Thrifts in the Troubled 1980s: In the Nation and the District

By J. A. Cacy

The condition of the nation's thrift institutions has been a serious national problem throughout the 1980s. High and volatile interest rates, combined with too much deregulation, have spawned widespread thrift insolvency and failure in all regions of the nation.

The federal legislation recently enacted to deal with thrift industry problems will allow insolvent and weak thrifts to be closed without causing losses to insured depositors. The law is also intended to prevent a recurrence of problems in the future. To further its objectives, the new legislation introduces many changes in regulations affecting thrift institutions. In general, thrifts must now meet more stringent capital requirements and operate more in line with practices that emphasize the financing of housing.

The persistence and gravity of thrift industry problems and the need for new legislation to deal with them may have created the impression that most thrift institutions are insolvent and soon will be closed. Also, some may be concerned that the new regulations will make it difficult for remaining thrifts to grow and prosper. Special problems encountered by thrifts in the states of the Tenth Federal Reserve District raise additional concerns about the condition of these institutions. District thrifts have not only shared in the difficulties besetting thrifts nationwide in recent years, but have had to contend with weakness in the district's economy. .

In view of concerns about the condition and future of thrift institutions, this article reviews the performance and behavior of thrifts in the 1980s and assesses their current condition as reflected in their capital positions. The article

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concludes that a majority of the nation's thrifts now meet minimum capital requirements established by the new legislation. In recent years, moreover, there has been an increase in the number of nationwide thrifts having stronger capital positions. Most Tenth District thrifts meet minimum capital standards, although relatively fewer than across the nation. An additional conclusion is that, compared with institutions having relatively weak capital positions, the more successful thrifts with stronger capital positions have tended to emphasize the financing of housing and, in general, have operated more in line with practices common to the industry prior to the troubled 1980s. That thrifts successful during the 1980s have favored practices that will be encouraged by the new legislation may reduce concerns about the future of the thrift industry.

I. THRIFTS IN THE 1980s: FROM PROSPERITY TO DISASTER

Prior to the 1980s, the U.S. thrift industry enjoyed many years of growth and prosperity. In the early 1980s, however, sharply rising interest rates turned a profitable thrift industry into one with large losses.[1] The industry recovered partially from 1983 to 1985 as interest rates declined. But after 1985, losses on assets and operations caused thrifts to suffer even greater losses than in the early part of the decade.

Thrift accounting

In discussing the experiences of thrifts during the 1980s, this article focuses on net income, expressed as a percent of assets. This is commonly referred to as return on assets, or ROA. ROA is equal to total income minus total expense; but, for analytical purposes, income and expense items are commonly divided into two groups: items relating to interest and items relating to all other factors. Following this procedure, and expressing all items as a percent of assets, ROA is equal to net interest income (NIM), minus net noninterest expense, (NNIE).[2] NIM is equal to interest income minus interest expense, while NNIE is equal to noninterest expense minus noninterest income. Noninterest expense consists of operating expense and nonoperating expense, while noninterest income consists of noninterest operating income and nonoperating income. In summary:

$$\mathrm{ROA} = \mathrm{NIM} - \mathrm{NNIE}$$
$$\mathrm{NNIE} = \mathrm{OE} + \mathrm{NOE} - \mathrm{NIOI} - \mathrm{NOI}$$

where ROA = net income
NIM = interest income minus interest expense
NNIE = net noninterest expense, that is, noninterest expense minus noninterest income
OE = operating expense, which consists of employee com-

[1] Thrift institutions include savings and loan associations and savings banks. The data in this article cover institutions that, during the periods covered, were insured by the Federal Savings and Loan Corporation. Excluded are noninsured institutions along with those insured by the Federal Deposit Insurance Corporation. Additional background on the data is included in the appendix.

[2] This formulation ignores income taxes.

TABLE 1
Income and expenses, 1977-88
U.S. thrift institutions
(Percent of assets)

	1977-79	1980-82	1983-85	1986-88
Net income (ROA)	0.70	−0.42	0.25	−0.58
Net interest income (NIM)	1.43	−0.03	0.93	1.30
Net noninterest expense (NNIE)	0.41	0.53	0.53	1.88
Noninterest operating income	0.79	0.64	0.96	0.70
Nonoperating income	0.08	0.33	0.55	0.54
Operating expense	1.22	1.39	1.70	2.00
Nonoperating expense	0.06	0.11	0.34	1.13
Regulatory capital*	5.58	3.69	4.38	4.09
GAAP capital*	—	—	3.18	3.36
Tangible net worth*	—	—	0.86	1.54
Deposits	82.42	77.54	80.84	77.44

*Year at end of period used for calculation

Note: For 1986-88 period, percent of tangible assets (total assets minus goodwill and other intangibles), except for regulatory and GAAP capital. For regulatory capital, percent of total assets. For GAAP capital, percent of GAAP assets. For other periods, percent of total assets, except for GAAP capital and net worth ratios in 1983-85 period.

Source: Federal Home Loan Bank Board

pensation and related expense

NOE = nonoperating expense, which consists mainly of provisions for losses on assets

NIOI = noninterest operating income, which includes fees and net income from service corporations and related operations

