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# Bank Regulation and Deposit Insurance: Controlling the FDIC's Losses

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*The FDIC's failure to close insolvent institutions before their market-value net worth becomes negative adds a further sizeable subsidy to risk-taking. In effect, it grants shareholders a larger (expected) claim against insured institutions than that represented by recorded net worth. More stringent enforcement of existing portfolio regulations by the FDIC, comparable to restrictive covenants in bond indentures, would eliminate a large portion of this subsidy and help minimize the agency's losses.*

Many have argued for some time that the present deposit insurance system encourages depository institutions to take more risks than are optimal for society. Under the present system, insured institutions are frequently allowed to continue raising insured deposits even after they have exhausted their net worth on a market value basis. As a result, the marginal cost of increased risk-taking from the perspective of the individual institution is lower than the cost to society as a whole. Insured institutions, therefore, tend to take on more risk than society would prefer. Moreover, the recent deregulation of deposit interest rates, the loosening of restrictions on depository institutions' lending and investment powers and the increase in deposit insurance coverage from \$40,000 to \$100,000 probably enhance this tendency to undertake excessive risk.

The Federal Deposit Insurance Corporation (FDIC) and others argue that this potential for increased risk to the deposit insurance fund creates a need for countervailing reforms that will give de-

pository institutions incentives to reduce risk-taking and/or give the insurance agency new powers to manage the risk to its fund. Much has already been written about the relative merits of various reform proposals. This article takes a different approach by evaluating the FDIC's use of its *current* regulatory and supervisory powers. Based on this evaluation, it is clear that the need for reform would be less pressing today, even with deregulation, if the FDIC had made better use of its authority to control risk-taking.

In Section I, the nature of the risk to the deposit insurance fund is described. Preservation of the market value of the deposit insurance fund is set forth as the criterion for judging the FDIC's use of its current powers to control risk-taking. Section II compares the FDIC's regulatory and supervisory powers to restrictive covenants in bond indentures. Section III evaluates the FDIC's use of its enforcement powers. Section IV presents and analyzes the FDIC's options for liquidating insolvent institutions. Although the FDIC's choice of liquidation proceedings would not affect the (ex ante) risk-taking behavior of insured institutions, it would affect the losses incurred by the FDIC and the value

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of the insurance fund, which is thought to be a measure of the FDIC's ability to handle widespread failures. In Section V, the valuation of the deposit

insurance fund is discussed. Finally, the paper concludes with some observations on desirable changes in the FDIC's behavior.

## I. The Risks to the Deposit Insurance Fund

Most analysts do not question whether deposit insurance in some form is necessary. Neither do they question the need for some government involvement in the provision of deposit insurance. The financial panics of the period before the creation of the FDIC and the relative stability of the financial system since then provide ample evidence, it seems, for the benefits of government-provided deposit insurance.

### Risk-taking Subsidy

The provision of deposit insurance, however, may encourage insured institutions to take on more risk than is socially optimal. Deposit insurance clearly reduces depositors' incentive to monitor the financial condition of the institutions where they place their funds. Thus, unless the insurer closes failing institutions before their net worth (on a market value basis) is exhausted, deposit insurance will give such institutions incentive to take on extraordinary risks with insured deposits, because the costs (after the institution becomes insolvent) will be borne solely by the insurer. Moreover, systematic failure to close insured institutions as they become insolvent affects the risk-taking behavior not only of those institutions on the verge of insolvency, but that of *all* insured institutions.

A tendency to close failing institutions only after their net worth becomes negative will distort the marginal cost of risk-taking by reducing the cost of increased leverage. Shareholders of an insured institution would be willing in such cases to accept greater leverage for a given level of portfolio risk and return because the *expected value* of their claims against the institution will be greater than that represented by its recorded net worth (even on a market value basis). This is because, in the event that the institution fails and is found to have negative net worth, the burden falls on the insurer rather than on the shareholders. As a result, the cost of raising additional equity will not reflect the true

social cost of increased risk-taking, and insured institutions will tend to take on more risk and operate with greater leverage than they would otherwise.

### Bank Closure Rule

To eliminate this subsidy to risk-taking, all the insurer need do is guarantee that, on average, insured institutions are closed as their net worth becomes negative. Under such a rule, the expected cost of increased risk-taking would be borne entirely by the shareholders<sup>1</sup> of insured institutions. They, in turn, would demand a premium commensurate with those risks, including risks associated with high leverage. As a result, insured institutions would have an incentive to reduce risk-taking and leverage to socially desired levels.

This closure rule implies, of course, that the protection afforded depositors is not insurance as the term is generally understood. Instead, the government in effect provides a guarantee that an "insured" institution will always have sufficient assets (on a market value basis) to discharge its liabilities, or that institution would not be allowed to stay in business. Theoretically, under such a rule, neither the depositors nor the insurer need ever incur losses, making a deposit insurance fund unnecessary.

The task of closing insured institutions before their net worth becomes negative is not a simple one, however. Determining when insolvency occurs is subjective, particularly under book value accounting conventions. In most cases, bank failure occurs not as a result of a readily observable inability to meet maturing obligations, but as a result of the more subjective determination that the value of the bank's loan and/or investment portfolio has deteriorated sufficiently to wipe out its capital. This determination is subjective because, short of a decision to close the bank and sell off its assets, there is no way objectively to determine the market value of the bank's portfolio. The other, more

objective, liquidity standard for determining a firm's bankruptcy (a firm's inability to meet maturing obligations) is one which the courts have applied to nonbanking firms. It is generally not applicable to banks and other depository institutions because, as noted above, deposit insurance has, to a large degree, removed depositors' incentive to withdraw funds when a bank is in danger of failing.<sup>2</sup>

To make matters worse, the FDIC does not have the legal authority to close a bank that, by the FDIC's valuation, is insolvent. Instead, the bank's chartering authority (that is, the Comptroller of the Currency in the case of a national bank, or the appropriate state banking agency in the case of a state-chartered bank) must determine that a bank is insolvent and close it before the FDIC can take action to limit its losses. This division of responsibilities can create problems for the control of risk to the deposit insurance fund. Not having the insurance liability of the FDIC, the other regulators' concern for the viability of the banks they supervise may lead them to keep a bank open longer than is optimal (that is, long enough to be certain that capital has been exhausted, which, because of uncertainties regarding asset valuation, is usually *after* capital has actually been exhausted).

