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THE LEGACY OF DEPOSIT
INSURANCE: THE GROWTH, SPREAD,
AND COST OF INSURING FINANCIAL
INTERMEDIARIES

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

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ABSTRACT

Without the Great Depression, the United States would not have adopted deposit insurance. While the New Deal's anti-competitive barriers have largely collapsed, insurance has become deeply rooted. This paper examines how market and political competition for deposits raised the level of coverage and spread insurance to all depository institutions. A comparison of the cost of federal insurance with a counterfactual of an insurance-free system shows that federal insurance ultimately imposed a higher cost but achieved political acceptance because of the distribution of the burden.

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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 anti-competitive 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's 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 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 insurance of intermediaries. Political economy offers models of logrolling (Shattschneider, 1935) and cascading regulation (Bernard 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 industry inducing the downstream firms to follow them later and push for their own protection. Cascading regulation in international trade vertically moves 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, the New Deal's 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 of an insurance free post-Great Depression financial system to assess the burden imposed by this legacy of the

New Deal.

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 securing 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 1930-1933 banking collapse had not frightened the public into supporting the pro-insurance 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 were resistant to any proposal. In the face of such opposition, credit for the adoption of deposit insurance belongs largely to Rep. Henry Steagall (D.-Alabama), 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 January 1, 1934. The coverage per account was set at a maximum of \$2,500. All Federal Reserve member banks were required to join. Non-member banks could receive insurance only if they joined the Fed within two years. The last provision was resented by the non-member 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, p. 56-7)

When the Temporary fund was extended for a year in 1934, Steagall attempted to increase coverage of accounts 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 July 1, 1937---a victory for the small banks. (Burns, 1974). The temporary system became permanent under Title 1 of the Banking Act of 1935, which created the FDIC. All Federal Reserve members were still required to join; but in a major concession, non-members, while subject to approval of the FDIC, were no longer required 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.²

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 \$5000 per account. Small banks and lower income individuals with small deposit accounts benefitted 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. The non-member 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.

The Growth of FDIC and FSLIC Insurance

For the next fifteen 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 account from \$5000 in 1934 to \$2807 by 1949. Figure 1 depicts the real value of the maximum coverage offered per account 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 2, the percentage of total deposits covered by FDIC insurance had climbed from 45 percent in 1934 to 50 percent in 1950.³ 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, in spite of repayment of the Treasury and Federal Reserve Banks initial contributions in 1949. (FDIC, 1984, pp. 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 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 or 97 percent of the total. The percentage of insured banks deposits covered would have risen from 50 to 57 percent. 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. The FDIC-insured mutual savings banks had 12.6 million accounts in 1949 with \$13 billion of deposits.⁴ Ninety-four percent of these accounts were fully insured, and 61 percent of all deposits were insured. While this profile looks similar to 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 the accounts with over \$5,000; for 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 4 shows the drop in fully insured accounts from 98.5 percent at the inception of insurance to just under 96 percent by 1949. The smallest banks felt this change acutely. Table 2 shows that in 1936 35.4 percent of banks had 90 to 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 insure maximum, he shifts the surplus to another bank and becomes one of what must be millions of multiple deposits." (U.S. Senate, 1950, p. 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 keep them within insurance limits. According to the survey, a sizeable 17.3 percent of household deposits were uninsured. Kennickell, Kwast, and Starr-McCluer found that any reduction or restriction in insurance coverage would substantially increase the uninsured deposits of households and increase the likelihood of withdrawals.⁵

In 1950, bills to raise the coverage were introduced by Senators John W. Bricker (R-Ohio), Claude D. Pepper (D-Florida), Charles W. Tobey (R-New Hampshire), Hugh A. Butler (R-Nebraska), William Langer (R-North Dakota) and Burnet R. Maybank (D-South Carolina) who was Chairman of the Committee. All of these bills contained increases up to \$15,000 and Pepper's would have removed the limit altogether. 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, p. 101) Ben Dubois, the Secretary of 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 part with the large bank in the eyes of the average depositor....The Corporation has been helpful indeed in establishment independent bank to continue in spite of the trend toward banking concentration" (U.S. Senate, 1950, pp. 87-8).

