

Commercial Banks and Real Estate Lending: The Texas Experience

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Abstract

This paper examines the performance of Texas commercial banks specializing in mortgage lending during the difficult times of the late 1980s and early 1990s to investigate how representative their experience as compared with that of banks concentrating in real estate lending across the country. The results show that Texas REBs performed very poorly during the 1980s and early 1990s, but this was because the Texas REBs were clearly different from the majority of the banks classified as REBs in the rest of the country. In contrast to non-Texas real estate specializing banks, those in Texas banks put substantial assets into much riskier construction and development loans, and in loans on commercial property, such as office buildings, hotels and shopping centers. In a poor real estate market, these loans performed very poorly. The analysis indicates that the Texas experience is not a basis for rejecting the view that the commercial bank industry can safely replace the declining thrift industry as a major source of residential mortgage financing.

1. Introduction

In response to the massive failures of thrift institutions in the 1980s, Congress passed the Financial Institutions Regulatory Reform and Enforcement Act of 1989 (FIRREA). Most notable among its provisions, FIRREA reduced permissible thrift powers and made substantial changes in the thrift regulatory and supervisory structure.

FIRREA also eroded the franchise value of a savings association charter in several ways. It increased deposit insurance premiums, stiffened the "Qualified Thrift Lender" (QTL) test, and confiscated some of the capital of the Federal Home Loan Banks (with a consequent reduction in the value of savings and loan holdings of Federal Home Loan Bank stock). The widely predicted shrinkage of the savings and loan industry has materialized. As the result

of failures, conversions to commercial bank charters, and acquisitions by commercial banks, the more than 4,000 thrifts at the beginning of the 1980s have shrunk to 1755 as of the third quarter of 1995. Similarly, assets held by thrifts have also declined by 20 percent, from \$950 billion as of year-end 1989 to \$762 billion as of September 1995.

Accompanying the decline of the thrift industry was the movement of banks into real estate lending. From 1980 to 1993, real estate loans outstanding at commercial banks more than tripled, growing from \$292 billion to \$917 billion. As a percentage of bank assets, real estate loans grew over the same time period from 14.3 percent to 24.8 percent. This increase in bank real estate lending was driven by several forces, including the decline in corporate loan demand due to increased access to direct credit markets; the boom in the commercial real estate market during the 1980s; and the new risk-based capital standards in the early 1990s, which required banks to hold less capital against residential mortgages than against commercial loans. In light of what happened to thrifts during the 1980s, the expansion by banks into real estate and the subsequent financial problems banks experienced have raised concerns both about the future of housing finance and the implications of greater real estate lending for the safety and soundness of commercial banks.¹

Eisenbeis and Kwast (1982; 1991, 5-24) have argued that when real estate lending is properly structured and managed, commercial banks that voluntarily specialize in such lending can be quite viable. Their results are comforting to those concerned about the future adequacy of housing finance. During much of the period they study, however, most banks operated in generally benign real estate markets. There is a legitimate question about how well such institutions would hold up under extreme pressure, such as those that led to the collapse of the thrift industry. In this paper we examine the performance of banks located in Texas, where the problems of real estate lenders have been the greatest, and we attempt to assess the performance of commercial banks specializing in real estate lending.² We examine how these institutions performed relative to other commercial banks in Texas and in the rest of the country.

In the remainder of this paper, we first discuss banking and real estate developments in Texas during the 1980s. After examining the causes of the problems at Texas banks and thrifts, we focus on the performance of those banks that chose to specialize in real estate lending.

We find that Texas real estate banks ("REBs") actually fared relatively poorly. That is, their performance was worse by many measures than the performance of the non-REBs in Texas. These results differ significantly from the findings of Eisenbeis and Kwast. However, we also find strong indications that the Texas REBs are different from REBs in the rest of the country. Texas REBs invested more heavily in commercial real estate, which is substantially more risky than traditional 1-4 family mortgages. Hence, our conclusion about the negative experience of Texas real estate banks is not a basis for rejection of the Eisenbeis-Kwast findings.

1 See Cole and Fenn (1994, 59-68) for an analysis of the role that real estate loans played in the failures of more than 1,300 commercial banks during the 1980s and 1990s.

2 The ability to weather a "Texas"-type scenario has been used by Fannie Mae as a test of its capital adequacy (Cole 1990).

2. The Situation in Texas

No one factor accounts for the extent of the real estate collapse in Texas in the 1980s. Instead, it was a combination of both macroeconomic factors including: inflation, high and volatile interest rates, and a drastic decline in oil prices and other more Texas-specific factors, such as the existence of a speculative environment, the lack of diversification, and the existence of liberal powers for state-charter thrifts.³

On the macro side, the health of Texas banks and thrifts was inexorably linked to interest rates and the price of oil. During the late 1970s and early 1980s, rising interest rates adversely affected financial institutions holding residential mortgages throughout the country. The precipitous declines in oil prices occurring in 1982 and 1986, however, were much more pernicious to financial institutions in Texas than to institutions located elsewhere.

Both the prosperity of the Texas economy and the huge run-up, and subsequent decline, in Texas housing and real estate values were due in large part to the cyclical variation in OPEC-driven oil pricing policies. The massive price increases in the 1970s spawned an optimism that the trend would never turn. Many real estate projects being financed by banks and thrifts in Texas were based indirectly, if not directly, upon the energy business. It should have been clear, for example, that apartment construction loans in Midland, Texas, could only be viable if there were employment increases in the oil business. Similarly, a strip shopping center in Houston was dependent upon the viability of the Houston economy, which in turn, was dependent upon the prosperity in the oil patch.

Federal tax policy also was an important cause of over-extensions in the real estate area. The Economic Recovery Tax Act of 1981 provided tax incentives that led investors to finance real estate projects undertaken solely for their tax consequences, spurring a construction and development boom. Five years later, Congress passed the Tax Reform Act of 1986, which drastically reduced the tax incentives for real estate investments. These tax law changes not only reduced the demand for new real estate investment, but also the reduced the market value of projects under construction and already built.