As a result, the timing of bank closures is likely to be biased in favor of allowing insolvent institutions to continue in operation. In fact, given the uncertainties associated with bank asset valuation, there will almost certainly be a bias toward closing insured institutions *after* their net worth becomes negative. This holds unless there are also legal guidelines permitting regulators to close institutions when net worth is still positive. Such guidelines would allow the *average* value of net worth at the time of closure to be zero, and avoid the subsidy to increased risk-taking.

One measure of the extent of this bias, and of the resulting subsidy to risk-taking, is the amount of the FDIC's net losses in connection with bank failures. Because the failure to close insolvent institutions represents, in effect, a guarantee of solvency on the part of the FDIC, the FDIC's potential liability increases in direct proportion to the amount of negative net worth in insured institutions. As a result, the FDIC's losses are also closely related to the amount by which insured institutions' net worth

is allowed to become negative on a market value basis. (By the same token, if insured institutions were closed before net worth became negative, the FDIC's potential liability would be zero and the agency would not incur losses since the value of failing institutions' assets would, by definition, be sufficient to discharge depositors' and other creditors' claims.) The FDIC's net losses between 1934 and 1983 amounted to \$2.4 billion, of which \$2.2 billion represented losses incurred since 1980 (primarily in connection with mutual savings bank failures. See Table 1). These figures probably provide only a lower-bound estimate of the size of the subsidy to risk-taking since they reflect the negative net worth position of only the institutions that were finally closed. Nonetheless, \$2.2 billion over a three-year period constitutes a sizeable subsidy.

### **Bank Closure Authority**

Given the magnitude of the subsidy arising from the failure to close insolvent institutions promptly, the FDIC needs the authority to close such institutions. But until such authority is granted, the FDIC needs to exert greater pressure on the chartering agencies to close insolvent institutions. Since the chartering agencies generally consult the FDIC whenever an insured institution is considered in danger of failing, the FDIC clearly has an opportunity to make its views known. The FDIC was, in fact, consulted about the majority of the bank failures to date, yet its losses amounted to \$2.4 billion. Thus, one would be hard-pressed to conclude that the FDIC has sought to minimize its subsidy to risk-taking.

Two examples of the FDIC's reluctance to seek an earlier closure of insolvent institutions will suffice. In the recent failures of the United American Bank of Knoxville, Tennessee, and affiliated banks, the FDIC was aware of the condition of the banks for some time before they were declared insolvent, yet the FDIC apparently made no attempt to encourage the state-banking agency to close the banks sooner. Losses to the insurance fund from these failures are likely to run as high as \$220 million. Likewise, in the case of the Franklin National Bank failure in 1974, the FDIC acquiesced in the decision to keep the bank open for a period of several months until a purchaser was found. The

FDIC's liability mounted during that time because, as the uninsured creditors took the opportunity to withdraw their funds, the bank replaced them with borrowings from the Federal Reserve, which the FDIC agreed to repay. If the agency had recorded foregone interest as a cost of this transaction, its losses would have been sizeable.

Efforts to close insolvent institutions sooner than is presently the case, however, will not eliminate the subsidy to risk-taking completely because there will always be instances in which failure is not detected immediately. For example, failure may occur between examinations. Thus, although the FDIC could reduce this subsidy substantially by pressing chartering agencies to close insolvent institutions sooner, some form of more direct control is also necessary. Two approaches (separately or in combination) are available: risk-adjusted pricing of

deposit insurance and/or regulation of bank portfolios. Since the FDIC must currently charge insured institutions the same statutory assessment rate for deposit insurance regardless of riskiness, the task of reducing risk-taking falls largely on supervision and regulation. While such an approach may seem, at first glance, less efficient than pricing, private long-term debt markets use such an approach in addition to risk-pricing to control the risks that private firms might take.

The appropriate criterion for judging the effectiveness of the FDIC's supervisory and regulatory powers, then, is the extent to which those powers give the FDIC the ability to protect the market value of the deposit insurance fund. The next section evaluates the FDIC's regulatory and supervisory powers in comparison to the mechanisms private markets have developed for protecting the principal value of investors' funds.

**Table 1**  
**FDIC Insurance Losses By Year**  
(dollars are in millions)

Year	Liquidation Status					
	All Cases		Payoff Cases		Assumption Cases	
	Number	Losses	Number	Losses	Number	Losses
1965	5	\$ 3.9	3	\$ 3.8	2	\$ 0.1
1966	7	0.5	1	—	6	0.5
1967	4	1.0	4	1.0	—	—
1968	3	0.01	—	—	3	0.01
1969	9	0.1	4	0.1	5	—
1970	7	0.3	4	0.3	3	0.01
1971	6	0.2	5	0.2	1	—
1972	1	1.2	1	1.2	—	—
1973	6	67.6	3	—	3	67.6
1974	4	0.3	—	—	4	0.3
1975	13	18.7	3	0.1	10	18.6
1976	16	22.5	3	1.9	13	20.6
1977	6	1.2	—	—	6	1.2
1978	7	5.9	1	0.1	6	5.8
1979	10	7.8	3	0.7	7	7.1
1980	10	21.0	3	1.8	7	19.2
1981	10	556.7	2	1.2	8	555.5
1982	42	1,069.1	7	48.0	35	1,021.1
1983	48	584.9	9	18.3	39	566.6
Total						
<b>1934-1983</b>	<b>668</b>	<b>\$2,393.4</b>	<b>328</b>	<b>\$96.2</b>	<b>340</b>	<b>\$2,297.1</b>

Source: FDIC, *Annual Report* 1982, p. 38 (Figures for 1983 were obtained from FDIC staff)

