

The Consequences of National Depositor Preference

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In 1993, Congress passed the Omnibus Budget Reconciliation Act and adopted *national depositor preference*. Provisions of the legislation elevated the claims of domestic depositors on the assets of a failed bank over the claims of foreign depositors and general creditors. Congress believed that national depositor preference would result in substantial cost savings to the Federal Deposit Insurance Corporation (FDIC) when it resolved failed institutions, but the law may have had unintended consequences.

Studies suggest that even though national depositor preference may produce cost savings for the FDIC, it may also induce bank creditors and depositors to act in ways that significantly reduce the cost savings. In addition, the effect of national depositor preference on foreign depositors may induce foreign governments to act in such a way that the FDIC loses some control of the resolution process.

The expectation of cost savings to the FDIC from national depositor preference is based on empirical studies that focus on small banks. But national depositor preference has a potentially greater effect on large banks because they have substantial amounts of foreign deposits and other unsecured liabilities. And it is precisely this same balance-sheet structure that makes it possible for large shifts in funding to occur when a bank is in trouble, subverting the intended purpose of national depositor preference. To see how liabilities shifted just before failure, we studied six large banks that failed between 1984 and 1992. Most of these large banks, however, failed before the implementation of

either the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) or national depositor preference two years later. Thus, we also discuss the potential effects of the combination of FDICIA and national depositor preference on the cost savings to the FDIC.

Another possible unintended consequence of national depositor preference relates to its treatment of foreign depositors. Foreign—hence, uninsured—depositors are given the same liquidation priority as general creditors, whereas domestic uninsured depositors are given a higher priority. If foreign countries perceive this hierarchy as unfair, they may seize the assets of foreign branches of failed U.S. banks, considerably complicating the resolution of bank failures. Seizure of such assets is sometimes referred to as “ring fencing.” We discuss policy proposals that may alleviate the potential problem of “ring fencing”; one of the proposals may, in addition, decrease FDIC losses.

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Definition of Depositor Preference

At the time of failure, the assets and liabilities of the bank are transferred to a receivership.¹ The receiver's task is to maximize net present value of recoveries for the receivership claimants. The receivership distributes the proceeds according to a liquidation priority, which is established by contracts between the claimant and the institution or by the legal status of the claimant.

Secured claimants have the highest priority because they have a contract with the bank for a specific claim on assets. Secured claimants are followed by a much larger creditors class composed of depositors and other general creditors. Holders of subordinated debt, preferred shareholders, and common shareholders follow. Receivership law or regulation determines the priority of the receiver for its administrative expenses and the relative priority of groups of depositors and other general creditors.

In the United States, receivership law has traditionally given the highest priority to the receiver for its administrative expenses, even placing it ahead of secured claimants. Depositors and general creditors have received varying treatment. Under the Banking Act of 1933, insured depositors had a higher priority than uninsured depositors and other general creditors. The Banking Act of 1935 gave the same priority to all depositors and general creditors. Under the 1993 statute, all receivership claimants are subject to the following general preference scheme:

- administrative expenses of the receiver;
- secured claims;²
- domestic deposits, both insured and uninsured;
- foreign deposits and other general creditor claims;
- subordinated creditor claims; and
- shareholders.

It is important to be explicit about what types of deposits are included in each deposit class. Insured and uninsured deposits are defined by deposit insurance coverage. A “foreign deposit” is any deposit obligation of a U.S. depository institution that is payable at an office located outside of any U.S. state, the District of Columbia, or a territory of the United States.³ Because of the manner in which the Federal Deposit Insurance Act of 1950 defines a “deposit,” foreign deposits are not accorded the priority benefit of domestic deposits and are therefore paid with other general liabilities of an institution.

The national depositor preference statute which grants preference to “deposit liabilities” over other general creditors, requires domestic depositors, insured and uninsured, be paid *in full* before remaining creditors can collect their claims. Since the FDIC pays the insured depositors in full and then stands in their place to seek recovery, national depositor preference may lower FDIC losses.

To see how this works, suppose a receivership has assets with a book value of \$100. Total assets net of losses and administrative expenses are \$90, but total depositor and creditor claims on the receivership are \$100, a difference that implies a \$10 total loss (see table 1).⁴ Once the secured claims (\$20) have been paid, \$70 remains for distribution to the other claimants.

With no depositor preference, depositors and general creditors are given the same liquidation priority and receive their *pro rata* share of the proceeds. For example, uninsured depositors hold \$6 of the total amount of unsecured claims (\$80). They will receive their share ($\$6/\80 —see column two of table 1) of the net value of assets for distribution (\$70—see note “c” of the table), or \$5.25. Since their claim was \$6, the loss to uninsured depositors is \$0.75. Similar calculations are made for the FDIC and for general creditors. Without depositor preference, most of the \$10 total loss is imposed on the FDIC.

With depositor preference, however, the FDIC and uninsured depositors stand before the general creditors. In our example, because total deposits (\$76) are more than the net value of assets available for distribution (\$70), general creditors receive nothing. Uninsured depositors and the FDIC receive payments according to their share of the amount of their combined claims (\$76). Depositor preference thus shifts some of the burden of the \$10 total loss away from the FDIC toward the general creditors for a given liability structure.

¹ For a more detailed discussion of the bank-failure-resolution process, see Bovenzi and Muldoon (1990).

² Secured claims receive priority only for the value of the collateral securing the claim. If the value of the collateral is less than the amount of the claim, the unsecured portion falls into the priority scheme according to the type of claim.

³ The wording in the Federal Deposit Insurance Act, Sections (3)(1)(3), (3)(1)(5)(A), is the basis of this definition. The legislation specifically mentions the following territories of the United States: Puerto Rico, Guam, American Samoa, the Trust Territory of the Pacific Islands, the Virgin Islands, and the Northern Mariana Islands.

⁴ For the sake of simplicity, in this example, all deposits are domestic deposits.

Table 1
Illustration of the Effect of Depositor Preference

Failed-Bank Assets				
Total book value				\$100
Total recoverable value (net of administrative expenses)				\$ 90
Failed-Bank Liabilities				
Secured liabilities				20
FDIC (as subrogee ^a for insured depositors)				70
Uninsured deposits ^b				6
General creditors				4
Total Liabilities				\$100
Net value of assets available for distribution ^c				\$ 70
Claimant Losses with No Depositor Preference				
	<u>Claim</u>	<u>Share</u>	<u>Payment</u>	<u>Loss</u>
Secured liabilities	\$ 20.00	NA	\$20.00	\$ 0.00
FDIC (as subrogee for insured depositors)	70.00	\$70/\$80 ^d	61.25	8.75
Uninsured deposits	6.00	6/80	5.25	0.75
General creditors	4.00	4/80	3.50	0.50
Total	\$100.00		\$90.00	\$10.00
Claimant Losses with Depositor Preference				
	<u>Claim</u>	<u>Share</u>	<u>Payment</u>	<u>Loss</u>
Secured liabilities	\$ 20.00	NA	\$20.00	\$ 0.00
FDIC (as subrogee for insured depositors)	70.00	\$70/\$76 ^e	64.47	5.53
Uninsured deposits	6.00	6/76 ^e	5.53	0.47
General creditors	4.00	NA	0.00	4.00
Total	\$100.00		\$90.00	\$10.00

NA = Not applicable.

^a The insured depositors are covered in full by the FDIC. As a subrogee, the FDIC substitutes for the insured depositors and retains all of their rights as creditors.

^b In this example, all deposits are domestic.

^c The net value of assets available for distribution is total recoverable assets (\$90) less secured claims (\$20).

^d When there is no depositor preference statute, claimants in a given class receive their *pro rata* share of the net value of assets available for distribution. In this example, the total amount of unsecured claims is \$80. The fraction of unsecured claims held by the FDIC is \$70/\$80. Thus, the FDIC receives 7/8 of the net value of assets for distribution ($\$70/\$80 \times \$70 = \61.25).

^e When there is a depositor preference statute, the insured depositors (represented by the FDIC) and the uninsured depositors have priority over general creditors. Since the sum of their claims is greater than the net value of assets for distribution, the general creditors will receive no payments. The FDIC receives insured depositors' share of the net value of assets ($\$70/\$76 \times \$70 = \64.47), and the uninsured depositors receive their share ($\$6/\$76 \times \$70 = \5.53).

As this example makes clear, with depositor preference the bank's liability mix at the time of failure—specifically, the proportion of liabilities that are secured—has a major effect on the proportion of loss borne by the FDIC. However, as shown below, when a bank is troubled its liability structure is bound to change, since depositor preference gives uninsured and unsecured claimants a powerful incentive to protect themselves from loss. They can do this by with-

drawing their funds or obtaining security, in both cases increasing the losses to the FDIC from failure.

Historical Background and Prior Research

As noted above, for most of the FDIC's history (that is, from 1935 to 1993), all depositors had the same liquidation priority as general creditors. Under the original deposit insurance law, the Banking Act of 1933, insured deposits were preferred over uninsured de-

posits and other creditors, but the Banking Act of 1935 overturned this preference and put into effect the scheme that remained in place until national depositor preference was implemented in 1993. The 1935 scheme gave depositors and general claimants of a failed bank the same liquidation priority, with one exception: if the failed bank was state-chartered, the state law (if one was in place) determined the relative standing of depositors and general creditors. By the time national depositor preference was enacted, nearly 30 states had depositor preference statutes (table 2), but most of the institutions to which these statutes applied were small.

In the early 1980s there was much talk of the desirability of increasing market discipline. And the Penn Square failure in 1982, which resulted in what was then the largest payoff in history, heightened concerns about a potential increase in costs to the FDIC. In this climate, the FDIC published a study (1983) arguing for national depositor preference, maintaining that it would increase market discipline by imposing greater losses on certain creditors, thereby enhancing their desire to monitor the condition of depository institutions.

