

Reforming Deposit Insurance and FDICIA

ROBERT A. EISENBEIS AND LARRY D. WALL

Eisenbeis is senior vice president and director of research at the Atlanta Fed and Wall is a financial economist and policy adviser in the research department's financial section. They thank Myron Kwast and Allen Berger for helpful comments and suggestions.

The current debate on deposit insurance reform addresses a host of issues, but most of them boil down to three concerns: the size of the net premiums (premiums minus rebates) paid by different groups of insured institutions; the timing of premium collections, now or in the future; and the size of deposit insurance coverage limits. The Federal Deposit Insurance Corporation (FDIC) says that both gross and net premiums should be higher to better charge for risk, collections should happen sooner rather than later, and coverage limits should be increased. The various banking lobbies support lowering net premiums for their respective members, deferring the payment of premiums to the extent possible, and raising the coverage limits on insured deposits.

The existence of a debate along these lines raises questions about the effectiveness of the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA). Shortly before the act's passage the U.S. Congress learned that it might also have to pay to cover losses of FDIC-insured commercial banks.¹ Congress responded by including in FDICIA a series of measures intended to prevent banks from failing with large losses to the deposit insurance fund or to taxpayers (see Box 1 on page 6). Among those provisions are prompt corrective action (PCA), which requires heightened supervisory actions as a bank's capital adequacy ratios decline; least cost

resolution (LCR), which seeks to limit the extent of FDIC losses when a bank is closed; and risk-based deposit insurance, which imposes higher premiums on riskier banks.

Mainly as a result of a strong economy and good luck, the large losses to the FDIC that some analysts had predicted in 1991 did not materialize. The economy first recovered from the 1990–91 recession and then progressed to a period of rapid growth. The extremely good economic times in the post-FDICIA period resulted in strong and steady bank earnings. The deposit insurance funds were rapidly rebuilt by premiums paid by insured banks and thrifts (hereafter, referred to simply as banks), reaching the statutory target reserve ratio of 1.25 percent of insured deposits. At the same time banks' capital adequacy ratios improved markedly. Arguably, FDICIA has been an important factor in the continuing good health of the banking industry even after the onset of a recession in 2001.

Despite this seemingly favorable performance, FDICIA has had mixed success in handling banks' losses. Several moderately large banking organizations have failed with losses to the insurance funds ranging from an estimated 25 to 75 percent of assets, according to Kaufman (2001a).² Most recently, Superior Bank FSB failed, with losses estimated by the FDIC at \$500 million of the bank's \$1.7 billion in assets; some private-sector forecasters predicted even higher losses.³ The architects of FDICIA clearly

intended to prevent banks of Superior's size from failing with such large losses (see Carnell 1997b).

Under FDICIA the extent of losses to depositors and the deposit insurer are largely under the control of the bank supervisory agencies, and the framers of FDICIA intended that supervisors should use their power to minimize those losses.⁴ The mandate to minimize losses represents an important change from supervisors' historical goal of reducing the number of failures. (The merits of this change are discussed in Box 2 on page 12.) When the act is implemented as intended, the losses to the FDIC should be small, as should losses to uninsured credi-

Banks argue that they have overpaid for deposit insurance coverage because the fund is currently above the target set in FDICIA.

tors. Additional deposit insurance reform might be desirable if FDICIA were so implemented, but the current issues would be of second-order importance.

This article explores the fundamental issues raised by FDICIA and the current deposit insurance reform debate. The article focuses especially on the issues of how and when premiums should be levied. This discussion leads to an analysis of the reform issues that should be the focus of current analysis and debate.

Current Issues in Deposit Insurance Reform

The FDIC (2001) recently made a number of proposals to reform the existing deposit insurance system. Among the more important of these are proposals to (1) levy insurance premiums on all banks regardless of their condition and the size of the fund, (2) merge the Bank Insurance Fund (BIF) and the Savings Associations Insurance Fund (SAIF), (3) allow the FDIC to issue credits against future premiums so that it can charge premiums to all banks without the fund becoming excessively large, (4) give the FDIC greater flexibility in setting the size of the fund, and (5) index the current \$100,000 limit on deposit coverage to a price index with the first adjustment in 2005.

The first three of these proposals, which address the size and distribution of the net premiums, are discussed below. The fourth proposal deals with the

size of deposit insurance coverage, and the fifth addresses the timing of the collection of premiums.

As the BIF fund started rising above the congressionally mandated 1.25 percent target, banks argued that they had in effect prepaid their premiums in the early 1990s, that reserves were sufficient, and that banks therefore should not be required to continue to pay into the fund. In 1996 the Deposit Insurance Funds (DIF) Act was passed, which eliminated premium collections from all but the riskiest institutions as long as the coverage ratio is above its target.

Arguing for changes to the DIF Act, FDIC Chairman Donald Powell (2001) says that the "FDIC wants to be able to fulfill the original mandate Congress gave it in 1991 to design and establish a truly risk-based system." The current restrictions on the size of the deposit insurance fund limit the FDIC's ability to charge such premiums. If risk-based premiums are to discourage excessive risk taking, banks must be charged premiums based on their current exposure. The FDIC further points out that premiums paid in the past have no effect on current incentives to take risk. If the appropriate premiums to discourage risk taking turn out to be too high ex post, then the FDIC should have the authority to rebate the excess. Relaxing this constraint would give the FDIC more freedom to charge premiums to all banks while keeping the fund within some desired range. Powell says that he is reluctant to mandate cash rebates but that the desired result could be obtained by giving credits toward future assessments.

Powell (2001) points out a number of problems caused by the current restrictions on the FDIC's discretion when the fund is too high or too low. He argues that premium limits imposed by the restrictions on the fund's size not only make risk-based premiums less effective but also allow new deposits to enter without paying any premiums. He also notes that if the fund ratio falls below the target then deposit insurance premiums must be increased to 23 basis points. Such an increase would most likely happen at a point in the business cycle when it would be a significant drain on banks' earnings. Powell argues that the consequence of this drain could be "impeding credit availability and economic recovery" (2001).

The current debate over ways to keep the fund from growing without bound versus the FDIC's desire to continue to charge risk-related premiums centers, on the surface, around three primary issues: the nature of the insurance contract, the appropriate size of the fund, and the appropriate insurance premium structure. Each of these issues is considered in turn, and the discussion will show

that the deeper issues concern the socially desirable way of apportioning losses between depository institutions and taxpayers.

The Nature of the Insurance Contract

Banks argue that they have overpaid for coverage because the fund is currently above the target set in FDICIA. If the deposit insurance contract were analogous to a whole life insurance contract, which consists of a combination of a term insurance and a savings function, then banks could be considered to have overpaid for insurance. If this overpayment plus accrued interest is sufficient to cover all future premium costs, then it could conceivably be converted into a paid-up term policy by using the accumulated overpayments to debit against future premium payments.

On the other hand, if the insurance is essentially a term, or pure self-funding, insurance contract, then banks have not overpaid for coverage and should continue paying for coverage regardless of the fund's size.⁵ Institutions have been charged premiums according to the risks they pose during a given period of time, and neither those risks nor the charges for them are dependent on the future or current size of the insurance fund. Additionally, premiums serve the purpose of actuarially reflecting the risks posed and provide banks with incentives to choose portfolios reflecting owners' risk-return trade-offs. Premiums should be paid *ex ante*, and the amount of past payments is irrelevant to current or future premiums.⁶ Insurance companies that issue term policies routinely accumulate reserves during periods of low claim frequency to cover losses when they do occur. Thus, if the FDIC were mimicking an insurance firm, there would be periods when the fund would be growing to cover future losses.