A third factor was the failure of federal and state savings and loan regulators to handle their supervisory responsibilities properly. They permitted insolvent thrifts to continue operations long after these institutions should have been closed. This contributed to the large losses suffered by the FSLIC in Texas thrift failures.⁴ More important for the purposes of this paper, weak thrifts continued to finance real estate projects that would not have been funded otherwise, increasing the oversupply of real estate that would bring the commercial real estate industry to ruin during the 1990s.

The problems in Texas, however, were not all rooted in broad-based macro problems. Key aspects of the Texas economy and culture must be kept in mind in assessing the prospects for thrifts or specialized lenders. There appeared to be a prevalent Texas attitude that when things go badly, the appropriate response was to double one's bet rather than to cut one's losses. There were ample opportunities for Texas banks to accept the fact that the decline

3 See Horvitz (1990, 95-116) for a more detailed explanation of factors leading to the collapse of Texas thrifts.

4 Cole and Eisenbeis (1996) report that the approximately 800 thrifts closed by regulators during 1980-88 were GAAP insolvent, on average, for more than a year and a half before closure, and that the length of time a thrift was allowed to operate while insolvent significantly increased FSLIC losses.

in the oil business meant significant losses and to halt their growth. Apparently, most could not accept this economic reality, and instead continued to grow by shifting their lending focus to the other major Texas growth industry, real estate. It is likely that the long history of price increases in real estate led banks and thrifts to be unduly optimistic in their approach to real estate lending.

Finally, most Texas thrifts were state-charter, stockholder-owned institutions with substantially more liberal asset powers than federally chartered institutions.⁵ During that time there were no limits on the percentage of assets used for loans secured by first liens on commercial real estate, raw land, or personal property (up to 100% of appraised value). Many institutions used these investment powers in ways that increased their vulnerability and the amount of speculative construction put in place.

The depth of the real estate collapse in Texas was directly related to the extent of the over-building during the boom years of the 1970s and 1980s. This over-building was not exogenous. The banks and thrifts financed most of it. Not only did the lenders suffer losses on the projects they financed, but the over-building led to lower prices on this real estate and greater losses for all real estate institutions.

This review makes clear that the Texas economy of the 1980s was a most unfavorable one in which to be a real estate lender. While savings and loans were constrained by regulation to focus on real estate lending, this was not true of commercial banks. Indeed, as will be shown, bank involvement in real estate lending expanded during the early portion of the 1980s when thrifts were experiencing difficulties. In view of the magnitude of the real estate collapse, we would expect those banks that chose to emphasize real estate lending during this period to fare much worse than more diversified banks. If that is not the case, however, we have evidence that commercial banks may be able to fill any gap in housing finance left by the decline of the thrift industry.

3. The Texas Real Estate Banks

In this section, we investigate further the prospects for depository institutions specializing in real estate lending in Texas and whether their experiences were similar to those thrifts elsewhere in the nation. Eisenbeis and Kwast (1991, 5-24) found that specialized institutions performed quite well over an earlier period, even without the special benefits that thrift institutions obtain by nature of their real estate specialization. Additionally, real estate banks did not appear to be more risky than regular commercial banks when measured by the variability of their earnings and quality of their assets. In fact, when Eisenbeis and Kwast looked at a sub-sample of longer-term real estate banks, these banks appeared not only to be more profitable than regular commercial banks, but also significantly less risky.⁶

For purposes of looking at the prospects for real estate specializing banks in Texas, a bank qualified as a real estate specialized bank (REB) each year that it held at least 40 percent of its assets in real estate loans.⁷ In any year that it did not meet the 40 percent criterion, a bank

5 Strunk and Case (1988) cite Texas, together with California, Arizona, and Florida as having the most liberal laws for state-chartered thrifts.

6 Longer-term specialized institutions were those that met the definition of being a real estate bank and were in the sample for five or more years.

7 Total real estate loans include loans collateralized by residential homes, apartments, commercial real

was not included in the real estate bank sample.⁸ This sample of specialized banks are compared with regular Texas commercial banks as well as with real estate banks and regular commercial banks in the rest of the nation.

Table 1a shows the distribution of the number of real estate and regular commercial banks in Texas and in the rest of the United States for each year from 1978-1993. Non-REBs in Texas increased in number until peaking at 1,835 in 1986, and then declined by 48% to 947 in 1993. Non-REBs in the rest of the United States peaked in 1982 at 12,605 and declined by 41% to 7,471 in 1993. There were fewer than five REBs in Texas until 1983, and their number increased rapidly over the next few years, peaking at 186 in 1987, just as the real estate problems in the state began to appear severe. After 1987, the number of Texas REBs declined by 73% to 50, a much more precipitous decline than that of Texas non-REBs. This pattern of growth and decline contrasts sharply with that of REBs in the rest of the United States. There, the number of REBs has increased each year since 1982, rising from 248 to 2,447 as of year-end 1993.

Table 1.a. Distribution of real estate banks and other banks by year. A real estate bank is defined as a commercial bank with at least forty percent of its consolidated assets invested in real estate assets. Data for Texas and the rest of the United States are presented separately.

Year	Texas real estate banks	Other Texas banks	U.S. real estate banks	Other U.S. banks
1978	2	1,393	685	12,311
1979	4	1,418	633	12,310
1980	3	1,464	434	12,533
1981	2	1,521	326	12,565
1982	4	1,594	248	12,605
1983	30	1,697	288	12,447
1984	54	1,799	412	12,201
1985	106	1,830	551	11,896
1986	137	1,835	749	11,455
1987	186	1,580	1,306	10,614
1988	149	1,343	1,574	10,042
1989	103	1,210	1,750	9,637
1990	57	1,126	2,051	9,090
1991	50	1,071	2,245	8,528
1992	56	1,033	2,357	7,976
1993	64	947	2,447	7,471

There is considerable churning within the REB sample, both in the US and in Texas as institutions come into and out of the sample. Table 1b shows that between 1985 and 1992, when there was a significant number of Texas real estate banks, more than 25% of the banks on average leave the REB sample by the following year. In Texas, this percentage is even higher. In the National sample, it is also clear that most of the banks which leave the REB

estate, and land.

8 While admittedly arbitrary, this 40 percent criterion and other criteria were explored in Eisenbeis and Kwast (1991, 5-24). The economic rationale for the definition was that this 40 percent ratio was about the percentage held by newly chartered S&Ls in Florida noted in a study by Baker (1982, 7-15).