The FDIC had another reason for favoring national depositor preference: in certain circumstances depositor preference would reduce the likelihood of a payoff and greatly facilitate the use of a purchase-and-assumption (P&A) transaction. The reason the FDIC preferred to use a P&A transaction was that a P&A met the two essential objectives of bank-failure-resolution policies most important to the FDIC at that time. The first objective was to minimize disruption to the community where the insolvent bank is located. The second is to minimize the role of the government in owning and managing bank assets.⁵ Passing all the deposits will achieve the first objective. Passing most of the assets will achieve the second. In a typical P&A, the FDIC does both of those. Therefore, the FDIC preferred to use a P&A transaction.

At that time, when the FDIC was under an obligation to treat all creditors in a particular class similarly,⁶ circumstances might have prevented it from using a P&A. Some failed banks, for example, had significant amounts of contingent claims, such as standby letters of credit, loan commitments, and other potential legal claims. Because those claims, if they materialized, would be considered general creditor claims, the FDIC would be obligated to treat them the same as deposits and, under a P&A,

Table 2
State Depositor Preference Statutes

State	Effective Date
Alaska	October 15, 1978
Arizona	September 21, 1991
California	June 27, 1986
Colorado	May 1, 1987
Connecticut	May 22, 1991
Florida	July 3, 1992
Georgia	1974 ^a
Hawaii	June 24, 1987
Idaho	1979 ^b
Indiana	1943 ^c
Iowa	January 1, 1970
Kansas	July 1, 1985
Louisiana	January 1, 1985
Maine	April 16, 1991
Minnesota	April 24, 1990
Missouri	May 15, 1986
Montana	1927 ^c
Nebraska	1909 ^c
New Hampshire	June 10, 1991
New Mexico	June 30, 1963
North Dakota	July 1, 1987
Oklahoma	May 26, 1965
Oregon	January 1, 1974
Rhode Island	February 8, 1991
South Dakota	July 1, 1969
Tennessee	1969 ^c
Texas	August 26, 1985 ^d
Utah	1983 ^c
Virginia	July 1, 1983
West Virginia	May 11, 1981

Source: Osterberg (1996) and state statutes.

^a Legislation became effective on either January 1 or July 1.

^b Passed by both houses of the state legislature on July 1; enactment date is unclear.

^c Neither the month nor the day of enactment is available.

^d Texas amended its law in the spring of 1993 and did not have depositor preference until national depositor preference was enacted in August 1993.

would have to ensure that they were paid in full. The potential cost associated with a large amount of contingent claims could make a P&A too expensive to justify it relative to the option of a payoff.

⁵ Bovenzi and Muldoon (1990), 1–2.

⁶ This obligation was established in *First Empire Bank, New York, et al. v. FDIC*. For a detailed discussion of this ruling, see FDIC (1998), 251.

The large amount of contingent claims was one reason the FDIC was not able to use a P&A transaction in the 1982 failure of Penn Square Bank, N.A., Oklahoma City, Oklahoma. Penn Square had total assets of approximately \$500 million. It had issued \$2.1 billion in loan participations that the FDIC believed could result in lawsuits, thereby creating a huge contingent liability for any potential acquirer and ultimately for the FDIC. Since the FDIC was unwilling to assume this risk, depositors of Penn Square were paid off. Had depositor preference been in effect, the FDIC would have been allowed to segregate contingent claims and subordinate them to deposit claims, thereby facilitating the use of a transaction type other than a payoff.

Silverberg (1986), too, argued in favor of depositor preference. At the time, the FDIC typically covered all depositors fully in most bank failures. But because of the FDIC's obligation to treat all creditors in a particular class similarly, depositors and general creditors had the same liquidation priority. Silverberg objected, maintaining that if depositors were covered in full, they should receive a preferred creditor position, and if they did not, in a P&A transaction other general creditors would be receiving the benefit of full protection without incurring the cost of an insurance premium.

In 1988, with national depositor preference not yet enacted, the FDIC developed a rationale for resolving bank failures that allowed it to avoid treating all creditors of a given class equally. The FDIC maintained that according to common law, depositors and creditors could be treated differently as long as nondeposit creditors received at least as much as they would have received in liquidation.⁷ This *pro rata* technique was used in the First Republic transaction, for example.

In a 1989 study the FDIC compared depositor preference with the new *pro rata* technique, restating its case for depositor preference but declaring a preference for the *pro rata* policy. The FDIC requested explicit authority to distinguish between depositor and nondepositor claims. The agency received such authority when Congress codified the *pro rata* approach in the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA). Once the FDIC was able to facilitate P&A transactions using its authority to distinguish between depositor and nondepositor claims, its interest in depositor preference largely vanished.

Not only did the FDIC no longer need depositor preference as a way of facilitating P&A transactions, but the expectation of cost savings to the agency from national depositor preference was also being chal-

lenged. In an empirical study, Hirschhorn and Zervos (1990) examined the effects of the 28 state depositor preference statutes on the thrift industry during the 1980s, comparing institutions operating with and without depositor preference. Although depositor preference laws appeared to create savings for the FSLIC by making nondepositor claimants worse off, the empirical analysis indicated that depositor preference materially increased the number of creditors who require collateral, thus increasing secured liabilities. This increase in secured liabilities shifts losses to all other creditors, including the FDIC (as subrogee for insured depositors), thereby increasing the FDIC's losses from failure.

In sum, by 1993 the FDIC's desire to promote depositor preference had evaporated: the passage of FIRREA had made depositor preference unnecessary in terms of distinguishing between depositor and nondepositor claims, and empirical analysis had shown that the cost savings to the FDIC might actually be short-circuited by creditors who would seek to protect themselves. Nonetheless, the national depositor preference statute was passed on August 10, 1993, without meaningful public debate. The main impetus behind passage was that it allowed Congress to project cost savings to the FDIC and use these projected savings to offset part of the projected U.S. budget deficit.⁸

When national depositor preference was enacted into law, the banking crises of the 1980s and early 1990s were at an end. Total assets of failed banks fell from \$44.2 billion in 1992 to \$3.5 billion and \$1.4 billion in 1993 and 1994, respectively. Although the budget planners might have expected more bank failures—and thus more cost savings—the failures never materialized. Since the enactment of national depositor preference, the largest bank to fail had total assets of only \$340 million.

Passage of national depositor preference therefore came at a time when conditions in the banking industry made it unnecessary. In addition, public commentators were quick to react, casting doubt on the assumptions underlying it. Kaufman (1997) suggested that the potential cost savings (which the Office of Management and Budget had estimated to be near \$750 million over five years) might be illusory. Since the long-run dynamic effects were uncertain, he concluded it was not clear whether national depositor pref-

⁷ FDIC (1989), 246–48.

⁸ FDIC (1997).

erence on the whole would be good or bad for the FDIC.

He also argued that in the long run depositor preference would cause foreign depositors and fed funds sellers to protect themselves. They can protect themselves in a number of ways: demanding higher interest rates, requiring collateral for their claims, using put options or acceleration clauses that require payment when a bank gets into trouble, or altogether refusing to provide credit to banks. These efforts could result in an increase in market discipline, but they might also increase the probability of runs at large failing banks.

Thomson (1994) reinforced the argument that non-deposit creditors will not react passively to the subordination of their claims. He held that under national depositor preference a significant number of non-deposit creditors might convert their claims to claims senior to deposits, thereby increasing the loss to the FDIC in the event of failure.

Silverberg (1993, 1994) stated that national depositor preference would result in increased market discipline and only marginal cost reduction to the FDIC. To support his claim, he compared the balance-sheet structure of failed banks at the time of failure with the structure several years before failure. He found that as the banks approached failure, depositors and creditors sought to protect their interests.

Silverberg (1994) also discussed the implications of depositor preference for a bank's off-balance-sheet activity. He noted that once the FDIC started imposing losses on unsecured creditors such as holders of standby letters of credit, off-balance-sheet activity fell in weak banks and rose in healthy banks. Further, any potential cost savings from derivative contracts probably would be minimized by a customer's ability to obtain collateral for any exposure. Silverberg conceded, however, that depositor preference would limit the FDIC's exposure to certain contingent claims arising from litigation.

Silverberg (1994) suggested that the shortcomings of depositor preference might also have several ramifications for foreign depositors and creditors which banks could try to contain in various ways. To protect foreign deposits and creditors, banks could incorporate foreign operations into separately capitalized banks. Or legislation could be enacted to insure foreign deposits and subject them to deposit insurance assessments. Going one step further, bank holding companies could create subsidiaries that include not only foreign operations but also off-balance-sheet activities.

Osterberg (1996) conducted a study of commercial bank failures similar to the Hirschhorn and Zervos (1990) study of thrift failures. For banks that failed before 1993, he compared those located in depositor preference states with those operating in states without such laws. He concluded that the portfolios of banks were similar with and without depositor preference. But although the portfolios were similar, the cost to the FDIC of resolving a failed bank between 1986 and 1992 was lower for banks with depositor preference. He concluded, however, that the proof provided by his evidence was not strong enough to show that depositor preference was achieving its intended benefits.

Shifting Liabilities in Large Banks

The crux of the debate, therefore, was whether the potentially significant cost savings to the FDIC would be shortcircuited by the behavior of uninsured depositors and unsecured creditors. National depositor preference gave them a greater incentive to protect themselves. Generally, an exposed creditor can either seek collateral or leave the institution, and both actions offer full protection. Table 3 lists the major types of bank assets and liabilities and specifies which liabilities are generally either secured or used for collateral.