In reality, neither view of the insurance contract is correct. Under FDICIA 1991, the insurance contract is neither a term nor a combination term-savings

contract. Instead, it is a pooled risk, or coinsurance, contract in which each institution is jointly and separately liable for industry losses up to the amount of its equity.⁷ That is, the industry, through *ex post* premiums, is taxed to bring the fund back to 1.25 percent; should the ratio fall below 1.25 percent, the industry could be taxed again up to the full amount of its equity. Hence, under FDICIA, banks are taxed to maintain what is essentially a petty cash fund at a specified size—presumably to enable the FDIC to conduct and resolve routine failures without having to initiate an industry assessment every time an institution fails and resources are used up. Any deficiency in the fund, should it be totally or partially depleted, is to be made up through an *ex post* settling up by the surviving institutions.

The Size of the Fund

William Isaac, former chairman of the FDIC, notes, "It's important to understand that there is no deposit insurance 'fund'" (2000, 35). Premiums paid to the FDIC are remitted to the Treasury and go into the General Fund of the United States.⁸ Outlays by the FDIC increase the federal deficit. Further, he asserts, "The object in collecting premiums from banks and thrifts is not to build a 'fund,' but to ensure that over time the deposit insurance program pays for itself. The so-called 'fund' is simply a running scorecard to determine whether banks and thrifts have paid in more than they have taken out."⁹

Current law places limits on the size of the fund relative to insured deposits. These limits affect (1) the resources available to the FDIC to resolve failed banks without having to rely on congressional appropriation, (2) the way losses are shared between taxpayers and insured institutions, and (3) the incentives of institutions, taxpayers, and Congress to monitor supervisory agencies' compliance with the goal of FDICIA to ensure that losses are minimized. Each of these issues is considered below.

1. Estimates of the losses varied but have been described in Kane (1983, 2002) and Brumbaugh (1993).

2. See Shadow Financial Regulatory Committee (2000a) for a discussion of two failures with large losses to the deposit insurer.

3. The FDIC was able to recover a large fraction of its losses from the owners of Superior Bank, according to Maremont (2001).

Two special circumstances appear to have facilitated the recovery: the bank's governance was concentrated in the hands of a small number of owners, and those owners had substantial other assets. In general, the FDIC cannot expect such recoveries from bank owners in future failures.

4. See Benston and Kaufman (1994) for an overview of FDICIA.

5. In FDIC (2000) this scenario is called a "user fee" model.

6. Under pure insurance, regulators or the insurer must monitor institution risk profiles to keep them from shifting portfolio risk structure after premiums have been set; see Koehn and Santomero (1980).

7. FDIC (2000) terms it a mutual insurance contract.

8. An electronic version of Isaac's comments may be found at woodrow.mpls.frb.fed.us/pubs/region/00-03/isaac.html.

9. The FDIC annual report indicates the nature of the fund's investments and income, but these are only bookkeeping entries, similar to the Social Security Trust Fund.

Resources available to the FDIC. The FDIC has historically had the authority to buy assets and absorb losses of failed banks up to at least the current value of the fund without seeking congressional authorization. It also may use these funds to provide temporary loans to receiverships to aid in resolving failed institutions. In effect, the fund serves as working capital for the agency, and efficiency considerations may argue for maintaining a minimal-sized account with the Treasury simply to facilitate the handling and financing of routine disposals of failed institutions. An advantage of this approach is that the FDIC can resolve bank failures without recourse

The danger in limiting the size of the insurance fund is that doing so could inhibit the FDIC's ability to resolve some problem banks should the fund become inadequate.

to the political process so long as it still has adequate resources in the fund. This ability is important because fraud and other difficult-to-detect problems will likely always occur in banking, and, hence, unintended losses to the insurance fund will be a continuing problem.

The danger in limiting the size of the fund is that doing so could inhibit the FDIC's ability to resolve some problem banks should the fund become inadequate. For example, a shortfall in the Federal Savings and Loan Insurance Corporation fund inhibited thrift regulators in the late 1980s, resulting in large losses to taxpayers.¹⁰ In this regard, having an account with the Treasury affects funds available to the FDIC and potentially its incentives. However, the real impact of having a target for the fund under the 1996 DIF Act is that it determines loss sharing between depository institutions and taxpayers when losses do occur.

Loss sharing. Under the DIF Act, any deficiency in the fund, should it be totally or partially depleted, is to be made up through an ex post levying of a tax in the form of higher premiums on surviving institutions. When the coverage ratio is restored, payments stop. Thus, the coverage ratio serves solely as an ex ante means to stop taxing banks for future claims on taxpayer funds. Under this system, institutions are providing a de facto loan to taxpayers over and above the income taxes

they pay each year. The principal reason for a larger fund coverage ratio is that it reduces the ex post tax on healthy institutions, which were not responsible for either failed institutions' risk taking nor for regulatory policies, a point that will be explored in more detail later.

This current situation can be described more formally to aid subsequent analysis. The DIF Act provides that as long as the ratio $\alpha = F/D$ of the actual size of the fund (F) to insured deposits (D) is less than the statutory required or target ratio, $\underline{\alpha} = 1.25$ percent (that is, $\alpha < \underline{\alpha}$), premiums will be collected from all institutions. Although called a premium, the charges are better regarded as a tax or user fee because the size of the charge is not related to the perceived or actual actuarial risk of loss to the insurance fund, which is determined primarily by regulatory behavior rather than institution risk.

Should an institution fail and its resolution result in a loss to the fund, then healthy institutions bear the ultimate cost of the loss in the form of either paying a larger tax or paying the existing tax for a longer period of time until the fund returns to the required coverage ratio, $\underline{\alpha}$. Now consider the case when the actual fund coverage ratio is greater than the statutory required ratio, $\alpha \geq \underline{\alpha}$. Then, according to the provisions of the 1996 DIF Act, premium or user fee collections cease for all but risky institutions.

The actual coverage ratio may be greater than or equal to $\underline{\alpha}$, even if failures occasionally occur, because interest on Treasury debt allocated to the insurance fund (via accounting transactions) accumulates and premiums/taxes are still collected from the riskiest institutions.¹¹ Should the loss to the fund as a proportion of insured deposits, L , occur at any time, t , but not be sufficiently large to force the actual coverage ratio, α_{t+1} , to fall below its statutory target, $\underline{\alpha}$ (that is, after the loss, α_{t+1} is still greater than $\underline{\alpha}$), then taxpayer monies from the General Fund must be allocated to cover the losses.

As mentioned previously, insured institutions would argue that they had already paid the funds to the FDIC and therefore had paid for or covered the losses. However, this argument misses the point from the taxpayers' perspective. Premium proceeds were used by the federal government to meet current obligations or to make purchases on behalf of taxpayers. Banks' premium payments were not placed in the form of cash in a vault or in a reserve or bank account, lying idle until needed. To meet the demand for funds triggered by the loss, government borrowings must be increased, taxes increased, or expenditures reduced by the amount of the loss,

and this obligation is the taxpayers' under the terms of FDICIA. Moreover, these losses will be reflected as a cost to the federal government in the government's budget.

If losses, L , are sufficiently large so that after the resolution the actual coverage ratio falls below its statutory target ($\bar{a} \geq \alpha_{i,t}$), then losses are shared between taxpayers and surviving depository institutions as follows. The proportion of the loss, s , represented by the extent to which the existing coverage ratio exceeds the target or statutory ratio, $s = \bar{a} - \alpha$, is borne by taxpayers. The additional or remaining proportion of the loss, $L - s$, is paid for over time by surviving depository institutions until the fund is restored to its statutory target coverage ratio.¹²

In order to continue collecting risk-related premiums, supposedly to control its risk exposure, the FDIC has proposed rebating excess premiums whenever the fund exceeds the statutory target by some fraction. Such a proposal, again, has important loss-sharing implications. For example, if there is a cap on the coverage ratio, \bar{a} , such that once the ratio exceeds the critical value $\bar{a} \geq \alpha$, premiums are rebated to insured institutions. Instituting a cap on the coverage ratio puts a ceiling on the amount of losses that are borne by taxpayers and shifts more risk in any given year to surviving insured institutions. The lower the value of the cap relative to the statutory target level, the smaller are the losses borne by taxpayers and the larger the losses borne by surviving insured institutions.

