Volume Title: The Defining Moment: The Great Depression and the American Economy in the Twentieth Century

Volume Author/Editor: Michael D. Bordo, Claudia Goldin and Eugene N. White, editors

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-06589-8

Volume URL: http://www.nber.org/books/bord98-1

Publication Date: January 1998

Chapter Title: The Legacy of Deposit Insurance: The Growth, Spread, and Cost of Insuring Financial Intermediaries

Chapter Author: Eugene N. White

Chapter URL: http://www.nber.org/chapters/c6889

Chapter pages in book: (p. 87 - 122)

3 The Legacy of Deposit Insurance: The Growth, Spread, and Cost of Insuring Financial Intermediaries

Eugene N. White

One enduring legacy of the Great Depression was the creation of deposit insurance for financial intermediaries. Deposit insurance was a real innovation in federal regulation of the financial system. While the New Deal's anticompetitive barriers have largely collapsed, deposit insurance has become deeply rooted.[1] Coverage of the banking system has expanded steadily, and it has spread to other financial sectors. Economists have inveighed against government insurance of financial intermediaries' liabilities; and yet even in the wake of costly insurance disasters, there is little political interest in altering this pillar of the New Deal.

Without the Great Depression, the United States would not have adopted the New Deal package of financial regulations that prominently featured deposit insurance. The New Deal regulations limiting competition had profound effects on the financial system; however, these regulations, with some exceptions, have disappeared while insurance of financial intermediaries appears to be permanent. Insurance began with the New Deal's limited explicit guarantee of bank deposits. This protection has grown considerably and is now granted implicitly to protect the deposits of all large banks. Furthermore, as table 3.1 shows, insurance has spread to other financial sectors. Although some features of deposit insurance have changed recently, there is no evidence of a rollback. With the important exceptions of mutual funds and money market mutual funds, the insurance of financial institutions' liabilities is pervasive.

There is no ready model to explain the growth and spread of federal insur-

Eugene N. White is professor of economics at Rutgers University and a research associate of the National Bureau of Economic Research.

The author is especially grateful for helpful suggestions from Michael Bordo, Hugh Rockoff, Anna Schwartz, Lawrence J. White, and conference participants.

1. For complete descriptions of New Deal banking regulations and their evolution over time, see Golembe and Holland (1986), Macey and Miller (1992), and White (1991).

Table 3.1 **Spread of Financial Intermediary Insurance (nominal value of insurance per customer)**

Liability Insured and Intermediary	Insurer	Coverage Begun or Increased							
		Jan 1934	Sept 1934	1950	1966	1969	1970	1974	1980
Deposits of commercial banks and mutual savings banks	FDIC	$2,500	$5,000	$10,000	$15,000	$20,000		$40,000	$100,000
Deposits of savings and loan associations	FSLIC		$5,000	$10,000	$15,000	$20,000		$40,000	$100,000
Shares in credit unions	NCUSIF						$20,000	$40,000	$100,000
Customer accounts held by broker-dealers	SIPC								
Cash							$20,000	$40,000	$100,000
Cash and securities							$50,000	$100,000	$500,000
Life insurance policies from life insurance companies	State funds						Established in the 1970s		
Defined-benefit pensions	PBGC							Established in 1974	

Sources: Federal Deposit Insurance Corporation, *Annual Report* (various years), Federal Home Loan Bank Board (various years), National Credit Union Administration (various years), Securities Investor Protection Corporation (various years), Brewer and Mondschean (1993), Pension Benefit Guaranty Corporation (1996).

ance of intermediaries. Political economy offers models of logrolling (Schattschneider 1935) and cascading regulation (Hoekman and Leidy 1992; Feinberg and Kaplan 1993) that are not applicable here. In "logrolling," sectors of an industry or related industries bargain in Congress for favorable legislation combined in one bill. Regulation "cascades" when one industry upstream secures protection, inducing downstream firms to follow them later and push for their own protection. Cascading regulation in international trade moves vertically from industry to industry. In contrast, the spread of insurance in the financial sector from banks and thrifts to credit unions, broker-dealers, life insurance companies, and pension funds represents horizontal movement. Although competition between types of intermediaries had increased in the 1920s, New Deal regulations tried to ensure very imperfect competition between the various sectors of the financial industry. Over time, competition within each segment and between each type of intermediary increased. The advantages conferred on banks by deposit insurance were then eagerly sought by uninsured intermediaries, and weaker institutions pushed up the level of insurance.

In this paper, I examine how insurance spread from one group of institutions to the next and how the level of insurance was gradually raised. Although deposit insurance has often been discussed as an important guarantor of the stability of the banking system and hence the economy (Friedman 1959), the expansion of deposit insurance cannot be justified on macroeconomic grounds. The general view today is that while the failure of individual banks might begin a panic, a systematic collapse may be prevented by proper intervention by the Federal Reserve as the lender of last resort (Friedman and Schwartz 1986). Instead, it is its redistributive features that have made insurance a permanent feature of the financial system while other New Deal regulations disappeared. Redistribution of the costs of failures, hidden in the insurance premiums, has gained public acceptance and allowed financial intermediaries to successfully lobby for expanded coverage. If insurance was not necessary for securing macroeconomic stability, substantial costs may have been incurred. I explore the cost of insurance with a counterfactual analysis of an insurance-free post–Great Depression financial system in order to assess the burden imposed by this legacy of the New Deal.

3.1 The Origins and Establishment of Deposit Insurance

While deposit insurance today enjoys broad public support, proposals for federal insurance before the Great Depression were viewed as special interest legislation. States had experimented with insurance of bank liabilities before the Civil War and after the panic of 1907. These state systems had, at best, mixed results, establishing a strong policy prejudice against federal insurance (Golembe 1960; White 1983; Calomiris 1990; Wheelock 1992). Nevertheless, a well-motivated lobby of predominantly rural, unit bankers was keen on se-

curing a federal guarantee system. Hoping to increase depositor confidence while preserving the existing banking structure, these bankers opposed the liberalization of branching laws and other regulations, which could have produced a more stable banking system of larger, diversified institutions (Calomiris 1993).

Studies of the origins of deposit insurance from Golembe (1960) to Calomiris and White (1994) emphasize that deposit insurance would have had little chance of adoption if the 1930–33 banking collapse had not frightened the public into supporting the proinsurance bankers' cause in Congress. Even so, the hurdles faced by backers of deposit insurance were high. From earlier state experiments, the problems of moral hazard and adverse selection were well known and debated in Congress (Flood 1991). Aware of the potential problems, the Roosevelt administration, the bank regulatory agencies, and the larger banks resisted any proposal. In the face of such opposition, credit for the adoption of deposit insurance belongs largely to Rep. Henry Steagall (D-Ala.), chairman of the House Banking and Currency Committee, who refused to permit the passage of any banking legislation unless it included an insurance system.

Far from being a high-minded policy aimed at protecting the depositor, the design of the Federal Deposit Insurance Corporation (FDIC) was the product of a lengthy legislative struggle, pitting smaller state-chartered, often unit banks against larger banks, often members of the Federal Reserve System. Under the Banking Act of 1933 (often called the Glass-Steagall Act), the Temporary Deposit Insurance Fund was organized and scheduled to begin operations on 1 January 1934. The coverage per depositor was set at a maximum of $2,500.[2] All Federal Reserve member banks were required to join. Nonmember banks could receive insurance only if they joined the Fed within two years. The last provision was resented by nonmember banks because they would be forced to meet the higher requirements and stricter regulations imposed on members. Banks joining the system were to pay a 0.5 percent assessment of insurable deposits, half upon joining and half subject to call (FDIC 1984, 56–57).

When the temporary fund was extended for a year in 1934, Steagall attempted to increase coverage to $10,000 against Roosevelt's objection that 97 percent of depositors were already covered. Congress raised the limit to $5,000 and postponed compulsory Federal Reserve membership until 1 July 1937—a victory for the small banks (Burns 1974). The temporary system became permanent under Title I of the Banking Act of 1935, which created the FDIC. All Federal Reserve members were still required to join; but in a major concession, nonmembers, while subject to approval of the FDIC, were no longer required

2. A depositor in a bank is provided with insurance up to the legal maximum. Insurance coverage is determined by how accounts are legally titled. A husband and wife might each have individual accounts and also share a joint account in one bank. All three accounts would be entitled to insurance up to the maximum because the legal title for each is unique.

to become members of the Fed. The permanent plan required an annual assessment on total, not just insured, deposits. This shift was opposed by the larger banks, whose shares of uninsured deposits were much greater.[3]

The Banking Act of 1935, based largely on the draft legislation of the FDIC staff, set a flat annual assessment rate of one-twelfth, or 0.0833 percent, of a bank's total deposits, eliminating the original capital contribution by banks. To ensure that the insurance fund was not depleted, the FDIC was given authority to borrow up to $975 million from the Treasury. Banks contributed premiums as a fraction of all their deposits but only received protection on deposits up to a maximum of $5,000 per account. Small banks and lower-income individuals with small deposit accounts benefited, while bigger banks with larger depositors provided a subsidy. The smaller banks' competitive position was improved, and there was less pressure to build stronger, larger banks.

The requirement that all Federal Reserve members join the new FDIC guaranteed that the bigger banks, many of whom had opposed federal deposit insurance, joined the system rather than lose the benefits of Fed membership. Nonmember banks, almost all smaller, state-chartered banks, had pushed for deposit insurance. Happy with the design, they signed up immediately. In 1935, 91 percent of the 15,488 commercial banks, with 86 percent of assets, joined the system. Only mutual savings bank membership was low. Of the 566 mutual savings banks, 11 percent, with 11 percent of total assets, took out membership. Most mutual savings banks preferred to remain in existing state insurance systems that offered higher levels of coverage. Nevertheless, the nearly universal coverage of commercial banks and the subsequent disappearance of bank failures was seen as triumph for the New Deal.

3.2 The Growth of Deposit Insurance

For the next 15 years, the FDIC's insurance of commercial banks and mutual savings banks appeared to be an unqualified success. By 1949, commercial bank membership crept up to 95 percent, accounting for 49 percent of deposits; mutual savings bank membership increased to 36 percent, holding 70 percent of all assets. Bank failures declined, no panics occurred, banks were more profitable, and the insurance fund grew. At the same time, inflation had reduced the real value of insurance. World War II inflation shrank the real value of coverage per depositor from $5,000 in 1934 to $2,807 by 1949. Figure 3.1 depicts the real value of the maximum coverage offered per depositor from 1934 to 1995, with the changes in the nominal levels of coverage indicated by vertical lines. However, this decline in protection elicited no outcry by depositors for more protection. As seen in figure 3.2, the percentage of total deposits

3. In 1936, the 10,014 banks with deposits of under $1 million had 85 percent of their deposits insured, while the 209 largest banks with deposits over $25 million had only 28 percent of their deposits covered. See table 3.2 below.