During the normal course of business, some creditors require security. For a mortgage or other borrowing, for example, some premises and fixed assets may serve as collateral. By definition, securities sold under agreements to repurchase are secured. Federal Home Loan Bank advances are required by law to be collateralized by loans. The Federal Reserve requires collateral for any borrowings from the discount window.

However, limitations do exist on the extent to which a large bank can give collateral for its liabilities. Banking law and regulation typically prohibit the use of collateral for many liabilities—most notably non-public deposits. Public entity depositors usually require that highly marketable securities be used for collateral—but securities account for less than 14 percent of the assets of banks over \$10 billion. Moreover, this proportion would probably diminish as a bank got into trouble and was required to fund deposit withdrawals by selling securities.

Rather than requiring collateral, depositors and creditors can simply withdraw funds, which will drain liquidity. When faced with such a liquidity drain, a bank typically sells its highest-quality, most-marketable assets first. If a troubled bank exhausts its supply of high-quality assets, it must sell less-marketable

Table 3
Bank Assets and Liabilities

Balance-Sheet Item	Used for Security/ Can Be Secured?
Assets	
Cash and balances due from depository institutions	No
Securities	Yes
Federal funds sold	No
Securities purchased under agreements to resell	Yes
Loans and lease financing receivables	Yes, for Federal Home Loan Bank advances and discount-window borrowings, also some loans may be offset against deposits
Trading assets	No, but some subject to offset
Premises and fixed assets	Yes, primarily mortgages
Other real estate owned	No, although may be subject to a prior lien
Investments in unconsolidated subsidiaries	No
Customers' liability to this bank on acceptances outstanding	No
Intangible assets	No
Other assets	No
Liabilities	
Non-public deposits	No, ^a but some subject to offset against loans outstanding
Public deposits	Yes
Federal funds purchased	Generally not, but may be secured as bank weakens
Securities sold under agreements to repurchase	Yes
Demand notes issued to the United States Treasury	Yes
Trading liabilities	No, but some subject to offset
Other borrowed money (includes discount-window borrowings and FHLB advances)	Discount-window borrowings and FHLB advances are always collateralized; otherwise, generally not secured
Bank's liability on acceptances executed and outstanding	No
Subordinated notes and debentures	No

^a Some states allow non-public deposits to be secured.

assets, and selling these requires more time. In the past, regulators and the market afforded these institutions such time. It is not clear that the same amount of time will be available to large, troubled institutions in the future.⁹

As for how depositors and creditors have in fact reacted to depositor preference (state or national), empirical studies, such as those by Hirschhorn and Zervos (1990) and Osterberg (1996), are limited by a relative scarcity of data. As mentioned above, from 1935 to 1993 depositor preference applied only to state-chartered institutions, and these were relatively small. Thus, the studies were able to analyze only relatively small institutions. But in theory, the greatest potential for cost savings to the FDIC from national depositor preference rests with large banking institutions, none of which has failed since 1993.

A bank's liability mix at the time of failure determines the extent to which depositor preference lowers the FDIC's costs, and as table 4 shows, the liability composition of FDIC-insured banks varies dramatically according to total assets. Small banks, those with assets of less than \$500 million, tend to rely more heavily on insured deposits as a funding base. In these banks domestic deposits make up 93 percent of total liabilities; estimates indicate that 85 percent of these domestic deposits are insured deposits. In the largest banks, those with assets above \$10 billion, domestic deposits make up only about half of total liabilities, with insured deposits slightly less than 70 percent of domestic deposits. For these banks foreign deposits account for approximately

⁹ FDICIA, discussed below, requires the prompt closing of troubled institutions.

17 percent of liabilities, and other borrowing and other liabilities amount to 33 percent.

Since domestic deposits account for the overwhelming majority of small-bank liabilities, not surprisingly Osterberg (1996) found that for these institutions, depositor preference resulted in only modest cost savings to the FDIC. Further, since small institutions have few general creditors, it would be relatively easy for such creditors to flee or shift to a secured status before failure.

The data required to measure accurately the effect of national depositor preference on large banks are not always available. In particular, uninsured and unsecured balances of large banks at the time of failure are not always accurate, even in data supplied by the FDIC, because accurate data were not always needed. Before 1992, most large-bank failures were handled without loss to depositors and other creditors, so there

was no need for the FDIC to make an insurance determination. (The process of determining insurance requires detailed analysis of bank liabilities to determine those that are uninsured and unsecured. It is therefore extremely labor intensive and expensive, especially for a large bank.)

What is known is that liabilities may shift in large banks before failure, and figures 1–6 show the shifts in the balance sheets before failure for a set of large banks that failed between 1984 and 1992. This failure group consists of Continental Illinois National Bank and Trust (CINB),¹⁰ First Republic Bank (Dallas), MBank (Dallas), Bank of New England, Southeast Bank (Miami), and First City (Houston)¹¹. Balance-sheet

¹⁰ CINB did not fail, but received open-bank assistance from the FDIC. For the purposes of this study, a bank requiring financial assistance from the FDIC to cover losses is considered to have failed.

¹¹ The second failure of this institution, in 1992.

Table 4
Average Asset and Liability Composition by Asset Size of BIF-Insured Banks,
December 31, 1998 (\$Millions)

	Less than \$500 Million	\$500 Million to \$5 Billion	\$5 Billion to \$10 Billion	Over \$10 Billion
Number of banks	9,533	775	68	87
Total assets	\$103,990	\$1,356,388	7,021,725	\$46,084,166
Securities	26,794	343,485	1,367,901	7,292,407
as a percent of total assets	25.8%	25.3%	19.5%	15.8%
Pledged securities	7,659	111,549	444,217	2,988,051
	7.4%	8.2%	6.3%	6.5%
Unpledged securities	19,135	231,936	923,685	4,304,357
	18.4%	17.1%	13.2%	9.3%
Total liabilities	\$ 93,304	\$1,229,448	\$6,355,083	\$42,508,334
Total deposits	\$ 86,807	\$ 975,050	\$4,669,049	28,570,584
as a percent of total liabilities	93.0%	79.3%	73.5%	67.2%
Domestic deposits	86,730	962,176	4,598,675	22,173,579
	93.0%	78.3%	72.4%	52.2%
Foreign deposits	77	12,874	70,374	6,397,005
	0.1%	1.0%	1.1%	15.0%
Estimated insured deposits	73,919	758,784	3,463,074	15,336,257
	79.2%	61.7%	54.5%	36.1%
Estimated uninsured deposits ^a	12,812	203,392	1,135,601	\$ 6,837,322
	13.7%	16.5%	17.9%	16.1%
Brokered deposits	669	30,463	86,866	480,736
	0.7%	2.5%	1.4%	1.1%
Municipal deposits	1,736	8,163	48,009	214,556
	1.9%	0.7%	0.8%	0.5%

^a Includes foreign deposits.

data are from the Call Reports filed quarterly with federal regulators. Data reflecting the balance-sheet position on the date of closing (when available) are from the FDIC's Financial Information Management System (FIMS).¹²

The six figures show total liabilities and total deposits—broken down into foreign/domestic and insured/uninsured—for several years before failure. These data are merger-adjusted, so that data for merged institutions are included throughout the time series. In addition, the six figures identify capital-adequacy status of the banks, defined by the categories put forth in the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA): “well-capitalized,” “adequately capitalized,” “undercapitalized,” “significantly undercapitalized,” or “critically undercapitalized.”

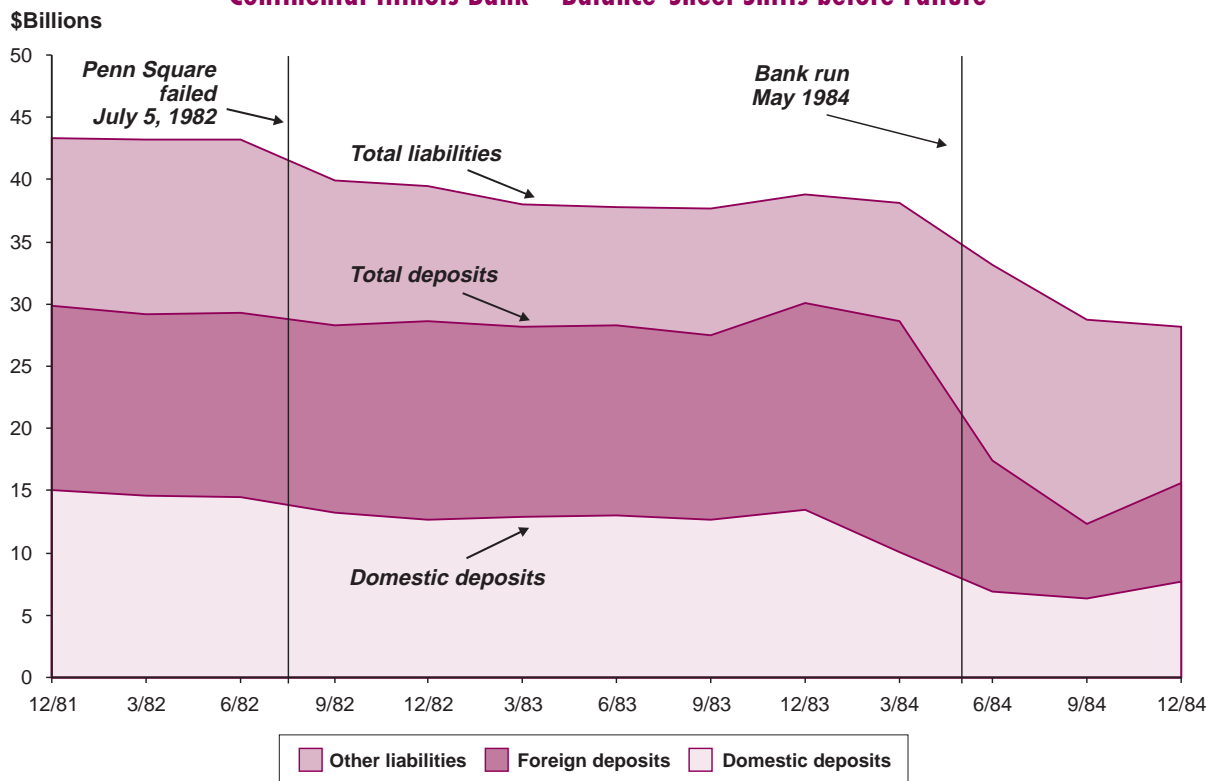
Estimates of insured deposits were not available for every period. Before March 1991, banks reported deposits over \$100,000 annually on the June Call Report; thereafter, banks reported them quarterly. These Call Report data can be used to estimate insured deposits, but these estimates are only that: estimates.¹³ In a few of the failed banks, insured deposits at the time of failure are available from FDIC FIMS data.