Federal regulators supported the increase but tended to cloak their support in terms of the ideology of guaranteeing the 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 \$5000 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, pp. 22-23). The Former FDIC Chairman Leo Crowley testified that he favored the increase from \$5000 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 Banking Association officials testified in favor of \$10,000 coverage but warned that any further increase would endanger the system (U.S. Senate, 1950, p. 66). Frederick A. Potts, President Philadelphia National Bank and a representative of the Reserve Bankers Association, testified that limited deposit insurance was a sound idea. However, he warned that a rise in protection to \$10,000 would undermine good bank management and stimulate demands for more coverage. (U.S. Senate, 1950, pp. 80-81). The most striking testimony against the proposal came from one of the founding fathers of the FDIC, Senator Arthur Vandenberg (U.S. Senate, 1950, p. 50-51). In a

letter, he denounced the proposed rise to \$10,000 coverage, arguing that 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 cover to \$10,000, how long will it be before we confront demands for total coverage? Total coverage would virtually socialize out private banking system. It could involve many of the vices which so often wrecked previous well-meaning adventures in this field."

The willingness of larger banks to support an increase in the level of coverage did not arise out of 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. While the more than ten thousand banks with under \$1 million in deposits had 86 percent of their deposits insured and the banks with \$1 to \$5 million of deposits had 74 percent of their deposits protected by the FDIC, the two hundred largest bank had only 28 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, 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, pp. 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 over the decade of the 1940s, net profits had recently 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, p. 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. But, the end result was a compromise of an increase in coverage and a change in assessment that satisfied both parties and ensured swift passage of the 1950 act. Figure 2 shows that the new level of \$10,000 coverage protected an additional 5 percent of deposits. More importantly for banks concerned about protection, the shares of protected accounts, shown in Table 3, returned to their earlier level. The more exposed banks who had lost their high level, 90 to 100 percent, of protected deposits, regained ground lost in the previous decade.

The larger banks also benefitted. The basic assessment rate was not reduced because the FDIC feared this might set the stage of a depletion of the fund. Instead, it was lowered by a rebate system. The FDIC deducted the 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 5, this rule produced some fluctuation in assessment rate around 0.035 and 0.037 percent of total deposits, far below the original 0.0833 percent. Total assessments reached in 1951 \$124 million, but \$70 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 who 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 continued saw the 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.

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 percentage of deposits in FDIC-insured institutions that were covered by FDIC insurance in Figure 2, four factors were considered: (1) If the real maximum deposit insurance coverage per account 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, and (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.⁶

Data on the number of accounts was difficult to obtain, as it was only collected by the

FDIC in occasional special reports until 1981. This data is displayed in Table 4. Beginning in 1990, some data on commercial banks' accounts was collected by the FDIC.⁷ 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 to 1981 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 account, 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 5. Regressions (1) and (2) are for the whole period, 1934-1994, and exclude the variable for accounts. As hypothesized, an increase in the real value of maximum deposit insurance coverage per account, 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 one 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 halt 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).

The constructed time series on accounts was used in the regressions (3) and (4) for the years 1934-1981. 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 coverage 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 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 the unhappy sectors of commercial banking. Afterwards it was not the needs of the commercial banks but rather their rivals that pushed for expanded coverage.

Raising Deposit Insurance in 1966 and 1969: the role of the S&Ls

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 (1934) established the Federal Savings and Loan Insurance Corporation, almost as an afterthought, to provide a full set of institutions to S&Ls to parallel those for banks.⁸ Many thrifts had found it advantageous to join the Federal Home Loan Bank 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 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 insurance for banks where 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 FHL Bank; but only 20 percent took out federal charters. Unlike the banks, where deposit insurance was almost universal from the outset, only 30 percent of the S&Ls with 50 percent of assets (See Figure 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 S&Ls only declined from 12,342 to 10,596. Unlike the banks who had to wait for state and then federal bank holidays to refuse customers payment, the S&Ls had a 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 the 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 in 1950 to 13 percent in 1970. Although imperfect substitutes for commercial banks' demand deposits, which paid no interest, S&Ls' 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 Figure 6). However, unlike the 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 \$1000 (FHLBB, Annual Report 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 S&Ls' surging inflow of

savings deposits came to an abrupt halt in the credit crunch of 1966, they 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 account as a threat. The decline in real deposit insurance in Figure 1 was slight compared to what happened before the 1950 increase. Furthermore, total coverage of deposits, shown in Figure 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 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 2. Here, the percentage of commercial banks with 90 to 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, Annual Report 1965). In 1965, the limit on the interest charged on bank's 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.⁹ 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 who 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, Annual Report, 1966).

Interest rate regulations needed some unification to preserve the system. The Treasury and the FDIC proposed that the Federal Home Loan Bank Board 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 S&L's account at the \$10,000 level, indicating that people were limiting their deposits (Congressional Record, August 23, 1966).