## II. Restrictive Covenants As a Paradigm for Bank Supervision

Like deposit insurance, the existence of long-term debt can influence shareholders' incentives to undertake risk. Because long-term creditors cannot simply withdraw their funds as the condition of a firm worsens, the existence of long-term debt provides an opportunity for the firm to continue operating with negative net worth on a market value basis. To prevent the shareholders from engaging in activities that are riskier than what the bondholders would prefer, long-term debt markets have sought to control shareholders' behavior not only through pricing but through restrictive covenants. Thus, a model for evaluating the powers of the FDIC is the extent to which they take on the characteristics of bond covenants.<sup>3</sup>

Long-term debtholders have long recognized the potential for conflict between their interests and those of the issuing firm's shareholders. To the extent that investors can anticipate the future investment opportunities and risk characteristics of a given firm, the prices of that firm's equity and debt will incorporate risk premiums commensurate with the marginal cost to society as a whole. In theory, pricing could even incorporate a premium to compensate investors for the possibility that the issuing firm would be able to operate until the entire value of the long term debt had been exhausted. (The price of the firm's equity would be higher and the price of the firm's debt would be lower than otherwise.) However, investors might then require such a high premium for holding bonds that no market for long-term debt would develop. Consequently, long-term debt contracts also contain covenants that constrain the shareholders' ability to engage in activities that would place bondholders at such a risk.<sup>4</sup> These covenants generally place restrictions on the issuing firm's dividend, financing and/or investment policies. Violations of such covenants give the bondholders the right to re-negotiate the terms of the indenture or even to declare the firm in default and seize collateral or accelerate the maturity of the debt, frequently forcing the firm into bankruptcy.<sup>5</sup>

One type of covenant common to many debt contracts places restrictions on the ability of the firm's management to reduce the value of the firm's debt coverage through stock repurchase and/or divi-

dend policy. By specifying the percentage of the pool of current and retained earnings and new stock issues that is available for dividends, redemptions and repurchases, this type of covenant prevents the firm's owners from reducing investment (and therefore, the value of outstanding debt) to increase share values.

A second class of covenants found in long-term debt contracts covers actions by a firm's shareholders that would tend to dilute the claims of bondholders. For example, covenants of this sort may require that a firm maintain certain financial ratios such as capitalization to debt and short-term assets to short-term debt at pre-specified levels as a condition of issuing additional debt. There are also likely to be restrictions on the issuance of debt with claims senior to those of the outstanding debt.

Finally, while covenants are not generally written to constrain a firm's investment choices directly (because of prohibitive enforcement costs), many have that effect. Constraints placed on dividend and financing policy will also constrain investment policy by limiting the firm's cash flow. Moreover, restrictions on the disposition of assets and the acquisition of claims against other firms make the pursuit of a more risky investment policy more difficult.

### Regulatory Means

In the same way that restrictive covenants protect bondholders, regulations regarding, among other things, loan concentrations, insider transactions and capital adequacy standards can protect the deposit insurance fund by constraining banks' investment and financing choices. The most significant check on the actions of a bank's shareholders, of course, is the enforcement of capital adequacy standards. The FDIC has stated that it will enforce a *minimum* capital-to-total assets ratio of five percent for the banks it insures, and that the adequacy of a bank's capital structure will be evaluated in light of the riskiness of the bank's portfolio.<sup>6</sup> Capital includes reported equity capital, reserves (including loan loss reserves) and mandatory convertible subordinated debt—net of loans the FDIC has classified as having a high probability of default. This

policy, together with the FDIC's authority to order a bank to stop paying dividends under certain circumstances, serves to protect the insurance fund from shareholders' policies that are contrary to the FDIC's interest.

By enforcing a minimum capital standard, the FDIC is effectively placing restrictions on a bank's ability to reduce coverage (protection) for the deposit insurance fund. Bond covenants restricting a firm's dividend policy serve the same purpose. Moreover, a minimum capital standard limits the extent to which a bank can issue more deposits and thereby increase the size of the FDIC's liability without also increasing the size of the bank's capital base. Finally, the FDIC's policy on bank capital significantly constrains a bank's ability to follow risky lending and investment policies. By requiring banks to subtract from their capital base the (book) value of loans with a high probability of default, the FDIC is able to force shareholders to absorb more of the costs of risky lending policies. Likewise, by stating that it will establish higher capital standards for riskier banks, the FDIC is again requiring shareholders to absorb the costs of increased risk-taking.

Additional restrictions on banks' ability to pursue risky policies include various regulations limiting both concentrations of loans to any given borrower and transactions between a bank and its executive

officers, directors or principal shareholders. Moreover, regulations regarding debt issuance and pledged assets constrain a bank's ability to dilute the claims of the insurance fund. Like bond covenants restricting a firm's ability to issue new debt with claims senior to those of existing debtholders, prohibitions against preferred debt in a bank's capital structure prevent some forms of claim dilution. Likewise, the ruling that only the uninsured deposits of public units may be secured by a pledge of assets places a check on banks' ability to undermine the FDIC's claim on their assets in case of insolvency. Finally, like many bond contracts, bank regulators require that banks have an adequate system of internal audits and that they purchase insurance to protect against certain types of risk, such as theft, fraud and employee infidelity. These requirements provide a buffer for the deposit insurance fund, particularly since many bank failures have involved fraud or insider abuses.

Clearly, then, bank regulation has much in common with restrictive bond covenants that are designed to control shareholders' tendencies to maximize their share values at the expense of the bondholders (or the deposit insurance fund). And, like bondholders, bank regulators have substantial powers to enforce these regulations. The next section evaluates the FDIC's use of these powers.

### III. Enforcement Options

Although the FDIC insures the deposits of nearly all banks in the U.S., it can take direct enforcement action only against the state-chartered nonmember banks.<sup>7</sup> Thus, the FDIC regulates and supervises directly only 59 percent of the more than 14,000 insured banks (and only about 23 percent of the total banking assets) in this country. While the other federal regulators have substantially the same powers over the remaining institutions, this division of authority could increase the risk to the deposit insurance fund because the other regulators might perceive risk differently from the FDIC. To reduce the risks arising from this division of powers, the FDIC is seeking legislation to give it the full range of enforcement powers over the banks it does not supervise directly.<sup>8</sup> However, its record as supervisor of banks over which it *does* have direct author-

ity suggests that even if granted expanded powers, the FDIC is not likely to enforce regulations much more vigorously than the other regulators.