Table 1.b. Banks Dropping Out of REB Sample Because of Failure or Portfolio Composition Change														
Year	National REB Sample—Banks in REB Sample that Left the Following Year							Texas REB Sample						
	Banks that left Sample % is of Bks in Sample		Banks that Failed by 1994 as % of Bks Leaving		Banks that Did not Fail		Banks in Sample		Banks that left Sample		Banks that Subsequently Failed by 1994		Banks that Did Not Fail	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1985	551	336	61.0%	28	8.3%	302	89.9%	106	85	80.2%	39	45.9%	46	54.1%
1986	749	357	47.7%	29	8.1%	328	91.9%	137	65	47.4%	22	33.8%	43	66.2%
1987	1306	682	52.2%	34	5.0%	648	95.0%	186	82	44.1%	31	37.8%	51	62.2%
1988	1574	494	31.4%	34	6.9%	460	93.1%	149	46	30.9%	27	58.7%	19	41.3%
1989	1750	433	24.7%	21	4.9%	412	95.2%	103	28	27.2%	7	25.0%	21	75.0%
1990	2057	570	27.7%	34	6.0%	536	94.0%	57	13	22.8%	5	38.5%	8	61.5%
1991	2245	559	24.9%	9	1.6%	550	98.4%	50	19	38.0%	1	5.3%	18	94.7%
1992	2357	543	23.0%	7	1.3%	536	98.7%	56	22	39.3%	1	4.5%	21	95.5%

sample do so because of a portfolio allocation choice rather than because they failed. Substantially more of the REBs in Texas end up failing, and they fail at higher rates than Texas banks that had never been in the REB sample.

This failure pattern suggests that a principal difference between REBs in Texas and in the rest of the country may lie in the assumption of risk. Eisenbeis and Kwast showed that in the United States as a whole, REBs were more conservative than other banks during the pre-1988 period they studied. As we will show, that conclusion is borne out by the post-1988 data covered by this study.⁹ The opposite, however, is true of REBs in Texas, which are riskier than the other banks. This risk is shown most clearly by the volatility of returns on assets contained in table 2.

These data show that Texas REBs suffered losses in excess of 200 basis points for three consecutive years from 1987-1989, and suffered a staggering cumulative loss of 1,107 basis points during the five years spanning 1986-1990. Of course, the sample of Texas REBs was not constant during these five years, but these figures demonstrate the depth of losses experienced by these specialists. Other Texas banks were not spared during these years, suffering losses in 1986-1989. The magnitude of these losses, however, never exceed 62 basis points (the 1987 loss). Both REBs and non-REBs in the rest of the United States fared far better, earning lower returns than in previous years, but never negative returns.

Table 2 also shows that United States REBs have equity-to-asset ratios only moderately below United States non-REBs.¹⁰ In Texas, however, the REBs have capital ratios well below non-REBs, at least during the crucial years of the Texas real estate market, from 1988-1990. Moreover, both groups of Texas banks have significantly lower capital ratios than both groups of United States banks for each year 1987-1991. In 1992-1993, the equity-to-asset ratios of Texas REBs rebounded from a 1989 low of 2.33% to a respectable 9.09% for 1993, higher than that for the other Texas banks.¹¹

The third panel in table 2 presents information on operating expense/operating income comparisons showing that the Texas REBs had significantly higher expenses than did other REBs in general. Table 3 presents the components of the operating expense/operating income ratios broken down by interest expense, noninterest expense, and loan losses provisions each to operating income. These ratios provide insights about the sources of the losses Texas banks recorded during the late 1980s. While the interest expense ratios are significantly higher for, Texas banks than non-Texas banks over the 1984-1989 period, the economic significance of these differences is small. Texas REBS had significantly higher noninterest expense beginning in 1985, and this persisted through 1993. This may be partly due to the higher costs involved in originating and servicing commercial loans as compared with single-family loans, and the costs involved in managing large volumes of foreclosed assets. But the differences, about 10 percentage points, are so large that this explanation is

9 We also investigated differences in liabilities structures. While some of the differences were statistically significant, they did not appear to be quantitatively important. Hence, we concentrate on the asset side of the balance sheet and upon the volatility of earnings as measures of performance.

10 Under the risk-based capital system, 1-4 family mortgage loans have a capital requirement only half that of other loans. It would be expected, therefore, that banks with a substantial mortgage loan portfolios would have lower equity-to-asset ratios than other banks.