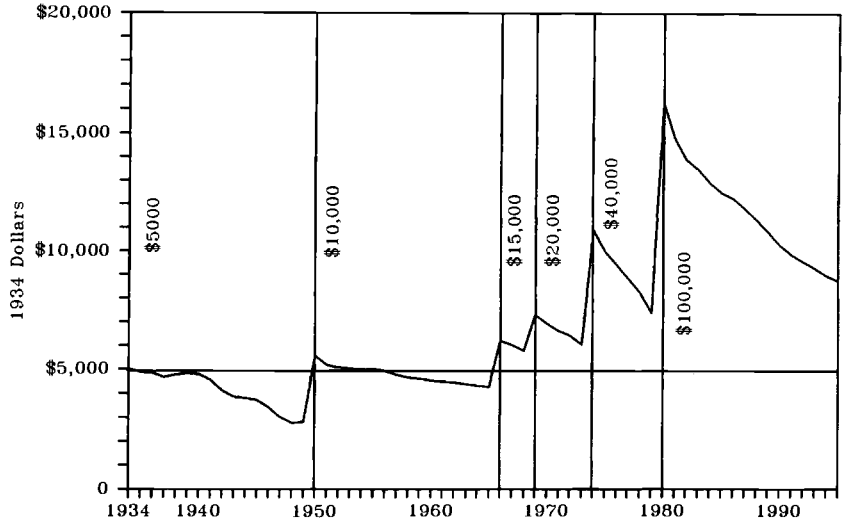

Fig. 3.1 Real value of deposit insurance per depositor, 1934–95
Sources: Federal Deposit Insurance Corporation, *Annual Report* (various years) and the consumer price index.
Note: Changes in nominal coverage are indicated by the vertical lines.

covered by FDIC insurance had climbed from 45 percent in 1934 to 50 percent in 1950.[4] The absence of big failures and the growth of deposits kept the total insurance fund at about 1.5 percent of all insured deposits, as shown in figure 3.3, in spite of repayment of the initial contributions by Treasury and Federal Reserve Banks in 1949 (FDIC 1984, 5–7).

By any measure, the vast majority of "small depositors" were well protected by this level of insurance, and there was no public demand for a big increase in coverage. In 1949, only 4.4 million of the 104 million bank accounts were not fully protected (FDIC, *Annual Report* 1949). Some of these accounts were government (293,000) and interbank deposits (127,000), which had high average balances of $40,000 and $90,000, in contrast to the average demand deposit balance of $1,911 and savings and time deposit balance of $824. The FDIC (*Annual Report* 1949) calculated that any increase in coverage would offer little additional protection. A rise in coverage to $10,000—which would have returned coverage to its real 1934 value—would have fully covered another 3 million accounts, reaching 97 percent of the total. The percentage of insured banks' deposits covered would have risen from 50 percent to 57 per-

4. The large decline of coverage in the 1940s, from 45 percent to 35 percent in 1942, was a consequence of the rapid growth of total deposits. Coverage bounced back to 50 percent thanks to the account-creating activity of depositors. Between 1941 and 1949, total deposits increased 117 percent and insured deposits by 174 percent, with the number of fully protected accounts rising by 47 percent (FDIC, *Annual Report,* various years).

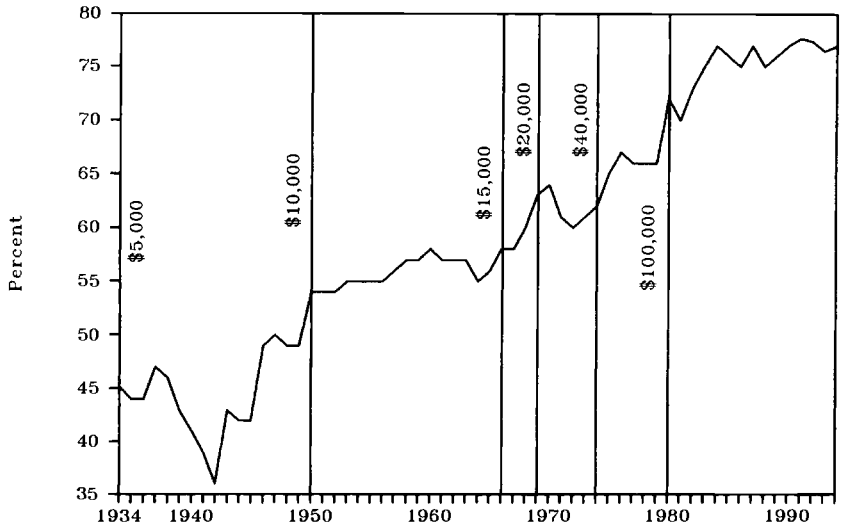

Fig. 3.2 Percentage of bank deposits insured by the FDIC, 1934–94
Sources: See fig. 3.1.
Note: Changes in nominal coverage are indicated by the vertical lines.

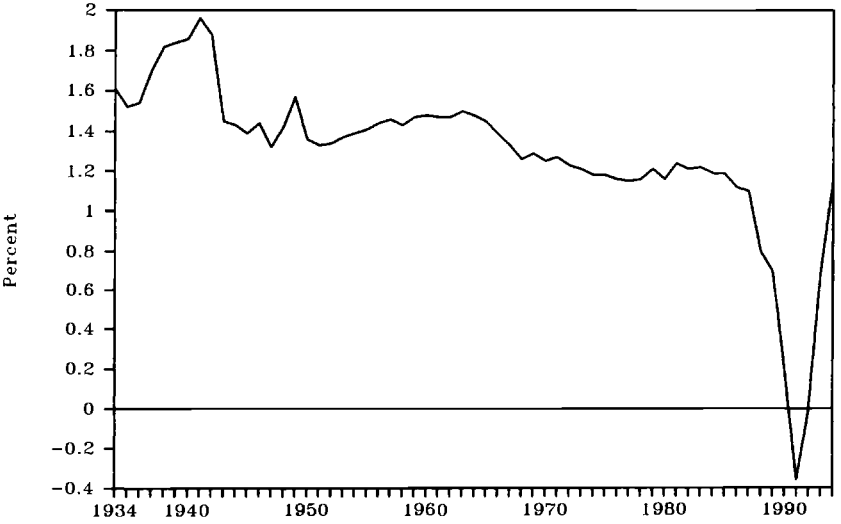

Fig. 3.3 FDIC insurance fund as a percentage of insured deposits, 1934–94
Sources: See fig. 3.1.

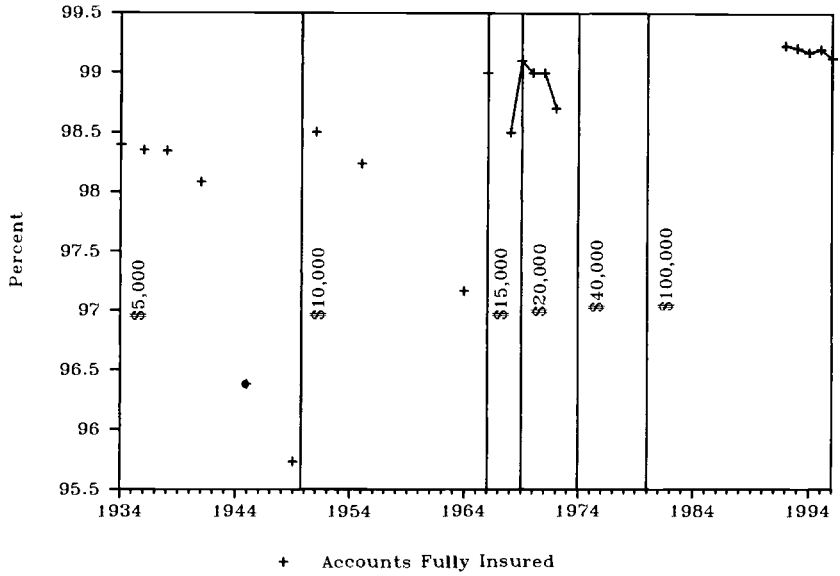

Fig. 3.4 Insurance of accounts in FDIC banks, 1934–94
Sources: See fig. 3.1.
Note: Changes in nominal coverage are indicated by the vertical lines.

cent. An increase to $25,000 would have covered 99.5 percent of all accounts and 65 percent of all deposits.

Mutual savings banks were a shrinking component of the banking industry and played no significant role in the politics of deposit insurance. By 1949, the FDIC insured only 192 of the 531 mutual savings banks. Most of the remainder (190 of 339) were in Massachusetts and were insured by a state fund. FDIC-insured mutual savings banks had 12.6 million accounts in 1949, with $13 billion in deposits.[5] Ninety-four percent of these accounts were fully insured, and 61 percent of all deposits were insured. While this profile looks similar to that of commercial banks, mutual savings banks were not at the same risk. In commercial banks, 68 percent of all deposits were held in the 3 percent of accounts with over $5,000; in mutual savings banks, only 39 percent of all deposits were in the 6 percent of accounts with over $5,000. Very few accounts, representing 3.6 percent of deposits, exceeded $10,000, whereas 57.7 percent of commercial banks' deposits were in accounts in excess of $10,000. Mutual savings banks were not as vulnerable as commercial banks and did not join the demand for a rise in insurance.

Demand for an increase in coverage was driven by the small banks' fear of losing deposits. Figure 3.4 shows the drop in fully insured accounts, from 98.5

5. Non–FDIC-insured mutual savings banks had $5.7 billion in deposits.

Table 3.2 **Percentage of Insured Commercial Banks by Their Percentage of Insured Deposits**

Year	Percentage of Insured Deposits: Less than 20	20–59	60–89	90–100	Number of Insured Banks
1936	0.8	6.1	57.7	35.4	14,085
1938	0.7	5.2	57.2	36.9	13,705
1941	1.3	6.4	59.4	32.9	13,434
1945	1.3	9.3	76.5	12.9	13,289
1949	1.2	13.5	79.6	5.7	13,440
1951	0.8	6.7	69.3	23.2	13,451
1955	0.2	8.2	72.5	19.1	13,278
1964	0.1	12.2	77.8	9.9	13,468

Sources: FDIC, *Annual Report* (1951, 76; 1955, 68; 1964, 102–3).

percent at the inception of insurance to just under 96 percent by 1949. The smallest banks felt this change acutely. Table 3.2 shows that in 1936 35.4 percent of banks had 90–100 percent of their deposits insured. The number of banks enjoying this high level of coverage collapsed to 5.7 percent in 1949. The search for protection by large depositors threatened smaller banks. In the 1950 Senate hearings on deposit insurance, Sydney J. Hughes of the Industrial Bank of Commerce of New York City and member of the Consumer Bankers Association explained that "when a depositor's balance exceeds the $5,000 insured maximum, he shifts the surplus to another bank and becomes one of what must be millions of multiple deposits" (U.S. Senate 1950, 90).

