Deposit insurance reform in the FDIC Improvement Act: The experience to date

George J. Benston and George G. Kaufman

Introduction and summary

At yearend 1991, Congress enacted fundamental deposit insurance reform for banks and thrifts in the Federal Deposit Insurance Corporation Improvement Act (FDICIA). This reform followed the failure of more than 2,000 depository institutions in the 1980s. Many of these institutions failed at a high cost to both shareholders and taxpayers, as a result of the incentive-incompatible structure of the government-provided deposit insurance at the time. This structure encouraged both moral hazard behavior by banks that increased their risk taking and poor agent behavior by regulators that delayed the imposition of appropriate regulatory sanctions on financially troubled institutions. As a result, the ultimate cost of resolution of insolvent institutions paid by U.S. taxpayers amounted to almost 3 percent of gross domestic product (GDP).[1] FDICIA put deposit insurance and other parts of the federal government safety net underlying depository institutions on a more incentive-compatible basis by providing for a graduated series of regulatory sanctions that mimic market discipline. These sanctions first may and then must be applied by the regulators to troubled banks. In this article, we review the important features of both the old and new safety net structures and evaluate the early results of FDICIA.

At yearend 1990, U.S. banking was in its worst shape since 1933. Some 1,150 commercial and savings banks had failed since yearend 1983, almost double the number of failures from the introduction of the Federal Deposit Insurance Corporation (FDIC) in 1934 through 1983 and equal to 8 percent of the industry at yearend 1980. Another 1,500 banks were on the FDIC's problem bank list (rated in the lowest two examination categories). Five percent of the total number of banks, or some 600 banks, which held 25 percent of the industry's total assets, reported book-value capital of less than 4 percent of their on-balance-sheet assets. Under FDICIA, these banks would have been classified as undercapitalized.

The thrift industry was in even worse shape. More than 900 federally insured savings and loan associations (S&Ls) were resolved or placed in conservatorship from 1983 to 1990. However, because there were far fewer S&Ls than banks, this number represented 25 percent of the 4,000 odd associations operating at the beginning of the decade.[2] Many more associations were economically insolvent, but were permitted to continue to operate as a result of government guarantees of their deposit liabilities. Nearly 400 S&Ls reported tangible book-value capital ratios of less than 3 percent in 1990, including more than 100 that reported negative ratios. The cumulative losses incurred by the failed institutions exceeded $100 billion in 1990 dollars. These losses resulted in the insolvency and closure of the S&L's government insurance agency—the Federal Savings and Loan Insurance Corporation (FSLIC)—and its replacement by the Resolution Trust Corporation (RTC) and the Savings Association Insurance Fund (SAIF) within the FDIC, which were capitalized primarily by taxpayer funds authorized in the Financial

George J. Benston is the John H. Harland Professor of Finance, Accounting, and Economics at Emory University and George G. Kaufman is the John F. Smith, Jr., Professor of Finance and Economics at Loyola University, Chicago, and a consultant to the Federal Reserve Bank of Chicago. *A briefer version of this paper was published in the* Journal of Economic Perspectives *(Benston and Kaufman, 1997). The authors are indebted to Robert Eisenbeis, Douglas Evanoff, and Paul Horvitz for useful comments and suggestions on earlier drafts; to J. Bradford De Long, Frederic Mishkin, and Timothy Taylor for the same on the* JEP *version; and to the Federal Reserve and Office of Thrift Supervision for providing data.*

Institutions Reform, Recovery, and Enforcement Act (FIRREA) of 1989. FIRREA provided some $150 billion of taxpayer funds to resolve insolvent associations.

During 1991, the banking industry continued to deteriorate rapidly. There was widespread fear that the banks would go the way of the S&Ls and the FDIC the way of the FSLIC, requiring further significant taxpayer funding. In response, at yearend, Congress enacted FDICIA. The act brought fundamental deposit insurance and prudential regulatory reform and is the most important banking legislation in the U.S. since the Banking Act of 1933 (Glass-Steagall). It dramatically altered the banking and regulatory playing field.

At yearend 1997, the banking industry had recovered significantly and was in its best financial health in decades. Commercial bank profitability was at record levels since the introduction of deposit insurance and almost no banks were classified as undercapitalized. The thrift industry also rebounded, but more slowly, and experienced a decline in assets as many resolved institutions were acquired by commercial banks.

In this article, we briefly review the causes of the U.S. banking and thrift debacles of the 1980s; describe the major aspects of and rationale for the corrective legislation enacted in FDICIA; summarize the recovery of banking in the 1990s; evaluate the effectiveness of the new prudential regulatory structure; and recommend further improvements. We conclude that under FDICIA, deposit insurance appears to have been put on a more workable incentive-compatible basis that should reduce the tendency for banks to take excessive risks and for regulators to unduly delay imposing sanctions on financially troubled institutions. However, because of the rapid recovery of the banking system, the effectiveness of the new structure has not yet been put to a real test, particularly for banks previously perceived as too big to fail. Regulators can improve the probability of the structure working as intended at least cost to taxpayers by increasing bank capital requirements to levels closer to those required by the market for noninsured bank competitors and by reinforcing their own political resolve to act consistently with the spirit as well as the letter of FDICIA.

Overview of the debacle

The savings and loan industry

Although the thrift and banking breakdowns in the 1980s are often lumped together, there are important differences. The details of the debacles have been extensively reviewed elsewhere (for example, Barth, 1991, Bartholomew, 1994, Benston and Kaufman, 1990, Day, 1993, Jaffee, White, and Kane, 1989, Kane, 1985 and 1989, Mayer, 1990, National Commission, 1993, U.S. Congress, Congressional Budget Office, 1993, and White, 1991). Here, we provide a brief overview to help set the stage for our analysis.

The thrift breakdown preceded the banking breakdown and was initially and primarily caused by the S&Ls' significant interest rate risk exposure in a period of large, abrupt, and unexpected increases in interest rates in the late 1970s. Both the duration mismatch and the interest rate increases can be blamed primarily on government policy. Since 1934 the federal government has attempted to stimulate home ownership by supporting long-term, fixed interest rate residential mortgages. Before deposit insurance was introduced in 1934, S&Ls rarely extended mortgages with stated maturities much in excess of ten years. After the introduction of deposit insurance, and particularly after World War II, S&Ls lengthened the maturities of their fixed rate residential mortgage loans first to 20 years and then to 30 years. Through the 1970s, they were in large measure prohibited from making variable rate loans.

In the era before deposit insurance, S&Ls raised funds through accounts titled share capital, which paid dividends, not interest, declared at the end of an income reporting period. In addition, the institutions could require advanced notice for withdrawal of funds. As a result, the maturity of their liabilities was effectively intermediate term. However, starting in 1934, to encourage the inflow of savings to finance mortgages, S&L shares were increasingly insured against loss by the FSLIC on the same basis as bank deposits. This effectively turned S&L shares into deposits, most of which were short term. Finally, in the 1960s, the shares were legally converted into deposits. The net effect of these government-induced changes was to greatly increase the interest rate risk exposure of S&Ls, making the industry an accident waiting to happen. The accident happened in the late 1970s, when market interest rates increased sharply. The increase reflected an even sharper rise in inflation, attributable largely to earlier excessive expansion in the money supply by the Federal Reserve.

The precarious situation in the thrift industry was exacerbated by the poorly structured and priced government-provided deposit insurance system, which caused two problems. One, it permitted S&Ls to engage in greater moral hazard behavior than noninsured firms by supporting their high-risk portfolios with insufficient capital. Two, it permitted the thrift regulators to be poor agents for their healthy institutions and taxpayer principals by delaying the imposition of adequate

sanctions on troubled associations and failing to resolve economically and, at times, even book-value-insolvent, institutions in a timely fashion. Moreover, as noted above, the system actually encouraged the institutions to assume greater interest rate risk by promoting long-term fixed rate mortgages financed by short-term deposits. Had it not been for credible federally provided deposit insurance, savers would have been less likely to have put their funds into financial institutions with such duration-unbalanced portfolios. In addition, when interest rates increased, runs by depositors to other, safer institutions would have forced the closure of unsound thrifts sooner. However, deposit insurance reduced the need for depositors to move their funds elsewhere and the need for the S&Ls' primary regulators—the Federal Home Loan Bank Board (FHLBB) and state agencies—to act quickly. Instead, in the early 1980s, the regulators were able to delay the day of reckoning. Among other actions, the regulators reduced the thrifts' book-value capital requirements, which already did not include capital losses from the interest rate increases, from 6 percent to 3 percent of assets and artificially puffed up even this amount of reported net worth by adopting *regulatory accounting practices* (RAP). RAP permitted such gimmicks as deferral of losses on asset sales and inclusion as an amortizing asset (misleadingly termed *goodwill*) of the negative net worth of insolvent S&Ls that were merged with other institutions (Barth, 1991, and Benston and Kaufman, 1990).[3]

The FHLBB engaged in these time-gaining measures for a number of reasons, including:

- being overwhelmed by the sudden large number of troubled and insolvent institutions;
- having insufficient reserves to resolve the insolvencies (the FSLIC was itself economically insolvent);
- concern that official recognition of the need for taxpayer funding would enlarge the federal government deficit;
- concern that official recognition would spread fear among depositors and ignite runs on all S&Ls and possibly even banks; and
- wishful thinking that, because many of the losses were *only* unrecognized paper losses, they would be reversed because interest rates are cyclical and are bound to decline.