Efforts to raise insurance predated the 1966 credit crunch, but demands more urgent now. 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 the supervisory practices. Rep. 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, August 23, 1966).

Congress navigated through the 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 one 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 $66 \frac{2}{3}$ percent. Although interest rate flexibility was clearly of greatest concern to intermediaries, the rise in insurance did help. No data exists on insurance coverage among thrifts, but the level of insured deposits rose for all sizes of banks in Table 3.

These adjustments to the New Deal system did little to alleviate the underlying problems. Once again in 1969-1970, 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, contrasting 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 who were not members in 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, Annual Report 1969).

With no debate, Congress also raised deposit insurance coverage for banks and thrifts on December 23, 1969 from \$15,000 to \$20,000.¹⁰ This hike halted the new decline in fully insured accounts depicted in Figure 4. The real value of nominal coverage of \$20,000 was now higher than it had ever been (Figure 1), reaching approximately \$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 (Figure 2), with institutions of all sizes (Table 3) benefitting from the increase. By 1969 there were only 208 noninsured commercial banks and nondeposit trust companies and 166 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 the banks and thrifts, well beyond the initial intentions of the New Deal.

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.¹¹ 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 for parity with banks and thrifts. Between 1934 and 1969, over 5,600 federal credit unions were liquidated.¹² Failures were increasing and in 1969, 274 federal credit unions were closed, 35 of them at a loss of \$95,000 to their members. Some assistance for failing firms came from credit union leagues, bailing out another 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, September 2, 1970).

Prompted by the credit crunches of 1966 and 1969, credit unions pressed 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 analog to the Federal Reserve and FHLBB. While this bill was

making its way through Congress, an amendment was added to create a system of insurance for credit unions.¹³ 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, Senator 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. The Senator 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 account of \$20,000 as the FDIC and the FSLIC of \$20,000, the 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 sixteen state funds, covering 3,150 credit unions with \$12 billion of deposits (NCUA, Annual Report 1982). However, in the wake of widespread failures 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, Annual Reports, 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 the incompetence was the responsibility of the relevant self-regulatory organization (SRO)--the New York Stock Exchange or the NASD. These organizations could intervene and transfer customer accounts 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). AMEX followed the NYSE's lead and by 1968 all the exchanges had established special funds. (Sobel, 1972 and U.S. Senate, Report No. 91-1218, 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 brokers. 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 the \$50 billion of customer securities (U.S. Senate, Report No. 91-1218, 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 of Representatives Report, No. 91-1613, 1970, p. 2). This misreading of history put 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 SEC, the Department of the Treasury and Congress' Joint Securities Industry Task Force. An old New Dealer, Emmanuel 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, December 1, 1970).

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).¹⁴ 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 its 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.¹⁵

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 were often discussed, it motivated few of the participants in the legislative process. The spread of insurance to non-depository 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 (ERISA) 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 work force by 1995 (PBGC, Annual Report , 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 policy holders. A rise in failures of life insurance companies prompted the National Association of Insurance Commissioners to recommend a model guarantee system to state legislatures in 1970. Although the plans varied 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.

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 and 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 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 2 had sagged a bit, but it was slight for all sizes of banks in Table 3.

The interest group at work behind this new proposal was the thrift industry, although some banks were also 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 the 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 of Representatives, Hearings 1973 p. 14). In addition, he pointed out that more insurance would reduce the flight of funds from depository institutions to non-deposit 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 government deposits (U.S. House of Representatives, Hearings 1973). The representative of the U.S. Savings & 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 gave an example from the King Country treasurer of 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 Washington 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 of Representatives, Hearings, 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 of all deposits 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 be easily exhausted if large banks continued to fail.¹⁶ 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 of Representatives, Hearings, 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 the 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 of Representatives, Hearings, 1973, p. 114).

Faced with these strongly held conflicting positions, Congress passed compromise legislation in 1974. Insurance on accounts of individuals and businesses was lifted to \$40,000, while government deposits 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 1, as did the total coverage of deposits in Figure 2. All sizes of banks, except the very largest, as seen in Table 3, 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 for all accounts. Until the S&L crisis broke, a further increased in insurance appeared unlikely.

\$100,000 Insurance and Too-Big-To-Fail

The collapse of the S&L industry has been extensively chronicled (Barth, 1991; Kane, 1989; and White, 1991). By the end of the 1970s, the income and net worth of the thrift industry was plummeting. Measured by book value in, net worth of the thrift industry fell from 5.7 to 4.0 percent 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 it 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 who feared the impact of interest rate deregulation (Litan, 1994).