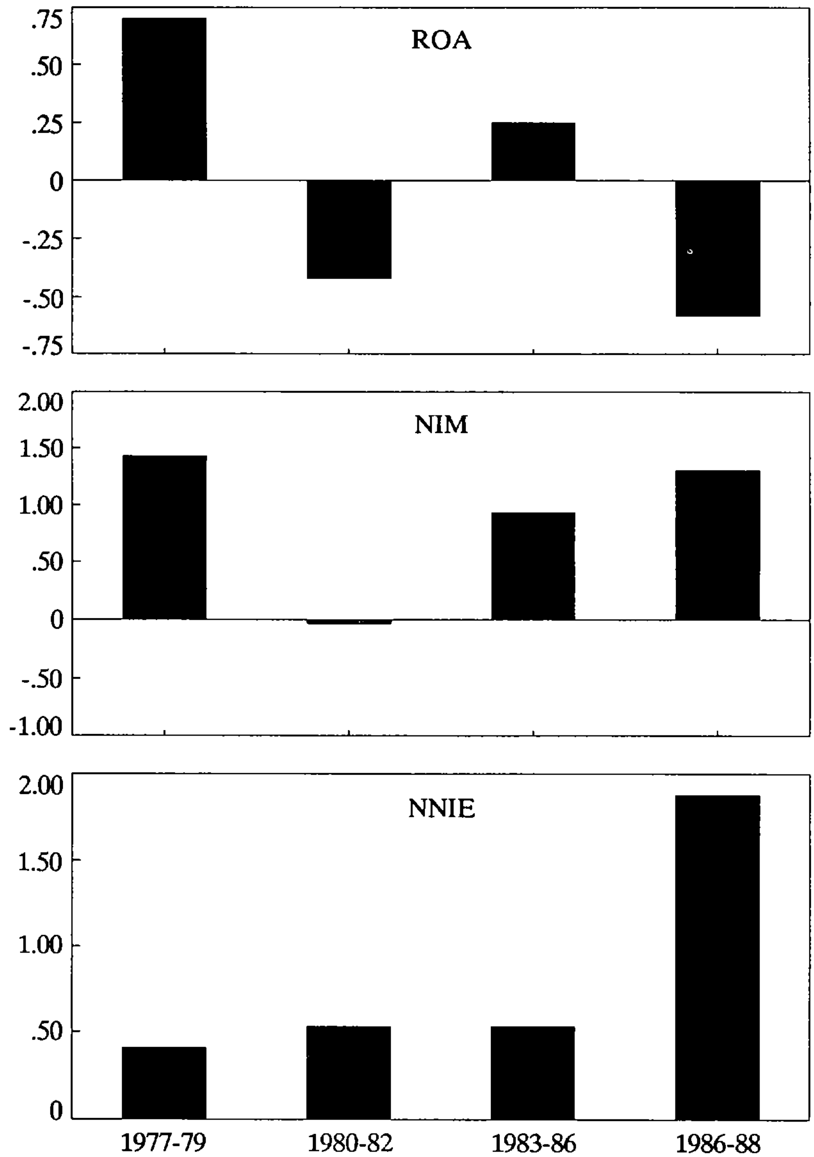
NOI = nonoperating income

Pre-1980: Thrifts grow and prosper

During much of the post-World War II era, the nation's thrift institutions enjoyed almost uninterrupted growth and prosperity. From 1965 to 1979, for example, assets held by thrifts increased at an annual rate of 10.6 percent, exceeding nominal GNP's growth rate of 8.8 percent for the same period. Thrifts were consistently profitable during this long growth period. Their return on assets averaged 0.61 percent and never fell below 0.44 percent on a yearly basis. The late 1970s were particularly profitable years. From 1977 to 1979, industry ROA averaged 0.70 percent (Chart 1, Table 1).

Even during prosperous years, however, thrifts encountered problems. For example, thrifts underwent periods of disintermediation, when rising interest rates caused deposit outflows, cost increases, and sluggish growth in quality earning assets. From 1965 to 1979, deposits and capital grew less rapidly than assets, causing the industry to become increas-

CHART 1
Return on assets, net interest income, and net noninterest expense, 1977-88
U.S. thrift institutions



Source: Federal Home Loan Bank Board.

ingly dependent on borrowed funds. During this period, the industry's deposit-asset ratio declined from 85 percent to 81 percent, while the capital-asset ratio dropped from 6.8 percent to 5.6 percent.

1980-82: Prosperity ends abruptly

The long period of prosperity for thrifts ended abruptly in the early 1980s. Large losses replaced profitability, as the thrift industry's ROA averaged -0.42 percent from 1980 to 1982, 112 basis points less than the average of the previous three years (Chart 1, Table 1).

Profitability declined during this period, primarily because interest rates soared. Higher interest rates immediately increased the cost of funds for thrifts. In the short run, thrifts could not increase their interest income because most of their assets were long-term fixed-rate mortgages. As a result, the thrift industry experienced a sharp decline in net interest income (NIM). This decline in NIM accounted for most of the drop in ROA during the 1980-82 period, compared with the late 1970s, as NNIE remained steady during the two periods (Chart 1, Table 1).

Thrifts' losses in the early 1980s were accompanied by continued deterioration in the capital position of the industry. The industry's capital-asset ratio declined almost two full percentage points from 1980 to 1982. Thrifts' deposit base also continued to erode (Table 1).

1983-85: Thrifts begin a recovery

The period from 1983 to 1985 saw a partial recovery of the thrift industry's fortunes. Return on assets averaged 0.25 percent during this period. Although lower than in the late 1970s, this was a substantial improvement over the losses experienced in the early 1980s.

The major factor accounting for the 1983-85 recovery was the same factor, working in reverse, that caused the 1980-82 deterioration. Just as the earlier rise in interest rates boosted interest expense and reduced NIM, the decline in interest rates of the 1983-85 period lowered interest expense and increased NIM. The rise in NIM accounted for all of the improvement in ROA during the 1983-85 period compared with the early 1980s. Net noninterest expense was the same during the two periods (Chart 1, Table 1).

The improved performance made it appear that the thrift industry was returning to healthier days. A number of factors supported this perception. For example, thrifts bolstered their capital and deposit bases during the 1983-85 period (Table 1).

Despite improving capital-asset and deposit-asset ratios, however, the industry's capital position remained inadequate, especially when properly measured. Capital as measured by generally accepted accounting principles (GAAP) was considerably lower than regulatory capital at the end of 1985. Tangible net worth was even lower than GAAP capital. GAAP capital consists of paid-in capital plus retained earnings minus deferred losses on assets and excludes questionable items included in regulatory capital, such as certificates issued by regulatory authorities. In addition to the items excluded by GAAP capital, tangible net worth excludes goodwill and other intangible assets. At the end of 1985, the GAAP capital-asset ratio was 3.18 percent, more than one percentage point less than the regulatory capital-asset ratio. The tangible-net-worth ratio was an even lower 0.86 percent.

Nevertheless, the profitability of the 1983-85 years improved the outlook for the thrift industry. Contributing to a better outlook for thrifts were added operational tools, including the ability to use adjustable-rate mortgages, the authority to invest in a wider range of assets, and the authority to compete for sources of funds not earlier available.

1986-88: Profitability sinks again

After 1985, the thrift industry's recovery turned out to be illusory. Instead of establishing a base for full recovery, conditions in the industry from 1983 to 1985 were actually sowing the seeds of disaster. Those seeds grew to fruition during the 1986-88 period, producing greater losses than those of the early 1980s. ROA averaged -0.58 percent during the three years ending in 1988, 83 basis points below the previous three-year period and lower than in the early 1980s.