There were good reasons for deposits in excess of the insured maximum to worry bankers, as one recent study suggests. Using a special sample of wealthy households from the 1992 Survey of Consumer Finances, Kennickell, Kwast, and Starr-McCluer (1996) found that while large depositors keep substantial shares of their assets in insured depositories, they often fail to keep them within insurance limits. According to the survey, a sizable 17.3 percent of household deposits were uninsured. Kennickell et al. found that any reduction or restriction in insurance coverage would substantially increase the uninsured deposits of households and increase the likelihood of withdrawals.[6]

In 1950, bills to raise coverage were introduced by Senators John W. Bricker (R-Ohio), Claude D. Pepper (D-Fla.), Charles W. Tobey (R-N.H.), Hugh A. Butler (R-Nebr.), Willian Larger (R-N.D.), and Burnet R. Maybank (D-S.C.), who was chairman of the banking committee. All of these bills contained increases up to $15,000, and Pepper's would have removed the limit altogether.

6. Employing a probit model, Kennickell et al. (1996) found that lowering the deposit insurance ceiling from $100,000 to $75,000 would increase total household uninsured deposits by 29 percent. Smaller effects were found for eliminating separate coverage of existing IRA and Keogh accounts.

In his plea for a rise to $10,000, Senator Butler noted that "from my correspondence, I judge that it is primarily the smaller country banks that are anxious for this change. It seems that under the present system a good many depositors maintain part or all of their funds in the city banks at some distances, perhaps from their homes" (U.S. Senate 1950, 101). Ben Dubois, the secretary of the Independent Bankers Association, made an explicit appeal to protect the small banks, stating that "the Federal Deposit Insurance Corporation has been a powerful instrument in the perpetuation of independent banking. It has put the small bank on a par with the large bank in the eyes of the average depositor" (U.S. Senate 1950, 87–88).

Federal regulators supported the increase but tended to cloak their support in terms of the ideology of guaranteeing continued protection of the small depositor. In the 1950 hearings, there was general support from federal regulators to raise the ceiling to $10,000. The secretary of the treasury, John W. Snyder, and the comptroller of the currency, Preston Delano, favored an increase to $10,000. Delano argued that $10,000 was justified on the grounds that prices had risen, lowering effective coverage, even though he admitted that $5,000 still covered 96 percent of accounts. The chairman of the FDIC, Maple T. Harl, also supported the increase on the grounds that protection of the small depositor required it; but he was also clear that "the preservation of the American banking system. . . . As you very well know, the survival of the dual banking system in large measure depends on Federal deposit insurance" (U.S. Senate 1950, 22–23). Former FDIC chairman Leo Crowley testified that he favored the increase from $5,000 to $10,000 because it would help small savers and the small banks in their home communities.

Larger banks were generally willing to support a rise, but they were less enthusiastic and were more concerned about the fact they subsidized the system. American Bankers Association officials testified in favor of $10,000 coverage but warned that any further increase would endanger the system (U.S. Senate 1950, 66). Frederick A. Potts, president of Philadelphia National Bank and a representative of the Reserve Bankers Association, testified that limited deposit insurance was a sound idea. He warned, however, that a rise in protection to $10,000 would undermine good bank management and stimulate demands for more coverage (U.S. Senate 1950, 80–81). The most striking testimony against the proposal came from one of the founding fathers of the FDIC, Senator Arthur Vandenberg. In a letter, he denounced the proposed rise to $10,000 coverage, arguing that it was imprudent: "There is no general public demand for this increased coverage. It is chiefly requested by banker demand in some quarters for increased competitive advantage in bidding for deposits." He predicted that "if we extend the coverage to $10,000, how long will it be before we confront demands for total coverage? Total coverage would virtually socialize our private banking system. It could involve many of the vices which so often wrecked previous well-meaning adventures in this field" (U.S. Senate 1950, 50–51).

The willingness of larger banks to support an increase in the level of coverage did not arise from any hope to improve their competitive position by insuring more deposits. Their position changed very little in terms of insurance coverage after the 1950 act went into effect. At the very beginning, in 1936, large banks received very little protection, as seen in table 3.3. While the more than 10,000 banks with under $1 million in deposits had 86 percent of their deposits insured and the banks with $1–$5 million in deposits had 74 percent of their deposits protected by the FDIC, the 200 largest banks had only 28 percent of their deposits insured. Coverage for them grew; yet by 1949, coverage was still only 36 percent. What concerned the larger banks was not the fact that they still had large uninsured deposits but that they were assessed on their total, not just their insured, deposits. To cover a much larger fraction of their deposits would have required a huge increase in coverage that would have interested few smaller banks.

Furthermore, a big increase in coverage would have decreased the ratio of the insurance fund to insured deposits, depicted in figure 3.3, perhaps requiring an increase in assessments. The insurance fund had grown thanks to the virtual disappearance of bank failures. The fund easily repaid the initial contributions ($289 million) of the Treasury and the Federal Reserve Banks (FDIC 1984, 58–60). There was concern that the assessment rate was too high, not too low, cutting into bank profits. Although banks' net earnings rose steadily during the 1940s, net profits had declined from $906 million in 1945 to $831 million in 1949. At the same time, the FDIC assessment climbed from $86 million to $109 million, following the rise in total deposits (FDIC, *Annual Report* 1949, 40). Cutting the assessment could easily buoy profits.

Not surprisingly, the larger banks lobbied Congress for a reduction in assessments while they grumbled about the increase in coverage. The smaller banks returned the favor. The Independent Bankers Association was set against any reduction in the premium and protested that big banks had no right to complain as they had obtained the interest prohibition on demand deposits under the New Deal. The end result was a compromise: an increase in coverage and a change in assessment that satisfied both parties and ensured swift passage of the 1950 act. Figure 3.2 shows that the new level of $10,000 coverage protected an additional 5 percent of deposits. More important for banks concerned about protection, the shares of fully protected accounts, shown in table 3.2, returned to their earlier level. The more exposed banks that had fallen from their high level, 90–100 percent, of protected deposits, regained ground lost in the previous decade.

The larger banks also benefited. The basic assessment rate was not reduced because the FDIC feared this might set the stage for a depletion of the fund. Instead, it was lowered by a rebate system. The FDIC deducted operating expenses and insurance losses from gross assessment income then shared the remainder, returning 60 percent to the banks and keeping 40 percent. As seen in figure 3.5, this rule produced some fluctuation in the assessment rate around

Table 3.3 **Insurance Coverage by Size of Bank**

	Under $1 million	$1–$5 million	$5–$25 million	Over $25 million	Over $100 million	Over $1 billion
1936						
Number of banks	10,014	3,231	694	209		
Deposits insured (%)	86.1	74.2	58.0	28.4		
Accounts insured (%)	99.4	98.8	98.4	97.4		
1949						
Number of banks	2,554	7,551	2,812	501	213	
Deposits insured (%)	81.3	73.6	63.7	52.7	36.1	
Accounts insured (%)	97.6	97.1	96.4	95.5	94.4	
1951						
Number of banks	2,349	7,463	3,035	564	241	
Deposits insured (%)	89.3	81.9	70.9	60.0	41.3	
Accounts insured (%)	99.1	99.0	98.6	98.4	98.3	
1964						
Number of banks	102	7,082	5,124	1,030	760	39
Deposits insured (%)	85.0	79.6	71.3	63.2	55.4	36.9
Accounts insured (%)	98.6	98.3	98.1	96.9	96.9	96.4
1966						
Number of banks	672	6,101	5,499	1,075	372	38
Deposits insured (%)	73.2	64.9	56.9	44.9	33.0	21.4
Accounts insured (%)	99.0	97.9	98.2	97.3	97.0	97.3
1968						
Number of banks	470	5,268	6,143	1,359	429	45
Deposits insured (%)	76.7	80.1	68.6	59.0	42.6	28.0
Accounts insured (%)	99.7	99.2	99.2	98.9	98.4	98.3

1970						
Number of banks	358	4,562	6,651	1,610	468	48
Deposits insured (%)	80.0	79.2	73.0	61.3	48.1	30.8
Accounts insured (%)	99.5	99.4	99.4	99.0	98.9	98.8
1972						
Number of banks	213	3,637	7,151	2,154	585	63
Deposits insured (%)	78.6	76.8	70.8	59.9	44.0	29.4
Accounts insured (%)	99.5	99.7	99.0	99.0	98.3	98.4
1975						
Number of banks	137	2,568	7,878	3,075	779	79
Deposits insured (%)	83.1	82.0	79.8	69.4	53.7	28.6
Accounts insured (%)	98.5	99.7	99.6	99.4	99.3	99.0
1980						
Number of banks	87	1,064	7,177	4,881	1,232	140
Deposits insured (%)						
At $40,000	60.0	77.8	77.6	70.2	54.0	34.1
At $100,000	80.0	88.9	86.7	79.8	63.1	41.5
Accounts insured (%)						
At $40,000	99.2	99.4	99.5	99.4	99.2	98.9
At $100,000	99.7	99.4	99.7	99.7	99.4	99.4

Sources: FDIC, *Annual Reports* (various years) and *Report of Deposits* (various years).

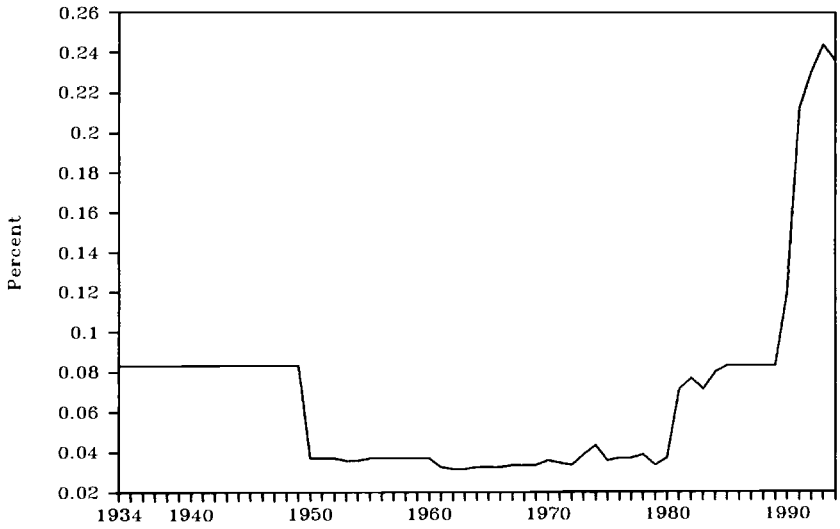

Fig. 3.5 FDIC effective assessment rate, 1934–94
Sources: See fig. 3.1.