Loss bearing and incentives. Public policy preference for shifting losses to taxpayers versus imposing additional costs on surviving institutions should depend on a couple of factors. First, it must be recognized that the FDIC (or the responsible regulatory agency) is acting as an agent for those bearing the loss. It has been demonstrated that losses are shared between taxpayers and insured institutions and that the relative burden shares are determined primarily by the target coverage ratio relative to the actual coverage ratio. The theory of relationships between principals and agents in a business setting suggests it is critical to attempt to align regulatory incentives with those bearing

the losses and to ensure the regulatory agencies' accountability to those on whom losses are being imposed.¹³ Under current FDICIA requirements, responsible regulatory agencies must report and answer to Congress for any material losses to the insurance fund. Congress, in turn, acts as a delegated agent for taxpayers to monitor agency performance and hold agencies accountable when they fail to follow prompt correct action and least cost resolution of failed institutions.

Conceptually, the incentives of Congress and taxpayers should be clearly aligned since any loss to taxpayers will be reflected in the current year's fiscal budget. If a target exists for the fiscal balance (surplus or deficit), Congress will have a strong incentive to be concerned about and to monitor regulatory agency behavior because failure to close insolvent institutions could impinge upon tax or spending programs. Furthermore, a statutory mechanism exists for holding the regulatory agencies accountable to the Congress.

It is less clear how regulatory agencies' incentives align with those of surviving depository institutions when regulatory failure to close institutions imposes potentially large losses on those institutions. One could argue that these incentives are not necessarily well aligned and may also have undesirable effects on systemic risk. Congress, for example, clearly has little incentive to discipline regulatory agencies when they impose costs on depository institutions. Institutions do not vote, and, moreover, they are perceived to be better able to bear the costs than taxpayers are.¹⁴ On the other hand, adjusting premiums to impose the current year's losses on the surviving banks will clearly affect earnings and returns to shareholders. Thus, banks may be motivated to use their political power to support timely resolution of the failed banks, thereby minimizing surviving banks' cost of deposit insurance.

The downside of imposing losses on banks is, as Powell (2001) points out, that the demand for funds to resolve failed banks is likely to occur at times when the entire banking system is under financial distress, such as during recessions. Imposing additional costs on already weakened institutions would act to tie the

10. White (1991), for example, documents the ways that the Federal Home Loan Bank System adopted policies of forbearance that ultimately resulted in large losses to the Federal Savings and Loan Insurance Corporation and taxpayers.

11. Currently, the FDIC is collecting premiums from only about 8 percent of insured institutions, according to Murton (2001).

12. How quickly the fund is rebuilt, apportioning losses across surviving institutions, may have solvency and systemic risk implications.

13. See Jensen and Meckling (1976) for a discussion of the theory of principals and agents as applied to firms.

14. Institutions and their principals do make campaign contributions, but these have become relatively limited as a result of campaign financing reforms.

The Federal Deposit Insurance Corporation Improvement Act

FDICIA contains a number of provisions designed to limit the costs of bank failure, especially the costs to the deposit insurance fund. In addition to some widely discussed changes, such as prompt corrective action, the act has some other provisions that are not widely understood and that have greatly changed the nature of how deposit insurance is administered (see Carnell 1997a, 13). The most important features incorporated in FDICIA are the clear setting of regulatory priorities, the changes to the incentive structure facing supervisors, providing regulatory discretion to intervene before an institution becomes insolvent, and eliminating the discretion to engage in regulatory forbearance.

Prompt Corrective Action

The prompt corrective action (PCA) provisions of FDICIA provide a series of mandatory and optional supervisory responses to declining bank capital adequacy ratios. For example, the provisions mandate that supervisory scrutiny should escalate progressively and specify a series of supervisory responses to be taken as a bank's capital declines.

Banks whose capital significantly exceeds the minimum required level are labeled well capitalized. PCA imposes only two limits on all banks, including well-capitalized banks, that are not in some other way operating in an unsafe or unsound condition or engaging in an unsafe or unsound practice. One limit is that a bank cannot pay dividends or repurchase shares if doing so would result in being undercapitalized after the payment. The other limit is that the bank also may not pay management fees if it would become undercapitalized after the payment.

Banks with capital adequacy ratios that meet the minimum required levels are labeled adequately capitalized. Section 301 of FDICIA limits the ability of banks that are merely adequately capitalized to obtain brokered deposits.

Banks with capital adequacy ratios below the minimum required level are considered undercapitalized. Prompt corrective action provisions mandate that an undercapitalized bank must submit a capital restoration plan for approval by its federal supervisor. Undercapitalized banks are not allowed to increase their average total assets over a quarter unless the growth is consistent with an approved capital restoration plan and the bank's tangible equity-to-asset ratio is increasing at an acceptable pace. Similarly, undercapitalized banks may not

acquire or merge with another company or establish or acquire additional branches unless they have an approved plan.

A bank whose capital adequacy ratio is significantly below the minimum is classified as significantly undercapitalized. Significantly undercapitalized banks are subject to all of the restrictions on undercapitalized banks. In addition, supervisors are instructed to take one or more of several actions, including (1) requiring recapitalization by equity issuance or acquisition, (2) restricting transactions with affiliates, (3) restricting the interest paid on deposits, (4) imposing stricter asset growth restrictions than those imposed on undercapitalized banks, (5) improving management by changes in the board of directors or senior executive officers, (6) prohibiting deposits by correspondent banks, (7) requiring prior approval for capital distributions by the bank's parent holding company, and (8) requiring the bank to divest one or more subsidiaries or the bank holding company parent to divest the bank. The bank also may not pay bonuses or increase base compensation beyond the level of the prior twelve calendar months without supervisory approval.

The capital adequacy measures used for the above four PCA categories and the cutoff values for each measure are to be determined by federal bank supervisors. PCA provisions specify that any bank whose ratio of tangible equity capital to total assets is less than 2 percent is automatically deemed critically undercapitalized; the provisions also allow regulators to use other capital adequacy measures to establish the cutoff. Critically undercapitalized banks are subject to all of the restrictions on significantly undercapitalized banks. In addition, critically undercapitalized banks may not pay interest on their subordinated debt without supervisory approval. Moreover, FDICIA specifies that the appropriate bank supervisor should appoint a receiver within ninety days of a bank's becoming critically undercapitalized unless the supervisor and the FDIC agree that some other action would better achieve the goal of minimizing the long-run loss to the deposit insurance fund.

Another significant change under FDICIA is the authorization to close banks with positive levels of measured book capital combined with encouragement to use that authority.¹ PCA provisions provide that banks with capital-to-asset ratios of less than 2 percent may be treated as insolvent

and resolved. This threshold recognizes that the value of bank assets is often overestimated and that the act of closing a bank may cause a decline in the value of those assets.²

FDICIA also recognizes a number of qualitative factors that supervisors may use to justify disciplinary actions. Furthermore, in measuring net worth, FDICIA requires supervisors to use standards at least as stringent as those in generally accepted accounting principles (GAAP). The supervisors already had the authority to set accounting standards that were as stringent as or more stringent than GAAP; the change is that FDICIA sets GAAP as a lower bound on accounting requirements. FDICIA goes even further, however, with respect to bank accounting standards by urging the agencies to “provide supplemental disclosure of the estimated fair market value of assets and liabilities, to the extent feasible and practicable.”³ This guideline reflects the recognition that ultimately economic net worth, not book or account net worth, is the source of value to shareholders and protects the insurance fund.

Least Cost Resolution

FDICIA also mandates that failed banks be resolved in the least costly way possible, a stipulation that generally requires the FDIC to resolve banks in the way that imposes the least cost on the insurance fund. This provision is generally understood to limit the FDIC’s ability to absorb losses that would otherwise be borne by uninsured depositors and nondeposit creditors. In many cases prior to FDICIA, the FDIC had protected uninsured depositors through the use of purchase and assumption transactions, assisted mergers, and so on. These protections were not mandated by law but rather reflected the agency’s long-standing practices and interpretation of its responsibilities. One consequence of the pre-FDICIA policy was to reduce the incen-

tives of outside creditors to monitor and care about their risk exposure, thereby reducing a potentially effective source of market discipline.