As in the 1980-82 period, profitability plunged from 1986 to 1988—but this time for very different reasons. In sharp contrast to the early 1980s when a decline in NIM caused ROA to fall, NIM actually increased in the 1986-88 period. NIM averaged considerably higher from 1986 to 1988 than during the two previous three-year periods and not much lower than in the prosperous late 1970s (Chart 1, Table 1).

The 1986-88 losses were associated with a large increase in net noninterest expense, which rose 131 basis points to more than offset the improvement in NIM. The increase in NNIE was caused primarily by two factors. One was an increase in nonoperating expense. Nonoperating expense began to soar during the 1986-88 period, when thrifts began making provisions for the losses on assets acquired during the 1983-85 period. The second factor was a decline in noninterest operating income. Many thrifts suffered declines in earnings or losses on their service corporations and related activities during the 1986-88 period. Furthermore, operating expense rose during this period.

Despite the losses suffered by thrifts from 1986 to 1988, the average capital position of the industry improved somewhat. Both the GAAP capital-asset ratio and the tangible-net-worth ratio rose from the end of 1985 to the end of 1988 (Table 1). However, the tangible-net-worth ratio remained at a low level.

II. THE CAPITAL POSITION OF THRIFTS IN THE LATE 1980s

Does the low tangible-net-worth ratio in the industry signal that most thrifts were insolvent or nearly so at the end of 1988? How many strong thrifts remain? This section examines the capital position of thrifts in early 1989 and describes changes that occurred in their position from the end of 1985 to early 1989.

To examine their capital positions, thrifts are divided into groups according to their ratios of tangible net worth to tangible assets. One group contains insolvent thrifts that have tangible-net-worth ratios below zero. A second group consists of solvent thrifts that have positive tangible-net-worth ratios. The remaining groups are overlapping subgroups of the solvent groups. One of these subgroups contains only those thrifts able to meet the minimum capital standards established by the new legislation. These thrifts have tangible-net-worth ratios in excess of 1.5 percent. Another subgroup contains only those thrifts that have tangible-net-worth ratios in excess of 3 percent and therefore meet the more stringent standards that will be phased in over the next few years.[3] A final subgroup contains strong thrifts that have tangible-net-worth ratios in excess of 6 percent.

In summary, the groups are as follows:

Tangible net-worth ratio	Designation
Below zero	Insolvent
Over zero	Solvent
Over 1.5	Meet minimum standards
Over 3.0	Meet stringent standards
Over 6	Strong

Most thrifts meet capital standards

One finding of the examination is that a large majority of thrifts were solvent in early 1989, and most of these were able to meet the current minimum 1.5 percent capital standards. In March 1989, 82 percent of thrifts were solvent, and 77 percent had tangible-net-worth ratios of 1.5 percent or more (Table 2). Thrifts meeting minimum capital standards accounted for a solid majority—65 percent—of total thrift assets.

Another finding is that considerably more than half of thrifts were able to meet the more stringent 3 percent capital standards. Nearly 67 percent had tangible-net-worth ratios in excess of 3 percent. These institutions held about 45 percent of all thrift assets.

A third finding of the examination is that there were a substantial number of strong thrifts with tangible-net-worth ratios over 6 percent. Strong thrifts numbered 1,146, or 39 percent of the total, at the end of March 1989. These institutions accounted for 15 percent of total thrift assets.

Many thrifts improve capital positions

Perhaps as important as the capital position of thrifts in early 1989 is the way the situation has changed over the past three years. The data on capital positions show a significant increase in the percentage of higher capital thrifts and a higher percentage of assets accounted for by them. For example, the percentage of strong thrifts increased from 25 percent at the end of 1985 to 39 percent in early 1989 (Table 2). Assets held by these thrifts rose from 9 percent to 15 percent. Similar increases occurred in the percentage of thrifts meeting minimum capital standards and in the percentage meeting the more stringent requirements.

While some of the increase in the percentage of higher capital thrifts was due to the demise of insolvent and lower capital thrifts during the period, not all of the improvement was accounted for in this way. Much of the gain was accounted for by improvements in the

[3] The new legislation requires thrift institutions to have "core" capital equal to at least 3 percent of assets and tangible capital equal to at least 1.5 percent of assets. In general, tangible capital is equal to paid-in equity capital plus retained earnings minus goodwill and other intangibles. Core capital generally is defined as paid-in equity capital plus retained earnings minus intangibles plus "supervisory goodwill." Some supervisory goodwill will be allowed during a transitional period that ends December 31, 1994. In other words, institutions that meet the 1.5 percent tangible capital requirement but whose tangible capital is less than 3 percent of assets will be able to use goodwill in meeting the 3 percent core capital requirement during the phase-in period. Thrifts must also meet a risk-based capital requirement similar to the requirement for commercial banks. This risk-based requirement is not treated in this article.

TABLE 2
Capital positions, 1985 and 1989
U.S. thrift institutions

Ratio of tangible net worth to tangible assets	Number of Institutions			
	December 31, 1985		March 31, 1989	
	Amount	Percent	Amount	Percent
Total	3,246	100.0	2,938	100.0
Below zero	691	21.3	541	18.4
Over zero	2,555	78.7	2,397	81.6
Over 1.5	2,293	70.6	2,252	76.7
Over 3	1,828	56.3	1,959	66.7
Over 6	820	25.3	1,146	39.0
	Assets held			
	December 31, 1985		March 31, 1989	
	Amount ($ Billions)	Percent	Amount ($ Billions)	Percent
Total	1,038	100.0	1,317	100.0
Below zero	329	31.7	313	23.8
Over zero	709	68.3	1,004	76.2
Over 1.5	590	56.8	856	65.0
Over 3	357	34.4	596	45.3
Over 6	97	9.3	195	14.8

Source: Federal Home Loan Bank Board

capital positions of individual thrifts. This is shown by the fact that, while the total number of thrifts declined 308 from the end of 1985 to early 1989, the number meeting minimum capital standards declined only 41. Moreover, the number meeting the more stringent standards rose somewhat and the number having strong capital positions increased substantially (Table 2).