The identification of significant financial difficulties can occur long before failure. The six figures make it clear that in the case of Bank of New England, for example, financial difficulties were apparent in late 1989, but the bank did not fail until January 1991. Many of the banks in Texas struggled financially for even longer periods. The figures also make it clear that a troubled bank's liability structure changes considerably as it approaches failure. In all of these cases total liabilities decreased, uninsured and unsecured liabilities fell relative to insured deposits, and foreign deposits declined.

¹² FIMS data for insured deposits represent an initial estimate made at the time of closing. These estimates are rough, since only limited information on multiple accounts and pass-through coverage is available.

¹³ A sum of all deposits in a bank that are \$100,000 or less may result in either an over- or an underestimation of the true level of insured deposits. For example, depositors may have multiple accounts at a single bank, all of which are under \$100,000, such that the sum of these accounts exceeds the insurance limit. And loan customers may be able to offset loan balances against uninsured deposits. Such factors would mean that our estimate of insured deposits was too high. Alternatively, the FDIC grants pass-through coverage on certain large deposits in which multiple individuals have interests. This pass-through coverage would mean that our estimate of insured deposits was too low. Since data on multiple accounts and pass-through coverage are not available, appropriate adjustments cannot be made.

Figure 1
Continental Illinois Bank—Balance-Sheet Shifts before Failure



Although precise data on the uninsured and unsecured liabilities at the time of failure are unavailable, the data suggest that both types of liability generally declined rapidly just before failure. A notable exception was Continental Illinois. If these pre-failure trends continued in these large banks, unprotected depositor and creditor claims would have been small at the time of failure.

Of the six banks examined, all but Continental Illinois were large regional banks with a retail orientation. The evidence therefore suggests that large banks with a retail franchise can better weather a protracted period of financial deterioration before experiencing liquidity insolvency.

Continental Illinois, in contrast, was a wholesale bank that relied heavily on purchased money, especially foreign deposits. It relied about half as much on domestic funding—measured by domestic deposits as a percentage of liabilities—as the other banks in the group (table 5): Continental Illinois funded approximately 34 percent of liabilities with domestic deposits, whereas the comparable figure for the other banks was from 45 to 72 percent.

The financial difficulties facing Continental Illinois surfaced several years before failure. Troubles began with the collapse of Penn Square, a collapse that caused Continental Illinois to experience some funding difficulties because it had purchased a large amount of loan participations from Penn Square.¹⁴ But Continental Illinois was able to replace fleeing domestic deposits with foreign deposits. When rumors of more substantial problems at the bank surfaced in May 1984, its funding quickly collapsed and an FDIC-orchestrated bailout was required.

At the time of the bailout, as figure 1 shows,

Continental Illinois still held substantial amounts of foreign deposits. Of total deposits of almost \$30 billion, insured deposits were believed to be roughly \$4.5 billion. Clearly, had the FDIC followed the liquidation priority later required under national depositor preference, it would have imposed losses on foreign depositors, uninsured depositors, and general creditors and would not have lost money on this transaction.

Extrapolating from the data on these six banks, we can divide large banks into roughly two classes. The first group has characteristics similar to those of Bank of New England, MBank, and First City. These “retail” banks can use their substantial retail funding base to withstand considerable financial pressure. Even with depositor preference, creditors of these banks are likely to shift the majority of failure risk to the FDIC.

The second group consists of “wholesale” banks whose path to failure could more closely approximate that of Continental Illinois. Since “wholesale” banks rely more heavily on liabilities that have a lower liquidation priority, liquidity would quickly evaporate in the face of significantly bad press, although these banks would be able to withstand a moderate amount of bad news. In 1991, for example, Citibank, a large wholesale bank, announced large losses in the first quarter. Uninsured deposits fell from 12 to 9 percent of liabilities. Citibank, in contrast to Continental, was able to attract enough foreign deposits to maintain their total deposit base and avoid liquidity problems. When such institutions close because of liquidity problems, much of the risk of financial loss still rests with uninsured and unsecured creditors, especially under depositor preference.

¹⁴ For more detail about Continental Illinois, see FDIC (1997), chap. 7.

Table 5
Balance-Sheet Characteristics of Six Large Failed Banks before Failure

Institution	Assets	Liabilities	Deposits (\$Millions) and Deposits as a Percentage of Liabilities (%)									
			Total	Domestic		Foreign		Estimated Insured ^a		Estimated Uninsured ^{a,b}		
Bank of New England	\$21,346	\$20,264	\$15,740	78%	\$12,865	63%	\$ 2,875	14%	\$7,478	35%	\$7,666	36%
First Republic	25,445	24,262	15,912	66	10,857	45	5,055	21	3,678	15	7,179	30
First City	7,280	6,983	4,355	62	3,809	55	545	8	2,337	40	1,051	18
MBank, Dallas	8,906	8,586	6,801	79	6,232	73	568	7	2,383	27	4,363	50
Southeast	14,578	13,935	10,975	79	9,999	72	976	7	6,378	46	4,597	33
Continental Illinois	44,923	43,162	29,302	68	14,530	34	14,772	34	NA	NA	NA	NA

NA = Not applicable.

Note: Merger-adjusted.

^a Earliest figures available within the two years before failure.

^b Includes foreign deposits.