0.035 and 0.037 percent of total deposits, far below the original 0.0833 percent. Total assessments in 1951 reached $124 million, but $70 million was rebated to the banks (FDIC, *Annual Report* 1951). Net profits for 1951 were $908 million, but they would have stood at only $838 million without this change.

The 1950 act was a well-crafted compromise. Insurance coverage of all deposits was on the rise. Larger banks, which had initially opposed deposit insurance, now "signed on" to support insurance thanks to the reduction in the effective assessment rate. The 1950 increase in insurance coverage was the last time that commercial banks appear to have been the primary movers behind insurance legislation. While commercial and mutual savings banks covered by the FDIC saw nominal coverage rise and the percentage of funds insured increase, greater competition and inflation put more pressure on other financial intermediaries who clamored more loudly for higher coverage.

3.3 Evaluating the Rise in Coverage for Commercial Banks

Legislation raising the level of coverage is only one factor leading to a higher level of protection. To explain the growing percentage of deposits in FDIC-insured institutions that were covered by FDIC insurance, shown in figure 3.2, four factors were considered: (1) If the real maximum deposit insurance coverage per depositor is increased, the percentage of covered deposits should rise. (2) Failures, measured either as the number of failing banks or the

percentage of deposits in failing banks, might induce depositors to shift their uninsured deposits to new accounts or banks for complete coverage. (3) A rapid growth in deposits might decrease coverage if individuals' balances quickly rise above insured levels. (4) If individuals open new accounts to ensure coverage of their deposits, the increase in the number of accounts should raise the percentage of deposits covered.[7]

Data on the number of accounts were difficult to obtain, as this information was only collected by the FDIC in occasional special reports until 1981. This is displayed in table 3.4. Beginning in 1990, some data on commercial banks' accounts were collected by the FDIC.[8] Accounts of all banks appear to have grown at a very rapid rate between 1934 and the mid-1970s. The average rate of growth exceeded the real rate of growth of the economy. Starting in the late 1970s and certainly in the early 1980s, this growth slows down, with some years of decline. The stagnation between 1981 and 1990 may be attributable to the high level of coverage provided by the jump from $40,000 to $100,000 insurance and the increase in alternatives to bank deposits, such as money market mutual funds. A continuous time series of accounts for the period 1934–81 was constructed by regressing the number of accounts on time and time-squared to fill in the missing observations, but no attempt was made to fill the gap between 1981 and 1990 when the trend growth abruptly changed.

Unit root tests and an examination of the partial autocorrelations indicated that the percentage of insured deposits, the real insurance per depositor, and the measures of bank failures needed first-differencing for stationarity. It was difficult to judge whether the growth of deposits also required first-differencing, but the results were similar so only the first-differenced results were reported in table 3.5. Regressions (1) and (2) are for the whole period, 1934–94, and exclude the variable for accounts. As hypothesized, an increase in the real value of maximum deposit insurance coverage per depositor raises the percentage of covered deposits. A rise in real coverage of $10,000 would drive the percentage of insured deposits up by about 6 percent, suggesting that this factor alone can only account for a modest portion of the increase. Also, as conjectured, an increase in deposits tends to lower the percentage of covered deposits. An acceleration in deposit growth of 1 percent pushed down coverage approximately 1.7 percent. The most notable example of this effect was during World War II, when the rapid growth of deposits outweighed other influences and temporarily halted the upward trend in coverage. Neither variable for bank failures helps to explain the rising coverage of deposits, probably because there is little variation in failures. For depositors, it may have been a minor consideration given the FDIC's practice of frequently providing full insurance to depositors whose accounts were over the limit (FDIC 1984).

7. The data were obtained from the FDIC's annual reports. The consumer price index was used to obtain the real value of deposit insurance.

8. The 1990–96 data were obtained through the FDIC's website (R. Drozdowski, correspondence with author, rodrozdowski@fdic.gov).

Table 3.4 **Number, Growth, and Insurance of Bank Accounts, 1934–96**

	All Insured Banks					All Commercial Banks				
	All Accounts		Fully Insured Accounts			All Accounts		Fully Insured Accounts		
Year	Number (millions) (1)	Annual Growth Rate (%) (2)	Number (millions) (3)	Annual Growth Rate (%) (4)	Percentage of Accounts Fully Insured (3)/(1) (5)	Number (millions) (6)	Annual Growth Rate (%) (7)	Number (millions) (8)	Annual Growth Rate (%) (9)	Percentage of Accounts Fully Insured (8)/(6) (10)
1934	51.2		50.4		98.4					
1936	58.8	7.1	57.8	7.1	98.4					
1938	62.7	3.3	61.7	3.3	98.3					
1941	69.5	3.5	68.2	3.4	98.1					
1945	92.3	7.4	89.0	6.9	96.4					
1949	104.0	3.0	99.6	2.8	95.7					
1951	111.6	2.4	109.9	3.4	98.5	98.2				
1955	129.7	3.8	127.4	3.8	98.2	114.6	3.9			
1964	174.8	3.4	169.8	3.2	97.2	155.0	3.4			
1966	193.0	5.1	191.1	6.1	99.0	173.0	5.7			
1968	212.0	4.8	208.8	4.5	98.5	191.0	5.1			
1969					99.1					

1970	231.7	4.5	229.4	4.8	99.0	209.3	4.7			
1971					99.0					
1972	244.5	2.7	241.3	2.6	98.7	220.2	2.6			
1975	302.5	7.4				276.5	7.9			
1980	322.9	1.3				289.9	1.0			
1981	323.4	0.1				290.0	0.0			
1990						277.4	−0.5			
1991						287.9	1.9			
1992					99.2	289.7	0.3	287.5		99.2
1993					99.2	285.8	−0.7	283.6	−0.7	99.2
1994					99.2	287.1	0.2	284.7	0.2	99.2
1995					99.2	303.8	2.9	301.3	2.9	99.2
1996					99.1	306.2	0.4	303.5	0.4	99.1

Sources: 1934–81, FDIC, *Annual Reports* (various years) and *Reports of Deposits* (various years); 1990–96, R. Drozdowski, correspondence with author, rodrozdowski @fdic.gov.

Table 3.5 **Determinants of FDIC Insurance Coverage of Commercial Bank Deposits**

	1934–94		1934–81	
Variable	(1)	(2)	(3)	(4)
Intercept	0.481	0.486	0.338	0.441
	(2.06)	(2.10)	(0.44)	(0.57)
Real value of insurance per depositor	0.566	0.571	0.598	0.602
	(3.51)	(3.59)	(3.371)	(3.38)
Percentage of deposits in failing banks	0.188		−346.486	
	(0.00)		(−0.87)	
Number of failing banks		0.014		0.020
		(1.12)		(0.67)
Growth in bank deposits	−16.518	−16.507	−16.046	−16.087
	(−4.01)	(−4.06)	(−3.53)	(−3.53)
Growth in number of bank accounts			0.016	−0.029
			(0.14)	(−0.02)
Adjusted R^2	0.302	0.318	0.380	0.315
F-statistic	9.381	10.013	6.300	6.175
Durbin-Watson statistic	2.119	2.138	2.134	2.178

Note: Numbers in parentheses are t-statistics.

The constructed time series on number of accounts was used in regressions (3) and (4) for the years 1934–81. The variable does not help explain the behavior of the dependent variable. However, this should not be taken as evidence that account-creating activity of depositors had no effect on coverage. The correlation between the number of accounts and the percentage of covered deposits from 1934 to 1981 is high, 0.93, reflecting a common trend. In the regression, the percentage of insured deposits is first-differenced, but the application of this procedure to accounts is first-differencing a variable, many of whose observations are fitted to the trend, thus rendering it relatively weak in the regression. While the quality of the data on accounts does not permit very robust tests of the effects of individual account-creating activity, qualitative evidence implicates account creation as an important factor from the beginning of the FDIC until at least the mid-1970s.

Although account creation may have been more important, the regressions only identify the FDIC's increased coverage per account in 1950, 1966, 1969, 1974, and 1980 as a key factor. The first increase in real coverage in 1950 was the product of lobbying by unhappy sectors of commercial banking. Afterward, it was not commercial banks but rather their rivals that pushed for expanded coverage.

3.4 Raising Deposit Insurance in 1966 and 1969: The Role of the S&Ls

Savings and loan associations (S&Ls) originally had little interest in deposit insurance. They were very cautious about advocating any guarantee system

and probably would never have supported one if commercial banks had not obtained the FDIC (Ewalt 1962). S&Ls were given the opportunity to obtain federal deposit insurance at the same time as Congress established the FDIC. The National Housing Act of 1934 established the Federal Savings and Loan Insurance Corporation (FSLIC), almost as an afterthought, to provide a full set of institutions to S&Ls to parallel those for banks.[9] Many thrifts had found it advantageous to join the Federal Home Loan Bank (FHLB) System. The purchase of shares in one of the 12 regional Federal Home Loan Banks gave them access to FHLB credit facilities but did not impose any additional regulations on them (Grossman 1992). Many fewer took out charters to become federal mutual savings and loan associations. Supervised by the Federal Home Loan Bank Board (FHLBB) and narrowly constrained in lending, a federal charter appeared relatively unattractive to most S&Ls. Although federally chartered S&Ls were required to join the FSLIC, members of the FHLB system were not so obliged. This regulation contrasted with insurance provisions for banks, under which all Federal Reserve members—national banks and state banks—were required to obtain FDIC insurance. Thus, by 1940, half of all S&Ls had joined a Federal Home Loan Bank, but only 20 percent took out federal charters. Unlike the banks, for which deposit insurance was almost universal from the outset, only 30 percent of the S&Ls, with 50 percent of assets (see fig. 3.6), had obtained FSLIC insurance by 1940.

The initial responses of banks and S&Ls to deposit insurance reflected their different experiences during the Great Depression and the costs and benefits of insurance they faced. Both industries suffered severe withdrawals of deposits between 1929 and 1933. Commercial banks lost 17 percent of their deposits and S&Ls 28 percent. S&Ls were forced to endure a larger contraction, but it was more orderly. Between 1929 and the end of 1933, the number of banks fell from 24,504 to 14,440; yet the number of S&Ls only declined from 12,342 to 10,596. Unlike the banks, which had to wait for state and then federal bank holidays to refuse customers payment, the S&Ls had the right to put depositors "on notice" and refuse to meet demands for withdrawals until loan repayments came in. Thus, S&Ls had a device to ward off the runs that devastated banks and saw less advantage to insurance that required acceptance of more federal regulation. In addition, FSLIC insurance came at a higher price. The FSLIC premium was 0.125 percent of deposits, whereas FDIC insurance was 0.0833 percent. The FSLIC rate was only reduced to the FDIC level in 1951 (Grossman 1992).