The evidence suggests that thrifts initially in the lower capital categories became weaker during the three-year period, while thrifts initially in the higher capital categories became stronger. No doubt, many thrifts experienced a sharp deterioration in their positions and, of course, many of these met their demise during the period. At the same time, the increase in the number of higher capital thrifts indicates that many thrifts strengthened their capital positions. Presumably, as the capital position of many insolvent and very weak thrifts worsened, some of these below-minimum-requirement institutions took steps to strengthen their positions and moved above the 1.5 percent threshold. Also, some above-minimum-standard but weak thrifts (those in the 1.5-to-3 percent category) moved above the 3 percent threshold, and many healthy thrifts (in the 3-to-6 percent category) further strengthened their positions and moved above the 6 percent capital position into the strong group.

III. PERFORMANCE AND PRACTICES OF STRONG AND WEAK THRIFTS IN THE 1980s

The new legislation requires that thrifts place greater emphasis in the future on the financing of housing.[4] Will this requirement, combined with the higher capital requirements, make it difficult for thrifts to grow and prosper? To gain some insight into this question, this section examines the behavior and experiences during the 1984-88 period of thrifts with different capital positions. The section examines profitability, the composition of assets and liabilities, and the return on assets and cost of funds. The examination finds that higher capital thrifts have emphasized the financing of housing and, in general, have followed traditional practices common to the industry prior to the 1980s.

The section focuses on the four groups: insolvent institutions with tangible-net-worth ratios below zero, weak thrifts with tangible-net-worth ratios between zero and 3 percent, healthy institutions with tangible-net-worth ratios between 3 and 6 percent, and strong thrifts with tangible-net-worth ratios in excess of 6 percent.

Strong thrifts earn more profits

During the 1984-88 period, a major difference between thrifts with different capital positions was their relative profitability. Strong and healthy thrifts experienced high positive ROAs during the period; weak thrifts experienced low positive ROAs; insolvent thrifts suffered large losses (Table 3).

As expected, the variation in ROAs among thrifts with different capital positions reflects, in part, differences in nonoperating expense and noninterest operating income. These differences show up most clearly when comparing the insolvent group with the other three categories. Higher nonoperating expense at lower capital thrifts, especially in the insolvent group, reflects the greater losses on assets suffered by these institutions. Lower noninterest operating income at insolvent thrifts was due to large

4 The new law tightens the "qualified thrift lender" test that is used to determine whether a depository institution is eligible for tax benefits and access to low-interest Federal Home Loan Bank advances. The previous requirement that 60 percent of a thrift's loans be generally for home financing will be stiffened to 70 percent. Also, thrifts will have to maintain 55 percent of their assets in a pool of loans and investments that is more closely connected to home financing and improvement than was previously used for the 60 percent test. Consumer loans and some other nonresidential investments will count toward the 70 percent limit. Also, the 70 percent test will be measured against all of a thrift's assets except its premises and furnishings, liquid assets such as reserves required by regulators, and "good will." The new test will take effect July 1, 1991.

TABLE 3
Income and expenses by capital position, 1986-88
U.S. thrift institutions
(Percent of tangible assets)

	Ratio of tangible net worth to tangible assets			
	Below zero (Insolvent)	Zero to 3 (Weak)	3 to 6 (Healthy)	Over 6 (Strong)
Net income (ROA)	−3.19	.20	.64	.97
Net interest income (NIM)	.33	1.21	1.76	2.44
Net noninterest expense (NNIE)	3.72	1.11	.97	1.14
Noninterest operating income	.46	.79	.83	.79
Nonoperating income	.69	.57	.45	.34
Operating expense	2.27	1.85	1.84	1.93
Nonoperating expense	2.60	.61	.41	.34

Source: Federal Home Loan Bank Board

losses on their service corporations and related activities.

A difference not necessarily expected among thrifts with different capital positions was that lower capital thrifts experienced relatively low NIMs. In this case, the difference varied across all four categories, as NIMs ranged smoothly from a robust 2.44 percent at strong thrifts to an anemic 0.33 percent at insolvent institutions (Table 3). Since a decline in NIM was not responsible for the decline in ROA experienced by thrifts as a group in recent years, one would not necessarily expect lower capital thrifts to have experienced relatively low NIMs during the 1984-88 period.

It turns out, however, that the lower NIMs of lower capital thrifts were indirectly related to higher losses on assets and operations. Two factors accounted for the lower NIMs at lower capital thrifts, and both factors were indirectly related to their losses on assets and operations. First, lower capital thrifts maintained relatively low ratios of loans and investment securities to assets (L&I-A), which held down interest income and contributed to low NIMs. The low L&I-A ratios of lower capital thrifts were caused in part by the high volumes of repossessed assets carried on their accounts. The latter, in turn, developed in connection with high losses on assets.

A second factor contributing to the lower NIMS of lower capital thrifts was that their interest expense was boosted by relatively high ratios of purchased funds (deposits plus borrowing) to assets (PF-A). The high PF-A ratios were caused by the low (or negative) capitalization of the lower capital (or negative capital) thrifts. The latter, in turn, arose in connection with losses on assets and operations. Again, the indirect connection is evident between lower

NIMs and higher losses on assets and operations.[5]

Asset and liability composition differs

Thrifts with different capital positions differed in ways other than profitability during the 1984-88 period. In particular, thrifts were distinguished by the composition of their assets.

As already noted, one striking difference among thrifts was their ratio of loans and investment securities to assets. Higher capital thrifts maintained sharply higher L&I-A ratios. During the 1984-88 period, loans and investment securities as a percent of assets averaged 94 percent at strong thrifts, 92 percent at healthy thrifts, 90 percent at weak thrifts, and 84 percent at insolvent thrifts (Table 4). Service corporations, goodwill and deferred losses, repossessed assets, and all other assets individually accounted for relatively low percentages of the assets of higher capital thrifts.

Ratios to total assets, however, give a somewhat distorted picture of the thrift industry. Lower capital thrifts necessarily have higher ratios of goodwill and deferred losses because these items are subtracted from total assets to arrive at tangible net worth. However, the relationship between capital position and the importance of loans and investment securities remains after correcting for this distortion by examining the composition of tangible assets, which is equal to total assets minus goodwill and deferred losses. Thus, loans and investments as a percent of tangible assets ranged from 95 percent at strong thrifts to 89 percent at insolvent thrifts (Table 4). At the same time, service corporations, repossessed assets, and other assets accounted for the larger percentage of tangible assets at lower capital thrifts than at higher capital thrifts.