11 The very low capital ratios of the Texas REBs from 1988-1990 undoubtedly reflect losses incurred during this period.

Year	Equity / Assets						Income / Assets (ROA)						Operating Expense / Operating Income					
	Texas Real Estate Banks		Other Texas Banks		U.S. Real Estate Banks		Texas Real Estate Banks		Other Texas Banks		U.S. Real Estate Banks		Texas Real Estate Banks		Other Texas Banks		U.S. Real Estate Banks	
1978	13.11	8.79 ^{4,5}	8.01 ⁶	8.56	8.89	1.03 ^{4,5}	0.93	0.93	0.93	0.93	87.78	79.30 ^{4,5}	81.85	81.76	87.78	79.30 ^{4,5}	81.85	81.76
1979	7.69	8.88 ⁴	8.11 ⁶	8.83	1.14	1.19 ^{4,5}	0.98 ⁶	1.05	1.05	82.00	78.00 ^{4,5}	82.01 ⁶	80.88	82.00	78.00 ^{4,5}	82.01 ⁶	80.88	
1980	7.72	9.11 ⁴	8.27 ⁶	9.00	0.95	1.27 ^{4,5}	0.87 ⁶	1.08	1.08	87.98	79.67 ^{4,5}	86.01 ⁶	83.12	87.98	79.67 ^{4,5}	86.01 ⁶	83.12	
1981	8.59	9.33 ^{4,5}	8.37 ⁶	9.02	1.17	1.33 ^{4,5}	0.71 ⁶	1.05	1.05	85.84	82.21 ^{4,5}	89.61 ⁶	85.62	85.84	82.21 ^{4,5}	89.61 ⁶	85.62	
1982	7.23	9.54 ^{4,5}	8.23 ⁶	9.24	1.51 ²	1.13 ^{4,5}	0.54 ⁶	0.89	0.89	84.33	89.57	90.93 ⁶	88.16	84.33	89.57	90.93 ⁶	88.16	
1983	12.51 ²	9.29 ⁴	8.22 ⁶	9.16	0.36	0.75 ⁴	0.56 ⁶	0.79	0.79	97.98 ¹	88.47	89.80	89.35	97.98 ¹	88.47	89.80	89.35	
1984	8.21	9.44 ⁴	8.76	9.18	0.54	0.45 ^{4,5}	0.61	0.67	0.67	87.56	93.04 ^{4,5}	89.03	88.61	87.56	93.04 ^{4,5}	89.03	88.61	
1985	7.96 ^{1,2,3}	9.14	8.76	9.14	0.04 ^{1,2,3}	0.18 ^{4,5}	0.54	0.58	0.58	91.06	92.88 ^{4,5}	87.20 ⁶	87.38	91.06	92.88 ^{4,5}	87.20 ⁶	87.38	
1986	7.07 ^{1,2,3}	8.28 ⁵	8.63	8.94	-0.97 ^{2,3}	-0.43 ^{4,5}	0.58 ⁶	0.45	0.45	94.53 ^{2,3}	94.16 ^{4,5}	86.64 ⁶	87.56	94.53 ^{2,3}	94.16 ^{4,5}	86.64 ⁶	87.56	
1987	5.66 ^{1,2,3}	7.70 ^{4,5}	8.46 ⁶	9.27	-2.26 ^{1,2,3}	-0.62 ^{4,5}	0.56	0.60	0.60	99.03 ^{2,3}	94.52 ^{4,5}	86.25	87.00	99.03 ^{2,3}	94.52 ^{4,5}	86.25	87.00	
1988	3.22 ^{1,2,3}	7.25 ^{4,5}	8.12 ⁶	9.50	-3.53 ^{1,2,3}	-0.45 ^{4,5}	0.67	0.70	0.70	100.37 ^{1,2,3}	90.43 ^{4,5}	85.81 ⁶	87.48	100.37 ^{1,2,3}	90.43 ^{4,5}	85.81 ⁶	87.48	
1989	2.33 ^{1,2,3}	7.37 ^{4,5}	8.27 ⁶	9.65	-3.17 ^{1,2,3}	-0.05 ^{4,5}	0.69 ⁶	0.87	0.87	104.58 ^{1,2,3}	89.44 ⁴	86.02	88.57	104.58 ^{1,2,3}	89.44 ⁴	86.02	88.57	
1990	4.43 ^{1,2,3}	7.45 ^{4,5}	8.20 ⁶	9.66	-1.14 ^{1,2,3}	0.27 ⁵	0.36 ⁶	0.76	0.76	99.82 ^{1,2,3}	89.46 ^{4,5}	87.09	87.53	99.82 ^{1,2,3}	89.46 ^{4,5}	87.09	87.53	
1991	6.58 ^{1,2,3}	7.75 ^{4,5}	8.32 ⁶	9.72	0.14 ^{1,3}	0.61 ^{4,5}	0.39 ⁶	0.81	0.81	91.03 ^{2,3}	88.24 ^{4,5}	86.84	86.48	91.03 ^{2,3}	88.24 ^{4,5}	86.84	86.48	
1992	8.66	8.15 ^{4,5}	8.66 ⁶	9.87	0.98	1.08 ⁴	0.73 ⁶	1.00	1.00	82.67	81.76 ^{4,5}	82.36	83.39	82.67	81.76 ^{4,5}	82.36	83.39	
1993	9.09 ³	8.94 ⁵	8.97 ⁶	10.26	1.47 ^{2,3}	1.27 ^{4,5}	0.93 ⁶	1.16	1.16	78.98	78.92 ^{4,5}	79.87	79.92	78.98	78.92 ^{4,5}	79.87	79.92	

¹ Indicates that the difference in the means for Texas Real Estate Banks and Other Texas Banks is statistically significant at the 0.05 level.

² Indicates that the difference in the means for Texas Real Estate Banks and U.S. Real Estate Banks is statistically significant at the 0.05 level.

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⁵ Indicates that the difference in the means for Other Texas Banks and U.S. Real Estate Banks is statistically significant at the 0.05 level.

⁶ Indicates that the difference in the means for Other Texas Banks and U.S. Real Estate Banks is statistically significant at the 0.05 level.

Variable Definitions: Total Assets RCFD2170; Equity RCFD3210; Net Income RIAD4340; Operating Income (1978-1983) RIAD4010+RIAD4115 +RIAD4020+RIAD4027+RIAD4050+RIAD4060+RIAD4065+RIAD4070+RIAD4080+RIAD4090+RIAD4100, (1984-93) RIAD4107+RIAD4079.

Table 3. Comparisons of selected ratios of expenses to operating income for real estate banks and other banks in Texas and the rest of the United States