Risk-Based Premiums

One of FDICIA’s key provisions that has received the most attention is the authorization of risk-based insurance premiums. Heretofore, the FDIC was required to charge the same premiums to all banks regardless of their risk profile. While most economists would argue that risk-based premiums are desirable, the force of this provision was weakened by subsequent legislation (the Deposit Insurance Funds Act of 1996), which eliminated premiums for healthy institutions once the insurance fund reached the required 1.25 percent ratio of assets to insured liabilities.⁴

Agency Incentives

FDICIA ultimately depends on bank supervisors to limit losses to the insurance fund. Such losses will result whenever an institution is closed after its net worth becomes negative. Measuring and monitoring an institution’s net worth is the responsibility of the primary regulator, as is closing the institution when its net worth reaches the threshold level.

FDICIA tries to provide incentives for supervisors to minimize the cost of bank failures to the insurance fund by providing for mandatory review by the agencies’ inspector generals of bank failures whenever the fund incurs a material loss (where a loss is defined as material if it exceeds the greater of \$25 million or 2 percent of the institution’s total assets at the time of resolution). Further, these reports are to be a part of the public record. However, there is no governance mechanism that holds the FDIC or other regulatory agencies responsible to those upon whom losses are imposed. Interestingly, however, this issue and related ones have not proved to be part of the public debate on deposit insurance reform.

1. One reason that regulators tended not to close an institution before it became insolvent was their concern about being accused of confiscating equity holders’ property, which generally is against the U.S. Constitution.
2. William Seidman, former chairman of the FDIC, has argued that the value of a bank’s assets may decline by as much as 25 percent when the bank is taken over by the FDIC. See Eisenbeis and Horvitz (1994), James (1991), Bovenzi and Murton (1988), and Brown and Epstein (1992).
3. The accounting reforms are in Section 121 of FDICIA, which adds a new section 36 to the Federal Deposit Insurance Act.
4. The Deposit Insurance Funds Act of 1996 prohibits the FDIC from assessing banks and thrifts unless they “exhibit financial, operational, or compliance weaknesses ranging from moderately severe to unsatisfactory, or are not well capitalized,” as long as a fund’s reserve ratio exceeds (and is expected to remain above) the designated reserve ratio. This provision has the effect of preventing the FDIC from collecting premiums on well-capitalized banks that are rated satisfactory by the supervisors.

health of financial institutions together and make their returns and likely failures more correlated. Sound financial institution policies would argue that regulatory agencies should seek to make failures isolated and independent events, both in actuality and in the minds of the public, so as to reduce the chances that systemic events and runs occur.

In the end, the choice of imposing costs on institutions or taxpayers hinges on a judgment about the relative strengths of the incentives of taxpayers or banks to bring and exert pressure on Congress to monitor and discipline the regulatory agencies. Given that Congress is more likely to respond to budget

The source of loss to the deposit insurer that poses the greatest risk of large losses to the fund is supervisory failure to act promptly when losses are identified.

pressure, a case can be made for a lower, rather than a larger, fund, and, if pushed to the extreme, an argument may be made for no fund at all.

Given Isaac's (2001) observation that the fund is really just a scorecard, the existence of the fund could mislead some into believing that the resources available to deal with failed banks are limited to the size of the fund. However, given that the losses are first covered out of the General Fund and that deposit insurance ultimately rests on the full faith and credit of the government, there is little case to be made for earmarking a contingent set of claims on the fund keyed to bank tax or premium payments.¹⁵ Thus, the case for maintaining a deposit insurance "fund" in an accounting sense rests on the need for the FDIC to have access to working capital to resolve failed banks without requiring a special appropriation by Congress for every resolution. However, the requirements for a working capital fund would not necessarily result in the same optimal level as that which would result from viewing the fund as banks' paid-in capital to cover future losses.

Premium Structure, Transparency, and Monitoring

The purpose of collecting risk-based premiums is to make banks bear the expected value of the losses that they would otherwise impose on the FDIC. Thus, the starting place for evaluating premium

structure is understanding the determinants of losses to the deposit insurer.

Determinants of insurance losses. Under the current provisions of FDICIA, the deposit insurance fund should suffer little or no losses as a result of bank failure provided that (1) the bank's losses are incurred slowly over time, (2) the supervisors identify losses as they occur, and (3) the supervisors act promptly. Thus, if the FDIC suffers significant losses from a bank failure, one or more of these conditions must not have held.

If a bank experiences sudden large losses, the supervisors may not be able to act in time to prevent costly failure. However, a prudent bank with a diversified portfolio should not be exposed to sudden large losses, and, indeed, such losses are rarely the cause of bank failure. In this regard, one of the benefits to bank management of conducting stress-testing simulations is to better understand the vulnerabilities *ex ante* to extreme risks from different sources.

Supervisors may fail to identify losses because a bank is deliberately seeking to hide the loss; that is, the bank is engaging in fraud. Fraud is a serious problem for the deposit insurer at smaller banks, where executing the fraud may require the cooperation of only a few bank insiders. However, fraud is more a shareholder concern than a deposit insurer problem at larger banks with reasonable internal controls, where a large number of individuals must cooperate to produce losses that would cause a bank to fail.¹⁶

Supervisors may also underestimate the magnitude of losses for some assets because of the difficulties in valuing likely credit losses for many loans, in pricing some complex financial transactions, and in assessing exposure to certain types of operational and portfolio risks. While some problems in valuing financial claims are inevitable, the intent of FDICIA was to force early resolution of the conflicts while the bank still has sufficient capital to be viable. This intent was the major rationale for establishing capital-based tripwires, which both legitimize strong regulatory intervention and channel regulatory discretion toward generally healthy but weakened institutions before it becomes too late. The difficulty of valuing assets also provides a strong reason for perhaps considering raising the tripwire thresholds and for increasing the critical 2 percent capital threshold at which troubled institutions are closed.

The final source of loss to the deposit insurer, and the one that poses the greatest risk of large losses to the fund, is supervisory failure to act promptly when losses are identified. Box 2 discusses some of the ways FDICIA addressed this problem,

including explicitly setting a goal of minimizing losses to the deposit insurer, prompt corrective action, inspector general reviews of material losses, and boosting market discipline via least cost resolution.

Pricing the risk to the deposit insurer.

Because regulatory behavior and not institution risk profiles is the primary source of the risk of loss to the insurance fund, it makes little sense from an insurance-risk perspective to base deposit insurance premiums primarily on institution risk. There is an argument for charging premiums for risk, but it rests on a completely different foundation than that typically advanced by academics. Regulatory agencies charged with monitoring the solvency of depository institutions are faced with a number of alternatives. At one extreme, they could engage in continuous supervision and monitoring. Doing so would not only be costly but also would probably be wasteful of resources. At the other extreme, agencies might not monitor at all and would simply pay off losses as they occur. This alternative too might be wasteful and clearly would lead banks to moral hazard behavior and risk taking. Regulators need, therefore, to balance the expected costs of supervision and monitoring and the risks that institutions may become economically insolvent between examinations. This risk is a function of the ease and costs of monitoring, the transparency of the accounting system, and the short-run risk-taking propensities of insured institutions between examinations. Also, because experience is proving that not all realized risks can be readily detected, some portion of the FDIC's price should reflect the fact that not all the actuarial risk is solely related to the time between examinations.