Another very important difference among thrifts with different capital position was the composition of their portfolio of loans and investment securities. Higher capital thrifts devoted a larger percentage of their portfolios to residential mortgage loans, with the percentage ranging from 70 percent for strong thrifts to 63 percent for insolvent thrifts. Higher capital thrifts also allocated a larger percentage of their portfolios of loans and investment securities to investment securities, and they devoted a smaller portion to loans other than residential mortgages (Table 4).

The makeup of portfolios of residential mortgage loans also varied for thrifts with different capital positions. Higher capital thrifts devoted a larger percentage of these portfolios to permanent whole mortgages and a smaller

[5] This discussion may be clarified by noting that

$$\text{NIM} = \frac{R}{A} - \frac{E}{A} = (\text{GROA})\left(\frac{L+I}{A}\right) - (\text{COF})\left(\frac{PF}{A}\right),$$

where
R = interest income
E = interest expense
GROA = gross return on assets = interest income ÷ loans + investment securities
COF = average cost of funds = interest expense ÷ purchased funds
L+I = loans plus investment securities
PF = purchased funds = deposits + borrowing

For thrifts with both positive net income and positive capital, those having relatively high purchased funds and low capital ratios may have relatively high return on equity ratios (ROE). For this reason, the differential between the ROEs of positive but lower capital thrifts and of higher capital thrifts during the 1984-88 period was less than the differential between their ROAs.

TABLE 4
Composition of assets and liabilities, return on assets, and cost of funds, by capital position, 1984-88, U.S. thrift institutions (Percent)

	Ratio of tangible net worth to tangible assets			
Composition of assets	**Below zero (Insolvent)**	**Zero to 3 (Weak)**	**3 to 6 (Healthy)**	**Over 6 (Strong)**
Percent of total assets				
Loans plus investment securities	84.0	90.0	92.3	94.1
Repossessed assets	2.7	0.9	0.6	0.4
Service corporations	2.0	1.9	1.4	0.9
Goodwill and deferred losses	5.7	1.8	0.7	0.5
Cash	1.2	1.3	1.3	1.2
Other assets	4.3	4.1	3.7	2.8
Percent of tangible assets				
Loans plus investment securities	89.1	91.7	93.0	94.6
Repossessed assets	2.8	0.9	0.6	0.4
Service corporations	2.1	1.9	1.4	0.9
Cash	1.2	1.3	1.3	1.2
Other assets	4.6	4.2	3.7	2.8
Percent of loans plus investment securities				
Residential mortgage loans	63.3	68.4	68.6	70.2
Other loans	22.9	18.8	17.5	13.4
Investment securities	13.8	12.9	13.9	16.4
Below grade (% of investment sec.)	4.1	7.4	4.1	5.5
Percent of residential mortgages				
Construction	4.2	4.5	4.7	4.1
1-4 family (% of construction)	53.4	57.0	63.7	77.4
Permanent whole mortgages	64.4	64.8	75.1	79.8
1-4 family (% of per. whole mort.)	87.0	84.5	85.6	91.2
Mortgage-backed securities	31.5	30.7	20.3	16.1
Composition of liabilities				
Percent of tangible assets				
Deposits plus borrowing	103.7	95.6	93.3	89.0
Percent of deposits plus borrowing				
Deposits	81.3	78.9	84.6	91.6
Percent of deposits				
Insured deposits	91.0	82.1	85.0	90.9
CDs	1.0	4.5	1.6	0.8
Gross returns and cost of funds				
Gross return on assets				
Loans	10.46	10.13	10.20	10.21
Investment securities	8.26	8.39	8.39	8.50
Loans plus investment securities	10.16	9.91	9.94	9.94
Cost of funds				
Deposits	8.19	8.11	7.98	7.86
Borrowing	8.88	8.79	8.99	8.83
Total	8.32	8.26	8.13	7.94
Yield spread	1.83	1.65	1.81	1.99

Source: Federal Home Loan Bank Board

percentage to mortgage-backed securities. Also, higher capital thrifts favored single-family over multifamily mortgages, especially in the area of construction loans.

Systematic differences on the liability side of the balance also developed between higher capital and lower capital thrifts during the 1984-88 period. One difference, noted earlier, was that the ratio of purchased funds to total tangible assets (total liabilities plus tangible capital) was lower for thrifts with relatively high capital positions (Table 4).

Another difference in the composition of thrift's liabilities relates to the amount of funds obtained from deposits and borrowing. Strong and healthy thrifts obtained a higher percentage of their purchased funds from deposits than did either weak or insolvent thrifts. Insolvent thrifts, however, obtained more of their funds from deposits than did weak thrifts, no doubt reflecting the difficulty insolvent thrifts had in finding borrowing sources. Also, higher capital thrifts obtained more of their deposits from insured deposits. As expected, insolvent thrifts obtained a relatively large portion of their deposits from insured accounts, presumably due to depositor reluctance to place uninsured funds in insolvent institutions. This factor also suggests why a minuscule portion of funds obtained by insolvent institutions was through negotiable CDs. However, strong thrifts relied less heavily on negotiable CDs than did weak and healthy institutions (Table 4).