On the whole, the FDIC has tended to make limited use of its current enforcement powers, particularly those involving legal proceedings, despite the substantial increase in risks to the insurance fund (as measured by the substantial losses incurred by the FDIC) over the last several years. Thus, although the FDIC has the authority to thwart insured nonmember banks' expansion plans, issue cease-and-desist orders, impose civil money penalties, suspend/remove bank officers and directors and ultimately terminate the insurance of *any* insured bank, it has tended to rely mainly on informal agreements with offending institutions and on more frequent examinations of their portfolios. Of

course, these last two actions are frequently sufficient to induce an insured institution to change its behavior. Nevertheless, the FDIC's apparent reluctance to resort to more serious measures until institutions are on the verge of insolvency unnecessarily increases the risk to the insurance fund.

### Formal Agreements

As a first step in inducing a nonmember bank to change its behavior, the FDIC always attempts to obtain some agreement from the bank to rectify the situation (including a plan to increase capital). The FDIC also increases the frequency of examination to monitor the bank's efforts at changing its practices. Such actions impose the burden of a significant cost on the bank, comparable, in some ways, to an increase in the insurance premium rate. Thus, like bond covenants that give bondholders the right to force the issuing firm to renegotiate the terms of the original contract when it has violated one or more of its provisions, the FDIC's ability to increase the frequency of examinations enables the agency to "renegotiate" the terms of the deposit insurance "contract" to reflect the increase in risk assumed by the fund.

Should agreements and more frequent examinations prove ineffective, the FDIC may decide to deny a nonmember bank's application to expand its activities. The FDIC has stated that it will use its authority to deny branch and acquisition applications, for example, as a means of forcing a bank to improve a seriously impaired capital structure.<sup>9</sup> This power is analogous to bond covenants that prevent a firm from undertaking certain types of activities until pre-specified minimum levels of capitalization and working capital, for example, are met. However, the FDIC has been criticized for not making greater use of this authority. The agency, together with the other bank regulators, allowed bank capital ratios to decline throughout the 1970s and early 1980s—at a time when most observers would argue that the more uncertain economic climate called for higher capital ratios. This decline has been especially pronounced at the large banks, where capital fell below 5 percent of assets between 1978 and 1981 (See Table 2.) Of course, a sizeable proportion of these large banks are not supervised directly by the FDIC. However, it is not clear that

the FDIC would have been significantly more stringent in regulating these banks' capital in any case. For example, in the United American Bank failure, the FDIC *did* have direct supervisory authority but nevertheless permitted the bank to continue expanding its branch network even *after* the bank had been deemed in danger of failing.<sup>10</sup> (As mentioned earlier, the bank and its affiliated banks failed in February 1983.)

### Legal Proceedings

The FDIC also has the ability to threaten and initiate legal proceedings (including termination of deposit insurance) against a bank. However, because of the costs (administrative hearings, for example) and delays involved in imposing these legal sanctions, the FDIC generally does not resort to them except in the most extreme cases. Until 1966, termination was the only legal proceeding the FDIC could bring against a bank, and it remains the only legal proceeding the FDIC can bring against the banks it does not supervise directly. Between 1966 and 1983, the FDIC initiated an average of only six

**Table 2**  
**Capital Trends In Insured Banks**

Year	Equity Capital as a Percentage of Total Assets		
	All Banks	Large Banks <sup>1</sup>	Small Banks
1960	8.1		
1965	7.5		
1970	6.6		
1971	6.3		
1972	6.0		
1973	5.7		
1974	5.6		
1975	5.9		
1976	6.1	5.3	7.7
1977	5.9	5.1	7.5
1978	5.8	4.9	7.7
1979	5.7	4.8	7.8
1980	5.8	4.8	8.0
1981	5.8	4.9	8.1
1982	5.8	5.0	8.1

1. Large banks are those with total assets in excess of \$300 million.

2. Data by size of institution were not available until 1976.

Source: FDIC, *Assets and Liabilities of Commercial and Mutual Savings Banks*.

termination proceedings a year—far below the annual average of 284 banks that were considered problem institutions over that same period. Since its inception, the FDIC has initiated only 307 termination proceedings even though the number of banks operating with negative net worth has undoubtedly exceeded the number (668) that actually failed. This reluctance to resort to termination proceedings is particularly significant since termination of deposit insurance is tantamount to a declaration of insolvency. A greater willingness to terminate would help overcome the FDIC's present lack of authority to close insolvent institutions.

### **Other Enforcement Measures**

In 1966 the agency was granted authority to issue cease-and-desist orders. Again, however, the FDIC has tended not to use this power except in cases of *serious* multiple infractions such as insider abuses, unsafe lending practices and/or serious impairment of capital. Between 1966 and 1975, only 37 such orders were issued. Since then, the agency has made greater use of this authority, issuing an average of more than 40 a year. Nonetheless, the FDIC still tends to use cease-and-desist only after the

condition of a bank has deteriorated to the point where it represents a substantial risk to the insurance fund. Since cease-and-desist powers were granted to give the FDIC a more flexible weapon than termination proceedings, the reluctance to use these powers unnecessarily hampers the FDIC's efforts to reduce bank risk-taking.

The FDIC's authority to impose civil money penalties, granted in 1978, has been used very infrequently. Only 11 were issued in 1982 and only three in the preceding years. In general, the FDIC uses this authority only after a bank has violated a cease-and-desist order, even though it has the authority to impose penalties for violations of laws limiting dealings with bank officials and/or corporate affiliates of the bank. Finally, the substantial restrictions on the exercise of the FDIC's authority to suspend or remove bank officers and directors mean that the FDIC has made limited use of this authority as well.

Thus, although the FDIC has considerable authority to take actions against a bank that poses a substantial risk to the insurance fund, such authority is used infrequently. In the end, this reluctance increases the losses borne by the FDIC and raises the value of the subsidy to bank risk-taking.