After World War II, the thrifts were one of the fastest growing groups of financial intermediaries. The New Deal conferred a variety of advantages on thrifts, whose share of all financial intermediaries assets rose from 6 percent

9. In 1932, Congress passed the Federal Home Loan Bank Act, which created the Federal Home Loan Banks and Federal Home Loan Bank Board, which paralleled the Federal Reserve System. The Home Owners Loan Act of 1933 gave the board authority to charter a new class of intermediary, federal mutual S&Ls, thus creating for the thrift industry a dual federal-state regulatory system that paralleled the dual banking system.

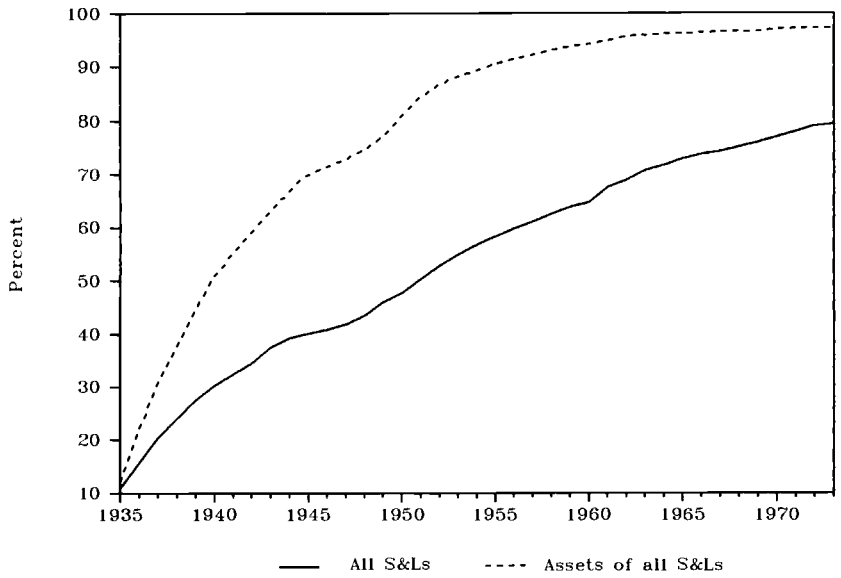

Fig. 3.6 Membership in the FSLIC, 1935–73
Sources: Federal Home Loan Bank Board (various years).

in 1950 to 13 percent in 1970. Although imperfect substitutes for commercial banks' demand deposits, which paid no interest, S&L interest-bearing passbooks were attractive to small savers and competed with banks' time deposits. By 1950, 50 percent of S&Ls, with 80 percent of all assets, had joined the system (see fig. 3.6). However, unlike banks, FSLIC-insured institutions had almost all their accounts insured. In 1941, 86 percent of all savings capital (deposits) in S&Ls were insured, rising to 94 percent by 1947. This high level of insurance is attributable to the predominance of small savers with balances averaging well below $1,000 (FHLBB 1947). This nearly complete coverage helps to explain why the insured S&Ls did not participate in the 1950 deposit insurance debate. Ten years later, conditions had changed dramatically. When the flow of savings deposits surging into S&Ls came to an abrupt halt in the credit crunch of 1966, S&Ls became interested in deposit insurance. The similarity of coverage among thrifts assured a fairly uniform view of the desirability of increased insurance in contrast to the wide divergence of opinion among banks.

Neither banks nor S&Ls saw the erosion in the real value of deposit insurance per depositor as a threat. The decline in real deposit insurance shown in figure 3.1 was slight compared to what happened before the 1950 increase. Furthermore, total coverage of deposits, shown in figure 3.2, was fairly stable. However, there was a significant drop in the number of fully insured accounts that especially affected small banks. Although coverage dropped for most

classes of banks, the three smallest categories of banks in table 3.3 show very large declines in coverage of deposits between 1951 and 1966. Inflation and the shift between groups make comparisons between years difficult, yet the danger posed by this decline in coverage is clear in table 3.2. Here, the percentage of commercial banks with 90–100 percent of their deposits insured by the FDIC dropped from 23.2 percent in 1951 to 9.9 percent in 1964. Thus, a small but significant fraction of the banking industry was feeling increasingly exposed.

By the mid-1960s, banks and thrifts were also worried that interest rate restrictions reduced their ability to attract deposits. While banks had been subject to Regulation Q interest rate ceilings since 1935, FHLB member thrifts were constrained by FHLBB rules, which imposed a variety of restrictions on the "dividends" paid on savings account (FHLBB 1965). In 1965, the limit on the interest charged on banks' time deposits stood at 5.5 percent, yet very few S&Ls could offer rates in excess of 5 percent. In this year, market rates moved above the ceilings, and both banks and thrifts began to lose funds.[10] Thrifts experienced a 4 percent fall in funds available for new investment, followed by a 28 percent fall in 1966, when savings inflows and loan repayments fell off. The big demand for advances from the FHLBB, led the board to ration lending to S&Ls, which then slashed mortgage lending by one-third. In response, the board adopted a more flexible dividend policy; and by the end of 1966, over 20 percent of S&L deposits were paying 5.25 percent (FHLBB 1966).

Interest rate regulations needed some unification to preserve the system. The Treasury and the FDIC proposed that the FHLBB be given more supervisory authority and power to set maximum interest and dividend rates. Many S&Ls were not enthusiastic about the prospect of new FHLBB regulation, but they were willing to countenance more control if it would ensure that deposit inflows resumed. Of considerable concern to the S&Ls was that savers were showing great reluctance to hold deposits in excess of the $10,000 level of coverage. One board study showed that there was an "artificial bulge" in the number of S&L accounts at the $10,000 level, indicating that people were limiting their deposits (*Congressional Record* 1966, 112, pt. 15: 20351–52).

Efforts to raise insurance predated the 1966 credit crunch, but demands had become more urgent. Hearings in Congress were held in 1963 to consider a rise in insurance coverage to $25,000 for banks and S&Ls. Over the next three years, congressmen wrangled over the level of coverage and whether the FHLBB should be granted additional regulatory powers. In congressional hearings, there was no protest by the FHLBB, the Board of Governors of the Federal Reserve, or the FDIC about the increase in insurance. They were much more concerned about the effects of changing supervisory practices. Rep.

10. Some aggressive thrifts employed brokers to advertise and collect funds for them (Marvell 1969, 133–36).

Wright Patman (D-Tex.), chairman of the House Banking and Currency Committee, vigorously argued for a simple increase in coverage. He brushed aside arguments that individuals could easily secure coverage by creating multiple accounts and claimed that the current $10,000 maximum coverage encouraged everyone from businessmen to widows to firemens' funds to put their money in out-of-town banks once the ceiling was reached in local banks. Patman slammed the big banks for pressuring their correspondent banks to block an increase in insurance, portraying them as predators anxious to drive the S&Ls out of business (*Congressional Record* 1966, 112, pt. 13:20354).

Congress navigated through these complex, competing interests in writing the Interest Rate Control Act of 1966. The act extended Regulation Q to thrifts but gave them a favorable differential. Thrifts were allowed to pay 3/4 of 1 percent in interest more than banks, in the hope of channeling funds back to the mortgage market. Congress also gave more supervisory authority to the FHLBB. The legislators settled on increasing deposit insurance for persons holding accounts in banks and thrifts to $15,000, a relatively low number as far as many thrifts were concerned. Following the 1950 deal, the 1966 package provided a sweetener for the larger banks in the form of an increase in the assessment rebate to 66 2/3 percent. Although interest rate flexibility was clearly of greatest concern to intermediaries, the rise in insurance did help. No data exist on insurance coverage among thrifts, but the level of insured deposits rose for all sizes of banks in table 3.3.

These adjustments to the New Deal system did little to alleviate the underlying problems. Once again in 1969–70, tighter monetary policy pushed market rates above the Regulation Q ceilings. S&Ls saw virtually no net inflow of new funds, while commercial banks lost funds, in contrast to the 1966 experience when S&Ls were in greater distress. S&Ls were in better shape thanks to the favorable differential in interest rate ceilings. Still, there were gaps in the interest rate controls. A substantial number of mutual savings banks in the Northeast that were not members of the Federal Reserve or the FDIC avoided the controls, as did non-FSLIC-member thrifts. These institutions' higher rates were drawing funds away. Congress responded to the complaints of controlled banks and thrifts by extending Federal authorities' control of all institutions in states where over 20 percent of savings were held by non–federally regulated institutions (FHLBB 1969).

With no debate, Congress also raised deposit insurance coverage for banks and thrifts on 23 December 1969, from $15,000 to $20,000.[11] This hike halted the new decline in fully insured accounts depicted in figure 3.4. The real value of coverage was now higher than it had ever been (fig. 3.1), reaching approxi-

11. Initially, the FDIC and FSLIC relied on state laws to define what constituted different deposit ownership, allowing people in some states to set up multiple accounts within banks and attain coverage many times the limit intended for individuals. In 1968, the FDIC and FSLIC joined together to produce a consistent set of rules on how to treat multiple accounts, placing some limits on protection (Marvell 1969, 106–11).

mately $7,000 in 1934 dollars. The percentage of insured accounts and deposits of FDIC institutions were at all-time highs of 99.1 and 63.1 percent (fig. 3.2), with institutions of all sizes (table 3.3) benefiting from the increase. By 1969 there were only 208 noninsured commercial banks and nondeposit trust companies and 166 noninsured mutual savings banks, virtually all of the latter being located in Massachusetts and covered by its deposit insurance system. (FDIC, *Annual Report* 1969). In the thrift industry, over 70 percent of the S&Ls, with over 90 percent of assets, were covered by 1969. Deposit insurance coverage in the 1960s had grown considerably for banks and thrifts, well beyond the initial intentions of the New Deal.

3.5 The Spread of Insurance

Greater interest rate volatility and increased competition in the 1960s created difficulties for all financial intermediaries. Facing these new challenges, credit unions, broker-dealers, pension funds, and insurance companies sought the benefits of government-provided insurance for their liabilities. As they held relatively modest or no funds on deposit and no claim could be made that insurance would serve to prevent a panic, the history of these intermediaries demonstrates how, even in the absence of concern about macroeconomic instability, new classes of intermediaries were successful in lobbying Congress to expand insurance far beyond its New Deal boundaries.