Interest rates did decline after 1982 and the regulators partially won their bet. But it was only a pyrrhic victory. Many of the insolvent or undercapitalized associations quickly incurred substantial credit losses either because of sharp economic downturns in their market areas or because they gambled for resurrection and lost. Local economic downturns started in the Energy Belt in the southwest in the mid-1980s and spread to New England and the Mid-Atlantic states in the late 1980s. Combined with stringent restrictions on the tax deductibility of losses on real estate enacted in 1986, these downturns resulted in severely depressed real estate prices. Regulators were ill-prepared to supervise adequately the new powers granted to S&Ls in the legislative deregulation of the early 1980s and were under pressure to help cut federal government spending by reducing their personnel levels. In addition, the disarray in the industry encouraged a sharp increase in fraud. As losses mounted, policymakers increased their denials and forbearance, partly in response to political pressures and partly to delay a big hit to the budget deficit. At this time, many individual S&Ls and their major trade association—the United States League of Savings Associations—stepped up their contributions to members of Congress to keep troubled associations open. As a result, instead of shrinking, S&L assets more than doubled between 1980 and 1988. However, the industry and policymakers were finding it increasingly difficult to conceal the truth. In 1987, Congress made one last attempt in the Competitive Equality Banking Act (CEBA) to fix the problem without resorting to public funds by borrowing against the FSLIC's projected future premium income.[4]

In 1989, shortly after the presidential elections (during which, by implicit agreement, little mention was made of the crisis), the regulators, Congress, and the Bush Administration finally acknowledged that some $150 billion in public funding was needed to resolve thrift insolvencies. In exchange, FIRREA required the closure of the FHLBB and its replacement as a regulatory agency with a new Office of Thrift Supervision (OTS), housed in the U.S. Treasury Department. The FHLBB's deposit insurance subsidiary, the FSLIC, was also abolished, and its insurance functions were transferred to the new SAIF, administered by the FDIC. This is one of the very rare instances when Congress terminated a government agency. In reality, however, the termination was more fiction than fact. Almost all of the affected personnel were transferred to the successor agencies.

Losses attributable to regulatory forbearance accounted for a substantial proportion of the total cost of recapitalizing the industry. Although Benston and Carhill (1994) provide evidence that many insolvent institutions did recover when interest rates declined in the mid-1980s, forbearance had a poor overall batting average in the 1980s, particularly after interest rates stopped declining. Most institutions that did not

attract additional private capital did not survive (Brinkmann, Horvitz, and Huang, 1996, Eisenbeis and Horvitz, 1994, Kane and Yu, 1996, National Commission, 1993, and U.S. Congress, Congressional Budget Office, 1991). While FIRREA provided the necessary public funding to resolve the thrift insolvencies, it introduced only minor changes in the structure of deposit insurance or prudential regulation. Instead, it sought to lay the blame for the debacle on incompetent regulators and competent crooks.

The commercial bank sector

Because they had more duration-balanced portfolios, commercial banks were not weakened greatly by the sharp increases in interest rates in 1979–81. However, like the S&Ls, commercial banks were operating with record low capital ratios. Hence, many were unable to absorb the credit losses from the regional recessions and commercial real estate lending that also affected S&Ls (Barth, Brumbaugh, and Litan, 1992, and Kaufman, 1995). The effects of these adverse events were magnified by restrictions on banks operating across state lines that limited their ability to reduce risk through geographical diversification. Seven of the ten largest banks in Texas failed in the late 1980s and two were merged in the aftermath of the recession in Texas, Oklahoma, Louisiana, and other states in the Energy Belt when the oil price bubble collapsed. In the early 1990s, the largest bank in New England and some of the largest savings banks in New York (which were also the largest in the country) failed when the real estate price bubble burst in New England and the Mid-Atlantic states. In addition, a number of large money center banks approached insolvency in the late 1980s as a result of defaults and near-defaults on loans to less developed countries made in the late 1970s (Fissel, 1991). By 1991, FDIC losses from bank failures had effectively wiped out its reserves. Indeed, on the basis of accepted insurance accounting, the FDIC was insolvent (Barth, Brumbaugh, and Litan, 1992). Coming on the heels of the seemingly ever-expanding S&L problem and the 1984 failure of the Continental Illinois Bank, the eighth largest bank in the country at the time, the increasing number of bank failures and the deteriorating condition of the industry as a whole gave rise to substantial public pressure on Congress to act swiftly to stem the crisis and ensure it would never happen again.

Development and enactment of FDICIA

Alternative proposals

By the late 1980s, numerous studies had identified poorly priced and structured federal deposit insurance as a primary cause of the banking and thrift crises. The widespread problems represented massive regulatory failure. Most of these studies emphasized moral hazard behavior by the institutions as the chief culprit but, with rare exceptions (particularly Kane, 1985 and 1989), overlooked the poor agent behavior of the regulators. From these studies, a large number of proposals for reform of deposit insurance were developed. Among those that received serious consideration were the following: 1) terminating government insurance and replacing it with either private insurance or a system of cross-guarantees among banks; 2) maintaining government insurance, but dramatically scaling back individual account coverage; 3) reregulation of deposit interest rates and additional restrictions on bank loans and investments to control risk; 4) narrow or "fail-safe" banking; 5) risk-based deposit insurance premiums; and 6) structured early intervention and resolution (SEIR). (See Benston and Kaufman, 1988.)

Serious political obstacles developed to any plan that attempted to eliminate deposit insurance or to scale it back even moderately. In the U.S. as in almost every other country, some form of explicit or implicit insurance was viewed as a political fact of life (Benston, 1995).[5] Private insurance was viewed as not sufficiently credible and bank cross-guarantees as insufficient in an undercapitalized banking environment. Deregulation was (incorrectly) seen as an important cause of the debacle by some politicians, media commentators, and academics, and in retrospect the implementation of deregulation left much to be desired. However, little support developed for reestablishing deposit interest rate ceilings or rolling back the expansion of lending authority to consumer and commercial loans granted S&Ls in the early 1980s. Reregulation was viewed as too late and impractical. Technology had let the genie out of the bottle to stay. Narrow banking received support primarily from the academic and think-tank communities (for example, Benston et al., 1989, Bryan, 1988, and Litan, 1987). It would mean a substantial change in the way banking had been conducted, which Congress and the banking industry were reluctant to initiate.[6] While risk-based insurance premiums partially addressed the moral hazard problem, how they would be determined was unclear and, by themselves, they did not address the regulatory agency problem. This left SEIR on the congressional radar screen.

Structured early intervention and resolution

Although various parts of SEIR had been proposed earlier, it was developed as a comprehensive package as part of a broader project on banking reform sponsored by the American Enterprise Institute in 1986–87 (Benston and Kaufman, 1988). The concept was subsequently modified and improved by a

number of scholars and policymakers (Benston et al., 1989, and Shadow Financial Regulatory Committee, 1992). SEIR offered the advantages of basically maintaining the existing system's banking and deposit insurance structures, while correcting its primary flaws.

Because SEIR maintains government-provided deposit insurance, although on a more restricted basis, market discipline on banks remains weaker than otherwise and the government maintains a direct interest in the financial health of the banks. It continues to protect its interest through regulatory discipline. But, SEIR changes the structure of deposit insurance and prudential regulation from incentive-incompatible to incentive-compatible. To deal with the moral hazard problem, regulatory sanctions on deposit-insured institutions mimic those the market imposes on similar enterprises that do not hold federally insured debt. Agency problems are dealt with by first allowing and then requiring specific intervention by the regulatory authorities on a timely basis. Thus, SEIR imposes on banks the same conditions that the banks impose on their own borrowers. SEIR calls for

- higher capital, with subordinated (explicitly uninsured) debt counted fully as capital;
- structured, prespecified, publicly announced responses by regulators triggered by decreases in a bank's performance (such as capital ratios) below established numbers;
- mandatory resolution of a capital-depleted bank at a prespecified point when capital is still positive; and
- market value accounting and reporting of capital.

In addition, the proposal called for maintaining government-provided deposit insurance for "small" investors. Below, we discuss each of these components.

For banks protected by the safety net (deposit insurance, central bank discount window, and central bank settlement finality), capital as a percentage of assets should be equivalent to the ratio maintained by uninsured nonbank competitors of banks, which is set by the marketplace. For example, bank book-value capital/asset ratios had dropped to 6 percent in the 1980s, while insurance companies, finance companies, and similar financial companies generally maintained capital ratios of between 10 and 25 percent (Kaufman, 1992). The SEIR proposal specified four capital/asset ratio zones or tripwires. *Adequately capitalized* banks, with ratios approximately equal to those of firms without government-provided deposit insurance (say, 10 percent or above with capital measured by market values) would be subject to minimum prudential supervision and regulation. Supervision would be limited to determining that the bank was reporting correctly and was not being managed fraudulently or recklessly. Should a bank's capital ratio fall below this level, say below 10 percent but above 6 percent, it would fall into the *first level of supervisory concern*. A bank in this zone would be subject to increased regulatory supervision and more frequent monitoring of its activities. The authorities could, at their discretion, impose such sanctions on the bank as restricting its growth, prohibiting it from paying dividends, and requiring a business plan for quick recapitalization. A bank would fall into the *second level of supervisory concern* if its capital/asset ratio fell below the next prespecified ratio (for example, 6 percent). The authorities then *must* impose additional and harsher sanctions, including still more intensive monitoring and supervision, restrictions on deposit rates, suspension of dividends, suspension of interest payments on subordinated debt, and prohibition of fund transfers to related entities. At or before this point, the bank would have considerable incentives to restore its capital ratio either by raising more capital or by shrinking its assets.