National Depositor Preference

Figure 2
First Republic Bank, Dallas—Balance-Sheet Shifts before Failure

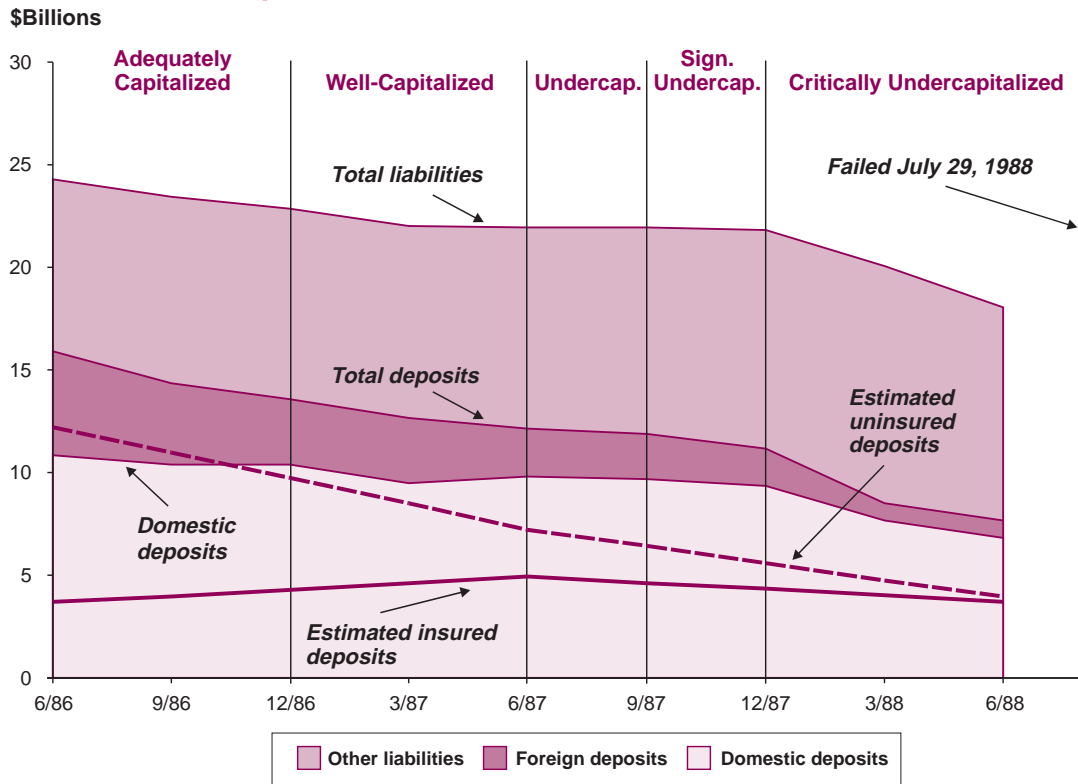


Figure 3
MBank, Dallas—Balance-Sheet Shifts before Failure

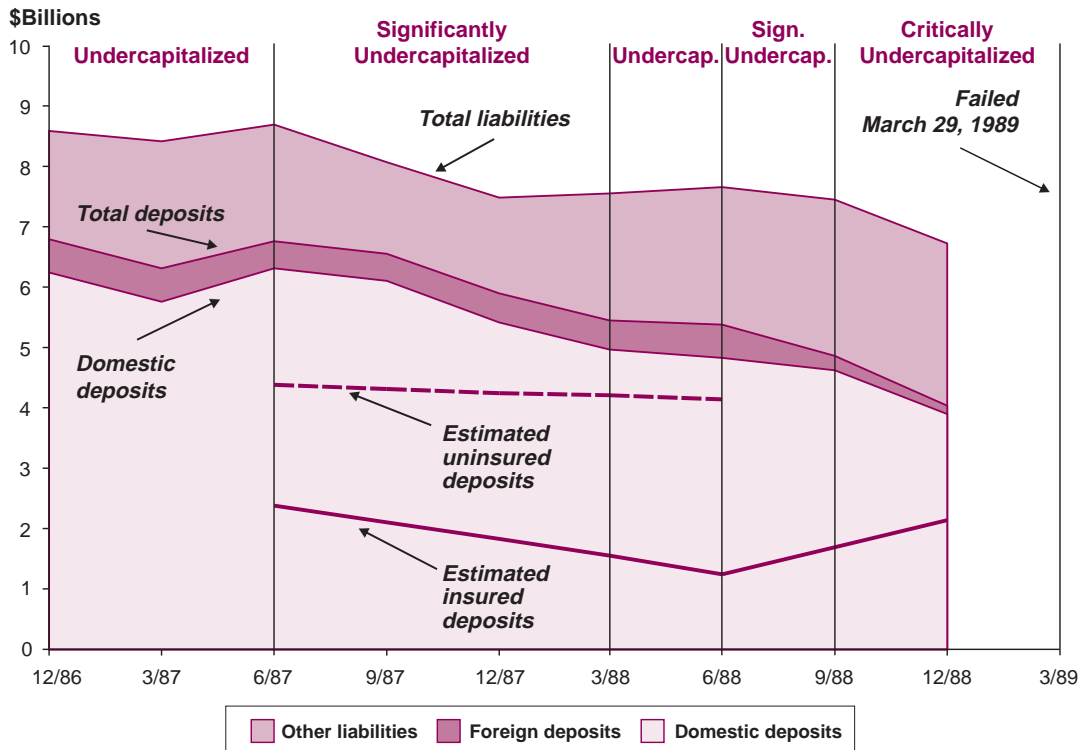


Figure 4
Bank of New England—Balance-Sheet Shifts before Failure

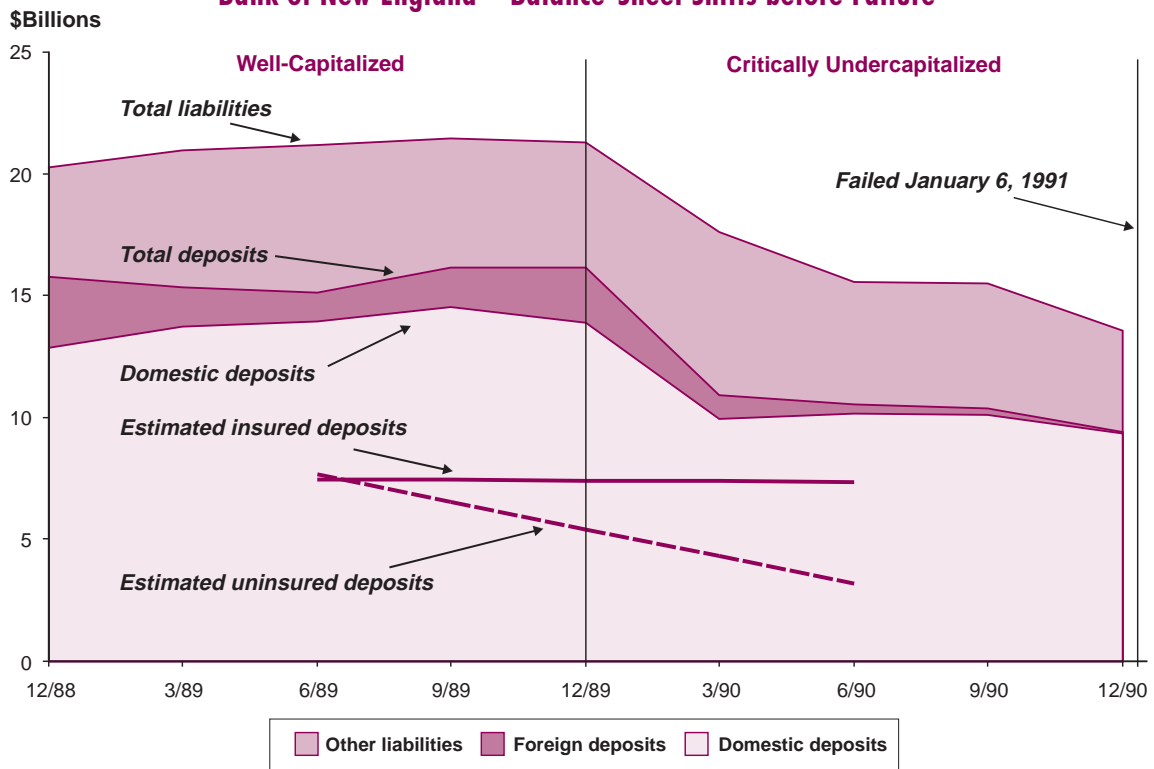


Figure 5
Southeast Bank, Miami—Balance-Sheet Shifts before Failure

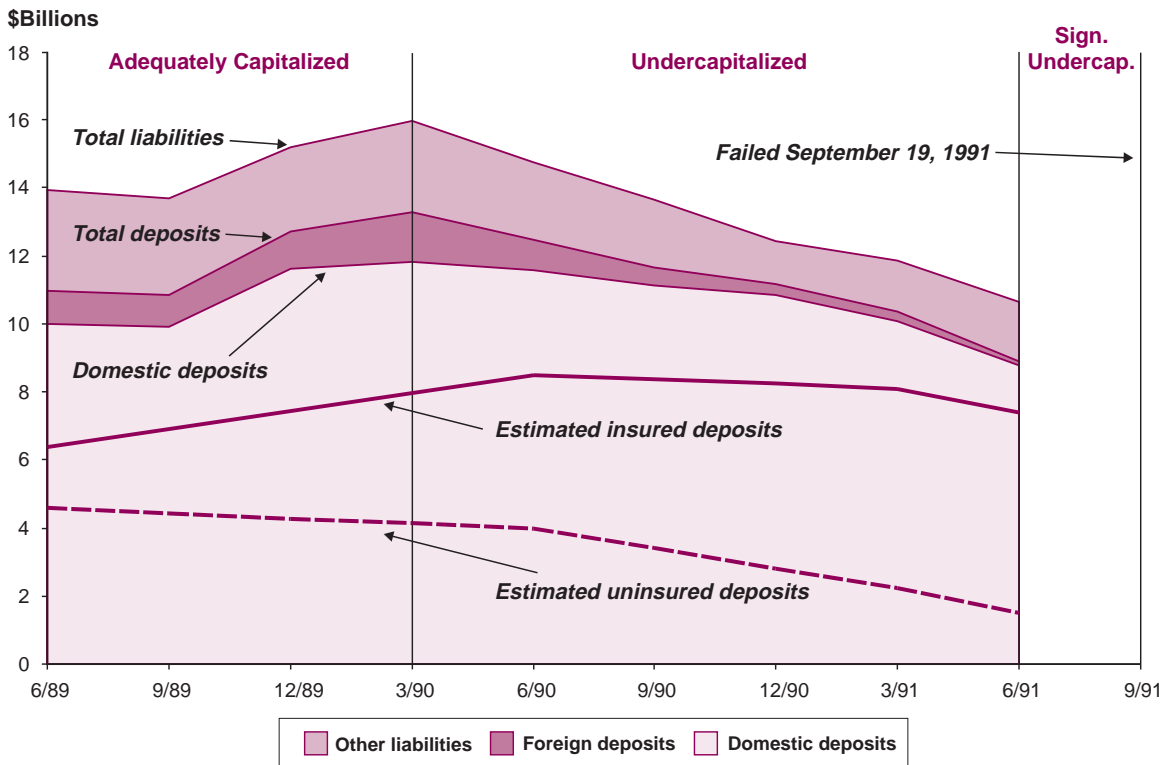
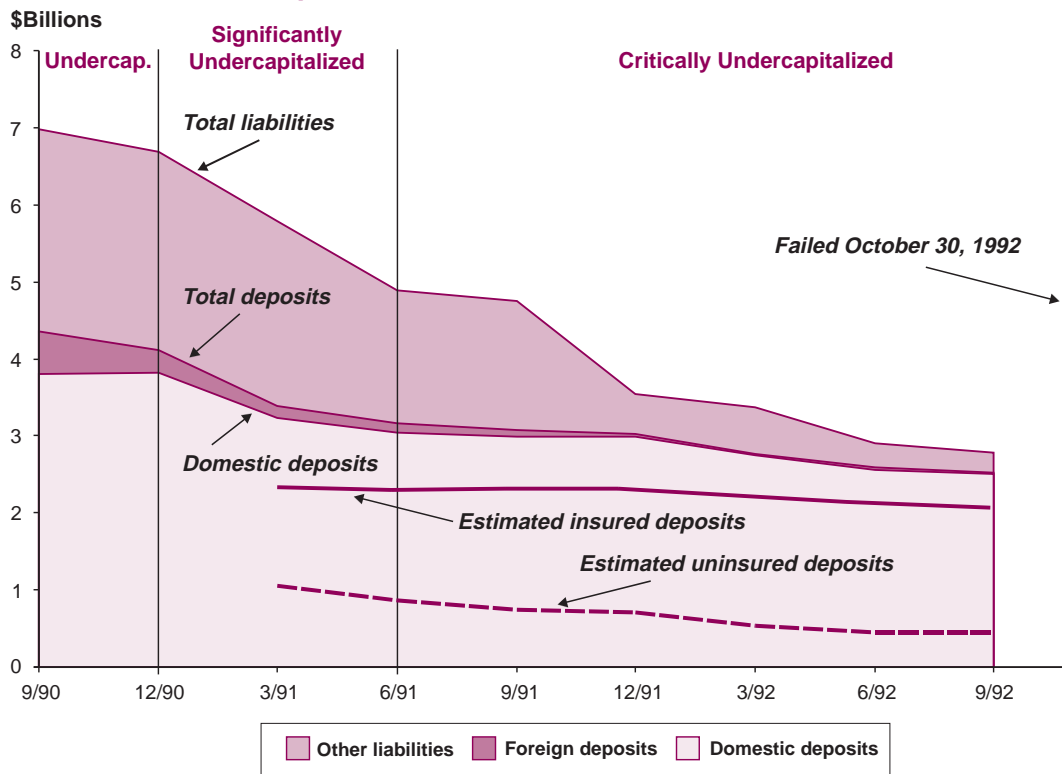


Figure 6
First City, Houston—Balance-Sheet Shifts before Failure



For the 50 largest BIF-insured institutions table 6 ranks the balance-sheet data as a percentage of total liabilities for the top and bottom 10 institutions in the ranking.¹⁵ The majority of the 50 largest institutions, especially the top ten, have a liability structure similar to that of the “retail” banks in the failure group. As mentioned above, their relatively stable funding base could allow them to weather relatively long periods of decline before failure. Certainly such a transition period would permit a considerable amount of liability shifting.