Designed to assist the small saver, credit unions grew rapidly in the postwar period. The Federal Credit Union Act of 1934 made federal credit union charters available, as an alternative to state charters, and they soon dominated the industry. The number of all credit unions—federal and state—more than doubled from 10,571 in 1950 to 23,656 in 1970, with deposits climbing from $880 million to $15.5 billion.[12] Like the S&Ls, credit unions were initially reluctant to press Congress to create institutions for them. But competition from federally assisted and protected banks and thrifts coupled with increased financial difficulties led the credit unions to aspire to parity with banks and thrifts. Between 1934 and 1969, over 5,600 federal credit unions were liquidated.[13] Failures were increasing, and in 1969, 274 federal credit unions were closed, 35 of them at a total loss of $95,000 to their members. Some assistance for failing firms came from credit union leagues, which bailed out 280 other credit unions; but these private reserve funds were very small. Failures induced Massachusetts in 1961, and later Wisconsin and Rhode Island, to create state funds; but they were restricted to state-chartered credit unions, a small fraction of the industry (*Congressional Record* 1970, 116, pt. 23:30734–47).

Prompted by the credit crunches of 1966 and 1969, credit unions pressed

12. However, they were small by comparison with the 5,669 S&Ls, which held $146 billion in deposits, and the 14,187 banks, which held $505 billion in deposits in 1970.

13. Adequate data exist only for federally regulated credit unions.

for lending and insurance institutions to parallel the Federal Reserve, the FHLB system, the FDIC, and the FSLIC. In 1970, Congress obliged them with the Federal Credit Union Act, creating the National Credit Union Administration (NCUA), an analogue to the Federal Reserve and FHLBB. While this bill was making its way through Congress, an amendment was made to create a system of insurance for credit unions.[14] The amendment was initially sponsored by several senators, and there was no apparent opposition from either banks or thrifts. A simple rationale was given by one sponsor, Sen. Wallace F. Bennett (R-Utah), who pointed out that federally chartered credit unions were the only depository institutions not covered by a federal insurance program. Bennett admitted that the absence of insurance posed no threat to the stability of the financial system and that the losses of credit unions had been small. Insurance coverage for credit unions was almost a matter of pure competitive equity.

Established in 1970, the National Credit Union Share Insurance Fund (NCUSIF) gave the credit unions an insurance system. At the same coverage per depositor of $20,000 as the FDIC and the FSLIC, 22 million credit union members, who had an average of $650 on deposit, gained ample protection. Like the FDIC and the FSLIC, the NCUSIF was mandatory for federally chartered credit unions and optional for state institutions. Administered by the NCUA, the fund charged an annual premium of 0.0833 on the aggregate of members' accounts and creditor obligations. Adoption of federal insurance was not initially universal. Many state-chartered credit unions did not want to accept the federal regulations necessary to obtain NCUSIF insurance. At the behest of these institutions, more states created their own insurance funds. In 1981, when California established the California Credit Union Share Guaranty Corporation, there were 16 state funds, covering 3,150 credit unions with $12 billion in deposits (NCUA 1982). However, in the wake of widespread failures of banks, S&Ls, and credit unions in the 1980s, there was a flight to the NCUSIF, which afforded greater protection. In 1981, NCUSIF-insured credit unions held 82 percent of all credit union shares. By 1985 this figure jumped to 92 percent, rising to a nearly universal 99 percent in 1995 with the demise of the state insurance plans (NCUA 1989, 1995).

In the same year that credit unions secured federal protection for their depositors, customers of broker-dealers received guarantees for their funds on deposit—protection that the original New Deal had never countenanced. The Securities Exchange Act of 1934 tried to protect customers from brokers' dishonesty but not their incompetence. Protection from incompetence was the responsibility of the relevant self-regulatory organization—the New York Stock Exchange (NYSE) or the National Association of Securities Dealers (NASD). These organizations could intervene and transfer customer accounts

14. The legislation enjoyed wide support among credit unions: when the Credit Union National Association surveyed its membership, 92 percent supported the bill.

from a weak to a strong member firm, liquidate failing members, or merge weak firms with stronger ones (Teweles and Bradley 1987).

The rising volume of activity on the exchanges during the 1960s bull market put an enormous strain on brokerages' ability to handle the complex paperwork that accompanied every transaction. The number of "fails" or failures to deliver security certificates or complete transactions produced a "back office" crisis. Many firms were swamped by business and could not manage their operations well. Firms used customers' free credit balances for any business purpose, including trading or underwriting, putting these funds on deposit at risk. When Ira Haupt and Company failed in 1963, as a result of a huge default on commodity contracts, the NYSE stepped in and assisted with the firm's liquidation (Teweles and Bradley 1987). Anticipating more problems, the NYSE created a special trust fund of $10 million and a $15 million line of credit in 1964 to assist troubled members and protect customers (Sowards and Mofsky 1971). The American Stock Exchange (AMEX) followed the NYSE's lead, and by 1968 all the exchanges had established special funds (Sobel 1972; U.S. Senate 1970).

When the bull market broke in 1969 and prices and volume fell, many brokerages held large inventories. Falling revenues and costly inventory losses led 129 NYSE member firms to be liquidated, merged, or acquired, and another 70 required some assistance from the exchange. The special fund ran out of funds in the summer of 1970 and was unable to pay out customers' accounts in failed brokerages. In this emergency, the NYSE transferred $30 million from its building fund to its special fund. However, it was clear that if a large brokerage went under, the resources of the special fund would be inadequate (Sobel 1975). The free credit balances—in effect, the funds customers held on deposit with broker-dealer firms—stood at $3 billion in 1970 for NYSE member firms. In addition, broker-dealers had custody of $50 billion in customer securities (U.S. Senate 1970). Although there were no runs on brokerages, the exchanges appeared unable to provide sufficient protection on their own. Insurance, equivalent to FDIC and the FSLIC, was viewed as a reasonable solution by the securities industry and the public (Seligman 1982). The House report on insurance legislation was explicit: "Failures may lead to loss of customers' funds and securities with an inevitable weakening of confidence in the U.S. securities markets. Such lessened confidence has an effect on the entire economy. . . . The need is similar in many respects to that which prompted the establishment of the Federal Deposit Insurance Corporation and the Federal Savings and Loan Insurance Corporation" (U.S. House 1970, 2). This misreading of history identified macroeconomic stability as the prime reason for insurance, when special interests in the financial industry always had the keenest interest in the establishment of insurance funds.

A proposal was put before Congress to establish a Securities Investor Protection Corporation (SIPC) to act as an FDIC or FSLIC for the securities industry. The bill had the support of the Securities and Exchange Commission (SEC),

the Department of the Treasury, and Congress' Joint Securities Industry Task Force. An old New Dealer, Emanuel Celler (D-N.Y.) questioned the intention of insuring all firms registered with the SEC without any inspection or further regulation. These qualms were repeated by other congressmen; but like the bill for credit unions, the idea of insuring customer accounts had wide support in Congress (*Congressional Record* 1970, 116, pt. 29:39345–70).

Congress passed the Securities Investor Protection Act (SIPA) in December 1970. This act created the SIPC, which was charged to administer a fund providing protection up to a maximum of $50,000 for both cash and securities, with a limit of $20,000 for cash. This insurance was mandatory for broker-dealers registered with the SEC, making coverage nearly universal from the outset. All SIPC members were assessed 3/16 of 1 percent per year of gross revenues from the securities business for the SIPC fund (Matthews 1994). If needed, the corporation could borrow up to $1 billion from the U.S. Treasury with the approval of the SEC (Seligman 1982).[15] Under SEC oversight, the SIPC has no authority to examine or inspect its members. Instead, the securities exchanges and the NASD are the examining authorities for their members, and the SIPA gave the SEC additional authority to adopt rules relating to the acceptance, custody, and use of customers' securities, deposits, and credit balances.[16]

The examples of insurance for credit unions and broker-dealers reflect the low tolerance for even small losses to the customers of financial intermediaries and the drive for equal competitive advantage. Although concern about the effects of failures on the stability of the financial system was often discussed, it motivated few participants in the legislative process. The spread of insurance to nondepository intermediaries, where a financial panic or run is not a concern, highlights this fact. Both pension funds and insurance companies responded to the favorable political circumstances to demand insurance. Underfunding of private defined-benefit pension plans left workers without pensions when their employers went bankrupt. The Pension Benefit Guaranty Corporation (PBGC) was established by Title IV of the Employee Retirement Income Security Act in 1974 to protect retirement incomes from defined-benefit pension plans. Financed by premiums collected from companies, the PBGC's coverage of pensions reached over one-third of the workforce by 1995 (PBGC 1995). While insurance of pensions became a federal responsibility, the guarantee of life insurance became a state responsibility as the federal government had never ventured to regulate life insurance. Before 1970, only New York had a guarantee system to protect policyholders. A rise in failures of life

15. Some brokerage firms carry additional commercial insurance on accounts exceeding SIPC coverage.

16. Before this act, there were no SEC or exchange rules regarding the use of customers' credit balances or other balances in possession of broker-dealers. After 1973, the SEC limited the use of customers' funds to finance margin loans to other customers and other customer-related activities (Matthews 1994, 55–56).

insurance companies prompted the National Association of Insurance Commissioners to recommend a model guarantee system to state legislatures in 1970. Although the plans vary from state to state, funds guarantee insurance in all 50 states (Brewer and Mondschean 1993).

By the early 1970s, financial pressures had pushed the insurance of liabilities beyond the banking system to the securities, pension, and insurance industries. There was no anticipation that the FDIC, FSLIC, NCUSIF, SIPC, PBGC, or state insurance systems could fall into trouble. In fact, the spread of insurance helped to prompt new demands from depositories for increased protection.

3.6 The 1974 Increase in Insurance

In 1973, Fernand St. Germain (D-R.I.) offered a bill to increase deposit insurance from $20,000 to $50,000 and provide 100 percent insurance for all government deposits, amending the FDIC act, the National Housing Act, and the Federal Credit Union Act. Where did this demand for more protection come from? Once again, there was no cry by the public for increased protection. As seen in figure 3.1, inflation had reduced the real value of insurance after the 1969 increase, but a $50,000 increase would have been a huge increase in real coverage. Total FDIC coverage of deposits in figure 3.2 had sagged a bit, but it was slight for all sizes of banks in table 3.3.

The interest group at work behind this new proposal was the thrift industry, although some banks also were eager for higher levels of coverage. An appeal was made to raise coverage to $50,000 to achieve parity with the securities industry—even though brokerage accounts only had insurance of $20,000 for cash. Frank Willie, chairman of the FDIC, took the view of the small banks in testifying that more insurance was required because "depositors seem to believe that their money is safest in the largest institutions. . . . A depositor is more likely to put funds exceeding the insured limit in a large commercial bank than a small one" (U.S. House 1973, 14). In addition, he pointed out that more insurance would reduce the flight of funds from depository institutions to nondeposit institutions and markets.