## **IV. Insolvency Proceedings**

Once an insolvent institution is finally closed, the means by which the FDIC disposes of that institution may affect the size of the FDIC's reported losses to some extent, but it will not affect the (ex ante) risk-taking behavior of insured institutions further (with one exception as noted below). However, because unnecessary losses impose additional costs on society by diminishing the FDIC's resources to handle future failures (the agency may be forced to raise effective assessment rates or, in the case of widespread failure, seek assistance from the Treasury or the Federal Reserve System), minimizing actual losses associated with bank failures even *after* banks fail may be as important a social goal as minimizing potential losses *before* banks fail. Therefore, this section examines the FDIC's options for disposing of insolvent institutions.

As the receiver<sup>11</sup>, the FDIC has several options for liquidating the assets of and paying off the claims against a failed bank. First, it can pay off the bank's depositors up to the insurance maximum of

\$100,000. Second, it can arrange for another institution to purchase the assets and assume the liabilities—Purchase and Assumption (P&A)—of the failed bank. Third, it can arrange a financially assisted merger which is, in many respects, equivalent to a P&A. Or fourth, if it decides that closing the bank is not the best approach, it can make loans or provide other financial assistance to the bank to keep it open. The FDIC's choice among these options depends primarily on which, in each case, involves the least cost to the FDIC (on the basis of initial estimates). However, these costs are estimated on the basis of accounting costs and may not give appropriate consideration to the effects of the transaction on the market value of the fund. As a result, the FDIC's choice may at times reduce the value of the fund unnecessarily.

### **Deposit Payoff**

In a deposit payoff, the FDIC literally pays a bank's depositors the value of their claims against

the bank up to the insurance maximum. The agency may choose to make the payments directly or, as it has done in a handful of cases, pay depositors through a Deposit Insurance National Bank (DINB) which it is authorized to operate for up to two years. In either case, by paying off the depositors, the FDIC assumes the depositors' claims and becomes a general creditor of the failed bank. Then, as receiver, the FDIC sells the assets of the bank and distributes the proceeds to the bank's creditors, including the insurance fund and the uninsured depositors, according to the legal priority of the claim and in proportion to the relative size of the claim. If the value of the assets is insufficient to cover the value of the liabilities, the FDIC as well as every other creditor (with the possible exception of preferred creditors or those with secured claims) receive only a portion of the value of their claims.

However, the FDIC, as receiver, can take certain steps to reduce the size of the losses incurred by the failed bank's creditors in a deposit payoff case. To the extent that the bank has insured depositors who also have delinquent loans outstanding at the bank, the FDIC can reduce its insurance liability *and* the losses incurred by the other creditors by offsetting the (book) value of the loan against the par value of the insured deposit. If the FDIC were to pay off the full value of the deposit and sell the delinquent loan, the receivership would incur a loss equal to the difference between the book and market values of the delinquent loan. In effect, the loan offset policy transfers this loss from the general creditors of the failed bank to the borrower/depositor.

At the same time that the FDIC uses a delinquent-loan offset policy to *reduce* its liability and to protect the insurance fund, curiously, it also offers uninsured depositors a "sound"-loan offset which *increases* its liability. In essence, depositors are allowed to use the book value of their indebtedness to the failed bank as an offset against the par value of their uninsured deposit to *increase* their deposit insurance protection. A depositor with a \$50,000 loan from the bank and a deposit of \$140,000, for example, would find this offset policy in her interest because, by using the deposit to discharge the indebtedness, the remaining deposit would be \$90,000—which is fully insured. Without the loan offset, she would receive protection for only

\$100,000 of her deposit and her \$50,000 loan liability would remain. With a good credit rating, the borrower/depositor would presumably have no trouble refinancing her loan and, as a result of the loan offset, will have protected herself against a possible loss on the uninsured portion of the deposit.

The FDIC has chosen to offer depositors this option because it enables the agency to reduce the size of its initial cash outlay. In the example above, the FDIC would have paid \$100,000 without the offset, but only \$90,000 with the offset. This emphasis on cash outlay is misplaced in this case, however. The policy will likely increase the FDIC's losses because, by allowing depositors to wipe out their indebtedness to the bank, the FDIC is reducing the aggregate value of the receivership's assets by more than it is reducing the value of its claims on the receivership's assets. In the example above, the assets of the receivership were reduced by \$50,000, while the FDIC's claim was reduced by only \$10,000. In effect, the FDIC is allowing other general creditors (that is, uninsured depositors) to assert their claims against the bank ahead of its own claims. To the extent that the receivership incurs losses, then, the FDIC will bear a larger share of them.

The FDIC has used the deposit payoff approach in 328 of the 668 failed bank cases between 1934 and 1983. With the notable exception of Penn Square National Bank in 1982, the banks whose deposits have been paid off by the FDIC have been small—holding an average of \$3.4 million in total deposits. The FDIC chose to pay off these banks because high-cost liabilities, undesirable markets and/or limitations on intra- and interstate branching, among other things, made them relatively unattractive to potential bidders. Moreover, in some of the cases, particularly that of Penn Square, the existence of large contingent claims against the bank or the suspicion of fraud made the FDIC's costs under a purchase and assumption transaction potentially quite large, causing the agency to opt for the high, but more certain, costs of a payoff.

### **Purchase and Assumption**

Of the remaining 340 insured bank failures between 1934 and 1983, the FDIC arranged P&As for the overwhelming majority. The P&A approach

is clearly preferred by the agency for dealing with the failure of large banks. In fact, until the failure of Penn Square, which was paid off for the special reasons already noted, any bank with even \$100 million in deposits was always disposed of through a purchase and assumption or a comparable financially assisted merger. The P&A is preferred because it is less disruptive than the payoff approach and has apparent cost advantages. In a deposit payoff, the bank's business is liquidated and the going-concern value is lost. In a P&A, by contrast, the winning bidder acquires the failed bank's business and pays a premium for it, offsetting a portion of the FDIC's costs. For large banks, in particular, this premium, which reflects the acquiring bank's valuation of the "goodwill" inherent in the failed bank's branch network and customer relationships, among other things, is generally sufficient to reduce the estimated cost of the P&A below that of the payoff. Moreover, the authority given to the FDIC by the Garn-St Germain Depository Institutions Act of 1982 to arrange interstate and interindustry purchases should increase these premiums because the FDIC will be able to sell multi-state charters that are not otherwise legally permissible.