Year	Interest Expense / Operating Income			Noninterest Expense / Operating Income			Loss Provisions / Operating Income			
	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	
1978	33.84	38.29 ^{4,5}	48.75 ⁶	44.28	41.01 ^{4,5}	33.10 ⁶	37.47	4.09 ^{4,5}	2.34 ⁶	2.92
1979	49.69 ¹	40.83 ^{4,5}	50.42 ⁶	45.94	37.17 ^{4,5}	31.58 ⁶	34.94	3.66 ^{4,5}	2.04 ⁶	2.70
1980	58.31	46.05 ^{4,5}	56.24 ⁶	50.88	33.62 ^{4,5}	29.77 ⁶	32.24	1.86	3.30 ^{4,5}	1.94 ⁶
1981	56.35	52.41 ^{4,5}	60.78 ⁶	57.39	29.80 ⁵	28.84	28.23	3.14	2.81 ^{4,5}	2.17
1982	61.63	53.55 ^{4,5}	60.39 ⁶	58.36	22.70	36.02	30.54	2.60	4.00 ^{4,5}	2.77 ⁶
1983	50.55 ³	52.03 ^{4,5}	54.63	55.37	47.43 ^{1,2,3}	36.44	35.17	5.01	6.17 ^{4,5}	3.91
1984	55.43	55.38 ⁵	55.25 ⁶	57.37	32.13	37.66 ^{4,5}	33.78 ⁶	6.32 ²	7.15 ^{4,5}	4.20 ⁶
1985	53.69	53.28 ⁵	52.98 ⁶	54.17	37.37	39.60 ^{4,5}	34.22	9.09 ²	9.31 ^{4,5}	5.74 ⁶
1986	54.44 ^{1,2,3}	52.76 ^{4,5}	50.18 ⁶	51.84	40.09 ^{2,3}	41.404,5	36.46	16.46 ^{2,3}	14.884,5	6.20 ⁶
1987	53.13 ^{2,3}	52.40 ^{4,5}	47.74 ⁶	49.16	45.81 ^{2,3}	42.124,5	38.51 ⁶	24.83 ^{1,2,3}	14.554,5	5.35 ⁶
1988	54.35 ^{1,2,3}	51.82 ^{4,5}	50.02	50.32	49.31 ^{1,2,3}	38.61 ^{4,5}	35.80 ⁶	30.61 ^{1,2,3}	12.92 ^{4,5}	4.53
1989	55.51 ^{1,2,3}	52.90 ^{4,5}	52.37	52.17	49.07 ^{1,2,3}	36.55 ^{4,5}	33.65	22.78 ^{1,2,3}	9.58 ^{4,5}	4.59 ⁶
1990	51.93	51.67 ^{4,5}	52.88 ⁶	52.42	47.69 ^{1,2,3}	37.78 ^{4,5}	34.21	10.32 ^{1,2,3}	5.73 ^{4,5}	6.59 ⁶
1991	44.49 ^{1,2,3}	47.88 ^{4,5}	49.50	49.39	46.54 ^{1,2,3}	40.36 ^{4,5}	37.34	6.12 ¹	3.80 ⁵	6.98 ⁶
1992	31.28 ^{1,2,3}	36.23 ^{4,5}	39.90 ⁶	40.58	51.39 ^{1,2,3}	45.54 ^{4,5}	42.46	4.53 ¹	2.56 ^{4,5}	3.78
1993	25.72 ^{2,3}	30.36 ^{4,5}	34.10 ⁶	35.09	53.26 ^{1,2,3}	48.56 ^{4,5}	45.77	0.73 ^{2,3}	0.994,5	4.29 ⁶

¹ Indicates that the difference in the means for Texas Real Estate Banks and Other Texas Banks is statistically significant at the 0.05 level.

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Variable Definitions from FRB Reports of Condition and Income: Interest Expense (1978-83) RIAD4170+RIAD4180+ RIAD4190+RIAD4200, (1984-93) RIAD4073; Non Interest Expense (1978-83) RIAD4135+ RIAD4217+ RIAD4240, (1984-93) RIAD4093; Operating Expense=Interest Expense +

Noninterest Expense; Loss Provisions RIAD4230+ RIAD4243

Table 4. Comparisons of asset and loan composition ratios as a percentage of total assets for real estate banks and other banks in Texas and the rest of the United States

Year	Liquid Assets			Total Loans and Leases			Other Assets		
	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks
1978	38.87	45.19 ^{4,5}	31.10 ⁶	59.82	53.82 ^{1,5}	68.59 ⁶	2.56	3.32 ^{1,5}	2.63 ⁶
1979	33.36 ¹	47.56 ^{4,5}	32.09 ⁶	66.76	51.51 ^{4,5}	67.566	3.65	3.46 ^{4,5}	2.75 ⁶
1980	39.83	48.85 ^{4,5}	33.51 ⁶	61.18	49.68 ^{4,5}	65.81 ⁶	3.66	3.84 ^{4,5}	3.10 ⁶
1981	33.90	48.16 ^{4,5}	32.98 ⁶	71.12	49.80 ^{4,5}	65.56 ⁶	4.41	4.38 ^{4,5}	3.56 ⁶
1982	37.32	45.94 ⁴	32.19 ⁶	67.82	51.67 ⁴	65.476	3.10	4.63 ^{4,5}	4.06
1983	26.11 ^{1,2,3}	44.70 ^{4,5}	29.79 ⁶	70.71 ^{1,2,3}	52.61 ⁴	66.86 ⁶	5.26 ³	4.64 ^{4,5}	4.346
1984	21.91 ^{1,2,3}	40.45 ^{4,5}	25.96 ⁶	75.29 ^{1,2,3}	56.66 ^{4,5}	70.79 ⁶	4.58	4.83 ^{4,5}	4.19
1985	20.94 ^{1,2,3}	40.10 ^{4,5}	26.14 ⁶	75.32 ^{1,2,3}	56.97 ^{4,5}	70.87 ⁶	4.82 ^{2,3}	4.56 ^{4,5}	3.95
1986	24.34 ^{1,2,3}	43.37 ^{4,5}	27.05 ⁶	71.10 ^{1,3}	53.27 ^{4,5}	70.08 ⁶	4.55 ^{2,3}	4.88 ^{4,5}	3.59 ⁶
1987	24.26 ^{1,2,3}	45.53 ^{4,5}	26.70 ⁶	69.11 ^{1,3}	51.02 ^{4,5}	70.41 ⁶	4.84 ^{1,2,3}	4.18 ^{4,5}	3.54
1988	26.54 ^{1,3}	48.49 ^{4,5}	26.86 ⁶	66.30 ^{1,2,3}	47.90 ^{4,5}	70.41 ⁶	4.85 ^{1,2,3}	4.05 ^{4,5}	3.48 ⁶
1989	28.35 ^{1,3}	50.91 ^{4,5}	27.43 ⁶	63.81 ^{1,2,3}	45.47 ^{4,5}	69.85 ⁶	4.28 ^{2,3}	3.97 ^{4,5}	3.52 ⁶
1990	31.21 ^{1,3}	53.66 ^{4,5}	27.57 ⁶	62.50 ^{1,2,3}	42.91 ^{4,5}	69.47 ⁶	3.66	3.75 ⁵	3.56
1991	31.82 ^{1,2,3}	55.34 ^{4,5}	29.13 ⁶	62.07 ^{1,2,3}	41.34 ^{4,5}	67.74 ⁶	3.79	3.70	3.54
1992	30.83 ^{1,3}	57.53 ^{4,5}	30.40 ⁶	65.07 ^{1,3}	39.77 ^{4,5}	66.57 ⁶	3.54	3.29 ⁵	3.36
1993	30.01 ^{1,3}	56.93 ^{4,5}	30.77 ⁶	66.42 ^{1,3}	40.71 ^{4,5}	66.46 ⁶	3.57	3.21 ^{4,5}	3.36