Finally, if the capital ratio fell below the third specified number, say 3 percent, the authorities *must* resolve the bank quickly through sale, merger, or liquidation. However, rather than permit a government agency to take at least temporary control and possibly dissipate its remaining capital, a solvent bank most likely would voluntarily raise its capital ratio into compliance or sell to or merge with another institution. Any losses incurred in resolution or from the authorities not acting quickly enough would be charged pro-rata to the insurance agency, uninsured depositors, and other creditors.

The structured, predetermined capital/asset ratios that trigger actions by the regulatory authorities have two purposes. One is to reduce a bank's moral hazard behavior. Similar to covenants that creditors impose on borrowers in most private loan and bond contracts, SEIR is intended to turn troubled institutions around before insolvency. The performance zones serve as speed bumps or tripwires to slow the deterioration of weak banks and reduce incentives and opportunities for them to increase their gambling as they approach the floor of a zone. Equally important, banks are encouraged to perform better by enticements, such as additional product and geographic powers and reduced monitoring in the highest zone. Thus, SEIR includes carrots as well as sticks.

The second purpose is to reduce the regulators' agency problem and discourage forbearance. The regulators first have the opportunity of using their discretion to get banks to restore depleted capital. But, if

the banks do not respond and their capital ratios continue to fall, appropriate sanctions, including resolution at least cost to the FDIC at a prespecified low but positive capital level, become mandatory. The regulatory rules supplement but do not replace regulatory discretion. Requiring and enforcing resolution at a predetermined and explicit minimum capital ratio represents a *closure* rule. Without such a rule, regulators can delay closing insolvent institutions because deposit insurance has reduced the probability of runs by depositors, which previously had forced at least temporary closure. Deposit insurance has effectively shifted control of the timing of the closure of an insolvent bank from the market to the regulators.[7]

Likewise, under SEIR, institutions can no longer effectively bring political pressure on regulators to forebear from closing them down. Nor would the institutions be given second and additional chances to gamble for resurrection. Resolution at a positive capital level does represent a "taking" by the government; any remaining funds would be returned to the shareholders. However, if the shareholders had perceived greater value in the bank, they would have recapitalized it before the closure tripwire was hit. Moreover, by specifying and permitting gradual increases in the strength of the sanctions, the multiple-performance-zone structure makes the imposition of sanctions by the regulators both more likely and more credible than if sudden and severe sanctions were specified.

Market value accounting for capital is desirable both to provide a more accurate picture of the financial condition of institutions and to increase the transparency and accountability of the regulatory agencies. Because banks frequently delay and under-reserve for loan losses and do not include changes in value due to changes in interest rates, reported book value capital tends to lag market value capital. Under SEIR, deposit insurance ceilings on individual accounts would be maintained at most at the existing $100,000 level, but would be strictly enforced *de facto* as well as *de jure*. Uninsured depositors would lose the same proportion of their uninsured funds in resolutions as the FDIC, thereby encouraging market discipline to supplement regulatory discipline. However, if the closure rule were strictly enforced, it is doubtful that the insurance would be required. In effect, all deposits would be collateralized by assets of at least the same market value (the bank would effectively be a narrow bank) and deposit insurance would be redundant, except in cases of massive fraud, inadequate monitoring by the regulatory agencies, or large, rapid declines in asset values across the board.

Legislative adoption and modification of SEIR in FDICIA

Although SEIR was not the first choice of most academics, it appealed to both Congress and the Administration in the early 1990s as a politically feasible, quickly implementable, and effective solution to minimize both the future costs of the ongoing banking debacle and the likelihood of a recurrence (Benston and Kaufman, 1994a, and Carnell, 1997a). What could appeal to Congress more than passing a law that promised to outlaw future losses at insolvent institutions without a radical change in the banking or deposit insurance structures or an appropriation of taxpayers' funds?

A modified form of SEIR was first introduced in the Senate in 1990 as part of a larger banking bill, but failed to be adopted. After much of it was recommended in a major study of the deposit insurance system by the Treasury Department that was mandated by FIRREA (U.S. Department of the Treasury, 1991), it was reintroduced in the Senate and introduced in the House of Representatives in early 1991. The bill included wider product and geographic powers for banks, but these provisions were deleted before final passage. The greatest opposition to SEIR, which resulted in the addition of the prompt corrective action (PCA) and least-cost resolution (LCR) provisions, came from bank regulators, who correctly perceived it as a reduction in their power, visibility, and freedom to micromanage banks (Horvitz, 1995).[8] Although the regulators' own credibility had been weakened greatly by the banking crisis and criticism of their response, they still were able to weaken many of the provisions that reduced their discretionary powers before FDICIA was passed by Congress and signed by the President at yearend 1991.[9]

The regulators further diluted the potential effectiveness of the act by drafting weak regulations to implement it (Benston and Kaufman, 1994b, and Carnell, 1997b). For example, the act specifies five capital/asset ratios, but largely delegates the setting of the numerical values of the zones to the banking agencies. (Table 1 shows selected sanctions and the numerical tripwire values established by the regulators). The regulators set the threshold values so low that almost all banks were classified as "adequately capitalized" or better, even before the industry had fully recovered. Moreover, after full recovery, when the capital ratios of most banks easily exceeded the required minimums for "well capitalized," the regulators opposed even small increases in the threshold values that would have demoted only a few banks.

TABLE 1

Summary of prompt corrective action provisions of FDICIA, 1991

Zone	Mandatory provisions	Discretionary provisions	Capital ratios (%)		
			Total	Risk-based Tier 1	Leverage Tier 1
1. Well capitalized			>10	>6	>5
2. Adequately capitalized	1. No brokered deposits, except with FDIC approval		>8	>4	>4
3. Undercapitalized	1. Suspend dividends and management fees 2. Require capital restoration plan 3. Restrict asset growth 4. Approval required for acquisitions, branching, and new activities 5. No brokered deposits	1. Order recapitalization 2. Restrict inter-affiliate transactions 3. Restrict deposit interest rates 4. Restrict certain other activities 5. Any other action that would better carry out prompt corrective action			
4. Significantly undercapitalized	1. Same as for Zone 3 2. Order recapitalization[a] 3. Restrict inter-affiliate transactions[a] 4. Restrict deposit interest rates[a] 5. Pay of officers restricted[a]	1. Any Zone 3 discretionary actions 2. Conservatorship or receivership if fails to submit or implement plan or recapitalize pursuant to order 3. Any other Zone 5 provision, if such action is necessary to carry out prompt corrective action	<6	<3	<3
5. Critically undercapitalized	1. Same as for Zone 4 2. Receiver/conservator within 90 days[a] 3. Receiver if still in Zone 5 four quarters after becoming critically undercapitalized 4. Suspend payments on subordinated debt[a] 5. Restrict certain other activities				<2[b]

[a]Not required if primary supervisor determines action would not serve purpose of prompt corrective action or if certain other conditions are met.

[b]Tangible equity only.

Source: Board of Governors of the Federal Reserve System.

At yearend 1997, only 2 percent of all commercial banks were not classified as well capitalized. Studies completed after enactment of the legislation conclude that had these low numerical values for the capital tripwires been in place in the 1980s, the required PCA sanctions would likely have been ineffective (Jones and King, 1995, FDIC, 1997, and Peek and Rosengren, 1996, 1997a, and 1997b). Indeed, a study by the General Accounting Office (GAO, 1996) reported that less than 20 percent of the banks and thrifts classified by the FDIC as problem institutions between 1992 and 1995 were also classified as undercapitalized.

The act specifies three definitions of capital—one leverage ratio and two risk-based ratios—and differentiates between equity (tier 1) and nonequity (tier 2) capital accounts. This basically follows the capital guidelines developed in the Basle Accord for international banks in industrial countries. Nevertheless, little if any empirical support has been found for these risk weights (Grenadier and Hall, 1995, Kane, 1995, and Williams, 1995). Rather, they operate as a form of credit allocation. Nor is the division of capital into the two tiers supported by economic or financial theory.

FDICIA also requires regulators to develop a means for estimating market values to the "extent feasible and practical." However, the agencies quickly viewed market value accounting as neither feasible nor practical and did not even fully implement the Financial Accounting Standards Board's standards with respect to marking securities to market for purposes of computing capital. During the congressional hearings, the time delay permitted for mandatory resolution of undercapitalized institutions was lengthened and limited waivers were permitted.

Implementation of the act's requirement to include interest rate risk in risk-based capital was postponed a number of times beyond its scheduled June 1993 deadline and finally left up to supervisory discretion on a case-by-case basis. Restrictions on permitting banks to maintain interbank balances at and extend credit to weak banks, which were included at the behest of the regulators to protect against systemic risk, were weakened. Also weakened substantially were first-time-ever penalties on the Federal Reserve for lending through the discount window to banks that subsequently failed. This provision was introduced after a congressional study found that 90 percent of all banks that had received extended credit through the discount window in the late 1980s later failed (U.S. House of Representatives, 1991). The penalty to the Fed for such lending was reduced from sharing in any loss resulting from the bank's failure—thereby putting the Fed's own funds at risk—in an earlier draft to effectively only a small loss of interest income received from a failed bank.