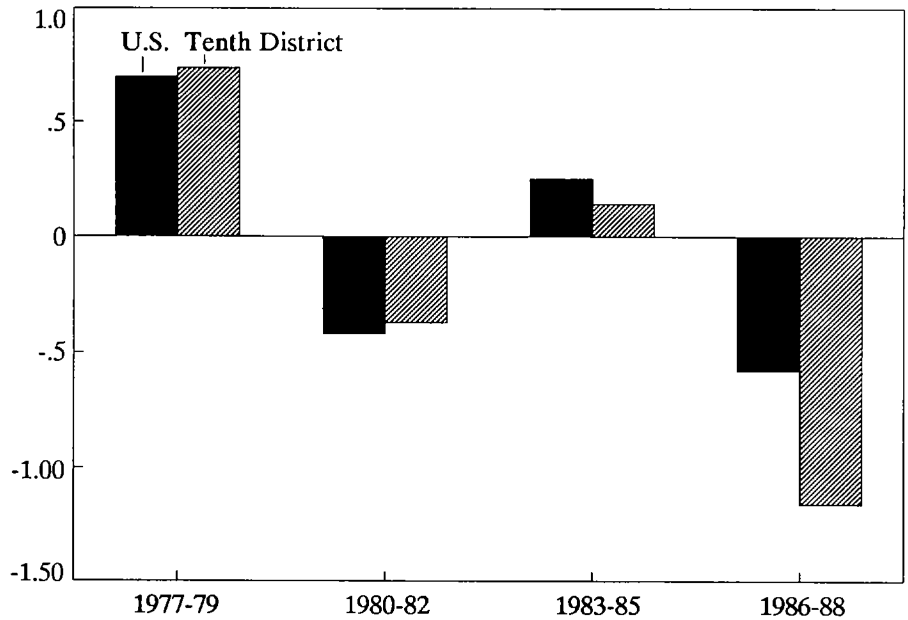
Returns and cost of funds differ

A final difference among thrifts with different capital positions was in the area of returns earned on assets and the cost of raising funds. These differences, while relatively small, are significant enough to note. In general, the three solvent thrift groups tended to have slightly lower gross returns on their loans and investments than did insolvent thrifts. A more distinct pattern is evident with regard to the cost of funds. Higher capital thrifts paid less for their deposits than did lower capital thrifts, with the cost of deposits increasing smoothly from 7.86 percent for strong thrifts to 8.19 percent for insolvent thrifts. A similar pattern holds for total cost of funds, except that weak thrifts paid slightly more than insolvent thrifts. Due to the lower cost of funds, the yield spread was highest at strong thrifts and higher at healthy thrifts than at weak thrifts. However, the higher gross return on assets at insolvent thrifts boosted their yield spread above that of both weak and healthy institutions.

IV. TENTH DISTRICT THRIFTS IN THE 1980s

Prior to the mid-1980s, trends experienced by thrift institutions in the states of the Tenth Federal Reserve District mirrored the trends nationwide. During the 1986-88 period, however, district thrifts suffered significantly larger losses than their nationwide counterparts, due in part to weak economic conditions in the Tenth District. As a result, in early 1989, there were proportionately fewer higher capital thrifts in the district than in the nation. The pattern of differences in profitability, in asset and liability composition, and in gross returns and cost of funds between higher capital and lower capital thrifts during the 1984-88 period was roughly similar at thrifts in the district and nationwide.

CHART 2
Return on assets, 1977-88
U.S. and Tenth District thrift institutions



Source: Federal Home Loan Bank Board.

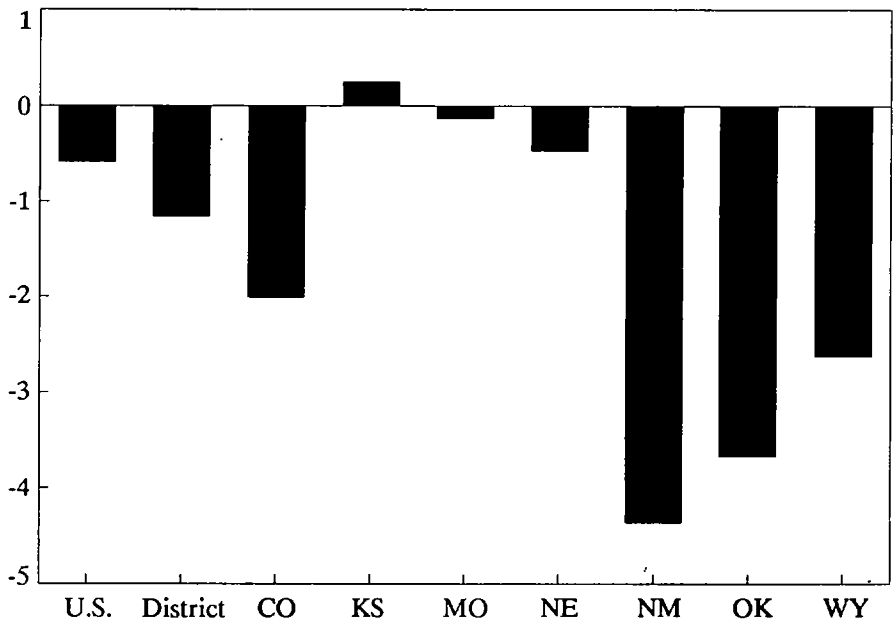
Pre-1986 experience mirrors the nation

The operating performance of district thrifts was almost the same as that of thrifts across the nation prior to the early 1980s. During the last three years of the 1970s, for example, ROA at district thrifts averaged 0.74 percent, compared with the national average of 0.70 (Chart 2). At the end of 1979, the deposit-asset and capital-asset ratios of district thrifts were comparable to their nationwide counterparts.

During the first three years of the 1980s, moreover, profitability declined similarly at district thrifts and thrifts nationwide. The return on assets for district thrifts averaged −0.37 percent from 1980 to 1982, compared with a −0.42 percent average nationwide (Chart 2).

District thrifts also experienced the partial recovery of ROA enjoyed by nationwide thrifts during the 1983-85 period. The return on assets at district thrifts averaged 0.14 percent during this period, only slightly lower than ROA across the nation.

CHART 3
Return on assets, 1986-88
U.S. and Tenth District thrift institutions



Source: Federal Home Loan Bank Board.

District thrifts' losses increase after 1985

Unlike earlier periods, however, the experience of district thrifts from 1986 to 1988 differed considerably from that of thrifts nationwide. Losses at district thrifts were substantially greater. Return on assets at district thrifts averaged −1.16 percent, representing losses of more than twice the national average (Chart 2).

The extent of the losses varied considerably across the seven district states. At one end of the scale, thrifts in Kansas enjoyed a positive ROA of 0.21 percent during the period. Thrifts in Missouri and Nebraska posted ROAs less negative than both the district and national averages. Thrifts in Colorado, New Mexico, Oklahoma, and Wyoming, however, suffered negative ROAs sharply higher than district and nationwide averages, with New Mexico's −4.36 percent being the largest (Chart 3, Table 5).