From the perspective of ensuring transparency, the rationale for premiums that vary across banks is transformed from pricing exclusively for risk to pricing based primarily on transparency. As mentioned previously, a portion of the FDIC's premium levy may still reflect multiperiod risk because the fund may incur some losses when a bank fails and because its condition was not detected at the time of the previous examination. However, the primary

factor would be banks' transparency. Banks that are relatively easy to value would pay lower insurance premiums. At the limit would be banks that invest solely in marketable assets (such as money market mutual funds), where the potential loss could be trivial. Conversely, banks that are harder to value would pay higher fees reflecting their potential to incur greater losses before their problems are recognized. Moreover, the incentive created by deposit insurance premiums could be augmented by examination charges that reflect the frequency and difficulty of the examination process (see Flannery 1991). Continuous monitoring of the net worth of all depository institutions is extremely costly, so risk-related premiums serve the function of balancing the costs of monitoring versus the chance that losses will materialize between examination periods.¹⁷ Presumably, the less risky and complex an institution's portfolio is, the lower the costs of monitoring.

Other Deposit Insurance Reform Issues

Several other reform issues have been proposed by either the FDIC or industry representatives. These include merging the deposit insurance funds and expanding deposit insurance coverage.

Merging the BIF and SAIF insurance funds.

Given that there is no insurance fund with resources set aside to be used in resolving losses and that deposit insurance is not really insurance, proposals to merge the bank insurance fund (BIF) and the Savings Association Insurance Fund (SAIF) would seem to be merely a bookkeeping issue of secondary importance. The reason that the merger issue arises at all is that their separate existence and the size of the BIF and SAIF relative to insured deposits determines both the amount of the tax paid by member institutions in the form of premiums and how losses are shared in the event that the coverage ratio falls below the mandated level.

While the issue is relatively unimportant, the weight of the arguments favors merging the two funds for reasons given by Chairman Powell (2001)

15. Some would argue that under FDICIA, taxpayers incur an insurance liability or loss only when the equity of the banking system is exhausted. The previous analysis suggests that this idea is not quite correct. Moreover, it is both unrealistic and unlikely that the government would let the banking system be destroyed before stepping in. Clearly, the government has recently intervened on behalf of the airline industry in the aftermath of September 11, and there is less of a statutory mandate and history to bail out that industry than there is for banking.

16. Allied Irish Banks reported a \$750 million loss from currency losses hidden by bogus offsetting trades, according to Fuerbringer and Kilborn (2002). They report that these large losses caused the bank's stock to fall 16 percent after the announcement in New York trading. Nevertheless, the bank expects to report positive profits for all of 2002, with the after-tax consequence of the losses causing the firm's profits to drop from \$865 million in 2001 to an estimated \$348 million in 2002.

17. See Flannery (1991) for a discussion of these trade-offs. See Shadow Financial Regulatory Committee (2000a) for a slightly different view.

in his recent testimony.¹⁸ Powell proposes merging the funds for several reasons. First, many institutions hold both BIF- and SAIF-insured deposits, and he notes that there is now a substantial overlap between the types of institutions insured by each system. Merging the funds would eliminate the costs for jointly insured institutions to track their BIF- and SAIF-insured deposits separately. Second, there is no longer the distinction (when the funds were originally established) that savings and loan associations were insured by the SAIF and commercial banks by the BIF. Because of mergers and acquisitions, more than 40 percent of the deposits

Minimizing the losses from failed banks is critical to minimizing the social costs of bank failure and eliminating moral hazard behavior.

insured under the SAIF are now held by commercial banks, and many thrifts are insured by the BIF. Third, merging the systems would simplify the structure and take away incentives for institutions to try to arbitrage the two funds' premium schemes over time. The potential for arbitrage exists because the two funds currently have different coverage ratios; thus, similar incidences of failure would differentially trigger changes in the premiums collected. For this reason, institutions at the margin would be tempted to arbitrage their insurance coverage away from the fund with the lower coverage ratio.

Indexing the deposit coverage limit to a price index. Smaller banks, in particular, have long believed they are at a competitive disadvantage in raising funds in markets against the nation's largest banks ever since the Continental Illinois Bank failed in 1984 and the eleven largest banks were declared to be simply too big to fail (Sprague 1986). Too-big-to-fail policies effectively provided 100 percent insurance coverage to depositors and other creditors, thereby reducing creditor risk exposure, lowering large institutions' cost of funds, and providing incentives for insolvent institutions to engage in moral hazard behavior.

Powell argues that deposit insurance coverage levels should be indexed to inflation to preserve the real value of deposits eligible for coverage. He con-

tends that doing so would not increase the size of the safety net but would instead prevent its shrinkage. He also believes that Congress should consider increasing the coverage limits for IRA and Keogh retirement savings accounts to provide greater wealth protection for individuals' retirement savings.

It is widely recognized that one consequence of raising the insurance limits to \$40,000 in 1970 and then to \$100,000 in the 1980s was to reduce depositors' incentives to monitor their risk exposure and to exert market discipline on institutions. The higher insurance levels also arguably induce risky institutions to engage in moral hazard behavior by bidding up deposit rates and taking on more risk as their net worth declines (see Shadow Financial Regulatory Committee 2000b).

Indexation of deposit insurance limits, as the FDIC proposes, would effectively insure real deposits. But such an increase is simply not necessary. If regulators close institutions as FDICIA requires, then all creditors, except equity holders, should suffer little or no losses from failure, except in the case of fraud. To argue that increased coverage is necessary is tantamount to regulators' admitting that they have no intention of closing institutions, as FDICIA mandates.

What Are the Real Issues?

This discussion has argued that the usual issues debated concerning FDIC reforms are not really central to the performance of the deposit insurance system and indeed that, if implemented, some of the more widely discussed proposals would be harmful.¹⁹ If so, then what are the "real issues?" This study contends that the primary issue is strengthening the incentives to resolve failures at the lowest cost to the FDIC. After FDICIA went into effect, FDIC records indicate that losses from 1992 through the second quarter of 2001 on bank failures to the BIF were 10.8 percent of assets in the aggregate and that thrift institution losses to the SAIF (excluding Superior) were 4 percent of assets. On a yearly basis, losses on BIF-insured failures during this period ranged from 8 percent to 61 percent, and for SAIF-insured failures, from 2 percent to 63 percent.

Admittedly, while some of the risks may be difficult to detect, the large losses the FDIC has borne with some failures, including Superior Bank, suggest that in at least some cases the rewards to supervisors of engaging in forbearance exceed the costs. FDICIA sought to realign the incentive structure, for example, by requiring in Section 131 of the act that material losses be investigated by the agencies' inspector generals with public disclosure.²⁰

However, this incentive is apparently insufficient. Thus, further consideration of the supervisory incentive system appears desirable.

The first principle may be to do no harm in the sense of making changes that further misalign incentives. Because there is no insurance fund, any losses borne by the FDIC flow through to the federal government's fiscal budget for the current year. The risk of changes in the deficit due to bank failures provides an incentive for Congress to monitor bank supervisors even if banks are likely to pay the entire cost of deposit insurance over some longer horizon.²¹ Thus, bank premiums should not be tightly linked to the cost of bank failures in the current year in order to give Congress an incentive to monitor the supervisors.

A useful step forward would be to implement FDICIA's mandate in Section 121 to develop and implement supplemental disclosure of the fair market value of banks' assets and liabilities. Academics have long argued that increasing the transparency of bank risk taking is one way to improve regulators' ability to monitor bank risk exposure. Immediate action to provide for fair market value disclosure could improve transparency, allowing outside parties to better monitor the regulators' performance. Further, the disclosure of fair market valuations would help concentrate supervisory and bank attention on changes in the economic value of banks rather than on the manipulation of historic cost-accounting figures to produce desired levels of book capital. Moreover, the intent should be to move to

fair-value accounting for the purposes of prompt corrective action (see Box 1) as supervisors and banks become more familiar with the concepts.²²

While a focus on fair-value statements could be a significant improvement, the adoption of fair-value accounting will not be sufficient by itself to implement the intent of prompt corrective action. For example, a significant part of the losses at Superior Bank occurred in assets that were required to be accounted for at fair value but for which fair value was substantially overestimated. Even with fair-value accounting, supervisors must be willing to demand accurate valuations and insist on timely revaluations when material errors are discovered. Thus, an insistence on accurate valuations is an important part of any reform. Moreover, the nature of these valuations and, in particular, reliance upon accruals versus actual cash flows may reflect the going-concern value of a banking organization but may not reflect the value of assets available upon liquidation or closure.

