquid assets to balance its books at the end of a day. On the other hand, it might refer to the outright supervisory takeover of a troubled bank that lacks enough capital to satisfy regulatory standards.

A cascade of failures is not the automatic result of the failure of an individual bank. 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 capital and liquidity and cash. Through moral hazard, the safety net increases the very risk against which the safety net protects, and transfers exposures away from private market participants toward the taxpayer.

Another factor underlying systemic risk is the extent to which participants in the banking and payment systems protect themselves against the risk of adverse developments, by estimating and controlling their susceptibility to potential failures of their counterparties even when those risks stem from the risk of failure of others. The myth that exposure to systemic risk can only be controlled by government intervention is debunked by the extensive private clearinghouse and other private contractual arrangements that, in the past, seem to have been successful in managing risk exposures among interdependent counterparties.

In short, systemic risk need not be a catastrophic problem. In the United States, the safety net has been substituted for private capital and liquidity and cash, making it appear that systemic risk would be extreme in the absence of the safety net. But, in the absence of the safety net, rational managers of banks would hold larger cushions of cash and liquidity and capital, raising thresholds of payments gridlock and electronic bank runs and inter-related banking insolvencies. Moreover, private risk-control measures would be developed and adopted as rational bank managers seek to guard against systemic risk by taking actions ahead of time that would assure the time and contractual basis for dealing with failures in an orderly way.

### **Fedwire in the Safety Net**

Access to Fedwire is a useful case study both because it is little understood and 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 stage coach in 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 when banks wanted to use their balances on deposit at Federal Reserve Banks.

Starting about 25 years ago, the Fed began making Fedwire payments regardless of whether the bank sending the payment had a sufficient balance in its Fed account at the time it made the transfer. Now, with Fedwire volume near \$1 trillion daily, the Federal Reserve Banks automatically provide daylight overdrafts with peak values in excess of \$100 billion daily, trusting the 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 an unintended result. Apparently, the practice began when the Fed and its customers installed on-line, real-time telecommunications technology, without redesigning procedures to check each on-line Fedwire payment against the payor banks' deposit balance. In effect, we failed to notice that our stage coaches more and more frequently were delivering our own credit to the paying bank before delivering the cash balance of the paying bank.

This safety net feature has assumed growing importance as the first line of defense against failure and systemic risk. It provides both time and the contractual basis for resolution of potential losses when a bank unexpectedly runs into trouble. The troubled bank can continue to make payments all day on Fedwire. If the bank can't balance its books at the end of the day, it is the Fed that is left holding the bag. The Fed must choose between lending at the window or working with the deposit insurance system to keep the bank open or to close it. The contractual basis for resolving failure is that the smart money can run from the bank during the day, while the Fed lends to the bank overnight, eliminating systemic risk. If the bank can't survive, the remaining uninsured creditors are left to work with the FDIC 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. The withdrawal of that implicit promise would curtail some transactions, but more importantly would encourage private arrangements to reduce risk.

### **Payment System Risk Policy**

The Federal Reserve has been struggling with this issue and has recently adopted a policy for dealing with daylight overdrafts. The policy is an attractive alternative for dealing with failure and systemic risk because it discourages Fedwire daylight overdrafts and has led to the development of private contractual arrangements for dealing with failure.



Initially, the Board of Governors' payment system risk policy was to reach an agreement with each bank about the expected upper limit on its daylight overdraft, with supervisory remonstrations if a bank did not seem to be taking the limit seriously. Then, a year ago, the Board published for comment 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 capital. I should emphasize 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 encourage private alternatives for dealing with failure.

A more effective way to prevent Fedwire daylight overdrafts would be an outright, real-time lock on Fedwire making it impossible for a bank to send a payment if that would create an overdraft, or an overdraft in excess of some limit. We already do this for certain institutions, including banks known to be in trouble, and there is no reason it couldn't be done for all Fedwire users.

There is a more important -- indeed, critical -- point about the safety net. 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 the risks involved, there is little incentive for private markets to develop careful counterparty risk scrutiny and effective loss sharing arrangements.

Shrinking the safety net requires a pervasive understanding that the Fed and FDIC will not intervene when trouble arises, leaving participants in private payments arrangements to bear the costs of failure. Supervision of private payments arrangements to assure effective loss sharing creates the possibility that banks won't fall into the safety net, and this is the route the Federal Reserve's policy seems to be taking. A more effective way to assure an incentive for meaningful private contractual arrangements to reduce systemic risk is precommitment by federal supervisors that the 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. For these to be effective, they must be based on the requirement that the private counterparties deal with the problem when cash, or liquidity, or capital runs out. Let me mention just a few of the ways in which creating an incentive for private contractual arrangements might influence the way we deal with payments.

One alternative to Fedwire daylight overdrafts is cash itself. The infallible contractual way to assure that banks don't fail to make payments during the day is that they hold enough cash. Several years ago, Governor Angell made a cogent proposal for inducing banks to hold more cash, including the payment of interest on excess reserves, but his proposal has not made much headway.

Banks could use the existing stock of cash more effectively during the day. I think many people still incorrectly understand this to be "slowing-down the flow of payments," to avoid daylight overdrafts. Conceptually, that might be possible, but it would not be a major factor in avoiding systemic risk in the payments system.

Far more likely -- because examples already are in place -- are contractual agreements by which counterparties condense their transactions during the day into a moving net obligation to be paid by one party to another at the end of the day. If the payment can't be made, the transactions are still good, but the damage is limited because only the smaller net debt of the overextended or failed party must be resolved.

Another avenue -- with an important example scheduled to begin in October of this year -- is for banks to condense the payments they make to one another during the day into a single net settlement payment at the end of the day. In the event of failure, the participants in the net settlement arrangement cover the failed position of their troubled counterparty, buying time to work out resolutions of its problems and their potential losses.

The example I refer to is Clearing House Interbank Payment System (CHIPS), the electronic foreign exchange payments network operated by the New York Clearinghouse, handling a volume of payments rivaling Fedwire funds transfers. In October, CHIPS is scheduled to implement an agreement for loss-sharing, with a \$4 billion pool of participants' liquid collateral to back that agreement.

The crucial feature of any private arrangement must be a contractual agreement placing risk of loss squarely on the parties to the arrangement. Consequently, participants have an incentive to monitor the creditworthiness of their counterparties and enforce standards that 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 will not be willing to assume the risks of failure to which they would be exposed on terms acceptable to the transacting parties.

## **Conclusion**

I am encouraged because the payment system risk example 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 payments arrangements.

The design of effective private arrangements for containing risk will evolve from market ingenuity -- with occasional lapses, of course -- when there is an incentive to do so. Perhaps the biggest obstacle to shrinking the safety net, and therefore the biggest obstacle to proceeding with financial reform, will be convincing beneficiaries and custodians of the present safety net that it is in their interests to limit the net and avoid the temptation to extend it in times of trouble. By removing this obstacle, we should be in a position where banks can expand their lines of business without putting the taxpayers at further risk.