Accounting for much of the weakness in ROAs at district thrifts during the 1986-88 period was a high NNIE, which averaged 2.19 percent, compared with 1.88 percent nationwide. The higher NNIE at district thrifts

TABLE 5
Income and expense, 1986-88
U.S. and Tenth District thrift institutions
(Percent of tangible assets)

	Net income (ROA)	Net interest income (NIM)	Net non-interest expense (NNIE)	Non-interest operating income	Non-operating income	Operating expense	Non-operating expense
United States	−.58	1.30	1.88	.70	.54	2.00	1.13
Tenth District	−1.16	.86	2.19	.62	.53	1.80	1.55
Colorado	−2.01	.95	3.19	.35	.48	1.93	2.09
Kansas	.25	.75	.51	1.02	.70	1.44	.79
Missouri	−.13	1.31	1.60	.34	.57	1.65	.86
Nebraska	−.46	1.00	1.67	.49	.50	1.78	.88
New Mexico	−4.36	−.09	4.52	1.29	.45	2.34	3.92
Oklahoma	−3.67	.36	4.30	.72	.29	2.26	3.05
Wyoming	−2.63	.76	3.59	.40	.50	2.53	1.96

Source: Federal Home Loan Bank Board

reflected higher nonoperating expense and lower noninterest operating income. The impact of these factors was partly offset by lower operating expense (Table 5).

One reason for the greater losses on assets (and therefore the higher NNIE and lower ROA) at district thrifts was the weak economic conditions in the district, particularly the weak conditions in the oil industry. Average nonoperating expenses were particularly high in Colorado, Oklahoma, and Wyoming, states dependent on the oil industry. Thrifts in Kansas, Missouri, and Nebraska, where oil is relatively less important, suffered below-average nonoperating expense. New Mexico, although not greatly dependent on the oil industry, diverged from this pattern, experiencing a high nonoperating expense (Table 5).

In addition to a relatively high NNIE, ROA at district thrifts was further depressed during the 1986-88 period by a relatively low NIM. NIM rose at district thrifts during the period, but less sharply than nationwide. As a result, NIM averaged only 0.86 percent at district thrifts, 44 basis points less than the national average. The low NIM was caused in part by factors related to the greater losses on assets experienced by these institutions. Thus, a relatively high percentage of district thrifts' assets were repossessed assets, leaving a low percentage for loans and investment securities. Also, the ratio of deposits plus borrowing to tangible assets was relatively high at district thrifts, reflecting their low capital position.

The more pronounced drop in ROA suffered by district thrifts during the 1986-88 period resulted in a greater erosion of their capital positions and deposit bases. From the end of 1985 to the end of 1988, the district GAAP capital-asset ratio declined to 1.6 percent, compared with a 3.2 percent ratio nationwide. The district's tangible-net-worth ratio was only 0.3 percent at the end of 1988, compared with a 1.5 percent ratio nationwide.

District has fewer higher capital thrifts

Greater losses suffered by district thrifts from 1986 to 1988 reduced the proportion of higher capital thrifts in the district in 1989, compared with the proportion of higher capital thrifts nationwide. Nevertheless, by the end of March 1989, a solid majority—about 64 percent—of district thrifts could meet the minimum 1.5 percent standard. These institutions held over half of the district thrift's assets (Table 6). Also, about half of district thrifts could meet the stringent 3 percent standard, and a third held a strong capital position with a net-worth ratio in excess of 6 percent. Those meeting the stringent standard held 38 percent of assets, while the strong thrifts held 20 percent.

As across the nation, the proportion of strong district thrifts and the percentage of assets held by them increased from the end of 1985 to early 1989. However, the proportion of district thrifts meeting stringent and minimum capital standards declined during the period. The percentage of assets held by these two groups of district institutions also declined (Table 6).

The tendency for initially strong thrifts to strengthen their positions and initially weaker thrifts to become weaker was less pronounced at district thrifts than at thrifts nationwide. In contrast to nationwide experience, the number of insolvent thrifts in the district increased, while the number of thrifts meeting both minimum and more stringent capital requirements declined. However, the number of strong thrifts in the district increased.

Higher and lower capital thrifts differ in the district

The pattern of differences between higher and lower capital thrifts from 1984 to 1988 was generally similar in the district and nationwide, although the district patterns were not as distinct. As across the nation, higher capital thrifts in the district enjoyed greater profitability than lower capital thrifts. Also following the national pattern, lower capital thrifts in the district had higher nonoperating expenses and lower noninterest income than did higher capital thrifts. Lower capital thrifts also had lower NIMs, due to lower ratios of loans and investments to assets and higher ratios of purchased funds to assets. Finally, the district pattern was similar to thrifts nationwide with regard to the composition of assets, the makeup of liabilities, the gross return on assets, and the cost of funds (Table 7).

V. SUMMARY AND CONCLUSIONS

Thrift institutions in the United States, including those in the seven states of the Tenth Federal Reserve District, have endured troubled times in the 1980s. After enjoying many years of growth and prosperity prior to 1980, the thrift industry's profits turned into losses as interest rates soared in the early years of the decade. Although thrifts enjoyed a partial

TABLE 6
Capital positions, 1985 and 1989
Tenth District thrift institutions

Ratio of tangible net worth to tangible assets	Number of Institutions			
	December 31, 1985		March 31, 1989	
	Amount	Percent	Amount	Percent
Total	296	100.0	266	100.0
Below zero	62	21.0	79	29.4
Over zero	234	79.0	187	70.3
Over 1.5	205	69.3	172	64.3
Over 3	159	53.8	133	49.6
Over 6	70	23.7	88	32.7
	Assets held			
	December 31, 1985		March 31, 1989	
	Amount ($ Billions)	Percent	Amount ($ Billions)	Percent
Total	74	100.0	89	100.0
Below zero	16	21.1	31	34.3
Over zero	58	78.9	58	63.7
Over 1.5	49	61.7	50	56.7
Over 3	29	39.5	34	38.4
Over 6	14	18.4	17	19.6

Source: Federal Home Loan Bank Board

recovery during the mid-1980s, conditions during that period were actually setting the stage for another round of even greater losses during the late 1980s. The losses suffered by thrifts throughout the 1980s sharply eroded the average capital position of the industry.

During most time spans, the performance of Tenth District thrifts has mirrored that of their counterparts nationwide. Since 1985, however, district performance has deviated considerably from national norms. Due importantly to weak economic conditions in the district, relatively more district thrifts have sustained greater losses. As a result, district thrifts suffered an even greater deterioration in their average capital position than did thrifts nationwide.