A full solution to the incentive problem requires further consideration and likely will require a package of steps. This package should contain measures to increase both the political and financial costs of engaging in forbearance. FDICIA's provisions to require special assessments of banks in certain cases of large bank failure are designed to encourage banks to put pressure on supervisors to avoid costly failures.²³ However, these provisions have an offsetting effect of reducing Congress's incentive to monitor the supervisors. This effect may be small

-
18. See Kaufman (2001b) for a discussion of the case for creating insurance funds for each bank supervisor as a method to increase pressure on bank supervisors to minimize losses.
 19. Blackwell (2002a, b) reports on an FDIC-commissioned study of private reinsurance for the FDIC. The benefits of obtaining reinsurance would be twofold: to spread the risk of loss and (as a "senior FDIC official" said in an interview) to gain, from the pricing of the reinsurance, "a valuable free-market perspective on the risk of loss banks and thrifts pose" (2002a, 1). However, the analysis in this article suggests that neither of these benefits would be significant. The risk of loss is already spread throughout the banking system, which is effectively providing its own reinsurance. It is not clear how that capacity would be significantly increased by reinsurance, nor is it clear how reinsurance would affect regulatory incentives to close economically insolvent institutions or to engage in least cost resolution since any premiums would be passed on to the industry by the FDIC, either directly or indirectly. Finally, the primary risk that would be priced by a private reinsurer is regulatory risk and not market risk. Blackwell (2002b) quotes George Kaufman as saying, "Reinsurers have to guess how well the FDIC will act. This is a problem you don't have in other types of reinsurance. In terrorism insurance, victims are not in control of the terrorists" (2002b, 4).
 20. FDICIA defines a material loss as the greater of \$25 million or 2 percent of the institution's total assets at the time the FDIC was appointed receiver or initiated open bank assistance.
 21. This condition should hold if the scorecard (insurance fund) has sufficient funds to pay the loss without increasing premiums. The condition will also hold even if the scorecard has insufficient funds so that banks will have to pay in the future provided that the congressional discount rate on future payments is greater than the interest rate at which bank obligations are cumulating.
 22. The Financial Accounting Standards Board (FASB) has been working on revisions to generally accepted accounting principles (GAAP) that would mandate the use of fair-value accounting for all financial instruments. Its preliminary views were published in FASB (1999).
 23. The provisions for rebuilding the fund in the event that least cost resolution is suspended are in Section 141 of FDICIA.

Preventing Bank Failure versus Preventing Failure with Large Losses

The prompt corrective action (PCA) provisions of FDICIA are based on one explicit goal: “to resolve the problems of insured depository institutions at the least possible long-term cost to the deposit insurance fund.”¹ These provisions are predicated on the fact that losses are imposed on the insurance fund or other institutions only if an institution is closed after its net worth becomes negative. Losses in the thrift industry were especially large during the 1980s because the Federal Home Loan Bank Board pursued policies of regulatory discretion and forbearance by permitting economically insolvent institutions to continue operating. To avoid a recurrence of this problem, FDICIA enhances supervisors’ ability to intervene before a bank becomes insolvent as its net worth declines and to close it before equity capital drops below zero (see Eisenbeis and Horvitz 1994).

A policy of early closure considerably reduces the risk of large losses to the fund by closing banks before the losses can become substantial. A potential cost of such a policy is a higher rate of bank failure because some banks will be closed that would otherwise return to health in time. Arguably, there is no trade-off in the long run if eliminating the subsidy to bank risk taking induces banks to operate more prudently. However, in the short run there is a clear trade-off with FDICIA opting for more, but less costly, failures. Setting aside the long-term trade-off, did the authors of FDICIA make the right choice?

The closure of a bank clearly imposes an opportunity loss on the bank’s owners and managers. The bank might return to financial health, in which case the owners’ holdings will have value and the manager retains his job. However, these are not compelling public policy arguments for keeping an insolvent or almost insolvent bank from failing if the cost is increased risk and losses to taxpayers should the gamble not pay off. A bank’s owners and managers made the portfolio choice decisions that led to its financial condition. If they believe its economic prospects justify its continued existence, then owners should try to recapitalize the bank.

Keeping the bank open creates a situation of asymmetric gains and losses in which the owners and managers retain the benefits if the bank returns to financial health but others—mostly uninsured creditors, the deposit insurer, and taxpayers—bear even larger losses if the bank fails. This asymmetry creates moral hazard behav-

ior. Kane (1989) argues that good public policy should not give bank owners and managers free options at the expense of the insurance fund and the taxpayer.

Closing an insolvent bank may also impose losses on some creditors. However, the probability of large losses to creditors in aggregate (including the deposit insurer) will be minimized if the bank is resolved close to the point at which it is becoming insolvent rather than waiting until its net worth is clearly negative.² Those creditors with the most junior claims, such as subordinated debt holders, might benefit from regulatory forbearance keeping the bank open if the bank’s losses are already sufficiently large to impair their claims. However, keeping a bank open to protect these creditors is, in effect, giving them an option similar to that being given to bank owners and managers, in which the cost of the option is being borne by all other creditors. Again, such forbearance is not good public policy.

Externalities from such a closure exist only if payments cannot be made or if default imposes losses on other institutions. Thus, public policy should focus exclusively on those losses due solely to failure that impact third parties with limited ability to protect themselves. A long-standing concern of regulators is so-called systemic risk, in which the failure of one bank might cause depositors to engage in panic withdrawals from other banks, triggering their cumulative collapse. The existing evidence is largely inconsistent with this concern (see Kaufman 1994, 1996; Wall and Peterson 1990). Deposit runs on other banks after bank failures tend to be limited to banks that were themselves financially weak and tend not to occur at strong banks (see Kane 1987; Benston and Kaufman 1995). Moreover, the central bank has the ability and has shown the willingness to provide additional liquidity both to the markets in general and to banks experiencing runs.

A second concern is that a bank failure may disrupt the payment system as banks become uncertain that other banks will honor their obligations. The events of September 11 illustrate this problem very clearly. When the World Trade Center collapsed, not only were securities trading firms, such as Cantor Fitzgerald, unable to make or complete transactions, but also disruptions to communications meant that some institutions were either only able to accept payments or were unable to route payments to their final recipients.

Some institutions' balance sheets ballooned out of control while others found themselves in substantial deficit reserve positions as anticipated payments did not materialize by the end of the day. The systemic nature of this disruption was essentially mitigated when the Federal Reserve stepped in and provided the necessary temporary liquidity so that institutions were able to close their books and avoid technical insolvency or default.³

A third concern is that failure may result in the temporary or permanent loss of lending ability of the failed bank. In part, this concern arises from a mistaken belief that resolving a failed bank necessarily implies liquidating the bank. In most cases the FDIC does not liquidate all of a failed bank's assets but rather seeks to sell the bank as an ongoing operation to other banks or to recapitalize it. Other banks are often willing to buy the entire failed bank or parts of it precisely because the expected revenue from operating the bank once stripped of its bad assets (and other claims) is greater than the costs. The acquirer has an incentive to continue operating the financially viable parts of the failed bank with minimal disruptions to customers. Some banks operate facilities where even very short-run disruptions, such as securities transfers, may be costly to the market. However, the magnitude of these costs depends critically on how the failure is resolved. An orderly, carefully thought-through transfer may impose few if any costs.⁴

A fourth concern is that a bank failure may be regarded as providing prima facie evidence of supervisory failure. This view often surfaces in informal conversations with supervisors and is

often implicit in public comments by senior supervisors. Moreover, such a perception has often been reinforced in the public arena in legislative oversight hearings and critical press reviews. Yet, as Fed Chairman Alan Greenspan has frequently emphasized, an important role of the banking system is to take risks, and in the course of doing so some banks will make mistakes and fail (Greenspan 2001). The only way for supervisors to prevent banks from becoming financially distressed is to prevent them from taking risks—a policy that few would recommend (see Litan 1987). Put another way, failure rates should not be used to measure supervisory performance. Doing so may actually have the perverse effect of encouraging supervisors to engage in forbearance by allowing distressed and insolvent banks to continue in operation long past the point at which they should have been closed. While bank failures per se need not be costly either to bank customers or to the insurance fund, allowing banks to deteriorate to the point that they impose large losses on the deposit insurer is costly.