Some who claim that the prompt correction and resolution tripwires would have been ineffective in the 1980s blame this on the provisions of FDICIA (for example, Peek and Rosengren, 1996, and FDIC, 1997). In part, this reflects their failure at the time to read the act carefully. The only numerical value specified in the act is one defining critically undercapitalized banks. As noted above, the act delegates setting all the other numerical values for the tripwires to the regulatory agencies. Moreover, the sole numerical capital value specified in the act—2 percent tangible equity to total assets—is a minimum, which can be exceeded or superseded by other definitions of capital. Some critics also argue that the use of capital, per se, as an indicator of bank performance is flawed because it is a lagging indicator of performance and less informative than examiner evaluations. As already noted, however, the act encourages regulators to move away from historical book value capital, which permits delayed and under-reserving for loan losses and excludes losses due to interest rate changes, and toward market value accounting, which would make capital a more accurate and timely indicator. (The role of bank capital is examined in greater detail in Benston, 1992, Berger, Herring, and Szego, 1995, Kane, 1992, and Kaufman, 1992.) In addition, the act permits regulators to downgrade banks and impose harsher sanctions on the basis of examination reports and other information. Thus, if the regulators failed to increase the numerical values of the capital tripwires and enhance the definition of capital to make the tripwires more effective, the fault lies with the regulators, not the legislation.

As is true for much federal legislation, FDICIA is long and complex and contains much more than deposit insurance reform. This has contributed to a lack of understanding of both the purpose and contents of the act. There are numerous provisions that deal only marginally with prudential matters and some that appear to have been motivated more by bank bashing and the personal agendas of individual members of Congress. The latter include a number of sanctions on troubled banks that permitted restrictions on employee compensation and the establishment of minimum ratios of book to market values of a bank's stock. Although for the most part these provisions were harmless (and possibly useful if interpreted wisely by the regulators) and some were repealed, the regulators and many bankers used them as examples of counterproductive and costly regulatory micromanagement of banks to impugn the overall act. They were at least temporarily successful in giving it a bad name (Kaufman,

1993, and Shadow Financial Regulatory Committee, 1996a and 1996b).

The establishment of the capital zones and the mandatory regulatory responses by FDICIA represent partial replacement of regulatory discretion by rules, somewhat like the partial replacement of Federal Reserve lender of last resort discretion by FDIC insurance rules following the Fed's failure to prevent the economic and banking crisis of the early 1930s. However, the FDICIA sanctions become mandatory only after the discretionary sanctions prove ineffective in improving a bank's performance and restoring its capital to a satisfactory percentage of assets. Thus, the mandatory sanctions serve as credible backup that should strengthen rather than weaken the regulators' discretionary powers. Moreover, because both the discretionary and the mandated sanctions and other rules are explicit and known a priori, they give the regulators stronger ex-ante influence in helping to shape banks' future behavior. (The design and the working of the PCA sanctions are analyzed in detail in Bothwell, 1997, and Carnell, 1997a.)

In addition to the PCA sanctions, FDICIA sought to further reduce the incentive for moral hazard behavior by requiring the FDIC to inaugurate risk-based deposit insurance premiums, which it did promptly. The risk classifications are based on the FDICIA capital categories and the regulatory agencies' examination ratings. In the first years, the spread between the premiums charged to the safest and riskiest banks was considerably narrower than that assigned by the market to the noninsured debt of these banks (Fissel, 1994). Over time, the premium spreads were widened, although almost all banks qualified for the safest bank category. In 1995, the Bank Insurance Fund (BIF) was recapitalized to the maximum 1.25 percent of insured deposits required in FDICIA, and premiums for all but a few banks were effectively reduced to zero. Legislation adopted in late 1996 increased the banks' premiums slightly by requiring them to contribute to meeting the payments on the FICO bonds, which, as noted earlier, were in danger of default from insufficient premium revenues from S&Ls only. The legislation also required S&Ls to make a one-time payment to recapitalize SAIF to the required 1.25 percent level and reduced their future insurance premiums to the same level as that of the banks, except for an additional 6 basis point charge for the FICO bonds.

FDICIA additionally attempts to increase the accountability of the regulators in carrying out their delegated responsibilities. The FDIC is required to compute and document the costs of resolving a troubled institution in alternative ways, justify its selection of the option used as the least-cost option, and have a report prepared by the agency's inspector general if it incurs a material loss. This documentation must be provided to the Administration and Congress and is audited annually by the GAO for compliance with the provisions of the act. The first GAO annual reviews were critical of both the FDIC's and the RTC's PCA and LCR procedures (GAO, 1994a and 1994b). Likewise, the FDIC's inspector general was critical of the agency's early implementation of PCA in 1993 and the first half of 1994 (FDIC, 1994). In response, both organizations changed their procedures and received better evaluations in subsequent GAO reviews, although a more recent GAO report still includes criticisms of the agencies' PCA directives through 1995.

Effective January 1, 1995, the FDIC is prohibited from protecting uninsured depositors or creditors at any failed bank if it would result in an increased loss to the deposit insurance fund. However, an exemption from LCR is provided for banks that regulators judge as too-big-to-fail (TBTF) cases, in which not protecting the banks' uninsured depositors or creditors from loss "would have serious adverse effects on economic conditions or financial stability." This exemption requires a determination that the country's financial security is threatened and that FDIC "assistance [to failed banks] ... would avoid or mitigate such adverse effects" by the Secretary of the Treasury, based on the written recommendation of two-thirds of the FDIC Board of Directors and the Board of Governors of the Federal Reserve System and consultation with the President. Moreover, any loss incurred by the FDIC from protecting insured claimants must be recovered with a special assessment on all insured banks based on their total assets, rather than just domestic deposits, the current base for insurance premiums. Thus, this assessment affects large banks proportionately more than do the regular assessments and makes it less likely that the protected bank's competitors would be supportive of such a rescue. Finally, the GAO must review the basis for the decision. The requirement to justify violations of the act, even ex-post, is likely to improve the regulators' accountability and make them think twice before taking actions that are outside the spirit of the act (Mishkin, 1997). Thus, compared with the pre-FDICIA situation, TBTF is likely to be used rarely, if at all.[10]

The recovery of banking in the 1990s

Banking recovered dramatically in the early 1990s. The number of bank failures declined steadily from 221 in 1988, to 127 in 1991, to 41 in 1993, to five in 1996, and only one in 1997. As shown in table 2, at yearend 1990, 5 percent of all BIF-insured banks,

TABLE 2

FDICIA capital positions of U.S. commercial banks, 1990–97
(percent of total banks or assets)

FDICIA capital zone	December 1990		December 1991		December 1993		December 1997[a]	
	Number of banks	Dollar assets	Number of banks	Dollar assets	Number of banks	Dollar assets	Number of banks	Dollar assets
Well capitalized	85.6	37.0	90.7	47.9	98.1	96.3	97.9	98.5
Adequately capitalized	9.8	37.6	6.2	43.8	1.5	3.5	2.0	1.4
Undercapitalized	2.5	23.1	1.7	7.6	0.2	0.1	0.1	–
Significantly undercapitalized	0.9	1.1	0.6	0.4	0.2	0.1	–	–
Critically undercapitalized	1.2	1.2	0.8	0.3	0.1	–	–	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number of banks	**12,172**		**11,777**		**10,856**		**9,403**	

[a]Includes all BIF–insured commercial and savings banks.
Source: Federal Reserve Bank of Chicago and Federal Deposit Insurance Corporation.

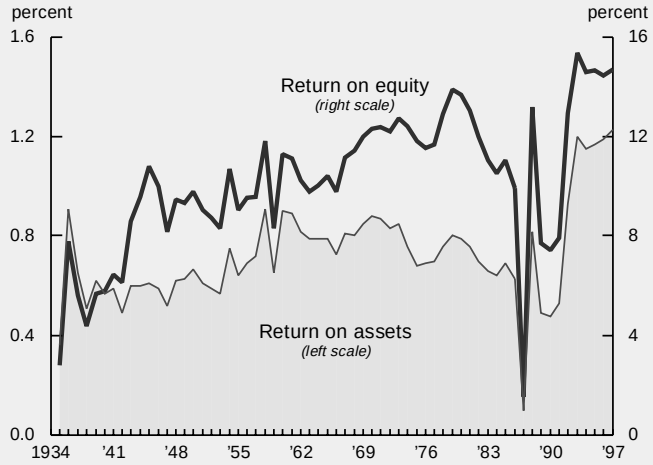
holding 25 percent of all bank assets, would have been classified as undercapitalized (in the lowest three of the five FDICIA zones). By yearend 1993, only 0.5 percent, holding 0.2 percent of all bank assets, would have been so classified. At yearend 1997, there were hardly any undercapitalized banks. Over the same period, the percentage of banking assets at well-capitalized banks increased from 37 percent to nearly 99 percent. The improvement is somewhat overstated because it reflects, in part, the resolution and, therefore, disappearance of insolvent institutions. As shown in figure 1, returns on both assets and equity for the remaining commercial banks rose to record levels. Except for consumer loans, nonperforming loan rates, which were high through the 1980s, declined sharply, as did loan charge-offs.

The industry's book-value equity capital/assets ratio climbed above 8 percent at yearend 1993 for the first time since 1963, after having declined to below 6 percent. For large banks the increase was even greater. The increases reflected both high retained earnings from profits and record sales of new capital. From 1991 through 1993, sales of new stock issues by large bank holding companies totaled nearly $20 billion, 33 percent more than the amount of equity capital raised in the previous 15 years and approximately 10 percent of their book-value equity capital at yearend 1990. The increase in the industry's market value capital/asset ratio was even greater than the increase in the book-value capital/asset ratios. In 1990, stocks of publicly traded banks sold at about 80 percent of their book value. In 1995, they traded at nearly 150 percent of book value.