In its simplest form, the purchase and assumption transaction requires that the acquiring institution assume *all* the deposit liabilities<sup>12</sup> and most other nonsubordinated liabilities of the failed bank. With these liabilities, it acquires "clean" assets of equivalent value—typically, the failed bank's premises (at appraised value), the securities portfolio (marked-to-market) and the performing loans (at book value), plus cash from the FDIC (less the amount of the purchase premium) to make up the difference between the values of the liabilities assumed and the assets acquired. Finally, because the acquiring bank does not assume all the failed bank's liabilities, the FDIC agrees to indemnify it against any costs arising from claims it does not explicitly assume.

The accounting origin of the FDIC's cash outlay is either a loan (at below-market rates) by the FDIC to the receivership secured by the remaining, unacceptable assets (at book value), or an outright purchase of those assets (at book value). Then, as the FDIC liquidates the assets it has acquired, it distributes the proceeds among the remaining claimholders according to the priority of their claims and in

proportion to the size of their claims. Thus, to the extent that the FDIC can either sell the nonperforming loans at some price or force delinquent borrowers to pay off their indebtedness, the FDIC will recover a portion of its cash outlay.

By preserving the going-concern value of the failed bank, the FDIC has been able to use the P&A to reduce its recorded costs. However, because the use of the P&A provides, in effect, 100 percent insurance coverage to *all* depositors (including those with deposits in excess of \$100,000) and many other uninsured creditors<sup>13</sup>, as well, this approach increases the FDIC's liability unnecessarily and probably results in an understatement of the true costs of the transaction for two reasons. First, the FDIC is removing a source of market discipline on the risk-taking proclivities of *all* insured banks. Thus, the FDIC has greatly increased its potential liability by increasing the likelihood that insured institutions will engage in excessive risk-taking. As a result, the effect of this transaction on the value of the deposit insurance fund is seriously understated.

Second, while other general creditors are made whole immediately, the FDIC is repaid only as it sells the poor quality assets that were not assumed by the acquiring institution. These assets are likely to require extraordinary expenses to be made marketable, and the FDIC's initial estimates of the cost of the P&A may not adequately take these expenses into account. Moreover, only the FDIC and subordinated creditors remain to bear these expenses. (For example, in one case, the FDIC had to invest an additional \$1 million in a real estate development it had acquired before it could sell the development.<sup>14</sup>) Although the purchase premium may offset a portion of these expenses, in many cases, the premium is not sufficient to provide a full offset (that is, the net worth of the failed bank is still negative when its goodwill is included). Therefore, the FDIC could reduce its losses significantly by sharing these costs with uninsured depositors and other general creditors. Recent P&A transactions in which only the insured deposits of the failed bank have been assumed by the acquiring institution suggest that the FDIC may be moving in this direction.

Thus, part of the attractiveness of the P&A, from the FDIC's perspective, may result from tendencies to understate the full cost of the transaction. If the

FDIC had accounted for these transactions on a market-value basis, the P&A (as it has been administered) might not have been the preferred option in as many cases, despite the loss of going-concern value under a deposit payoff. This may be particularly true when uninsured deposits represented more than a miniscule proportion of total liabilities.

### Financially Assisted Mergers

A few of the more than 300 transactions the FDIC counts as P&As were actually financially assisted mergers (FAMs). Most of these involved large mutual savings bank failures—12 occurred between 1981 and early 1983. The FDIC counts these as P&As because, while they differ from P&As in a number of technical respects, their impact on the liability of the FDIC is comparable to that of P&As. The decision to use a merger instead of a P&A for failing mutual savings banks is based largely on the distinguishing characteristics of mutual savings banks and not on the relative costs to the FDIC of a merger and a P&A.

Unlike commercial banks, mutuals' problems are due primarily to interest rate risk. The combination of a duration mismatch between their long assets and short liabilities and the upward trend in interest rates since the mid-1970s steadily eroded the industry's reported net worth. On a market value basis, the erosion was dramatic: by 1980, the value of the industry's assets had declined so much that it was substantially insolvent.

Given this erosion in the market value of a mutual's *entire* portfolio, the practice of dividing assets into "acceptable" and "unacceptable" categories does not make sense. Instead, in its handling of failing mutuals, the FDIC undertakes to keep the institution open until it can, by providing some form of financial assistance, arrange a merger with a stronger institution. In the typical FAM (although the specifics of each transaction vary considerably), the acquiring institution accepts a large portion of the failing institution's assets (generally at book value) and most of the liabilities as well. It also obtains the goodwill of the failed institution. Then, because the market value of the acquired liabilities exceeds that of the acquired assets, the FDIC provides the acquiring institution with sufficient financial assistance to make up the difference.

This assistance can take several forms. First, the FDIC can make a cash loan to the acquiring institution at a rate below the appropriate risk-adjusted rate. The FDIC's losses in this case will be in the form of foregone interest. Second, the FDIC can purchase some of the assets of the failing bank at their book values. For example, in the FDIC's handling of the merger of Greenwich Savings Bank with Metropolitan Savings Bank, the FDIC assumed responsibility for repaying a \$428 million loan from the Federal Reserve Bank of New York and received in return approximately \$480 million (book value) of Greenwich's assets which were actually worth about half their book value. The FDIC's losses under this form of assistance are equal to the difference between the value of the cash outlay (or liability assumed) and the market value of the assets acquired.

On the FDIC's books, this transaction would appear as an increase in the FDIC's assets equal to the book value of the assets assumed and either an increase in liabilities equal to the liability assumed or a decrease in cash assets equal to the net cash outlay. The difference between the book and market values of the assets acquired would be recorded as a loss which reduces the FDIC's net worth (that is, the insurance fund). Thus, this approach should provide an accurate accounting of the true cost, assuming the FDIC can arrive at a close estimate of the market value of the acquired assets. As in the case of P&As, however, the same problems with estimating extraordinary expenses incurred in disposing of acquired assets arise, making the FDIC's valuation of this type of transaction suspect.