FDICIA's focus on preventing failed banks from imposing a high cost to the deposit insurance fund rather than on limiting the number of failures is appropriate.⁵ Bank failure per se need not be very costly whereas allowing banks to fail with large costs to the deposit insurance agency is costly to other institutions and society and should be avoided. Bank supervisors, like everyone else, should be held accountable for their performance, but measures based primarily on the number and size of bank failures are not appropriate measures of that performance.

1. Section 131 of FDICIA, titled "Prompt Regulatory Action," creates a new Section 38 of the Federal Deposit Insurance Act.
2. One common argument is that had PCA been in effect during the 1980s supervisors would have been forced to close many banks that ultimately survived. Of course, this argument ignores the fact that, had PCA already been in effect, institutions would have had incentives to behave differently and hence would not have pursued such risky portfolio strategies to begin with.
3. The classic case of systemic externalities occurred during the late 1800s under the fractional reserve system of the National Banking Act. Because banks were allowed to keep required reserves in the form of deposits at Reserve City and Central Reserve banks, a withdrawal of funds from weak institutions would sometimes pyramid into withdrawals of reserve funds from healthy institutions. The Federal Reserve Act eliminated this problem. See Eisenbeis (1997) for a further discussion of the sources of systemic risk.
4. Indeed, these costs should not be overestimated given the recent experience with market disruption on a scale far in excess of that which would result from the failure of any individual firm.
5. The "systemic risk" part of least cost resolution provides that the FDIC need not follow least cost resolution if doing so would have very adverse consequences for the system as a whole. However, for the systemic risk clause to be invoked, approval is required by not only two-thirds of the FDIC Board but also by two-thirds of the Federal Reserve Board and by the Secretary of the Treasury. These changes are intended to make it more difficult for the deposit insurer to extend coverage to uninsured depositors and other creditors.

for the failure of a very large bank because such a failure is likely to involve other externalities that could affect large numbers of voters. In more general cases, however, there may be an unavoidable trade-off between trying to create incentives for banks to provide political pressure and maintaining incentives for Congress to monitor on its own.

Recent discussion to create financial incentives are proposals by Kane (1997) and Wall (1996) to make supervisors' compensation depend in part on deposit insurance losses.²⁴ Such proposals may not be the most efficient way of providing incentives to supervisors, given that the conditions that lead to bank failure may vary substantially through time. Nevertheless, these or related proposals deserve some consideration as part of a package to increase the costs to supervisors of forbearance.

As a backstop to supervisory action, market mechanisms may apply pressure on banks and supervisors when supervisors choose not to act on their own. The provisions of FDICIA Section 141 create such an incentive by mandating that the FDIC should resolve banks at the least possible cost to the deposit insurance fund. Prior to FDICIA, most uninsured bank creditors could expect that the FDIC would resolve a failed bank in a way that protected all creditors. The least cost provisions of FDICIA and the FDIC's procedures in the wake of FDICIA appear to have substantially reduced expectations of such a bailout.

The least cost provisions appear to have had some effect in the case of Superior Bank. While some depositors were surprised by the failure of Superior, the record suggests that many uninsured depositors bailed out long before the failure. The Thrift Financial Report submitted by Superior Bank to the Office of Thrift Supervision (and available on the FDIC's Web site at www2.fdic.gov/call_tfr_rpts/?catNumber=74) indicates that Superior had uninsured deposits of \$572.4 million at its peak in March 2000 (schedule SI). This figure dropped to \$492.0 million in September, to \$253.6 million in December, and to \$52.6 million by March 2001. The discipline exerted by uninsured depositors did not prevent the bank from costly failure, likely in large part because of the presence of risk-insensitive funding that Superior was able to attract as uninsured depositors withdrew their funds. Insured deposits rose by \$220 million (from \$1.052 billion to \$1.272 billion) between March 2000 and March 2001. Similarly, short-term federal funds and repurchase agreements, which are typically protected by perfected collateral in the event of a failure, grew by \$73 million (from \$179.1 million to \$252.9 million).²⁵

Smaller banks may be able to rely entirely on insured deposits for funding, but the backstop provided by market pressure could be strengthened both for medium-sized and larger banks, which are typically more reliant on uninsured funding. One way of enhancing the role of market discipline would be to limit the ongoing growth of Federal Home Loan Bank (FHLB) advances, which provide a safety valve for banks.²⁶ The FHLB may advance money to even the most distressed bank without significant fear of loss because the advances are overcollateralized and backed by a super-priority lien on all of the bank's assets. These collateral agreements allow a bank to withstand a greater volume of withdrawals before becoming illiquid and to shift losses to the FDIC if the bank does fail.

Market discipline may also be enhanced by addressing market perceptions that the largest banks are "too big to fail"—that is, too large to be resolved in a way that imposes significant losses on most creditors, including all depositors.²⁷ One method of enhancing market discipline is to accept that perceptions that some banks are too big to fail are unavoidable in the near future and to seek to substitute market signals that are less subject to too-big-to-fail views. Evanoff and Wall (2000) have suggested that subordinated debt is viewed as highly unlikely to benefit from too-big-to-fail perceptions and, accordingly, its pricing could be used as a signal for prompt corrective action. A more direct, albeit longer-term project, would be to directly attack the perception that some banks are too big to fail by developing and publicizing plans to close very large banks without protecting uninsured creditors.

Summary and Conclusions

The current discussions about deposit insurance reform largely reflect a concern with how to allocate the losses arising from bank failures. In this respect, this debate represents a significant step back from FDICIA, which focuses on the more important question of how to minimize the losses to the deposit insurer. Minimizing the losses from failed banks is critical to minimizing the social costs of bank failure and eliminating moral hazard behavior. Further, if losses are reduced to the trivial levels envisioned by FDICIA, the questions of how losses are allocated across banks, taxpayers, and time become minor issues.

The goal of this article is to refocus attention on the policies needed to implement the original goals of FDICIA. The article has not proposed and does not present a fully satisfactory answer to the problem of implementing FDICIA. Nevertheless, several

proposals merit further consideration as potential partial solutions.

The principal problem in implementing FDICIA is creating a system in which incentives are aligned. Ideally, bank supervisors focus on minimizing the cost of bank failures. Adopting fair-value reporting as encouraged by FDICIA and possibly incentive-based compensation for supervisors would be helpful steps. Other, as yet unexplored, opportunities may also exist.

Market participants may also serve a valuable role in limiting losses in those cases where the

supervisors have failed to do so. For example, limiting weak banks' ability to avoid least cost resolution with collateralized borrowings from any source would help. In addition, weakening perceptions that some banks are too big to fail by developing and publicizing plans to resolve these banks would strengthen market discipline at the largest banks. As long as the market assigns a substantial probability to the likelihood that some banks are too big to fail, the use of market signals from subordinated debt may also help induce supervisors to engage in prompt corrective action.