The federal legislation recently enacted to

TABLE 7

Composition of assets and liabilities, return on assets, and cost of funds, by capital position, 1984-86, Tenth District thrift institutions (Percent)

	Ratio of tangible net worth to tangible assets			
Composition of assets	**Below zero (Insolvent)**	**Zero to 3 (Weak)**	**3 to 6 (Healthy)**	**Over 6 (Strong)**
Percent of total assets				
Loans plus investment securities	86.1	91.8	93.5	94.5
Repossessed assets	3.0	1.5	1.0	0.8
Goodwill and deferred losses	4.9	0.9	0.4	0.3
Service corporations	1.3	1.3	1.4	0.7
Cash	0.9	0.9	0.9	0.9
Other assets	2.3	2.3	1.8	1.7
Percent of tangible assets				
Loans plus investment securities	90.5	92.6	93.9	95.0
Service corporations	1.4	1.3	1.4	0.7
Repossessed assets	3.2	1.5	1.0	0.8
Cash	1.0	0.9	0.9	0.9
Other assets	3.9	3.6	2.8	2.8
Percent of loans plus investment securities				
Residential mortgage loans	64.7	64.1	66.4	73.5
Other loans	22.2	23.3	16.1	11.8
Investment securities	13.1	12.6	17.6	14.8
Below grade (% of investment sec.)	4.5	3.5	3.1	0.0
Percent of residential mortgages				
Construction	2.9	3.3	3.9	1.3
1-4 family (% of construction)	60.6	58.9	50.8	81.9
Permanent whole mortgages	61.8	60.1	45.1	71.4
1-4 family (% of per. whole mort.)	89.8	85.8	86.7	95.8
Mortgage-backed securities	35.4	36.6	51.0	27.3
Composition of liabilities				
Percent of tangible assets				
Deposits plus borrowing	103.5	95.9	93.7	90.7
Percent of deposits plus borrowing				
Deposits	83.8	78.0	78.4	87.2
Percent of deposits				
Insured deposits	92.5	87.2	86.6	91.4
CDs	0.3	0.5	1.6	0.4
Gross returns and cost of funds				
Gross return on assets				
Loans	10.13	9.97	9.94	9.93
Investment securities	8.23	8.05	8.73	8.22
Loans plus investment securities	9.87	9.70	9.71	9.67
Cost of funds				
Deposits	8.28	8.27	8.33	8.07
Borrowing	9.13	9.04	9.05	8.59
Total	8.41	8.44	8.48	8.14
Yield spread	1.46	1.26	1.24	1.53

Source: Federal Home Loan Bank Board

deal with thrift industry problems will allow insolvent and weak thrifts to be closed without causing losses to insured depositors. The law is also intended to prevent a recurrence of problems in the future. In furtherance of this objective, the legislation requires that thrifts meet more stringent capital standards and operate more in line with practices that emphasize the financing of housing.

Under the new legislation, many insolvent and weak thrifts that suffered losses and capital erosion during the 1980s will be closed. However, a large majority of thrifts are able to meet the minimum capital standards established under the new law. Furthermore, most thrifts can now meet the higher standards that will be effective after a transition period, and, in fact, a substantial number of thrifts hold strong capital positions. While the capital positions of many thrifts deteriorated in recent years, many thrifts took steps to add to their capital. As a result, the percentage of higher capital thrifts has increased since the end of 1985.

Some observers have expressed concern that the provisions in the law requiring greater emphasis on the financing of housing could dampen the future growth and profit potential of the thrift industry. In recent years, however, stronger thrifts have emphasized the financing of housing and, in general, have followed practices common to the industry prior to the troubled 1980s. Compared with their lower capital counterparts, higher capital thrifts have generally favored loans and investment securities over other types of assets, such as investments in service corporations. Higher capital thrifts have also allocated a larger percentage of their portfolio of loans and investment securities to residential mortgage loans rather than to other types of loans. Furthermore, higher capital thrifts have allocated a higher portion of their residential mortgage loans to permanent whole mortgages rather than to construction loans or pass-through securities. On the liability side of the balance sheet, higher capital thrifts have obtained a relatively large share of their funds from deposits rather than from borrowing, and they have obtained a relatively large share of their deposits from accounts that were fully insured. Finally, higher capital thrifts have paid less for their deposits than have lower capital thrifts.

It appears, therefore, that one management success formula for thrift institutions in recent years has been to emphasize the financing of housing and to rely more on traditional industry practices. This does not necessarily mean that other approaches were not (or could not have been) equally successful. Nor does it mean that all thrifts following the formula were successful or that had others followed it, they would have been successful. Finally, a success formula for the past may not be one in the future. It may be that success in the coming environment will require thrift institutions to deviate more from traditional practices.

Nevertheless, it is instructive to reiterate that thrifts that remained relatively strong during the difficult 1980s tended to emphasize the financing of housing encouraged by the new legislation and, in general, relied more on practices common to the industry prior to the 1980s.

Appendix
Background of the Data

The data used in this article cover thrift institutions (savings and loan associations and savings banks) that were insured by the Federal Savings and Loan Insurance Corporation (FSLIC) during the period studied. The data are based on reports submitted by thrift institutions to the Federal Home Loan Bank Board.

For years prior to 1984, the data were obtained from *Combined Financial Statements,* various issues, published by the Federal Home Loan Bank Board. For the 1984-89 period, the data were obtained from a data base maintained by the staff of the Board of Governors of the Federal Reserve System. This data base, in turn, was obtained from the Federal Home Loan Bank Board and consists of quarterly balance sheet and income statement data on individual thrifts.

In using this data base to arrive at the various ratios used in the article, the ratios were first calculated for each year. In arriving at the yearly ratios, income statement items were summed across the four quarters of the year, while balance sheet items were averaged for the four quarters. The resulting totals were then used to calculate the various ratios. For example, to obtain ROA for the Tenth District for 1984, net income reported by district thrifts for each of the four quarters in 1984 was summed to arrive at the district net income for the year. Then, the assets were summed across the four quarters and divided by four to arrive at average district assets for 1984. Finally, district net income was divided by district assets to arrive at the district ROA for the year. To obtain multiyear ratios, the yearly ratios were averaged. In some cases, ratios for earlier years in a period were not available. In these cases, the multiyear data are based on the years for which data were available.

It should be noted that the data have not been adjusted for mergers and liquidations. In some cases, this results in some distortion in the data. For example, income statement items may not be consistent with balance sheet items for merged institutions for the period during which the merger occurs. An additional source of potential distortion is that the data contain some institutions that were receiving assistance from FSLIC during the period covered.