The 1980 act raised federal deposit insurance coverage on individual accounts from \$40,000 to \$100,000 for banks, thrifts, and credit unions. Customer accounts for broker-dealers were now insured for up to a maximum of \$100,000 in cash and \$500,000 for both cash and securities. The result of this legislation was a big increase in the real value of insurance per account (Figure 1) to approximately three times the level of 1935. The percentage of insured deposits was ratcheted up (Figure 2); and, as Table 3 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 sixteen years since there was any nominal increase in coverage. Unlike the end of two periods of similar length, 1934-1950 and 1950-1966, there is no swelling demand for a new rise. The real value of insurance per account 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 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, 1992), 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 certificate of deposits 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 system-wide 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 merger and acquisition wave 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.

Conjecture and Conclusion

In the public's eye, deposit insurance was is still considered to be 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 failures, has enabled these intermediaries to obtain higher levels of real coverage and made it easier for other institutions to press their claim 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 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 potentially would 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 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 where 1982-1984 is the base year. As presented in Table 6, the total cost of resolving bank failures with the FDIC was

\$39 billion for 1945-1994 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 clean up of the thirties.

What the bank failures would have looked like in the absence of the New Deal is difficult to estimate. Banking and Monetary Statistics (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 1921-1928, 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 absence of the FDIC. Multiplying the loss rate times the real deposits of insured banks for each year of 1945-1994, yields a potential annual loss of \$960 million or a present discounted value of \$12.8 billion. There is also reason to think that this is a high estimate because the banking system was undergoing a shake out 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 produced a further winnowing of banks. Furthermore, the New Deal halted the process of merger and consolidation that had started in the 1920s. This development would have certainly 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 percentage of deposits in suspending

banks to total deposits for the period 1921-1928 was 0.291 percent. For a slightly longer period for just national banks, 1907-1929, it was 0.283. Table 6 offers four possible failure rates. Beginning in 1907, the Comptroller of the Currency (U.S. Comptroller of the Currency, Annual Reports and see Calomiris and White, 1994) produced detailed records of the recoveries and losses for national banks. No single detailed source exists for state chartered banks. The recovery rates used are the percentage 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 percent (FDIC, Annual Report, 1994). Whether the FDIC was more efficient than the receivers under the national banking system or the nature of the failures or economic conditions were different is difficult to determine. Rather than hazard a guess, Table 6 offers several recovery rates, ranging from 20 to 80 percent and including the FDIC and national bank suspension rates.

Table 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 1921-1927 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 upward bound. If failure rates were lower and recovery rates were higher--both plausible facts 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 the 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 the banks. While these costs remained large in aggregate, they appeared to have vanished to the individual depositor. The change in the 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.

Notes

1. For complete descriptions of the New Deal's banking regulations and their evolution over time see Golembe (1986), Macey and Miller (1992), and White (1992).
2. 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 2.
3. The large decline of coverage in the 1940s from 45 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 Reports).
4. The non-FDIC insured mutual savings banks had \$5.7 billion in deposits.
5. Employing a probit model, Kennickell, Kwast and Staff-McCleur 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.
6. The data was obtained from the Federal Deposit Insurance Corporation's Annual Reports. The Consumer Price Index was used to obtain the real value of deposit insurance.
7. The 1990-1996 data was obtained from correspondence through the FDIC's Website.
8. 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 FHLBB 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.
9. Some aggressive thrifts employed brokers to advertize and collect funds for them. Marvell, pp. 133-6.
10. 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, 106-111.
11. However, they were small by comparison to the 5,669 S&Ls who held \$146 billion in deposits and the 14,187 banks which had \$505 billion in deposits in 1970.

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

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

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

15. 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, 55-56).

16. The Bank of the Commonwealth in Detroit and the United States National Bank in San Diego had recently failed. Each bank had over \$1 billion in deposits.

17. See WWW.FDIC.GOV for the details of these restrictions.

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

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

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Table 1

The Spread of Financial Intermediary Insurance

Liability Insured and Intermediary	Insurer	Coverage Begun or Increased Nominal Value of Insurance per Customer						
		Jan 1934	Sept 1934	1950	1966	1969	1974	1980
Deposits of Commercial Banks & 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					1970 \$20,000	\$40,000	\$100,000
Customer Accounts Held by Broker-Dealers	SIPC					Cash Cash & Securities	\$20,000 \$50,000	\$40,000 \$100,000 \$500,000
Life Insurance Policies from Life Insurance Companies	State Funds							
Defined Benefit Pensions	PBGC							

Table 2

Percentage of Insured Commercial Banks
by their Percentage of Insured Deposits

	Percent of Insured Deposits				Number of Insured Banks
	Less than 20%	20 to 59%	60 to 89%	90 to 100%	
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

Source: Federal Deposit Insurance Corporation
Annual Report, 1951, p. 76; 1955, p. 68; 1964, pp. 102-3.