As a result of resolutions and improved profits and capital positions, there are fewer commercial banks that require special supervision. Problem banks peaked at more than 1,500 at yearend 1987, or 11 percent of the industry, and at over $500 billion in assets (held by some 1,000 banks) in early 1992, or 15 percent of all bank assets. By yearend 1993, there were fewer

FIGURE 1

Return on assets (ROA) and equity (ROE)



Source: Federal Deposit Insurance Corporation, *Quarterly Banking Profile*, Fourth Quarter 1997, p. 2.

than 500 problem banks, holding $250 billion in assets; and at yearend 1997, there were only 71 such banks, holding $5 million in assets. Some of the improvement reflects bank resolutions rather than recoveries, particularly in the early years.

The thrift industry has also recovered in the 1990s, but at a slower rate, and proportionately more of the industry's better performance reflects the disappearance of insolvent institutions. Between 1989, after the enactment of FIRREA, and 1995, the number of OTS-regulated institutions declined by 50 percent, from nearly 3,000 to about 1,400, and S&L assets dropped by 45 percent. At yearend 1990, 32 percent of the institutions, holding nearly 50 percent of total assets, would have been classified as undercapitalized. By yearend 1992, only 4 percent of the remaining institutions, holding 8 percent of assets, were so classified. At mid-year 1996, only 0.5 percent of the 1,397 associations were undercapitalized (table 3). The S&Ls' returns on assets and equity also improved sharply from negative values in 1990 to nearly 1 percent on assets and 11 percent on capital in 1996. At the same time, the corresponding values for commercial banks were 1.2 percent and nearly 15 percent, respectively.

In addition to the impact of FDICIA, a number of economic factors contributed to the recovery of banks and S&Ls. The national and regional economies recovered at a low inflationary rate, the residential and, particularly, the commercial real estate markets bottomed out and recovered, interest rates declined as monetary policy eased during the recession that started in mid-1990 and inflationary expectations receded, and the yield curve turned steeply upward, generating at least temporary profits to asset-long institutions.[11] In addition, the funding provided by FIRREA permitted the resolution of insolvent institutions that were making profitability difficult for solvent institutions by frequently paying higher-than-market interest rates to attract deposits and charging lower-than-market rates on their loans.

Evaluation of deposit insurance reform in FDICIA

How well has the deposit insurance reform enacted in FDICIA worked to date? The PCA and LCR provisions, even in their weakened form, appear to have been effective in reducing the moral hazard and agency problems previously associated with deposit insurance and to have contributed to the strengthening of the industry. Three aspects of the SEIR provisions of FDICIA are particularly important. First are the improved, but, at times, still less-than-prompt, actions of the regulatory authorities in penalizing poorly performing institutions and resolving institutions that do not meet FDICIA's minimum capital requirements. Second are the actions of banks and thrifts to exceed the law's minimum requirements by raising additional capital; this has made them less prone to fail and to take excessive risks. Third is the potential ending of the FDIC's protection of uninsured deposits at insolvent institutions and its imposition on these deposits of their pro-rata share of any losses incurred. This has given uninsured depositors at other institutions more reason to monitor their own institutions and the

TABLE 3

FDICIA capital positions of U.S. thrift institutions[a]
(percent of total thrifts or assets)

	December 1990[b]		June 1996	
FDICIA capital zone	**Number of thrifts**	**Dollar assets**	**Number of thrifts**	**Dollar assets**
Well capitalized	52.6	25.0	97.3	97.6
Adequately capitalized	15.5	26.4	2.3	2.4
Undercapitalized	10.2	18.5	0.4	0.1
Significantly undercapitalized	3.7	3.1	0.0	0.0
Critically undercapitalized	18.0	27.0	0.1	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**
Total thrifts	**2,539**		**1,397**	

[a]Regulated by the Office of Thrift Supervision.
[b]All thrifts, including those operated by the Resolution Trust Corporation.
Source: Office of Thrift Supervision.

institutions more reason to increase their capital to assuage depositors' concerns.

Prompt actions to correct institutions with inadequate capital and resolve undercapitalized banks at least cost

Despite the large number of resolutions, since the enactment of FDICIA, the regulatory agencies have not always initiated corrections as promptly or as firmly as the act requires. As noted earlier, the FDIC's inspector general (FDIC, 1994) found that the agency, for various reasons, had not used these tools in about one-third of a sample of 43 undercapitalized banks between December 1992 and July 1994. Likewise, the GAO (1996) found that through 1995 the Comptroller of the Currency and the Federal Reserve initiated PCA directives against only eight of a sample of 61 banks identified as undercapitalized at some time in 1993 and 1994, although the agencies generally resolved critically undercapitalized (the lowest capital zone) banks within the specified 90-day period. Despite frequent criticism that PCA zones based solely on capital do not make full use of the more current information the agencies possess, only twice between yearend 1992 and mid-1996 did the two agencies either downgrade banks from well capitalized to adequately capitalized or treat a bank as if it were in a lower zone on the basis of their own evaluation that the bank was "engaging in an unsafe or unsound practice" (Bothwell, 1997).

In addition, the GAO (1994a) found that the FDIC may not have marketed large failed banks effectively in 1992 and, thus, may have solicited too few bidders or the type of bid not likely to lead to least-cost resolution. A follow-up study (GAO, 1995) reported that the FDIC had improved its marketing practices in 1993. Nevertheless, the GAO found that, in a number of instances in 1995, the FDIC had failed to document its decisions on LCR as completely as required. Thus, despite the cries by the agencies that PCA and LCR would severely limit if not eliminate their discretion, the GAO concluded that to date "the subjective nature of the standards continues the wide discretion that regulators had in the 1980s over the timing and severity of enforcement actions" (GAO, 1996a, p. 57).

The FDIC's average loss rate has not declined significantly since the enactment of FDICIA. It averaged nearly 14 percent in the years immediately before and after enactment (Bothwell, 1997). In part, this may reflect the greater decline in large bank failures, resulting in proportionately smaller losses. Nevertheless, it would appear that the regulatory agencies could move faster to impose sanctions and to resolve undercapitalized institutions and reduce FDIC losses. Indeed, FDICIA-mandated annual reviews by the banking agencies' own inspectors general and the GAO of resolutions that involve material losses to the FDIC (losses that exceed $25 million) found that in three of the four such cases in 1995, the "bank regulators either did not take sufficiently aggressive enforcement actions to correct identified safety and soundness deficiencies or to ensure that troubled banks complied with existing enforcement actions" (GAO, 1996b, p. 5).

For large banks, FDIC losses might also be reduced by the depositor preference legislation, enacted in 1993 as part of the Omnibus Budget Reconciliation Act, although the complex dynamic implications of the act have yet to be sorted out (Kaufman, 1997). This legislation gives the FDIC and uninsured depositors at domestic offices of insured banks priority in failure resolution over the banks' depositors at overseas branches and general creditors, for example, Fed funds sellers. Previously, all these claimants had equal standing. Moody's responded to this change by quickly downgrading the newly subordinated obligations of some then poorly capitalized banks below the rating of the bank's domestic deposits. At first glance, this provision gives major U.S. money center banks, like Citibank, which have large foreign deposits and are large buyers of Fed funds, a near 50 percent capital ratio from the FDIC's vantage point. Thus, the FDIC should expect to suffer no losses in resolving such banks. Dynamically, however, this could change as the subordinated claimants act to protect themselves by either collateralizing their claims or by running. As a consequence, the FDIC could become more vulnerable than before. Unlike FDICIA, the depositor preference legislation was enacted as part of a nonbanking bill with little publicity and analysis.

A quicker FDIC response is also desirable because the agencies have defined a "critically undercapitalized" institution as having only 2 percent or less of book-value-tangible equity to capital, which is the minimum ratio specified in the act. Although little research has been done on the appropriate capital/asset cutoff level, 2 percent appears much too low, particularly in light of increasing use by banks of derivatives with which they can change their risk exposures quickly and greatly and for which even effective internal control and monitoring systems are difficult to construct. As the continuing high loss rate to the FDIC suggests, it is likely that in many, if not most, instances this ratio will be breached only after an institution's market value capital has become negative. This lessens the likelihood that insolvencies will be resolved without loss to depositors and that deposit insurance will truly be redundant. However, with fewer

insolvencies, the regulators should be able to act faster to resolve insolvencies.

Additional capital raised by banks

The record amounts of new equity and subordinated debt sold by the industry in the early 1990s attest to the greater fears of bank management and shareholders that the era of liberal forbearance was over and that painful and costly sanctions would be imposed quickly if their banks did not satisfy the capital ratio performance criteria. By 1995, the capital ratios of nearly all banks exceeded the required minimum for even the well-capitalized classification, suggesting that the marketplace encouraged banks, even after widescale share repurchases, to maintain noticeable "excess" capital above their requirements. That is, the market views the regulatory requirements as too low and, at best, as minimums. Although still far below the capital held by most of their noninsured competitors, the maintained higher capital base should allow these banks to absorb a higher level of losses than before and reduce any incentive they may have to engage in moral hazard behavior. Nevertheless, Standard and Poor's states that "without this regulatory support [that boosts its creditworthiness], the [banking] industry's high leverage ratio alone would rank it lower than the current assessment" (Standard and Poor's, 1996, p. 1).