Some of the institutions at the bottom of the list appear to have a more “wholesale” structure. In these cases the FDIC might be able to benefit substantially from depositor preference. Yet (as discussed in the next section) these may be the very institutions most likely to have some or all of their claims covered in full because of the “systemic risk” provisions of FDICIA.

FDICIA, Systemic Risk, and National Depositor Preference

Historically, as shown above, large banks have experienced considerable balance-sheet shifting before failure. It is important to note, however, that these institutions were operating under a different set of

rules and market perceptions from the ones that exist today. Not only national depositor preference but also many other changes were enacted into law in the 1990s, all designed to reduce the exposure of the deposit insurance funds to failed banks.

FDICIA in particular contained numerous provisions concerning the treatment of financially distressed and failed banks that have implications for the consequences of national depositor preference. Foremost among these provisions was prompt corrective action (PCA), which raised the capital threshold for the determination of equity solvency.¹⁶ PCA also made it more difficult for federal and state regulators to delay closing capital-deficient institutions. Earlier closure, in turn, has the potential for reducing some of the liability shifting seen in past failures.

¹⁵ The figures are the sum of balance-sheet items of all of the FDIC-insured depository institutions in the bank or thrift holding company as reported on the Call Report. To the extent that transactions take place between banks within the holding company, the sum overestimates the amount reported on a consolidated balance sheet.

¹⁶ The PCA provisions of FDICIA define various capital categories for a bank, ranging from “well-capitalized” to “critically undercapitalized.” As a bank’s capital level diminishes and it falls into lower capital categories, federal regulators are generally required to take increasingly stringent action against the institution.

Table 6
Sum of Balance Sheets of 50 Largest Holding Companies, December 31, 1998

Ranked by Domestic Deposits to Liabilities (\$Millions)

Rank	Holding Company	Assets	Deposits as a Percentage of Liabilities				
			Total	Domestic	Foreign	Insured	Uninsured ^a
1	Union Planters	\$ 31,549	87%	87%	0%	74%	13%
2	Regions	38,739	85	81	3	61	20
3	First American	20,868	81	79	2	57	21
4	Firststar	40,326	79	78	1	58	20
5	Wells Fargo	195,809	81	77	4	56	21
6	Manufacturers	20,702	78	77	2	57	20
7	Mercantile	36,202	79	77	2	58	19
8	Summit	33,137	76	76	0	57	18
9	U.S. Bancorp	73,470	76	75	1	52	24
10	Marshall & Ilsley	21,557	81	75	6	56	19
41	Astoria	\$ 20,513	52%	52%	0%	49%	3%
42	California Fed	54,636	50	50	0	47	3
43	Bank of New York	61,343	81	50	32	23	27
44	Northern Trust	28,465	69	42	27	22	21
45	Chase Manhattan	355,483	66	40	26	18	23
46	Republic New York	47,155	78	31	46	24	7
47	State Street	43,184	68	27	41	2	25
48	Bankers Trust	105,844	42	22	20	5	16
49	Citicorp	370,397	66	18	48	11	7
50	J. P. Morgan	175,919	34	5	29	0	5

^a Includes foreign deposits.

Some students of the 1980s banking crisis were critical of delays in bank closings, and they attributed some of the delay to the extent to which large, already troubled, banks used Federal Reserve discount-window borrowings to stay afloat. Hence, FDICIA restricted the Federal Reserve's ability to lend to troubled institutions, viewing such lending as an attempt to delay bank closings.

Figures 7–10 show discount-window borrowings relative to total liabilities and total deposits for four of the six failed banks in our sample.¹⁷ Each of these institutions relied on discount-window borrowing, and it may have extended the life of the institution.

FDICIA also changed the cost test used by the FDIC to choose the method of failure resolution. Before FDICIA, the cost test required only that the chosen resolution method be less costly than a payoff. FDICIA's "least-cost test" requires that the resolution method chosen be less costly than *all* alternative methods. The least-cost test makes it substantially more difficult for the FDIC to structure resolution transac-

tions in which uninsured depositors are covered in full, since there will usually be the less-costly alternative method in which only insured depositors are covered in full.¹⁸

Some argue that the effects of the least-cost test will be minimal for very large banks—precisely the banks that offer the largest cost savings to the FDIC from national depositor preference—inasmuch as the test does not apply if there is a determination of systemic risk. A systemic-risk determination requires two-thirds of the members of the FDIC Board of Directors and two-thirds of the members of the Board of Governors of the Federal Reserve System to find that complying with the least-cost test would have serious adverse effects on economic conditions or financial stability; if they make that finding, they forward a written recommen-

¹⁷ Consistent data on discount-window borrowing for CINB and First City were not available.

¹⁸ For further discussion of the effect of the least-cost test on the choice of resolution method, see Bovenzi and Muldoon (1990).