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Variable Definitions from FRB Reports of Condition and Income: Liquid Assets RCDFD0010+ RCFD0350+ RCFD0400+ RCFD0600+ RCFD0900+ RCFD0380; Total Loans and Leases (1978-83) RCDFD2122+ RICEF123+ RCFD2122+ RCFD2122+ RCFD2123; Real Estate Loans RCDFD1410; C&I Loans RCDFD1600; Consumer Loans RCDFD1975

Table 4. (Continued) Comparisons of asset and loan composition ratios as a percentage of total assets for real estate banks and other banks in Texas and the rest of the United States

Year	Real Estate Loans			Consumer Loans			Commercial and Industrial Loans		
	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks
1978	43.68 ^{1,3}	11.79 ^{4,5}	45.22 ⁶	10.62	19.31 ^{4,5}	13.50 ⁶	3.71	14.71 ^{4,5}	6.81 ⁶
1979	44.42 ¹	11.61 ^{4,5}	44.96 ⁶	12.96	18.67 ^{4,5}	13.15 ⁶	7.05	14.40 ^{4,5}	6.65 ⁶
1980	43.22 ^{1,3}	11.15 ^{4,5}	44.93 ⁶	11.37	16.67 ^{4,5}	11.59 ⁶	5.93	15.29 ^{4,5}	6.84 ⁶
1981	48.61	10.91 ^{4,5}	45.22 ⁶	13.65	15.17 ^{4,5}	10.35 ⁶	8.39	17.51 ^{4,5}	7.62 ⁶
1982	47.99 ^{1,3}	11.97 ^{4,5}	45.78 ⁶	10.62	14.16 ^{4,5}	9.75 ⁶	8.11 ¹	19.12 ^{4,5}	8.17 ⁶
1983	45.05 ^{1,3}	15.13 ^{4,5}	46.52 ⁶	9.37 ^{1,3}	14.20 ^{4,5}	10.05 ⁶	11.94 ^{1,2}	17.64 ^{4,5}	8.44 ⁶
1984	45.91 ^{1,3}	17.98 ⁴	47.58 ⁶	11.75 ¹	14.50 ^{4,5}	10.83 ⁶	15.58 ^{1,2,3}	18.49 ^{4,5}	10.25 ⁶
1985	46.01 ^{1,2,3}	19.88 ^{4,5}	48.38 ⁶	11.44 ¹	14.39 ^{4,5}	10.51 ⁶	16.60 ^{2,3}	17.77 ^{4,5}	9.71 ⁶
1986	45.68 ^{1,2,3}	20.49 ^{4,5}	48.50 ⁶	10.20 ^{1,3}	12.83 ^{4,5}	10.12 ⁶	15.15 ^{2,3}	15.66 ^{4,5}	9.66 ⁶
1987	46.83 ^{1,2,3}	20.92 ⁵	48.96 ⁶	10.17 ^{1,3}	11.96 ^{4,5}	9.94 ⁶	14.52 ^{2,3}	14.15 ^{4,5}	9.75 ⁶
1988	47.16 ^{1,2,3}	20.15 ^{4,5}	48.95 ⁶	9.76 ^{1,3}	11.43 ⁴	9.74 ⁶	12.92 ²	12.54 ^{4,5}	9.99 ⁶
1989	47.23 ^{1,2,3}	19.54 ^{4,5}	49.18 ⁶	9.60 ^{1,3}	11.49 ⁴	9.27 ⁶	11.71 ²	10.87 ^{4,5}	9.74 ⁶
1990	46.09 ^{1,2,3}	18.60 ^{4,5}	49.32 ⁶	9.19 ³	10.89 ⁴	8.67 ⁶	10.45	9.78 ⁵	9.98 ⁶
1991	47.05 ^{1,2,3}	18.14 ^{4,5}	49.39 ⁶	8.13 ^{1,3}	10.22 ⁴	7.92 ⁶	8.56 ³	8.73 ^{4,5}	9.20 ⁶
1992	48.31 ^{1,3}	17.75 ^{4,5}	49.39 ⁶	8.05	9.73 ⁵	7.41 ⁶	8.51	8.15 ^{4,5}	8.66 ⁶
1993	50.16 ^{1,3}	17.81 ^{4,5}	49.38 ⁶	6.89 ^{1,3}	9.86 ⁴	7.18 ⁶	8.31	8.04 ⁵	8.38 ⁶

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Variable Definitions from FRB Reports of Condition and Income: Liquid Assets RCFD0010+; RCFD0350+ RCFD0400+ RCFD0600+ RCFD0900+ RCFD0980; Total Loans and Leases (1978-83) RCFD2122+ RCFD2123+ RCFD2124+ RCFD2125+ RCFD2126+ RCFD2127+ RCFD2128+ RCFD2129+ RCFD2130+ RCFD2131+ RCFD2132+ RCFD2133+ RCFD2134+ RCFD2135+ RCFD2136+ RCFD2137+ RCFD2138+ RCFD2139+ RCFD2140+; C&I Loans RCFD1500; Consumer Loans RCFD1975

Table 5. Comparisons of selected real estate asset ratios as a percentage of total assets for real estate banks and other banks in Texas and the rest of the United States