24. Wall (1997) provides the incentive through a system in which the repayment of bonds issued by the FDIC to investors is contingent on the state of the deposit insurance fund. That proposal could easily be modified so that repayment of the bonds is contingent on the losses to the deposit insurance fund, possibly averaged over some period of time.
 25. Superior's ability to attract such funds provides further evidence of the desirability of increasing the limits on insured deposits. Raising the deposit insurance limits would only make it easier for troubled banks to substitute insured for uninsured deposits.
 26. See Stojanovic, Yeager, and Vaughan (2000) for a discussion of the implications of FHLB advances for deposit insurance.
 27. The term "too big to fail" should not be taken too literally. While depositors may not suffer losses, equity holders may lose their investments and senior management may lose their jobs. See Stern (2000) for a discussion of alternative methods of addressing too-big-to-fail issues.
-

REFERENCES

- Benston, George J., and George G. Kaufman. 1994. The intellectual history of the Federal Deposit Insurance Corporation Improvement Act of 1991. In *Reforming financial institutions and markets in the U.S.*, edited by George G. Kaufman. Boston: Kluwer Academic Publishers.
- . 1995. Is the banking and payments system fragile? *Journal of Financial Services Research* 9 (September): 209–40.
- Blackwell, Rob. 2002a. FDIC study backs reinsuring funds. *American Banker*, January 7.
- . 2002b. Reinsurance for FDIC raises eyebrows. *American Banker*, January 8.
- Bovenzi, John F., and Alan J. Murton. 1988. Resolution costs of bank failures. *FDIC Banking Review* 3 (Fall): 1–13.
- Brown, R.A., and S. Epstein. 1992. Resolution costs of bank failures: An update of the FDIC historical loss model. *FDIC Banking Review* 5 (Spring/Summer): 1–16.
- Brumbaugh, R. Dan, Jr. 1993. *The collapse of federally insured depositories: The savings and loan as precursor*. New York: Garland Publishing.
- Carnell, Richard Scott. 1997a. FDICIA after five years: What has worked and what has not? In *FDICIA: Bank reform five years later and five years ahead*. Research in Financial Services: Private and Public Policy, vol. 9, edited by George G. Kaufman, 11–16. Greenwich, Conn.: JAI Press.
- . 1997b. A partial antidote to perverse incentives: The FDIC Improvement Act of 1991. In *FDICIA: Bank reform five years later and five years ahead*. Research in Financial Services: Private and Public Policy, vol. 9, edited by George G. Kaufman, 199–233. Greenwich, Conn.: JAI Press.
- Eisenbeis, Robert A. 1997. Bank deposits and credit as sources of systemic risk. Federal Reserve Bank of Atlanta *Economic Review* 82 (Third Quarter): 4–19.
- Eisenbeis, Robert A., and Paul M. Horvitz. 1994. The role of forbearance and its costs in handling troubled and failed depository institutions. In *Reforming financial institutions and markets in the U.S.*, edited by George G. Kaufman. Boston: Kluwer Academic Publishers.
- Evanoff, Douglas D., and Larry D. Wall. 2000. Subordinated debt as bank capital: A proposal for regulatory reform. Federal Reserve Bank of Chicago, *Economic Perspectives* 14 (Second Quarter): 40–53.
- Federal Deposit Insurance Corporation (FDIC). 2000. *Options paper*. Washington, D.C.: FDIC, August.
- . 2001. *Keeping the promise: Recommendations for deposit insurance reform*. Washington, D.C.: FDIC, April.
- Financial Accounting Standards Board (FASB). 1999. Reporting financial instruments and certain related assets and liabilities at fair value. *Preliminary Views*, December 14.

- Flannery, Mark J. 1991. Pricing deposit insurance when the insurer measures bank risk with error. *Journal of Banking and Finance* 15 (September): 975–98.
- Fuerbringer, Jonathan, and Peter T. Kilborn. 2002. Bank trader's losses total \$750 million: Allied Irish discloses currency unit trouble. *New York Times*, February 7.
- Greenspan, Alan. 2001. The financial safety net. Speech delivered at 37th Annual Conference on Bank Structure and Competition of the Federal Reserve Bank of Chicago, May 10.
- Isaac, William M. 2000. Financial reform's unfinished agenda: A look at deposit insurance funds. Federal Reserve Bank of Minneapolis, *The Region* 14 (March, special issue): 34–37.
- James, Christopher. 1991. The losses realized in bank failures. *Journal of Finance* 46 (September): 1223–42.
- Jensen, Michael C., and William H. Meckling. 1976. Theory of the firm: managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics* 3 (October): 305–60.
- Kane, Edward J. 1983. The role of government in the thrift-industry's net-worth crisis. In *Financial services: The changing institutions and government policy*. Edited by George J. Benston. Englewood Cliffs, N.J.: Prentice-Hall.
- . 1987. Who should learn what from the failure and delayed bailout of the ODGF. National Bureau of Economic Research Working Paper 2260, March.
- . 1989. Changing incentives facing financial-services regulators. *Journal of Financial Services Research* 2 (September): 263–72.
- . 1997. Ethical foundations of financial regulation. *Journal of Financial Services Research* 12 (August): 51–74.
- . 2002. What lessons might crisis countries in Asia and Latin America have learned from the S&L mess? Paper presented at the conference "What Can an Examination of S&Ls Reveal About Financial Institutions, Markets, and Regulations?" sponsored by the UCLA Anderson School of Management and the Milken Institute, Los Angeles, Calif., January 25.
- Kaufman, George G. 1994. Bank contagion: A review of the theory and evidence. *Journal of Financial Services Research* 8 (April): 123–50.
- . 1996. Bank failures, systemic risk, and bank regulation. *Cato Journal* 16 (Spring/Summer): 17–45.
- . 2001a. Prepared testimony of George G. Kaufman for the hearing on the failure of Superior Bank, FSB, Hinsdale, Illinois, before the U.S. Senate Committee on Banking, Housing, and Urban Affairs, September 11. <www.senate.gov/~banking/01_09hrg/091101/kaufman.htm>.
- . 2001b. The current status of deposit insurance in the United States and proposals for reform. Loyola University, Chicago. Unpublished working paper, December.
- Koehn, Michael, and Anthony M. Santomero. 1980. Regulation of bank capital and portfolio risk. *Journal of Finance* 35 (December): 1235–44.
- Litan, Robert E. 1987. *What should banks do?* Washington, D.C.: Brookings Institution.
- Maremont, Mark. 2001. Pritzkers to pay \$460 million over bank failure. *Wall Street Journal*, December 11.
- Murton, Arthur J. 2001. BIF assessment rates for first semiannual assessment period of 2002. Memorandum to Board of Directors, Division of Insurance, FDIC. <www.fdic.gov/deposit/insurance/risk/Bif2002_01.html>.
- Powell, Donald E. 2001. Statement of Donald E. Powell, chairman, Federal Deposit Insurance Corporation, on deposit insurance reform before the Subcommittee on Financial Institutions and Consumer Credit, Committee on Financial Services, U.S. House of Representatives, October 17. <www.fdic.gov/news/news/speeches/chairman/sp17oct01.html>.
- Shadow Financial Regulatory Committee. 1999. The failures of BestBank and First National Bank of Keystone. Statement No. 157, September 27.
- . 2000a. Proposal on full cost pricing of supervisory and examination services by the federal banking agencies. Statement No. 161, May 8.
- . 2000b. Deposit insurance reform options. Statement No. 165, December 4.
- Sprague, Irvine H. 1986. *Bailout: An insider's account of bank failures and rescues*. New York: Basic Books.
- Stern, Gary H. 2000. Thoughts on designing credible policies after financial modernization: Addressing too-big-to-fail and moral hazard. Federal Reserve Bank of Minneapolis, *The Region* 14 (September): 3–5, 24–29.
- Stojanovic, Dusan, Timothy J. Yeager, and Mark D. Vaughan. 2000. Is Federal Home Loan Bank funding a risky business for the FDIC? Federal Reserve Bank of St. Louis, *The Regional Economist* (October): 5–9.
- Wall, Larry D. 1997. Taking note of the deposit insurance fund: A plan for the FDIC to issue capital notes. Federal Reserve Bank of Atlanta *Economic Review* 82 (First Quarter): 14–30.
- Wall, Larry, and David R. Peterson. 1990. The effect of Continental Illinois's failure on the performance of other banks. *Journal of Monetary Economics* 26 (August): 77–99.
- White, Lawrence J. 1991. *The S&L debacle: Public policy lessons for bank and thrift regulation*. New York: Oxford University Press.