Table 3

Insurance Coverage by Size of Bank

	Under \$1 million	\$1 million to \$5 million	\$5million to \$25million	Over \$25 million	Over \$100 million	Over \$1 billion
1936						
Number of Banks	10,014	3,231	694	209		
Percent Deposits Insured	86.1	74.2	58.0	28.4		
Percent Accounts Insured	99.4	98.8	98.4	97.4		
1949						
Number of Banks	2,554	7,551	2,812	501	213	
Percent Deposits Insured	81.3	73.6	63.7	52.7	36.1	
Percent Accounts Insured	97.6	97.1	96.4	95.5	94.4	
1951						
Number of Banks	2,349	7,463	3,035	564	241	
Percent Deposits Insured	89.3	81.9	70.9	60.0	41.3	
Percent 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
Percent Deposits Insured	85.0	79.6	71.3	63.2	55.4	36.9
Percent Accounts Insured	98.6	98.3	98.1	96.9	96.9	96.4
1966						
Number of Banks	672	6101	5499	1075	372	38
Percent Deposits Insured	73.2	64.9	56.9	44.9	33.0	21.4
Percent 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
Percent Deposits Insured	76.7	80.1	68.6	59.0	42.6	28.0
Percent 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
Percent Deposits Insured	80.0	79.2	73.0	61.3	48.1	30.8
Percent 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
Percent Deposits Insured	78.6	76.8	70.8	59.9	44.0	29.4
Percent 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
Percent Deposits Insured	83.1	82.0	79.8	69.4	53.7	28.6
Percent 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
Percent 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
Percent 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

Source: FDIC, Annual Reports and Reports of Deposits, selected years.

Table 4

Number, Growth, and Insurance of Bank Accounts

1934 - 1996

	Number of Accounts in All Insured Banks (millions) (1)	Annual Growth Rate of (1) (percent) (2)	Number of Fully Insured Accounts in All Insured Banks (millions) (3)	Annual Growth Rate of (3) (percent) (4)	Percent of Accounts Fully Insured (3/1) (5)	Number of Accounts in All Commercial Banks (millions) (6)	Annual Growth Rate of (6) (percent) (7)	Number of Fully Insured Accounts of All Commercial Banks (millions) (8)	Annual Growth Rate of (8) (percent) (9)	Percent 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

Source: FDIC Annual Reports and Reports of Deposits, 1934-1981
 FDIC Webmaster Communication, 1990-1996

Table 5
Determinants of FDIC Insurance Coverage
of Commercial Bank Deposits

	(1) 1934-1994	(2) 1934-1994	(3) 1934-1981	(4) 1934-1981
Intercept	0.481 (2.06)	0.486 (2.10)	0.338 (0.44)	0.441 (0.57)
Real Value of Insurance Per Account	0.566 (3.51)	0.571 (3.59)	0.598 (3.371)	0.602 (3.38)
Percentage of Deposits in Failing Banks	0.188 (0.00)		-346.486 (-0.87)	
Number of Failing Banks		0.014 (1.12)		0.020 (0.67)
Growth in Bank Deposits	-16.518 (-4.01)	-16.507 (-4.06)	-16.046 (-3.53)	-16.087 (-3.53)
Growth in Number of Bank Accounts			0.016 (0.14)	-0.029 (-0.02)
Adjusted R-Squared	0.302	0.318	0.380	0.315
F-Statistics	9.381	10.013	6.300	6.175
Durbin-Watson Statistic	2.119	2.138	2.134	2.178