Year	Residential (1-4 Family) Mortgages						Multifamily (5 or more) Mortgages						Farmland Mortgages					
	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	Other U.S. Banks	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	Other U.S. Banks	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	Other U.S. Banks	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	Other U.S. Banks		
1978	19.20	4.21 ^{4,5}	30.93 ⁶	11.20	0.44	0.19 ^{4,5}	0.72 ⁶	0.31	0.06 ^{1,2,3}	1.28 ^{4,5}	3.92 ⁶	2.45	0.06 ^{1,2,3}	1.28 ^{4,5}	3.92 ⁶	2.45		
1979	30.91 ¹	4.40 ^{4,5}	31.46 ⁶	11.42	0.34	0.17 ^{4,5}	0.64 ⁶	0.28	0.55 ^{2,3}	1.08 ^{4,5}	3.35 ⁶	2.26	0.55 ^{2,3}	1.08 ^{4,5}	3.35 ⁶	2.26		
1980	29.90	4.38 ^{4,5}	32.12 ⁶	11.09	0.23	0.19 ^{4,5}	0.76 ⁶	0.26	0.02 ^{1,2,3}	0.92 ^{4,5}	2.74 ⁶	2.01	0.02 ^{1,2,3}	0.92 ^{4,5}	2.74 ⁶	2.01		
1981	32.49	4.32 ^{4,5}	31.21 ⁶	10.67	0.37	0.21 ^{4,5}	0.94 ⁶	0.26	0.00 ^{1,2,3}	0.70 ^{4,5}	2.37 ⁶	1.79	0.00 ^{1,2,3}	0.70 ^{4,5}	2.37 ⁶	1.79		
1982	40.28 ^{1,3}	4.54 ^{4,5}	29.74 ⁶	10.07	0.24 ²	0.24 ⁴	1.44 ⁶	0.26	0.09 ^{1,2,3}	0.69 ^{4,5}	2.02	1.66	0.09 ^{1,2,3}	0.69 ^{4,5}	2.02	1.66		
1983	15.73 ^{1,2,3}	5.53 ^{4,5}	29.25 ⁶	10.00	1.21 ^{1,3}	0.31 ⁴	1.43 ⁶	0.30	0.99	0.75 ^{4,5}	1.69	1.68	0.99	0.75 ^{4,5}	1.69	1.68		
1984	16.57 ^{1,2,3}	6.55 ^{4,5}	28.49 ⁶	10.20	1.22 ^{1,3}	0.45 ^{4,5}	1.20 ⁶	0.33	0.90 ³	0.78 ^{4,5}	1.48	1.75	0.90 ³	0.78 ^{4,5}	1.48	1.75		
1985	17.44 ^{1,2,3}	7.49 ^{4,5}	28.72 ⁶	10.33	1.24 ^{1,3}	0.44 ^{4,5}	1.48 ⁶	0.34	0.69 ^{2,3}	0.81 ^{4,5}	1.51 ⁶	1.87	0.69 ^{2,3}	0.81 ^{4,5}	1.51 ⁶	1.87		
1986	17.29 ^{1,2,3}	7.93 ^{4,5}	27.95 ⁶	10.51	1.04 ^{1,3}	0.51 ^{4,5}	1.40 ⁶	0.37	0.98 ^{2,3}	0.85 ^{4,5}	1.65 ⁶	2.04	0.98 ^{2,3}	0.85 ^{4,5}	1.65 ⁶	2.04		
1987	17.83 ^{1,2,3}	8.31 ^{4,5}	28.00 ⁶	11.18	1.26 ^{1,3}	0.46 ^{4,5}	1.27 ⁶	0.38	0.90 ^{2,3}	1.05 ^{4,5}	1.65 ⁶	2.37	0.90 ^{2,3}	1.05 ^{4,5}	1.65 ⁶	2.37		
1988	18.43 ^{1,2,3}	8.30 ^{4,5}	27.87 ⁶	11.46	0.94 ^{1,2,3}	0.38 ⁴	1.21 ⁶	0.36	1.07 ^{2,3}	1.20 ^{4,5}	1.66 ⁶	2.55	1.07 ^{2,3}	1.20 ^{4,5}	1.66 ⁶	2.55		
1989	18.89 ^{1,2,3}	8.10 ^{4,5}	27.72 ⁶	11.75	0.81 ^{1,2,3}	0.38 ⁴	1.18 ⁶	0.37	1.62 ³	1.25 ^{4,5}	1.56 ⁶	2.68	1.62 ³	1.25 ^{4,5}	1.56 ⁶	2.68		
1990	21.62 ^{1,2,3}	7.78 ^{4,5}	27.32 ⁶	12.02	0.84 ^{1,3}	0.40 ⁴	1.24 ⁶	0.39	1.18 ³	1.25 ^{4,5}	1.52 ⁶	2.75	1.18 ³	1.25 ^{4,5}	1.52 ⁶	2.75		
1991	20.90 ^{1,2,3}	7.76 ^{4,5}	27.07 ⁶	12.29	1.03 ^{1,3}	0.44 ⁴	1.35 ⁶	0.41	1.23 ³	1.27 ^{4,5}	1.770 ⁶	2.92	1.23 ³	1.27 ^{4,5}	1.770 ⁶	2.92		
1992	24.89 ^{1,3}	7.76 ^{4,5}	26.91 ⁶	12.50	1.24 ^{1,3}	0.45 ⁴	1.37 ⁶	0.46	1.09 ^{2,3}	1.29 ^{4,5}	1.930 ⁶	3.13	1.09 ^{2,3}	1.29 ^{4,5}	1.930 ⁶	3.13		
1993	28.02 ^{1,3}	7.80 ^{4,5}	26.69 ⁶	12.63	1.44 ^{1,3}	0.50 ⁴	1.51 ⁶	0.49	0.75 ^{1,2,3}	1.42 ^{4,5}	2.00 ⁶	3.35	0.75 ^{1,2,3}	1.42 ^{4,5}	2.00 ⁶	3.35		

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Variable Definitions from FRB Reports of Condition and Income: Residential Mortgages RCON1430, Multifamily Mortgages RCON1460; Farmland Mortgages RCON1420; Nonfarm Nonresidential Mortgages RCON1480; Construction and Land Development Loans RCON1415; Foreclosed Real Estate RCFD2150

Table 5. (continued) Comparisons of selected real estate asset ratios as a percentage of total assets for real estate banks and other banks in Texas and the rest of the United States