National Depositor Preference

Figure 7
First Republic Bank, Dallas—Discount-Window Borrowings

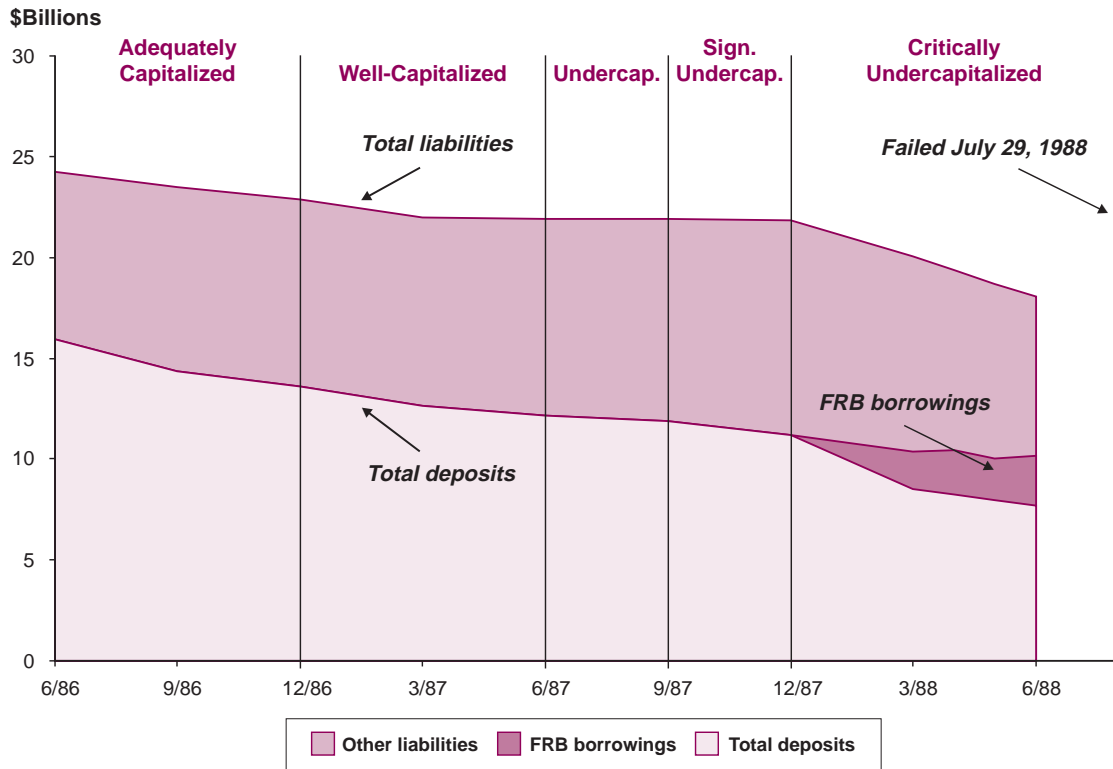


Figure 8
MBank, Dallas—Discount-Window Borrowings

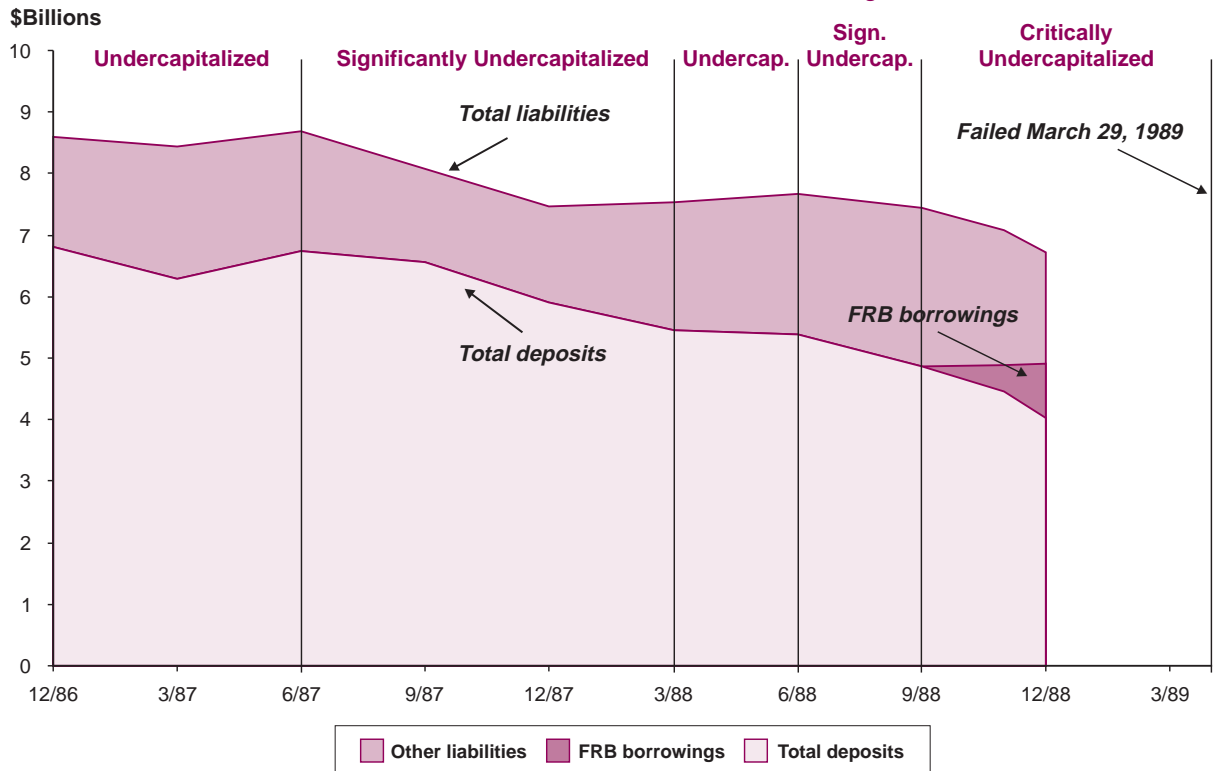


Figure 9
Bank of New England—Discount-Window Borrowings

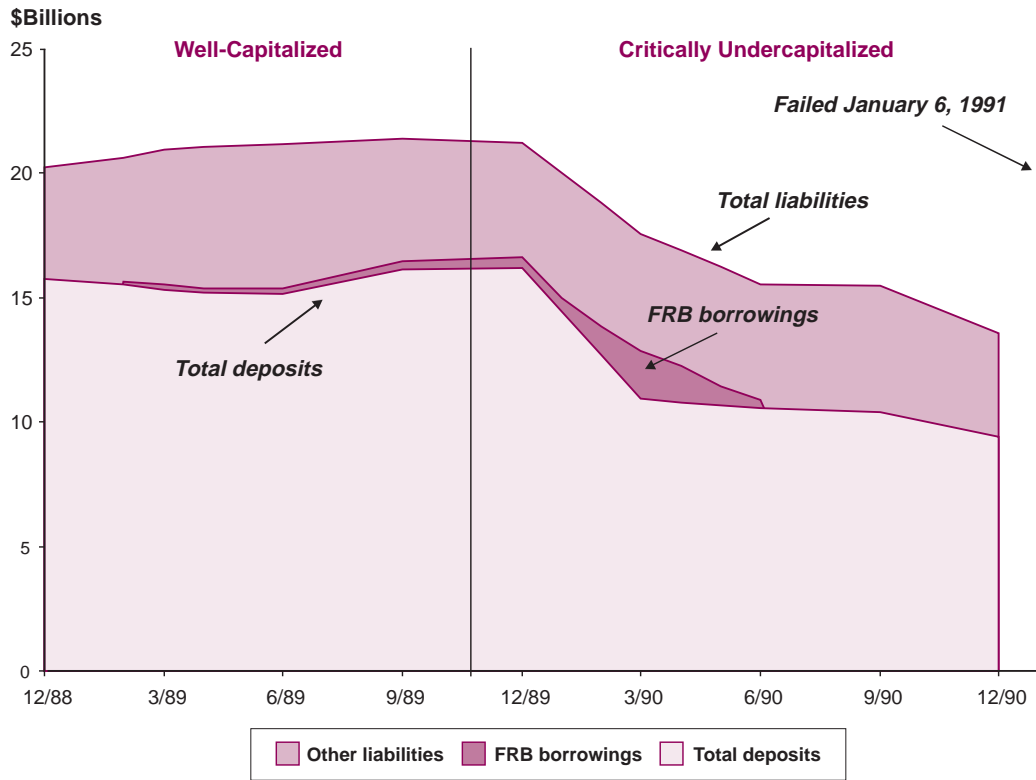
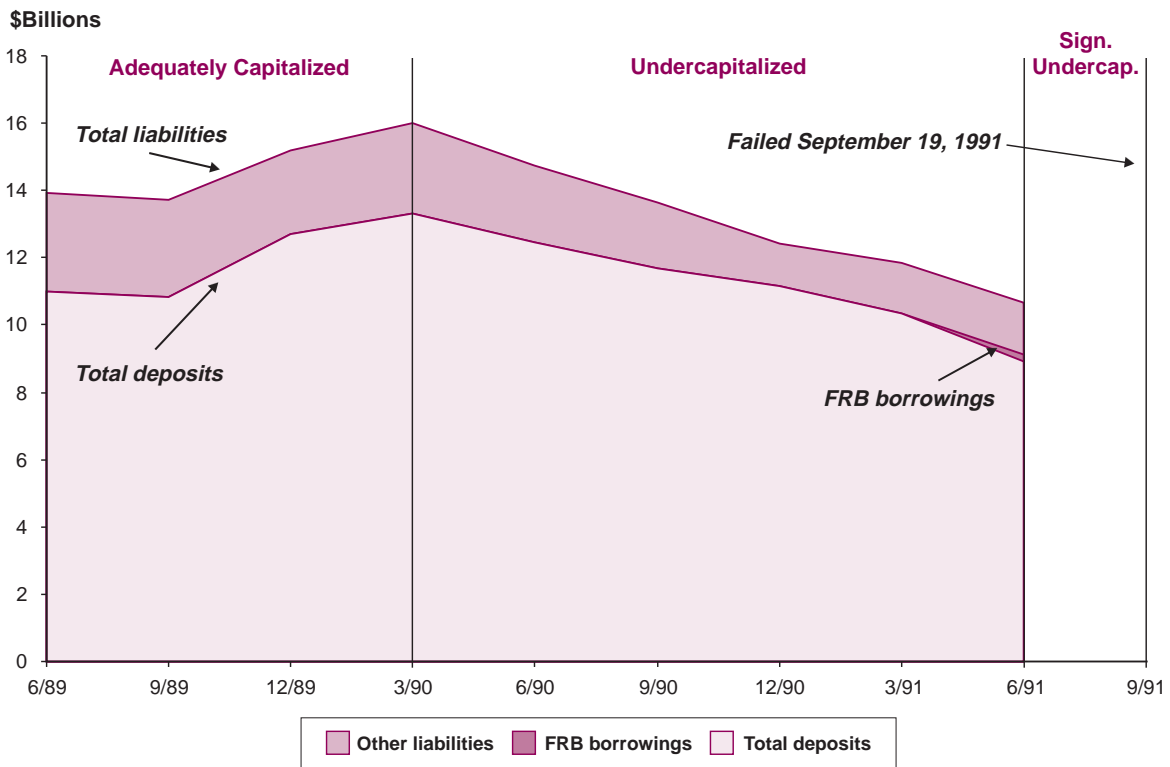


Figure 10
Southeast Bank, Miami—Discount-Window Borrowings



dation to the Secretary of the Treasury; who, in consultation with the President, must agree before the least-cost test can be waived.

Despite the intentions of Congress when it passed FDICIA, the least-cost test and the greater complexity of the systemic-risk determination process might produce additional market anxiety at the onset of future large-bank failures. Exposed creditors might be more skittish and therefore more prone to run or seek collateral. Uninsured depositors and unsecured creditors might move more aggressively to protect themselves. Thus, financially troubled banks might then face greater demands for collateral and be exposed to more aggressive runs.

On the one hand, such actions by exposed depositors and creditors will certainly cause a troubled institution to close earlier than under past rules. And earlier closure may cause earlier and more rapid shifting of risk to the FDIC. Thus, cost savings to the FDIC may end up being minimal. On the other hand, earlier closure may not give banks time to liquidate high-quality, but less-liquid, assets, and if higher-quality assets remain in the bank at the time of failure, the FDIC may lose less money when resolving a failed bank.

Treatment of Foreign Depositors and Proposals to Modify Depositor Preference

Doubts about the cost savings to the FDIC are one unintended consequence of national depositor preference. There is another, and possibly serious, implication for the FDIC. As noted above, national depositor preference does not extend to foreign depositors, who are treated the same as general creditors. This priority implies that the FDIC can impose losses on foreign depositors. But as Silverberg (1994) noted, if the FDIC attempts to impose such losses, it may lose control of the resolution process. If a country attempts to protect its depositors, it may decide to dispose—under its own laws—of the assets and liabilities of the domestic branches of a failed foreign bank (in this case the foreign bank would be a U.S. bank). Seizing such assets is sometimes called “ring fencing.” A country is more likely to protect its depositors and creditors with ring fencing if it believes the foreign country (for example, the United States) does not have a competent liquidation plan. In some countries, ring fencing is required by law. In this way, domestic depositor preference complicates the resolution of a large bank with a substantial presence abroad.¹⁹

Treating foreign depositors as general creditors increases the chances of ring fencing, but even without ring fencing, imposing proportionately larger losses on foreign depositors increases systemic risk and perhaps generates runs by foreign depositors on other large institutions. If the FDIC reduces the potential for ring fencing by offering to provide foreign depositors and creditors with more than would be dictated by receivership recoveries, it would be violating the least-cost test and would require a systemic-risk determination. Alternatively, legislative changes could be made so that foreign deposits were considered “deposits” for preference purposes while remaining uninsured. This change would decrease both the likelihood of ring fencing and the need for systemic-risk determinations.