The third approach, which the FDIC has chosen in nine of the 12 recent assisted mergers, may understate significantly the true cost of handling insolvent mutuals. Under this approach, the FDIC enters into an income maintenance agreement with the acquiring institution. It agrees to pay the difference between the average cost of funds for all mutual savings banks and the yield on the acquired earning assets over some period of years. Presumably, the acquiring bank is willing to pay a higher purchase "price" in a transaction involving an income maintenance agreement than in those involving a subsidized loan or a purchase of assets because such

an agreement transfers all interest rate risk to the FDIC.

The FDIC's potential losses, however, are also much higher. In effect, the FDIC is betting that interest rates will not rise significantly—the same thing that got the mutuals into trouble in the first place. Moreover, it is likely that the FDIC is not being fully compensated for these increased risks. Unless the bidding is fully competitive (that is, the investor who would be willing to pay the highest premium for the income maintenance agreement has the opportunity to bid for the failing institution), the FDIC's preference for income maintenance agreements may not take into consideration their full economic costs. As a result, this practice understates the full impact of the transaction on the value of the insurance fund.

### **Financial Assistance to On-Going Banks**

In addition to its powers in receivership cases, the FDIC has authority to provide financial assistance to an institution in danger of failing to keep it from failing. Such authority has serious implications for the control of risk-taking by insured institutions. To the extent that the FDIC is perceived as being willing to use this authority, insured institutions will have even greater incentive to take on risks because the FDIC assistance enables insolvent institutions to continue in operation even longer. Fortunately, the original legislation granting the FDIC this authority in 1950 limited its use to situations in which the FDIC determined that the continued operation of the bank was essential to its community.

The FDIC has made extremely limited use (a total of five failing bank cases have been resolved this way) of this power not only because the agency tended initially to interpret the enabling legislation narrowly, but also because a more extensive use of such powers might be viewed as a usurpation of the Federal Reserve's lender-of-last-resort function. With the passage of the Garn-St Germain Act in 1982, however, the FDIC's authority in this regard was expanded to include nearly all failing bank cases. To date, the FDIC has not made use of its expanded authority. However, should the agency ever make use of this expanded power, it must, as a condition of providing such assistance, demand covenants that enable it to exercise substantial control over the operations of the recipient.

The FDIC's willingness to impose such conditions is clear from the assistance it provided First Pennsylvania National Bank in 1980. In this case, the assistance package fell under the essentiality test implicit in the original (1950) legislation. The FDIC found that the continued existence of the bank was essential to its community because its size was such that failure might precipitate a crisis of confidence in the banking system more generally. Had First Pennsylvania, with almost \$8 billion in assets, been allowed to fail, it would have been the largest bank failure in the United States. Instead, the FDIC put together a \$500 million term loan package comprising \$325 million from the FDIC and \$175 million from a consortium of other banks. In exchange for providing an interest rate subsidy on the package, the FDIC received warrants to purchase 13 million shares of the holding company's stock at \$3 per share. The terms of the agreement also enabled the FDIC to place restrictions on the bank's dividend policy and to review the bank's financial plans periodically. In effect, the FDIC became a shareholder in the bank with the right, appropriately, to participate in the potential rewards associated with the increased risk it was assuming.

At the same time that the Garn-St Germain Act increased the FDIC's authority to give financial assistance to weak institutions, it also gave the agency the authority to prop up the net worth of mutual savings banks and other qualifying institutions through a net worth certificate program. The FDIC buys the net worth certificates of participating institutions (which can be counted as regulatory net worth) in amounts equal to a percentage of their operating losses. In return, the institution receives a promissory note from the FDIC. Although this transaction seems little more than an exchange of paper, it has important implications because it enables substantially insolvent institutions to continue in operation and increases the potential size of the FDIC's liability. In return, the FDIC receives greater control over the decisions of the participants and avoids the immediate costs associated with closing the institutions that would otherwise require receivership outlays. Thus, net worth certificates make the FDIC an equityholder in the failing institution, with an overriding vote on certain issues. Whether these powers are adequate to control risk-taking, however, remains to be seen.

## V. The Deposit Insurance Fund

In the FDIC's supervision of failing institutions and in its practices for disposing of failed institutions, the agency has not always behaved as if preserving the market value of the insurance fund (or minimizing losses) were the primary objective. To a certain extent, this may be due to a myopic emphasis on accounting costs—and not on true economic costs. As a result, the reported value of the deposit insurance fund may be misleading as an indicator of the FDIC's ability both to manage risk-taking among depository institutions and to handle widespread failures.

The deposit insurance fund was valued at \$13.8 billion as of December 31, 1982, and represents the book-value net worth of the FDIC (see Table 3). Additions to the fund come from two sources: insurance premium payments from all insured banks (which amount to little more than a few basis points per dollar of deposits but which generate close to half of the FDIC's revenues) and interest income on the FDIC's \$13.6 billion securities portfolio. The fund is diminished primarily by liquidation expenses, including the FDIC's estimate of its ultimate losses (net of recoveries) in connection with disposing the "bad" assets of failing institutions.

As mentioned earlier, assets acquired through insolvency proceedings are generally recorded at their par values even though they are worth considerably less. At the same time, however, the FDIC

reduces its current income and therefore, the deposit insurance fund, by its estimate of the losses in connection with disposing of the failed institution. Assuming that this estimate is valued properly in the accounting records, the overstatement of the value of the FDIC's assets will be offset by the decline in the FDIC's income and in the value of the insurance fund. However, there is reason to believe that these estimates may not reflect true economic costs. The FDIC's provision of indemnity agreements and income maintenance agreements are just two instances in which the FDIC may be placing a lower value on the transaction than the market does. Moreover, because the FDIC's choice between a P&A or an FAM on the one hand, and a payoff on the other, will frequently depend on its initial estimate of losses under each approach, the tendency to understate the costs of a P&A (or FAM) will tend to bias the agency's decisions in favor of the P&A (or FAM) and reduce the value of the insurance fund by more than might have been the case in a payoff. Likewise, the FDIC's provision of open-bank assistance (that is, loans and/or mutual capital certificates) in return for greater control over the operations of the affected institution amounts to an equity position in a failing institution. Such an investment is extremely difficult to value, providing another source of distortion in the reported value of the insurance fund.