The thrifts appeared to be especially eager to attract state and local deposits and were relentless in their congressional testimony about the need for 100 percent insurance of government deposits (U.S. House 1973). The representative of the U.S. Savings and Loan League described the cumbersome process of depositing county or state funds into multiple accounts, none exceeding the $20,000 limit, to ensure full protection. In addition, many states required that bonds be used to collateralize deposits, with requirements varying from one locality to the next. Donald P. Lindsay of the National League of Insured Savings Associations described the task of the King County treasurer in Washington State, who kept 552 S&L passbook accounts to ensure that county funds were fully protected. He also gave the example of a city treasurer in Washing-

ton State who mistakenly calculated the FSLIC coverage within one S&L and lost funds. The National Association of Mutual Savings Banks supported 100 percent insurance of government deposits, hoping for more business (U.S. House 1973). The vice president of the Credit Union National Association, William D. Heier, supported the St. Germain bill. Since the Federal Credit Union Act prohibited federal credit unions from receiving funds from state and local governments, he proposed an amendment to allow credit unions to receive such funds.

While Willie favored higher individual coverage, he resisted full coverage for government deposits. The chairman of the FDIC pointed out that public depositors' losses had been very small and they had recovered 99 percent of funds from failed banks. He was concerned that this innovation would imperil the insurance fund. An increase in coverage for all depositors to $50,000 would have caused the ratio of the insurance fund to insured deposits to fall from 1.28 to 1.13 percent. Willie did not find this alarming, except when coupled with 100 percent insurance for public units. The full coverage for public units would have driven the coverage of the insurance fund to 1.04 percent. At such a level, the fund might easily be exhausted if large banks continued to fail. In contrast, Thomas R. Bomar, head of the FHLBB, was more sanguine and fully supported the position of the thrift industry, testifying that the FSLIC fund would not be put at risk by 100 percent insurance of government deposits (U.S. House 1973).

In spite of the growing demands from many parts of the financial industry for more and more insurance, some sectors resisted. One official of the American Bankers Association, H. Phelps Brooks, Jr., president of Peoples National Bank of Chester, South Carolina, made their case: "Full insurance coverage of public accounts will open the door to pressure for 100 percent insurance of all accounts. Account holders with quasi-public responsibility could well ask why their savings or checking accounts above $20,000 are any less important than Government funds. . . . When the county sewer district promptly receives 100 percent of its deposits upon closing of the institution, the officials at the local private hospital will certainly feel entitled to special consideration. Then other depositories with large accounts would not understand why their accounts are not fully covered." Brooks concluded that 100 percent coverage would have detrimental effects on the sound management of depository institutions (U.S. House 1973, 114).

Faced with these strongly held conflicting positions, Congress passed compromise legislation in 1974. Insurance of deposits for individuals and businesses was lifted to $40,000, while the government deposit guarantee was hiked to $100,000. This legislation applied to commercial banks, mutual savings banks, and thrifts. SIPC protection was raised to $100,000 in cash and securities, with a $40,000 maximum for cash. The result was a dramatic rise in real protection as seen in the data for the FDIC. The real value of insurance rose in figure 3.1, as did the total coverage of deposits in figure 3.2. All sizes

of banks, except the very largest, as seen in table 3.2, achieved much higher rates of protection for their deposits and accounts. Five years of legislation, beginning in 1970, had spread insurance to institutions beyond the banking system and dramatically raised the level of insurance. Until the S&L crisis broke, a further increase in insurance appeared unlikely.

3.7 $100,000 Insurance and "Too Big To Fail"

The collapse of the S&L industry has been extensively chronicled (Barth 1991; Kane 1989; White 1991). By the end of the 1970s, the income and net worth of the thrift industry was plummeting. Measured by book value, the net worth of the thrift industry fell from 5.5 to 0.5 percent of assets between 1977 and 1982, but any market value method showed the industry as whole to be insolvent by about $100 billion. The FSLIC possessed only $6.5 billion of reserves and could have paid off only a fraction of the deposits of insolvent thrifts. The housing industry did not want massive S&L closures, and the Reagan administration had no desire to see a doubling of the federal deficit. A militant S&L lobby pressured the FSLIC into a policy of forbearance—putting off any serious attempt to discipline or close thrifts. With generous PAC money, the thrifts also helped to persuade Congress to give them another chance to recover.

The results of intense lobbying by the thrifts and other financial institutions were the Depository Institutions Deregulation and Monetary Control Act of 1980 (DIDMCA) and the Garn–St. Germain Act of 1982. All financial institutions, banks and thrifts, began a phased eliminated of interest rate ceilings over the next six years. The 1982 act authorized banks and thrifts to offer money market deposit accounts to compete with money market mutual funds. Furthermore, S&Ls were given a whole new range of powers. They were released from their traditional portfolio constraints and permitted to increase consumer loans, commercial real estate mortgages, and business loans. In addition to this legislation, the FHLBB diluted capital requirements.

Congress did not openly discuss the issue of deposit insurance. There was considerable opposition to any further protection. Federal bank regulators strongly opposed an increase in coverage, emphasizing that it would cause some institutions to take more risks. Instead, the increase in coverage was added quietly and quickly to DIDMCA in a House-Senate conference session to placate the thrifts, which feared the impact of interest rate deregulation (Litan 1994).

The 1980 act raised federal deposit insurance coverage for individual deposits from $40,000 to $100,000 for banks, thrifts, and credit unions. Customer accounts with broker-dealers were now insured up to a maximum of $100,000 in cash and $500,000 in both cash and securities. The result of this legislation was a big increase in the real value of insurance (fig. 3.1) to approximately three times the 1935 level. The percentage of insured deposits was racheted up

(fig. 3.2); and, as table 3.2 shows, the leap from $40,000 to $100,000 brought a much higher rate of protection for all classes of banks.

Deposit insurance was locked firmly in place, yet since 1980, there has been no further increase in deposit insurance. As of 1996, it has been 16 years since there was any nominal increase in coverage. Unlike the end of two periods of similar length, 1934–50 and 1950–66, there is no swelling demand for a new rise. The real value of insurance has declined with inflation, but it is still more than 50 percent higher than the 1934 level. Some constraints have been placed on insurance. There have been some additional limits placed on the coverage of accounts to limit the creation of joint and multiple accounts to expand coverage.[17] Following the 1986 increase in the minimum capital ratio to 6 percent (White 1991), the Federal Deposit Insurance Corporation Improvement Act of 1991 mandated the creation of risk-based insurance premiums in an attempt to control the problem of moral hazard.

While the high real level of coverage may have reduced the demand for insurance, there are other important factors at work, most notably, the "too big to fail" policy providing de facto 100 percent insurance. Deposit insurance was a useful instrument for guaranteeing relatively small deposits. The advent of very large denomination, uninsured certificates of deposit (CDs) allowed banks greater ability to manage their liabilities. But it left them subject to the judgment of the money market. Rumors of insolvency panicked large CD holders into a run on Continental Illinois in 1984. The Federal Reserve and the FDIC intervened to protect all depositors, large and small, because they feared that losses would precipitate runs on other banks, generating a systemwide crisis. The bailout of Continental Illinois certified the too-big-to-fail policy that had been evoked in the early 1970s in the case of selected banks, like Franklin National (Sprague 1986). Although initially aimed at only the money center banks, the doctrine was extended in varying degrees to other big banks (Boyd and Gertler 1993). This subsidization of risk taking by large banks produced an incentive to grow. When combined with the reduction in geographic barriers to branching and holding companies, a wave of mergers and acquisitions began in the 1980s. The winnowing of weak institutions in the bank and thrift crises of the decade and this consolidation of the banking industry has reduced the lobbies that previously pushed for higher coverage while leaving deposit insurance firmly in place.

3.8 Conjecture and Conclusion

In the public's eye, deposit insurance is still considered one of the great successes of the New Deal. While many economists no longer hold it in such high regard, any serious rollback is politically inconceivable. Public acceptance of deposit insurance for banks and thrifts, even with numerous costly

17. See http://www.fdic.gov for the details of these restrictions.

failures, has enabled these intermediaries to obtain higher levels of real coverage and made it easier for other institutions to press their claims for insuring their liabilities. A reasonable policy question is whether the cost of deposit insurance exceeded the cost of bank failures in the absence of deposit insurance, following the Great Depression. This counterfactual question is potentially complex, and I will only consider here the case with the available complete data for the FDIC.

The New Deal greatly altered the structure of the financial system. The constraints that were placed on banks allowed other intermediaries to capture what otherwise might have been banking business. Thus, the size of the banking sector is smaller than it would have been in the absence of the New Deal. Similarly, the regulations on bank portfolios altered the liquidity and risk of banks, affecting the probability of bank failure. Any attempt at constructing what the banking system would have looked like and how many failures would have occurred in the absence of the New Deal requires grand simplifying assumptions. Aware of these difficulties, I offer here a simple, suggestive counterfactual where macroeconomic policy continued to be generally stabilizing after World War II, preventing any new great depression.

First, I estimated the real cost of bank losses under the FDIC from 1945 to 1994. The cost here is taken to be the administrative and operating expenses of the FDIC plus the losses from bank failures. To estimate the latter, I considered the losses from the three types of FDIC interventions: deposit payoffs, deposit assumptions, and assistance transactions. For payoffs, I took the estimated losses (disbursements less recoveries) plus the deposits not reimbursed by the FDIC (estimated by the total deposits times the fraction of uninsured deposits).[18] For assumptions and assistance transactions, the estimated losses to the FDIC were used. The total losses for each year were converted into real dollars, employing the consumer price index with 1982–84 as base year. As presented in table 3.6, the total cost of resolving bank failures with the FDIC was $39 billion for 1945–94, or an annual cost of $770 million. The present discounted value of the cost of bank failures from the beginning of the postwar era, 1945, was $7.8 billion. This starting date was selected to omit the chaos and cleanup of the 1930s.