Subordinated and explicitly uninsured debt with remaining maturity of at least two years, so that it cannot be repaid before the authorities can act, is an inexpensive and effective way of increasing capital requirements, particularly for larger banks (Benston and Kaufman, 1988, Benston et al., 1986, Keehn, 1989, and Evanoff, 1993).[12] Unlike equity, interest on such debt is tax deductible. Permitting banks to meet capital requirements with subordinated debt allows them the same income tax advantages as corporations in general. Consequently, higher capital requirements would not increase banks' cost of capital above that which the market would demand. Rather, the higher requirement would only eliminate any deposit-insurance subsidy. Moreover, such debt would require little change in bank operations. Banks effectively only have to substitute explicitly uninsured term debt for large-denomination term certificates of deposit that are slightly FDIC-guaranteed. Because their losses occur only after a bank's equity is depleted and they do not have the option of running, these bondholders may be expected to carefully monitor the bank's equity position and begin to impose discipline as soon as they perceive serious financial problems. FDICIA requires interest and principal payments on subordinated debt to be suspended when the bank becomes "critically undercapitalized." Thus, private market discipline will supplement, if not precede, regulatory discipline. The current capital requirements would be strengthened significantly at little if any additional cost by requiring at least large banks to maintain an additional margin of, say, 2 percent subordinated debt. Indeed, in 1985, the FDIC requested comment on a proposal to increase capital requirements on insured banks to 9 percent, 3 percent of which could be satisfied by subordinated debt (FDIC, 1985). Unfortunately, this proposal was not implemented.

Imposition of resolution costs on uninsured depositors

To satisfy the LCR provisions of the act, the FDIC dramatically changed its resolution procedures to leave more uninsured depositors (with deposits in excess of $100,000 at risk) unprotected, even before the yearend 1994 requirement to do so. Before FDICIA, the FDIC almost always provided financial assistance for the purchase and assumption of all liabilities of resolved insolvent institutions, particularly larger banks by other banks, thereby protecting depositors with uninsured funds at these institutions from loss. Table 4 shows the number and total assets of banks resolved by the FDIC from 1986 through 1997. In 1991, for example, the FDIC imposed losses on uninsured depositors in only 17 percent of the 127 resolved BIF-insured banks that were costly to it. The unprotected depositors were mainly at small banks, holding only 3 percent of all resolved bank assets. Uninsured depositors at all large banks, including the Bank of New England, were fully protected.

In 1992, the unprotected percentages increased sharply to depositors at 54 percent of all 122 resolved banks, holding 45 percent of all resolved bank assets. Uninsured depositors at the relatively large First City Bank (Texas) and American Savings Bank (Connecticut) were left unprotected. However, uninsured depositors at four other large institutions—CrossLands Savings (New York) and three other savings banks, which tend to have proportionately fewer uninsured deposit accounts than commercial banks—were protected. In 1993, the pendulum completed its swing. Uninsured depositors at 85 percent of the 41 resolved institutions holding 94 percent of assets were left unprotected, including the uninsured depositors at the largest of the relatively small banks that failed.

The results for 1994 appear mixed at first. In part, this reflects the small number of resolutions and, in part, the relative importance of savings banks. Of the 13 BIF-insured banks resolved, uninsured depositors were unprotected in eight (62 percent) of these banks, holding 57 percent of the dollar assets of all resolved

TABLE 4

FDIC resolutions of banks, 1986–97, by protection of uninsured depositors

	Number of banks				Total assets ($ in billions)			
Year	Total	Protected	Not protected	Percent not protected	Total	Protected	Not protected	Percent not protected
1986	145	105	40	28	7.6	6.3	1.3	17
1987	203	152	51	25	9.2	6.7	2.5	27
1988	221	185	36	16	52.6	51.3	1.3	3
1989	207	176	31	15	29.4	27.2	2.2	8
1990	169	149	20	12	15.8	13.3	2.5	16
1991	127	106	21	17	62.5	60.9	1.6	3
1992	122	56	66	54	45.5	25.0	20.5	45
1993	41	6	35	85	3.5	0.2	3.3	94
1994	13	5	8	62	1.4	0.6	0.8	57
1995	6	0	6	100	0.8	0.0	0.8	100
1996	5	2	3	60	0.2	0.1	0.1	63
1997	1	1	0	0	–[a]	–	–	–

[a]Less than 0.1.

Source: Federal Deposit Insurance Corporation.

banks. But two of the five banks at which uninsured depositors were protected were savings banks and were the two largest banks resolved during the year, even though the largest had assets of only $337 million. Moreover, the FDIC did not expect to suffer losses in these resolutions or in two others in which uninsured depositors were protected, including one trust company that had no deposits. Excluding these two savings banks and the two other banks in which the FDIC did not expect to suffer losses changes the picture. Uninsured depositors were unprotected at eight of the nine (89 percent) commercial banks resolved, holding 96 percent of assets at all resolved commercial banks.

In 1995, only six banks were resolved and uninsured depositors were protected in none. As in the earlier years, all were small banks, the largest having less than $300 million in assets at the time of its resolution. In 1996, only five small banks were resolved and losses were imposed on the very few uninsured depositors at three of these banks. In 1997, one bank with deposits of less than $30 million was resolved, with the few uninsured deposits protected. Thus, in contrast to its pre-FDICIA policy, it appears that the FDIC did not favor depositors at larger banks in its 1992 through 1997 resolutions.

Because no large money center bank has been critically undercapitalized since the enactment of FDICIA, the too-big-to-fail provisions of the act have not yet been tested. However, to the extent the ex-ante incentives and sanctions in FDICIA prevent concurrent widescale failures (such as occurred in the 1980s), so that only a few banks are likely to be in trouble at any one time, and the multiple sign-offs required by FDICIA protect uninsured depositors at large banks, the regulators might be expected to use the TBTF exemption sparingly, if at all. It should be noted that the Bank of England, which had earlier pursued a TBTF policy, did not protect uninsured depositors in its most recent two large failures, those of the Bank of Credit and Commerce International (BCCI) in 1991 and Barings in 1995.

Conclusion

FDICIA appears to have been successful in its first six and a half years in helping to strengthen the financial condition of the U.S. banking and thrift industries.[13] Deposit insurance appears to have been placed on a workable incentive-compatible foundation. Whether it will continue to work well depends on a number of factors, including the political will of bank regulators to carry out the intent of the legislation. The regulators could signal their intent to do so by, among other strengthening actions, 1) stopping their foot dragging and complaining about the difficulty of implementing market or current value accounting for federally insured institutions and allocating part of their large research budget and staff to improving the reporting and disclosure process, and 2) raising the thresholds for all capital categories to levels more consistent with those the market imposes on the banks' nonbank competitors and that the agencies themselves appear to view as more appropriate for nonproblem

banks. For example, while 71 commercial banks were classified as problem banks by the FDIC at yearend 1997, only 17 BIF-insured institutions were classified as undercapitalized. Because of the current good health of the industry, a moderate move in this direction at this time would cause only a few institutions to be downgraded to undercapitalized, if they did not raise additional capital. The resulting increase in capital would put the banking sector in a better position to absorb future losses and reduce the probability of bank failures. The failure rate should also be reduced by the recent removal by Congress of most restrictions on interstate banking and by regulatory agency actions increasing the ability of banks to engage in insurance and securities activities. As a result, banks will be able to diversify more effectively both geographically and across product lines.

The general features of FDICIA's PCA and LCR provisions are being incorporated in the deposit insurance structures of a number of other countries, as well as being recommended by international agencies, such as the Bank for International Settlements (BIS) and the International Monetary Fund (IMF). Many countries have experienced banking debacles similar to that in the U.S. in the 1980s. A recent survey by the IMF reported serious banking problems since 1980 in more than 130 of its 180-plus member countries (Lingren, Garcia, and Saal, 1996). In many cases, the cost of resolution, in terms of the use of taxpayer funds to finance the difference between the protected par value of deposits at insolvent institutions and the market value of their assets, exceeded the 3 percent of GDP cost borne by the U.S. In a number of countries, the cost is estimated to have exceeded 20 percent of GDP. Poorly structured and priced government-provided deposit insurance and other bank guarantees have been identified as a major culprit in almost all of these debacles. Thus, basing deposit-insurance reform on the structure pioneered in the U.S. may assist in preventing future banking crises in other countries as well.[14]

NOTES

[1]In these resolutions, the institutions were closed or merged with assistance from the Federal Savings and Loan Insurance Corporation.

[2]These data omit some 600 nonfederally insured institutions. These were predominantly small institutions operating in a small number of states. Many, particularly in Ohio and Maryland, experienced severe financial problems in the mid-1980s and either failed or obtained federal deposit insurance (English, 1993, and Kane, 1992).

[3]In 1996, the Supreme Court ruled that the creation of such goodwill represented legal contracts that Congress did not have the authority to reverse in 1989 in FIRREA without appropriate compensation. Any damages awarded to the thrift shareholders that have sued the government will add to the net cost of resolving the debacle.

[4]The bonds sold were issued by a specially established government sponsored enterprise (GSE) type of financing corporation (FICO). Because premium revenues to the corporation from S&Ls to pay the interest on the bonds were far less than projected, legislation was enacted in 1996 to require commercial banks to contribute funding to avoid default and ease the burden on the S&Ls.