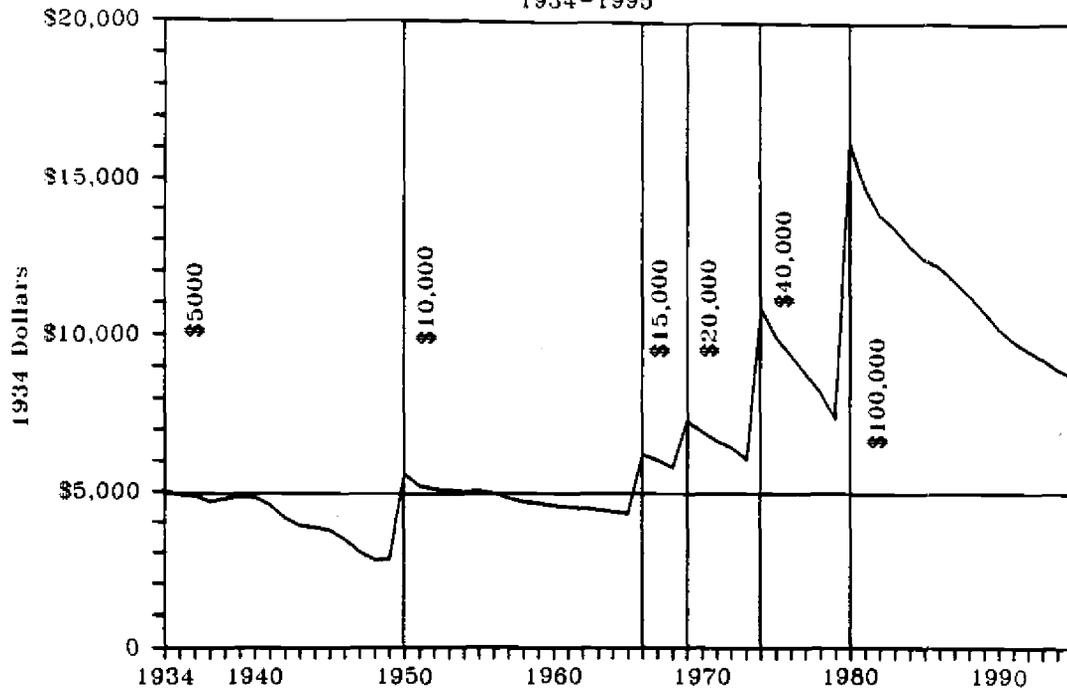
The numbers in parentheses are t-statistics.

Table 6

The Cost of FDIC Insurance and Counterfactual Deposit Losses
 1945-1994
 (in 1982-84 billions dollars)

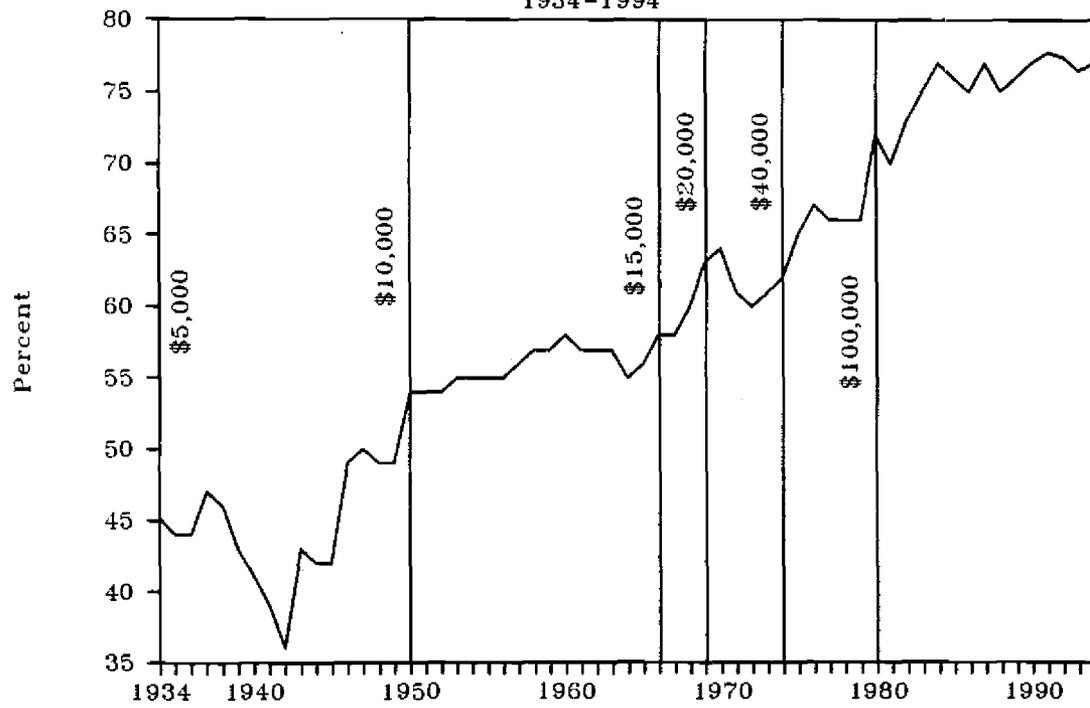
Estimated Cost of Bank Failures (Average Annual Cost/ Present Discounted Value)	Recovery Rates Percent			
	80	65	50	48
Under the FDIC	.77/7.8			
No FDIC	Loss Rates of 1921-28 .96/12.8			
Bank Failure Rates				
0.05 percent	.14/2	.24/4	.66/6	.68/16
0.1 percent	.26/5	.46/9	.66/12	.68/13
0.2 percent	.52/10	.92/17	1.32/24	1.38/25
0.283 percent	.74/14	1.08/24	1.86/34	1.94/36