## VI. Summary and Conclusions

The recent deregulation of deposit rates may have increased the risks to the deposit insurance fund by enabling depository institutions to increase their ability to attract insured deposits (by offering higher rates than competitors) and thereby stay in operation long after their net worth has been exhausted (on a market value basis). The FDIC should address this problem of increased risk by exerting greater pressure on the chartering agencies to close insolvent institutions. Moreover, the agency needs to engage in more vigorous enforcement of certain "safety and soundness" regulations—risk-adjusted capital adequacy standards, in particular. Of course, this approach may seem contrary to the spirit of

financial deregulation. As we have seen, however, it has a direct counterpart in the largely unregulated private long-term debt market.

Like deposit insurance, the existence of long-term debt in a firm's capital structure gives shareholders incentive to undertake increased risk after the debt is issued. As a result, long-term debt contracts usually contain covenants to prevent increased risk-taking. These covenants generally place restrictions on the issuing firm's dividend, financing and/or investment policies. Violations of these covenants give the bondholders the right to renegotiate the terms of the indenture or even to declare the firm in default and thus force the firm into bankruptcy.

In the same way that restrictive covenants protect bondholders, regulations regarding loan concentrations, insider transactions and capital adequacy standards can protect the deposit insurance fund by constraining banks' investment and financing choices. And, like bondholders, bank regulators have substantial powers to enforce these regulations, including the authority to issue cease-and-desist orders, impose civil money penalties, remove bank officers and directors and close insolvent institutions. However, bank regulators have displayed a surprising reluctance to resort to these powers. The FDIC's losses and the subsidy to risk-taking, as a consequence, have been larger than they would have been otherwise.

Once insolvent institutions are finally closed, the choice of liquidation proceedings need not affect

the risk-taking behavior of insured institutions further. That choice may, however, affect the losses incurred by the insurance fund. Because unnecessary losses impose additional costs on society, minimizing receivership losses may be as important a social goal as minimizing potential losses prior to actual failure. Because the estimated accounting costs of each of the FDIC's liquidation options may give a distorted picture of the true economic costs, they may lead the agency to choose an option that increases receivership losses unnecessarily. Moreover, certain practices associated with purchase and assumptions, financially assisted mergers and financial assistance all make the recorded value of the insurance fund a less reliable measure of the FDIC's resources.

**Table 3**  
**Assets, Liabilities and the Deposit Insurance Fund**  
**of the Federal Deposit Insurance Corporation**  
**As of December 31, 1982**  
**(thousands of dollars)**

<b>Assets</b>		<b>Liabilities and the Insurance Fund</b>	
Cash	\$ 1,335	Accounts Payable and Accrued Liabilities	\$ 162,331
U.S. Treasury securities:		Notes Payable:	
bills	4,440,238	short-term	201,205
notes and bonds	9,119,243	long-term	185,753
Total	13,559,481	Total	386,958
Assistance to insured banks:		Liabilities incurred in bank failures:	
short-term notes receivable	82,933	FRB & FHLB indebtedness	147,666
long-term notes receivable	654,643	Notes payable	476,484
net worth certificates	174,529	Income maintenance agreements	276,595
special assistance	7,816	Depositors' claims unpaid	9,547
less: allowance for losses	(3,227)	Total	910,292
Total	916,694	Estimated losses from litigation (including indemnity agreements)	3,000
Equity in assets acquired from insured banks:		Total liabilities	1,462,581
depositors' claims paid	320,216	Deposit Insurance Fund	13,770,994
depositors' claims unpaid	9,547	Total	\$15,233,525
loans and assets purchased	609,148		
assets purchased outright	401,563		
less: allowance for losses	(628,405)		
Total	712,069		
Other assets	43,946		
Total assets	\$15,233,525		

## FOOTNOTES

1. This assumes that there are no externalities associated with the risks taken by one institution. In fact, there are likely to be such externalities, otherwise deposit insurance could probably be provided without government involvement. To account for these externalities, all the insurer need do is close insured institutions when their net worth declines to some positive amount, for example, 5 percent of assets.
2. See Tim Campbell and David Glenn, "Deposit Insurance in a Deregulated Environment," **Journal of Finance**, May 1984, for a discussion of alternative bankruptcy mechanisms.
3. I am indebted to David Pyle for suggesting long-term debt as a possible paradigm for deposit insurance. His comments on this subject have been most helpful.
4. Whether the use of bond covenants to control the shareholder/bondholder conflict increases the value of the firm relative to other means of controlling that conflict is a source of debate in finance literature.
5. This section draws on material presented by Clifford W. Smith, Jr. and Jerold B. Warner in "On Financial Contracting: An Analysis of Bond Covenants," **Journal of Financial Economics**, 7(1979), p. 117-161, which discusses the use of bond covenants to control the stockholder/bondholder conflict.
6. Federal Deposit Insurance Corporation, "Statements of Policy," **Laws, Regulations, Related Acts**, Volume 1, p. 5223.
7. Those banks having a national charter are supervised by the Comptroller of the Currency. State-chartered member banks are jointly supervised by the appropriate state banking authority and the Federal Reserve System.
8. Currently, when the FDIC's interpretation of the riskiness of a particular practice differs from that of the bank's primary regulator, the FDIC can resort only to a termination of insurance proceeding. See **FDIC: The First Fifty Years**, Federal Deposit Insurance Corporation, Washington, D.C., 1984, p. 124.
9. FDIC, Statement of Policy, p. 5223.
10. "Federal Supervision and Failure of United American Bank in Knoxville, Tenn., and Affiliated Banks," **Twenty-Third Report, by the Committee on Government Operations**, November 18, 1983; 98th Congress, 1st Session.
11. The Comptroller must appoint the FDIC receiver for national banks. Although state banking regulators are not required to appoint the FDIC receiver for state-chartered banks, they almost always do.
12. Although a loan offset policy is not generally applicable to P&A transactions, the FDIC does occasionally offset problem loans of the bank's directors against those individuals' deposits. This policy protects the interests of the receivership in cases where fraud and insider abuses are suspected.
13. **Deposit Insurance in a Changing Environment**, Federal Deposit Insurance Corporation, April 15, 1983.
14. **FDIC: The First Fifty Years**, p. 104.