[5]In his analysis of the reasons Argentina reinstated deposit insurance in 1995 only a few years after it had abolished it, Miller (1996, pp. 229–230) concluded that "overwhelming political forces trumped the [economic] theory to which these individuals [those in charge of the government and who were 'ideologically attuned to the dangers of socializing risk in the banking sector'] subscribed."

[6]For example, institutions offering federally insured deposits would no longer be permitted to make or hold most types of loans. Their earning asset portfolios would be restricted to very high credit quality, very short maturity securities or their deposits would have to be collateralized with virtually risk-free securities. Proponents claimed that the other services and products provided by banks could be free from regulation. They did not consider the following four concerns important. First, narrow banks would be more costly to depositors, since they would be restricted to low-yielding earning assets, while incurring the considerable expense of processing checks. Second, narrow banks would lose economies of scope with respect to operating costs, customers' transactions costs, and risk reduction from diversification. Third, other providers of fund transfer services would be established. Using fractional reserves and investing in more profitable assets, these providers could outbid banks for similar services. It would be difficult, perhaps impossible, for government to forbear from rescuing "depositors" in these firms, should they fail. Hence, nothing substantial would have changed. Fourth, capital, reporting, and auditing requirements and a closure rule still would be required to prevent insolvent or near-insolvent narrow banks from engaging in fraudulent or moral-hazard behavior and to resolve insolvencies quickly.

[7]Barth and Brumbaugh (1996) describe in detail the process and implications of regulatory forbearance at one S&L.

[8]The PCA provisions of FDICIA are more specific than those proposed in SEIR and reflect the understanding of the role of economic incentives by staff drafters of the House and Senate Banking Committees. The opposition of some regulators to the act may be gauged by their statements shortly after its enactment. For example, William Seidman, chairman of the FDIC, described FDICIA as "the Credit Crunch Enhancement Act of 1991 … the greatest overload of regulatory micromanagement seen anywhere in the world" (Seidman, 1993, p. 47). John La Ware, a governor of the Federal Reserve Board said, "how they had the audacity to call it an 'improvement act' I'll never understand" (Carnell, 1997b, p. 11).

[9]Although, unlike the FSLIC, the FDIC did not require permanent taxpayer funding to validate its deposit guarantee, FDICIA did make such funds available if necessary and provided temporary funds for working capital, which the FDIC and RTC used and repaid in full.

[10]All depositors generally have access to all or part of their funds at resolved banks the next business day, regardless of the resolution process used. Insured deposits at domestic offices of insured banks are paid in full either at a successor bank that acquired the deposits at lowest cost to the FDIC or at the resolved bank, if it is being liquidated by the FDIC, which generally serves as receiver. (Insured institutions whose capital declines below the tripwire value for critically undercapitalized must shortly thereafter be placed in receivership or conservatorship by their primary federal supervisor. Insured institutions are not subject to the general corporate bankruptcy process.) Uninsured deposits are paid according to the lowest cost of resolution to the FDIC. They are paid in full if either the FDIC does not expect to suffer a loss on the resolution (particularly since the enactment of depositor preference under which losses are first charged against nondepositor creditors and depositors at foreign branches) or another bank assumes these deposits at lowest cost of resolution to the FDIC. The uninsured deposits are paid at less than full value if the FDIC expects to suffer a loss in the resolution. The FDIC will advance owners of uninsured deposits a prorata share of the recovery value based on a conservative estimate of what it expects to receive on the sale of the bank's assets. Thus, uninsured depositors share with the FDIC in the expected loss from resolution. Because the FDIC is the receiver of insolvent banks and, under PCA, is likely to have been involved in reviewing the bank's activities closely before insolvency, it is able to estimate recovery values reasonably quickly and accurately at time of resolution. If the FDIC is successful at resolving the bank before or shortly after its capital becomes negative, any losses should be small. If the FDIC overestimates the recovery values (underestimates the loss), it will assume the additional loss. If it underestimates the recovery values (overestimates the loss), it will reimburse the uninsured depositors as the additional recoveries are realized. The payments are made through the resolved bank operating under FDIC receivership. Thus, there is effectively no delay in providing depositors at resolved institutions access to the higher of the insured or near-market value of their funds and the payments system is minimally disrupted, if at all.

[11]Among its easing actions, the Federal Reserve reduced reserve requirements on time deposits from 3 percent to 0 percent at yearend 1990 and on demand deposits from 12 percent to 10 percent in February 1992. Both actions should have increased bank profitability; the 1992 reduction was specifically implemented "to reduce funding costs for depository institutions ... [and] strengthen banks' financial condition" (Board of Governors, 1993, p. 95).

[12]Currently, for purposes of regulatory capital compliance, term subordinated debt with an original weighted average maturity of greater than five years may be included as supplementary (tier 2) capital up to an amount no greater than 50 percent of tier 1 capital. However, the eligible amount is partially reduced as the remaining maturity of any subordinated debt declines below five years and is reduced by the full amount of any such debt with a remaining maturity of less than one year. Although not included for measuring capital compliance, term subordinated debt maintained in excess of these limits is taken into account by regulators in their overall assessment of a bank's financial condition.

[13]The apparent success of FDICIA is also reflected in the increasing number of recommendations to introduce PCA and LCR type provisions in other countries (for example, Goldstein, 1997, and Goldstein and Turner, 1996).

[14]Predictions of large and lasting improvements in bank safety from changes in prudential regulation have often been overly optimistic. For example, the U.S. Comptroller of the Currency argued confidently in his 1915 annual report, one year after the enactment of the Federal Reserve Act, that: "The establishment of the Federal Reserve banks makes it practically impossible for any national bank operating in accordance with the provisions of the national banking act and managed with ordinary honesty, intelligence, and efficiency to fail" (Comptroller of the Currency, 1916, p. 32).

Likewise, Milton Friedman and Anna Schwartz wrote in their seminal review of U.S. monetary history that: "Federal insurance of bank deposits was the most important structural change in the banking system to result from the 1933 panic, and, indeed in our view, the structural change most conducive to monetary stability since state bank note issues were taxed out of existence immediately after the Civil War" (Friedman and Schwartz, 1963, p. 434).

And Paul Samuelson predicted in the eleventh edition of the classic textbook *Economics*, published just before the U.S. banking and thrift crises, that because of deposit insurance, "in the 1980s, the only banks to fail will be those involving fraud or gross negligence" (Samuelson, 1980, p. 282).

REFERENCES

Barth, James R., 1991, *The Great Savings and Loan Debacle*, Washington, DC: American Enterprise Institute.

Barth, James, and R. Dan Brumbaugh, Jr., 1996, "The condition and regulation of Madison Guaranty Savings and Loan Association: A case study of regulatory failure," in *Research in Financial Services*, Vol. 8., George G. Kaufman (ed.), Greenwich, CT: JAI Press, pp. 73–96.

Barth, James R., R. Dan Brumbaugh, Jr., and Robert E. Litan, 1992, *The Future of American Banking*, Armonk, NY: M.E. Sharpe.

Bartholomew, Philip F., 1994, "FDICIA two years later," in *Assessing Bank Performance: FDICIA Two Years Later*, George Kaufman (ed.), Chicago: Loyola University, February, pp. 7–16.

Benston, George J., 1995, "Safety nets and moral hazard in banking," in *Financial Stability in a Changing Environment*, Kuniho Sawamoto, Zenata Nakajima, and Hiroo Taguchi (eds.), New York: St. Martin's Press, pp. 329–377.

_____, 1992, "The purpose of capital for institutions with government-insured deposits," *Journal of Financial Services Research*, April, pp. 369–384.

Benston, George J., R. Dan Brumbaugh, Jr., Jack M. Guttentag, Richard J. Herring, George G. Kaufman, Robert E. Litan, and Kenneth E. Scott, 1989, *Blueprint for Restructuring America's Financial Institutions*, Washington, DC: Brookings Institution.

Benston, George J., and Mike Carhill, 1994, "The causes and consequences of the thrift disaster," in *Research in Financial Services*, Vol. 6, George G. Kaufman (ed.), Greenwich, CT: JAI Press, pp. 103–169.

Benston, George J., Robert A. Eisenbeis, Paul M. Horvitz, Edward J. Kane, and George G. Kaufman, 1986, *Perspective on Safe and Sound Banking*, Cambridge, MA: Massachusetts Institute of Technology Press.

Benston, George J., and George G. Kaufman, 1997, "FDICIA after five years," *Journal of Economic Perspectives*, Summer, pp. 139–158.

_____, 1994a, "The intellectual history of the Federal Deposit Insurance Corporation Improvement Act of 1991," in *Reforming Financial Institutions and Markets in the United States*, George G. Kaufman (ed.), Boston: Kluwer, pp. 1–18.

_____, 1994b, "Improving the FDIC Improvement Act: What was done and what still needs to be done to fix the deposit insurance problem," in *Reforming Financial Institutions and Markets in the United States*, George G. Kaufman (ed.), Boston: Kluwer, pp. 99–120.

_____, 1990, "Understanding the savings and loan debacle," *The Public Interest*, Spring, pp. 79–95.

_____,1988, "Risk and solvency regulation of depository institutions: Past policies and current options," *Monograph Series in Finance and Economics*, New York: New York University Press, No. 1988-1.

Berger, Allen N., Richard J. Herring, and G. P. Szego, 1995, "The role of capital in financial institutions," *Journal of Banking and Finance*, June, pp. 393–431.

Board of Governors of the Federal Reserve System, 1993, *Annual Report 1992*, Washington, DC.