Figure 1
Real Value of Deposit Insurance per Account
1934-1995



Changes in the nominal coverage are indicated by the vertical lines

Figure 2
Percentage of Bank Deposits Insured by the FDIC
1934-1994



Changes in the nominal coverage are indicated by the vertical lines

Figure 3
FDIC Insurance Fund as a Percentage of Insured Deposits
1934 - 1994

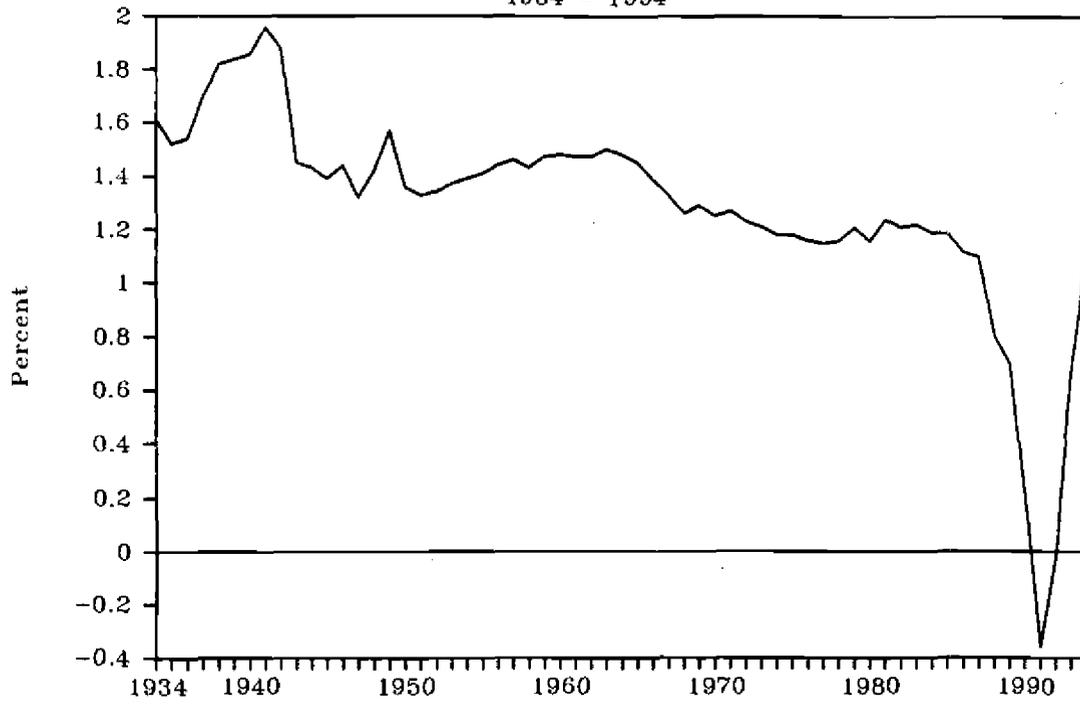


Figure 4
Insurance of Accounts in FDIC Banks
1934-1994

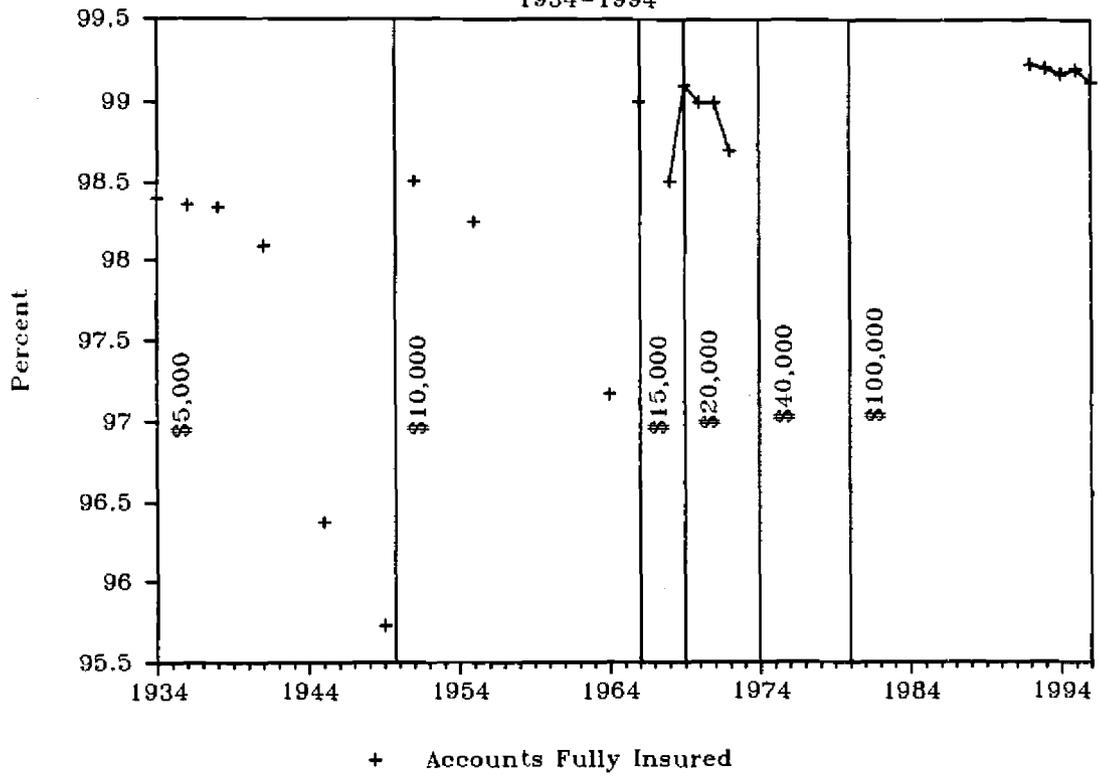


Figure 5
FDIC Effective Assessment Rate
1934 - 1994

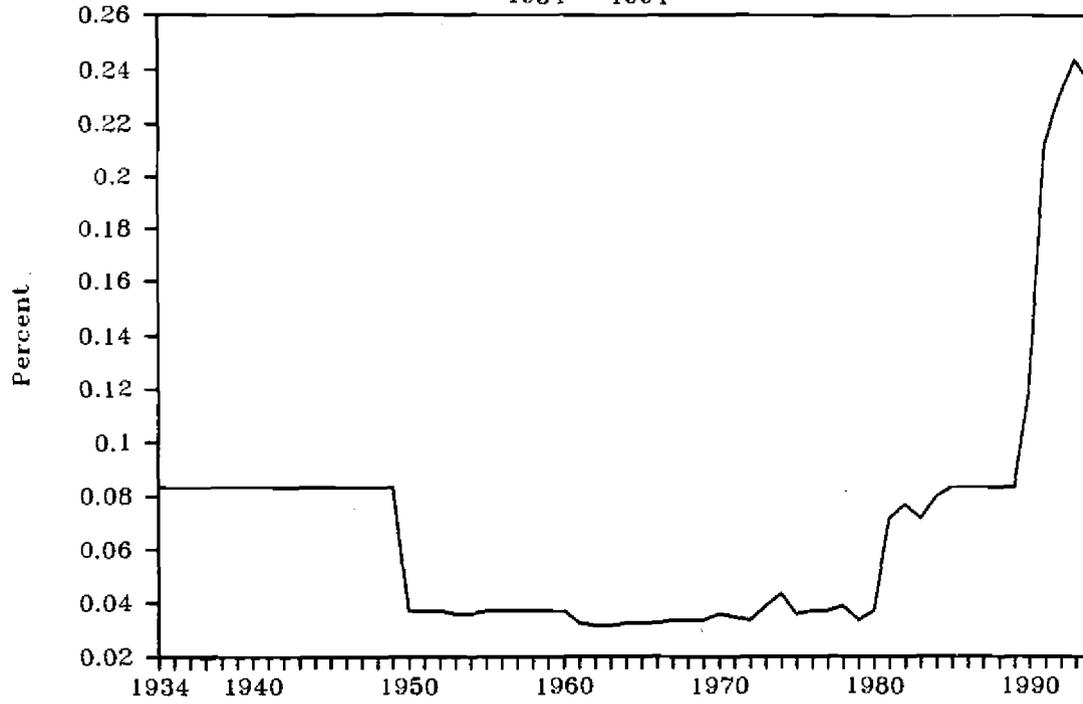


Figure 6
Membership in the FSLIC
1935-1973