What the bank failures would have looked like in the absence of the New Deal is difficult to estimate. *Banking and Monetary Statistics* (Board of Governors 1943) reported the estimated losses to depositors for all bank failures from 1921 to 1941. The average annual loss rate on total bank deposits for 1921–28, the nearest period of stability without insurance, was 0.1032 percent. If we assume that the structure of the banking system after 1945 remained essentially the same as it was in the 1920s and the shocks to the economy were the same, then we could use the loss rate to estimate the losses to depositors in the ab-

18. Data on losses to customers whose accounts were over the maximum level of coverage were not apparently obtainable.

Table 3.6 **Cost of FDIC Insurance and Counterfactual Deposit Losses, 1945–94 (billion 1982–84 dollars)**

Assumption	Estimated Cost AAC/PDV	Recovery Rates (%)			
		80	65	50	48
Under the FDIC	.77/7.8				
No FDIC					
Loss rates of 1921–28	.96/12.8				
Bank failure rates					
0.05 percent		.14/2	.24/4	.66/6	.68/16
0.1 percent		.26/5	.46/9	.66/12	.68/13
0.2 percent		.52/10	.92/17	1.32/24	1.38/25
0.283 percent		.74/14	1.08/24	1.86/34	1.94/36

Note: Table reports estimated cost of bank failures. Entries list average annual cost (AAC)/present discounted value (PDV).

sence of the FDIC. Multiplying the loss rate times the real deposits of insured banks for each year of 1945–94 yields a potential annual loss of $960 million, or a present discounted value of $12.8 billion. There is also reason to think that estimate is high because the banking system was undergoing a shakeout in the 1920s, as many small banks were disappearing. The Great Depression accelerated this process and eliminated virtually any bank showing signs of weakness. The recession of 1936–37 would have further winnowed the banking system. Furthermore, the New Deal halted the process of merger and consolidation that had started in the 1920s. This development would certainly have continued more vigorously in the post–World War II period in the absence of New Deal banking regulation. Both the destruction of weak banks and the formation of larger banks would have produced a stronger banking system with fewer losses.

An alternative approach to estimating the losses to depositors in the absence of the FDIC is to use varying bank failure rates and recovery rates. The ratio of deposits in suspending banks to total deposits for the period 1921–28 was 0.291 percent. For a slightly longer period (1907–29) and for national banks only, it was 0.283. Table 3.6 offers four possible failure rates. Beginning in 1907, the comptroller of the currency (U.S. Comptroller of the Currency, various years; and see Calomiris and White 1994) produced detailed records of recoveries and losses for national banks. No single detailed source exists for state-chartered banks. The recovery rates used are percentages paid out on proved claims three years after suspension. After three years, recoveries are very low. The average recovery rate for suspended national banks from 1907 to 1927, weighted by bank deposits, was 48 percent.[19] The recovery rate for the FDIC on its disbursements for failed banks from 1934 to 1994 was 65

19. If the rates are weighted by the number of banks, the average rate is 42 percent. I stop in 1927 because any later year collections were being made during the depression.

percent (FDIC, *Annual Report* 1994). Whether the FDIC was more efficient than the receivers under the national banking system or whether the nature of the failures or economic conditions were different is difficult to determine. Rather than hazard a guess, table 3.6 offers several recovery rates, ranging from 48 to 80 percent and including the FDIC and national bank suspension rates.

Table 3.6 provides a range of counterfactual estimates. If banks in the post-1945 period continued to fail at the same rate as national banks had in 1921–27 and had the same low recovery rate, depositors might have been hit with losses of $1.86 billion per year, much more than under the FDIC. However, this estimate is certainly an upper bound. If failure rates were lower and recovery rates were higher—both plausible assumptions with a stronger banking system—then costs to depositors would have been similar or even lower than under the FDIC. For a broad range of estimates, it appears that the FDIC did not reduce costs and may have raised them. Unfortunately, given the absence of comparable data, it was not possible to conduct this exercise for the FSLIC. However, the sheer magnitude of the S&L disaster of the 1980s relative to the calm of the 1920s strongly suggests that the FSLIC imposed very high costs compared to an uninsured system.

Even given the tenuous nature of these estimates, it is hard to escape the conclusion that deposit insurance did not substantially reduce aggregate losses from bank failures and may have raised them. What it did do was to alter the distribution of losses. Instead of a small number of depositors bearing the losses of a relatively small number of banks, costs were distributed to all depositors and hidden in the premia levied on banks. While these costs remained large in aggregate, they appeared to have vanished to the individual depositor. The new distribution of the costs of failure made the FDIC a widely accepted program and has ensured the continuance of deposit insurance into the next century.

References

Barth, James R. 1991. *The great savings and loan debacle.* Washington, D.C.: American Enterprise Institute Press.

Board of Governors of the Federal Reserve System. 1943. *Banking and monetary statistics.* Washington, D.C.: Board of Governors of the Federal Reserve System.

Boyd, John H., and Mark Gertler. 1993. In *NBER macroeconomics annual 1993,* ed. Olivier J. Blanchard and Stanley Fischer. Cambridge, Mass.: MIT Press.

Brewer, Elijah, III, and Thomas H. Mondschean. 1993. Life insurance company risk exposure: Market evidence and policy implications. *Contemporary Policy Issues* 11:56–69.

Burns, Helen M. 1974. *The American banking community and New Deal banking reforms, 1933–1935.* Westport, Conn.: Greenwood.

Calomiris, Charles W. 1990. Is deposit insurance necessary? *Journal of Economic History* 50 (June): 283–95.

———. 1993. Regulation, industrial structure, and instability in U.S. banking: An historical perspective. In *Structural change in banking*, ed. Michael Klausner and Lawrence J. White. Homewood, Ill.: Irwin.

Calomiris, Charles W., and Eugene N. White. 1994. The origins of Federal Deposit Insurance. In *The regulated economy: A historical approach to political economy*, ed. Claudia Goldin and Gary D. Libecap, 145–88. Chicago: University of Chicago Press.

Congressional Record. 1966. 89th Cong., 2d sess. Washington, D.C.

———. 1970. 91st Cong., 2d sess. Washington, D.C.

Ewalt, Josephine H. 1962. *A business reborn: The savings and loan story, 1930–1960.* Chicago: American Savings and Loan Institute Press.

Federal Deposit Insurance Corporation (FDIC). Various years. *Annual report.* Washington, D.C.: Federal Deposit Insurance Corporation.

———. 1984. *The first fifty years: A history of the FDIC, 1933–1983.* Washington, D.C.: Federal Deposit Insurance Corporation.

———. Website. http://www.fdic.gov.

Federal Home Loan Bank Board (FHLBB). Various years. *Annual report.* Washington, D.C.: Federal Home Loan Bank Board.

Feinberg, Robert M., and Seth Kaplan. 1993. Fishing downstream: The political economy of effective administered protection. *Canadian Journal of Economics* 26 (February): 150–58.

Flood, Mark D. 1991. The great deposit insurance debate. *Federal Reserve Bank of St. Louis Review* 74 (July–August): 51–77.

Friedman, Milton. 1959. *A program for monetary stability.* New York: Fordham University Press.

Friedman, Milton, and Anna J. Schwartz. 1986. Has government any role in money? *Journal of Monetary Economics* 17:37–62.

Golembe, Carter H. 1960. The deposit insurance legislation of 1933. *Political Science Quarterly* 76 (June): 181–95.

Golembe, Carter H., and David S. Holland. 1986. *Federal regulation of banking, 1986–87.* Washington, D.C.: Golembe Associates, Inc.

Grossman, Richard S. 1992. Deposit insurance, regulation, and moral hazard in the thrift industry: Evidence from the 1930s. *American Economic Review* 82 (September): 800–821.

Hoekman, Bernard M., and Michael P. Leidy. 1992. Cascading contingent protection. *European Economic Review* 36:883–92.

Kane, Edward J. 1989. *The S&L insurance mess: How did it happen?* Washington, D.C.: Urban Institute Press.

Kennickell, Arthur, Myron L. Kwast, and Martha Starr-McCluer. 1996. Households' deposit insurance coverage: Evidence and analysis of potential reforms. *Journal of Money, Credit, and Banking* 28 (August, pt. 1): 311–22.

Litan, Robert E. 1994. Financial regulation. In *American economic policy in the 1980s*, ed. Martin Feldstein. Chicago: University of Chicago Press.

Macey, Jonathan R., and Geoffrey P. Miller. 1992. *Banking law and regulation.* Boston: Little, Brown.

Marvell, Thomas B. 1969. *The Federal Home Loan Bank Board.* New York: Praeger.

Matthews, John O. 1994. *Struggle and survival on Wall Street: The economics of competition among securities firms.* New York: Oxford University Press.

National Credit Union Administration (NCUA). Various years. *Annual report.* Washington, D.C.: National Credit Union Administration.

Pension Benefit Guaranty Corporation (PBGC). Various years. *Annual report.* Washington, D.C.: Pension Benefit Guaranty Corporation.

Schattschneider, Elmer E. 1935. *Politics, pressure, and the tariff.* New York: Prentice-Hall.
Seligman, Joel. 1982. *The transformation of Wall Street.* Boston: Houghton Mifflin.
Sobel, Robert. 1972. *Amex: A history of the American Stock Exchange, 1921–1971.* New York: Weybright and Talley.
———. 1975. *N.Y.S.E.: A history of the New York Stock Exchange, 1935–1975.* New York: Weybright and Talley.
Sowards, Hugh L., and James S. Mofsky. 1971. The Securities Investor Protection Act of 1970. *Business Lawyer* 25 (April): 1271–88.
Sprague, Irvine H. 1986. *Bailout.* New York: Basic Books.
Teweles, Richard, and Edward S. Bradley. 1987. *The stock market,* 5th ed. New York: Wiley.
U.S. Comptroller of the Currency. Various years. Annual report. Washington, D.C.: Government Printing Office.
U.S. House. 1970. *Report no. 91–1613: Securities Investor Protection Act of 1970.* 91st Cong., 2d sess.
———. Committee on Banking and Currency. 1966. *Financial Institutions Supervisory and Insurance Act of 1966: Hearings.* 89th Cong., 2d sess., 15, 20, 22 September.
———. Subcommittee on Bank Supervision and Insurance. 1973. *To provide full deposit insurance for public units and to increase deposit insurance from $20,000 to $50,000: Hearings.* 93d Cong., 1st sess., 5, 6, 26 November.
U.S. Senate. 1950. *Amendments to Federal Deposit Insurance Act.* Hearings before a subcommittee of the Committee on Banking and Currency. 81st Cong., 2d sess., 11, 23, 30 January.
———. 1970. *Report No. 91–1218: Securities Investor Protection Corporation.* 91st Cong., 2d sess.
Welfling, Weldon. 1968. *Mutual savings banks.* Cleveland, Ohio: Press of Case Western Reserve University.
Wheelock, David C. 1992. Deposit insurance and bank failures: New evidence from the 1920s. *Economic Inquiry* 30 (July): 530–43.
White, Eugene N. 1983. *The regulation and reform of the American banking system, 1900–1929.* Princeton, N.J.: Princeton University Press.
White, Lawrence J. 1989. The reform of federal deposit insurance. *Journal of Economic Perspectives* 3 (fall): 11–29.
———. 1991. *The S&L debacle.* New York: Oxford University Press.

This Page Intentionally Left Blank