Another way to decrease the incentive for ring fencing would be to enact insured depositor preference—the same liquidation priority as in the Banking Act of 1933. Under insured depositor preference, insured deposits would receive preference, and uninsured domestic deposits and foreign deposits would be treated the same as general creditors. Since foreign deposits (which are not insured) and uninsured domestic deposits would be treated alike, the fairness issue raised by foreign countries would have less merit.

Even though insured depositor preference has the advantage of possibly decreasing the incentive for ring fencing, proposals to enact it have had political opposition. Insured depositor preference would put small banks at a competitive disadvantage to the extent that depositors at some large institutions would be perceived as receiving *de facto* 100 percent coverage (because of the systemic-risk provisions of FDICIA) for their *uninsured* depositors, and these institutions would therefore be able to attract more depositors.

Insured depositor preference would do more than decrease the likelihood of ring fencing. It would also increase market discipline by shifting a greater amount of failure risk from the FDIC to other market participants. For the 50 largest bank holding companies ranked by insured deposits to liabilities, table 7 shows the deposit structure of the top and bottom 10 institutions. The highly wholesale-oriented institutions that have the smallest proportion of domestic deposits (table 6) also have the smallest proportion of insured deposits (table 7). There are also numerous large, re-

¹⁹ It is possible for a bank to change the nature of its foreign-deposit contracts by making the funds payable in the United States (thereby placing them within the definition of a deposit). Doing so would generate costs in the form of reserve requirements imposed by the Federal Reserve and deposit insurance premiums; the net benefits or costs are difficult to quantify.

tail-oriented banking organizations that have relatively low levels of insured deposits. In fact, in three large banking organizations insured deposits account for less than 5 percent of total liabilities. Even with the shifting of liabilities, these modest levels of insured deposits imply a larger pool of liabilities to share losses than is the case under the current system.

Summary and Conclusions

The FDIC's experience with depositor preference has varied. The agency initially operated under an insured depositor preference mandate but quickly recommended that all deposits have the same liquidation status as general creditors. This priority system was enacted in 1935 and (except for state-chartered institutions) remained in place until 1993, when Congress adopted a domestic depositor preference scheme.

Public commentators were generally critical of the adoption of national depositor preference, particularly

since it was passed with little public debate and discussion. Many large banks have substantial amounts of foreign deposits and other unsecured liabilities, and the commentators thought this balance-sheet structure might have misled federal budget analysts into believing that considerable cost savings were available from depositor preference. But uninsured depositors and unsecured creditors of troubled banking institutions always seek to protect themselves. At failure, the amount of uninsured deposits and unsecured liabilities is much less than it was in the months or years before failure.

In any case, given the healthy state of the banking industry since passage of national depositor preference, the supervisory and market-discipline changes brought about by the combination of national depositor preference and FDICIA (1991) remain untested. When a large bank fails, these revisions will very probably alter the behavior of market participants in meaningful ways. Uninsured depositors and unsecured creditors

Table 7
Sum of Balance Sheets of 50 Largest Holding Companies, December 31, 1998
Ranked by Insured Deposits to Liabilities (\$Millions)

Rank	Holding Company	Assets	Deposits as a Percentage of Liabilities				
			Total	Domestic	Foreign	Insured	Uninsured ^a
1	Union Planters	\$ 31,549	87%	87%	0%	74%	13%
2	World Savings	31,958	72	72	0	71	1
3	Dime Savings	22,294	66	66	0	63	4
4	Charter One	24,878	66	66	0	62	4
5	Regions	38,739	85	81	3	61	20
6	Huntington	28,271	76	74	2	60	15
7	AmSouth	19,833	73	73	0	58	15
8	Mercantile	36,202	79	77	2	58	19
9	Firststar	40,326	79	78	1	58	20
10	Summit	33,137	76	76	0	57	18
41	Mellon	\$ 52,354	74%	66%	9%	37%	29%
42	Union Bank	36,428	87	75	12	33	42
43	Republic New York	47,155	78	31	46	24	7
44	Bank of New York	31,343	81	50	32	23	27
45	Northern Trust	28,465	69	42	27	22	21
46	Chase Manhattan	355,483	66	40	26	18	23
47	Citicorp	370,397	66	18	48	11	7
48	Bankers Trust	105,844	42	22	20	5	16
49	State Street	43,184	68	27	41	2	25
50	J. P. Morgan	175,919	34	5	29	0	5

^a Includes foreign deposits.

will probably be more skittish. They will protect their interests more actively and thus precipitate a liquidity failure much more rapidly than has been the case in the past. They will do this because earlier closures have a greater potential for leaving foreign depositors and other creditors unprotected, to the benefit of the FDIC.

Another likely consequence of the current depositor preference system—because this system gives foreign depositors only the same status as general creditors—is the greater probability of a systemic-risk determination in the case of a bank with sizable foreign operations. For without a systemic-risk determination, the FDIC would be required to pay domestic depositors in full before foreign depositors received anything, and placing foreign depositors behind domestic depositors would create a strong incentive for foreign countries to intervene in the failure process. In the past, some countries intervened in the process by structuring their own liquidation plans for the domestic branches and operations of a failed foreign institution. This process, often called “ring fencing,” is designed to protect a

country’s depositors in foreign banks from loss when the foreign bank fails. Since the national depositor preference scheme gives other countries’ depositors a lower priority than U.S. uninsured depositors, other countries are likely to consider it unfair and be more willing to engage in ring fencing.

Therefore, a system that gives preference to domestic depositors may not be the best and most effective form of depositor preference. An alternative would be to change the statute to grant foreign deposits the same standing as domestic deposits. Another option, certainly more controversial, would be to move to an insured depositor preference system like the one in effect from 1933-1935.

Because only relatively small institutions have failed since the adoption of depositor preference in 1993, we have a unique opportunity to reopen the depositor preference debate. Other options—either preference for all depositors, foreign and domestic, or preference only for insured depositors—should be discussed and debated as viable alternatives.

BIBLIOGRAPHY

- Banking Act of 1933*. U.S. Public Law 73-66. 73rd Cong., 1st sess., May 17 to June 16, 1933.
- Banking Act of 1935*. U.S. Public Law 74-305. 74th Cong., 1st sess., April 19 to June 3, 1935.
- Bovenzi, John F., and Maureen E. Muldoon. 1990. Failure-Resolution Methods and Policy Considerations. *FDIC Banking Review* 3, no. 1:1–11.
- Federal Deposit Insurance Act of 1950*. U.S. Public Law 81-797. 81st Cong., 2nd sess., September 22, 1950.
- Federal Deposit Insurance Corporation (FDIC). 1934. *Annual Report*. FDIC.
- . 1983. *Deposit Insurance in a Changing Environment*. FDIC.
- . 1984. *The First Fifty Years: A History of the FDIC, 1933–1983*. FDIC.
- . 1987. *Mandate for Change: Restructuring the Banking Industry*. FDIC.
- . 1989. Deposit Insurance for the Nineties: Meeting the Challenge. Unpublished manuscript.
- . 1996. *Failed-Bank Cost Analysis*. FDIC Division of Finance.
- . 1997. *History of the Eighties, Lessons for the Future: An Examination of the Banking Crises of the 1980s and Early 1990s*. 2 vols. FDIC.
- . 1998. *Managing the Crisis: The FDIC and RTC Experience, 1980–1994*. 2 vols. FDIC.
- Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA)*. U.S. Public Law 102-242. 102d Cong., 1st sess., December 19, 1991.
- Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA)*. U.S. Public Law 101-73. 101st Cong., 1st sess., August 9, 1989.
- Hirschhorn, Eric, and David Zervos. 1990. Policies to Change the Priority of Claimants: The Case of Depositor Preference Laws. *Journal of Financial Services Research* 4:111–25.
- Kaufman, George G. 1997. The New Depositor Preference Act: Time Inconsistency in Action. *Managerial Finance* 23, no.11:56–63.
- Lutton, Thomas, and David Becher. 1994. Depositor Preference. Office of the Comptroller of the Currency memo dated March 24, 1994. Duplicated.
- Omnibus Budget Reconciliation Act of 1993*. U.S. Public Law 103-66. 103d Cong., 1st sess., August 10, 1993.
- Osterberg, William P. 1996. The Impact of Depositor Preference Laws. Federal Reserve Bank of Cleveland *Economic Review* 12:1–12.
- Silverberg, Stanley C. 1986. A Case for Depositor Preference. *FDIC Banking and Economic Review* 4, no. 4:7–12.
- . 1993. A Case for Broadening the Deposit Insurance Assessment Base. Unpublished manuscript. Independent Bankers Association of America.
- . 1994. Depositor Preference, Insurance Costs, and the Cost of Supervision. *The Golembe Reports* 1994–2.
- Thomson, James B. 1994. The National Depositor Preference Law. Federal Reserve Bank of Cleveland *Economic Commentary*. February 15, 1–4.
- U.S. Department of the Treasury. 1991. Modernizing the Financial System: Recommendations for Safer, More Competitive Banks. U.S. Department of the Treasury.