Bothwell, James L., 1997, "Evaluating the prompt corrective action and least cost resolution provisions of FDICIA: The watchdog's perspective," in *Research in Financial Services*, Vol. 9, George G. Kaufman (ed.), Greenwich, CT: JAI Press, pp. 47–62.

Brinkmann, Emile J., Paul M. Horvitz, and Ying-Lin Huang, 1996, "Forbearance: An empirical analysis," *Journal of Financial Services Research*, March, pp. 27–42.

Bryan, Lowell L., 1988, *Breaking Up the Bank*, Homewood, IL: Dow-Jones Irwin.

Carnell, Richard S., 1997a, "A partial antidote to perverse incentives: The FDIC Improvement Act of 1991," in *Research in Financial Services*, Vol. 9, George G. Kaufman (ed.), Greenwich, CT: JAI Press, pp. 199–233.

_____, 1997b, "The FDIC Improvement Act of 1991: What has worked and what has not," in *Research in Financial Services*, Vol. 9, George G. Kaufman (ed.), Greenwich, CT: JAI Press, pp. 11–16.

Day, Kathleen, 1993, *S & L Hell*, New York: W. W. Norton.

Eisenbeis, Robert A., and Paul M. Horvitz, 1994, "The role of forbearance and its cost in handling troubled and failed depository institutions," in *Reforming Financial Institutions and Markets in the United States*, George G. Kaufman (ed.), Boston: Kluwer Academic, pp. 49–68.

English, William B., 1993, "The decline of private deposit insurance in the United States," *Carnegie-Rochester Conference Series*, June, pp. 57–128.

Evanoff, Douglas D., 1993, "Preferred sources of market discipline," *Yale Journal on Regulation*, Summer, pp. 347–362.

Federal Deposit Insurance Corporation, 1997, *History of the Eighties: Lessons for the Future*, Washington, DC: FDIC.

_____, 1985, "FDIC requests comment on ways to achieve market discipline," news release, No. PR-57-87, Washington, DC, May 6.

Federal Deposit Insurance Corporation, Office of Inspector General, 1994, "Audit of FDIC's implementation of the prompt corrective action provisions of FDICIA," Washington, DC: FDIC, September 23.

Fissel, Gary S., 1994, "Risk measurement, actuarially-fair deposit insurance premiums, and the FDIC's risk-related premium system," *FDIC Banking Review*, Spring/Summer, pp. 16–27.

_____, 1991, "The anatomy of the LDC debt crisis," *FDIC Banking Review*, Spring/Summer, pp. 1–15.

Friedman, Milton, and Anna Jacobson Schwartz, 1963, *A Monetary History of the United States*, Princeton, NJ: Princeton University Press.

General Accounting Office, 1996a, *Bank and Thrift Regulation: Implementation of FDICIA's Prompt Regulatory Action Provisions*, No. GAO/GGD 97-18, Washington, DC, November.

_____, 1996b, *Inspectors General: Mandated Studies to Review Costly Bank and Thrift Failures*, No. GAO/GGD 97-4, Washington, DC, November.

_____, 1995, *1993 Bank Resolutions: FDIC Further Improved Its Resolution Process*, No. GAO/GGD 95-118, Washington, DC, June.

_____, 1994a, *1992 Bank Resolutions: FDIC Chose Methods Determined Least, But Needs to Improve Process*, No. GAO/GGO 94-107, Washington, DC, May.

_____, 1994b, *RTC Policies and Practices Did Not Fully Comply With Least-Cost Provisions*, No. GAO/GGD 94-110, Washington, DC, June.

Goldstein, Morris, 1997, *The Case for an International Banking Standard*, Washington, DC: Institute for International Economics, April.

Goldstein, Morris, and Philip Turner, 1996, "Banking crises in emerging economies: Origins and policy options," Bank for International Settlements, Basle, Switzerland, economic papers, No. 46, October.

Grenadier, Steven R., and Brian J. Hall, 1995, "Risk-based capital standards and the riskiness of bank portfolios: Credit and factor risk," National Bureau of Economic Research, Cambridge, MA, working paper, No. 5178, July.

Horvitz, Paul M., 1995, "Banking regulation as a solution to financial fragility," *Journal of Financial Services Research*, December, pp. 369–380.

Jaffee, Dwight M., Lawrence J. White, and Edward J. Kane, 1989, "Symposia: Federal deposit insurance," *Journal of Economic Perspectives*, Fall, pp. 3–47.

Jones, David S., and Kathleen Kuester King, 1995, "The implementation of prompt corrective action: An assessment," *Journal of Banking and Finance*, June, pp. 491–510.

Kane, Edward J., 1995, "Difficulties in transferring risk-based capital requirements to developing countries," *Pacific Basin Finance Journal*, September pp. 357–368.

_____, 1992a, "How incentive-incompatible deposit-insurance funds fail," in *Research in Financial Services*, Vol. 4, George G. Kaufman (ed.), Greenwich, CT: JAI Press, pp. 51–92.

_____, 1992b,"Corporate capital and government guarantees," *Journal of Financial Services Research*, April, pp. 357–368.

_____, 1989, *The S&L Insurance Mess*, Washington, DC: Urban Institute Press.

_____, 1985, *The Gathering Crisis in Federal Deposit Insurance*, Cambridge, MA: MIT Press.

Kane, Edward J., and Min-The Yu, 1996, "Opportunity cost of capital forbearance during the final years of the FSLIC mess," *Quarterly Review of Economics and Finance*, Fall, pp. 271–290.

Kaufman, George G., 1997, "The new depositor preference act: Time inconsistency in action," *Managerial Finance*, Vol. 23, No. 11, pp. 56–63.

_____, 1995, "The U.S. banking debacle of the 1980s: An overview and lessons," *The Financier*, May, pp. 9–26.

_____, 1993, "FDICIA: Renaissance or requiem," in *FDICIA: An Appraisal*, Chicago: Federal Reserve Bank of Chicago, pp. 501–505.

_____, 1992, "Bank capital: Past, present, and future," *Journal of Financial Services Research*, April, pp. 385–402.

Keehn, Silas, 1989, *Banking on the Balance: Powers and the Safety Net*, Chicago: Federal Reserve Bank of Chicago.

Lindgren, Carl-Johan, Gillian Garcia, and Matthew I. Saal, 1996, *Bank Soundness and Macroeconomic Policy*, Washington, DC: International Monetary Fund.

Litan, Robert E., 1987, *What Should Banks Do?*, Washington, DC: Brookings Institution.

Mayer, Martin, 1997, *The Bankers: The Next Generation*, New York: Truman Talley Books.

_____, 1990, *The Greatest-Ever Bank Robbery*, New York: Charles Scribner's Sons.

Miller, Geoffrey D., 1996, "Is deposit insurance inevitable? Lessons from Argentina," *International Review of Law and Economics*, June, pp. 211–232.

Mishkin, Frederic S., 1997, "Evaluating FDICIA," in *Research in Financial Services*, Vol. 9, George G. Kaufman (ed.), Greenwich, CT: JAI Press, pp. 17–33.

National Commission on Financial Institution Reform, Recovery and Enforcement, 1993, *Origins and Causes of the S&L Debacle: A Blueprint for Reform*, Washington, DC: Government Printing Office, June.

Peek, Joe, and Eric S. Rosengren, 1997a, "Will legislated early intervention prevent the next banking crisis?," *Southern Economics Journal*, July, pp. 268–280.

_____, 1997b, "How well capitalized are well-capitalized banks?," *New England Economic Review*, Federal Reserve Bank of Boston, September/October, pp. 41–50.

_____, 1996,"The use of capital ratios to trigger intervention in problem banks: Too little, too late," *New England Economic Review*, Federal Reserve Bank of Boston, September/October, pp. 49–58.

Samuelson, Paul A., 1980, *Economics*, 11th edition, New York: McGraw-Hill.

Seidman, William, 1993,"The banking crises in perspective," in *FDICIA: An Appraisal*, Chicago: Federal Reserve Bank of Chicago, pp. 46–47.

Shadow Financial Regulatory Committee, 1996a, "Standards for safety and soundness (Implementation of Section 132 of FDICIA) (September 14, 1992)," *Journal of Financial Services Research*, December, supplement, p. S-44.

_____, 1996b, "Safety and soundness standards (December 13, 1993)," *Journal of Financial Services Research*, December, supplement, p. S-66.

_____, 1992, "An outline of a program for deposit insurance reform (February 13, 1989)," *Journal of Financial Services Research*, August, supplement, pp. S78–S82.

U.S. Congress, Congressional Budget Office, 1993, *Resolving the Thrift Crisis*, Washington, DC, April.

_____, 1991, "The cost of forbearance during the thrift crisis," staff memorandum, Washington, DC, June.

U.S. Department of the Treasury, 1991, *Modernizing the Financial System: Recommendations for Safer, More Competitive Banks*, Washington, DC, February.

U.S. Department of the Treasury, Comptroller of the Currency, 1916, *Annual Report 1915*, Washington, DC.

U.S. House of Representatives, Committee on Banking, Finance and Urban Affairs, 1991, "An analysis of Federal Reserve discount window loans to failed institutions," Washington, DC, staff study, June 11.

White, Lawrence J., 1991, *The S & L Debacle*, New York: Oxford University Press.

Williams, Michael G., 1995, "The efficacy of accounting-based bank regulation: The case of the Basle Accord," Milken Institute, Santa Monica, CA, working paper, No. 95-9, May.