Year	Nonfarm Nonresidential Mortgages			Construction and Land Development Loans			Foreclosed Real Estate		
	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks	Texas Real Estate Banks	Other Texas Banks	U.S. Real Estate Banks
1978	9.92	3.53 ^{4,5}	7.15 ⁶	14.05	2.41 ⁵	2.35 ⁶	0.00 ^{1,2,3}	0.15 ⁵	0.15 ⁶
1979	9.51	3.51 ^{4,5}	7.31 ⁶	3.01	2.30 ⁵	2.05 ⁶	0.10	0.14	0.15 ⁶
1980	11.54	3.42 ^{4,5}	7.68 ⁶	1.22	2.12 ^{4,5}	1.46 ⁶	0.32	0.12 ⁵	0.15
1981	15.07	3.33 ^{4,5}	8.50 ⁶	0.53	2.16 ⁵	1.86 ⁶	0.15	0.13 ^{4,5}	0.34 ⁶
1982	2.80 ²	3.70 ⁴	8.93 ⁶	4.29	2.63 ⁵	3.04 ⁶	0.30	0.17 ^{4,5}	0.61 ⁶
1983	12.88 ^{1,3}	4.60 ^{4,5}	9.23 ⁶	13.75 ^{1,2,3}	3.76 ⁵	4.01 ⁶	0.50	0.19 ^{4,5}	0.87 ⁶
1984	12.18 ^{1,3}	5.51 ^{4,5}	9.97 ⁶	14.58 ^{1,2,3}	4.43 ^{4,5}	5.60 ⁶	0.46 ²	0.26 ^{4,5}	0.84 ⁶
1985	13.17 ^{1,2,3}	6.49 ^{4,5}	10.67 ⁶	12.61 ^{1,2,3}	4.15 ^{4,5}	5.20 ⁶	0.87 ^{1,3}	0.50 ⁴	0.79 ⁶
1986	14.72 ^{1,2,3}	6.97 ^{4,5}	11.87 ⁶	9.39 ^{1,2,3}	3.42 ^{4,5}	4.95 ⁶	2.25 ^{1,2,3}	0.91 ⁵	0.79 ⁶
1987	15.42 ^{1,2,3}	7.37 ^{4,5}	12.38 ⁶	7.05 ^{1,2,3}	2.41 ^{4,5}	4.84 ⁶	4.38 ^{1,2,3}	1.33 ^{4,5}	0.81 ⁶
1988	15.13 ^{1,2,3}	6.89 ^{4,5}	12.79 ⁶	6.03 ^{1,2,3}	1.79 ^{4,5}	4.75 ⁶	5.55 ^{1,2,3}	1.60 ^{4,5}	0.68 ⁶
1989	14.65 ^{1,3}	6.65 ^{4,5}	13.18 ⁶	4.61 ^{1,3}	1.46 ⁴	4.88 ⁶	6.65 ^{1,2,3}	1.70 ^{4,5}	0.65 ⁶
1990	13.89 ^{1,3}	6.34 ^{4,5}	13.55 ⁶	3.32 ^{1,2,3}	1.29 ⁴	4.81 ⁶	5.24 ^{1,2,3}	1.54 ^{4,5}	0.87 ⁶
1991	17.04 ^{1,3}	6.18 ^{4,5}	14.05 ⁶	2.50 ^{1,2,3}	1.18 ⁴	4.09 ⁶	4.36 ^{1,2,3}	1.31 ^{4,5}	1.07 ⁶
1992	16.08 ^{1,3}	6.18 ^{4,5}	14.49 ⁶	2.65 ^{1,3}	1.13 ⁴	3.62 ⁶	2.35 ^{1,2,3}	0.92 ^{4,5}	1.06 ⁶
1993	15.65 ^{1,3}	6.25 ^{4,5}	14.77 ⁶	3.23 ^{1,3}	1.34 ^{4,5}	3.60 ⁶	1.07 ^{1,2,3}	0.50 ^{4,5}	0.70 ⁶

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Variable Definitions from FRB Reports of Condition and Income: Residential Mortgages RCON1430, Multifamily Mortgages RCON1460; Farnland Mortgages RCON1420; Nonfarm Nonresidential Mortgages RCON1480; Construction and Land Development Loans RCON1415; Foreclosed Real Estate RCFD2150

unlikely to suffice. The non-interest expenses of the United States REBs are about equal to those of the non-REBs. The last panel of table 3 clearly shows that differences in the expense to income ratio are also rooted in differences in asset quality. The ratios of loan-loss provisions to operating income are significant from both a statistical and economic perspective. For Texas REBS, these ratios are more than four times greater than those for non-Texas REBS in each year 1987-1989. For Texas non REBs, these ratios are more than double those for non-Texas non-REBs in each of these same years.¹²

Table 4 shows the composition of assets for the four groups of banks. What is clear from this table is that REBs, both in Texas and the rest of the United States, hold significantly higher portions of their assets in the form of loans and significantly lower portions in the form of liquid assets than do other banks. Typical loan-to-asset ratios for REBs are in the 60%-70% range, whereas those for other banks are around 50%. This would seem to suggest that REBs in general hold riskier portfolios than other banks.

The remaining panels of table 4 allow us to analyze this finding further by breaking down the loan-to-asset ratio into its three major component parts: real-estate loans, consumer loans, and commercial and industrial (C&I) loans. Not surprising is the fact that REBs have far more real estate loans as a percentage of assets than other banks, since this is the basis upon which banks qualify as real-estate specialists. It is worth noting that in each year analyzed, REBs hold at least twice the percentage of assets in real estate than do non-REBs for both the Texas and non-Texas samples.

Additional evidence of riskiness is found in the C&I loan data of table 4. C&I loans comprise a substantially smaller percentage of assets of the Texas REBs than of the non-REBs until 1985. After that, the Texas REBs held C&I portfolios about equal, as a percentage of total assets, to those of the Texas non-REBs. For the rest of the United States, REBs consistently hold relatively fewer C&I loans than do non-REBs. Put another way, except for the 1978-1982 period when there were very few REBs in Texas, REBs in Texas hold C&I asset proportions that substantially exceed those of United States REBs. This suggests that Texas REBs were riskier than their counterparts in the rest of the United States. Their real estate lending was not just an allocation of loans, but represented an unusually large part of larger-than-normal loan portfolios.

Table 5 provides even more convincing evidence on the relative riskiness of banks in Texas versus the rest of the United States. In this table, the real estate loan portfolio is broken down into six component parts: residential mortgages, multifamily mortgages, farmland mortgages, non-farm nonresidential mortgages, loans for construction and land development, and foreclosed real estate. From 1983-1991, Texas REBs hold a substantially lower percentage of assets in the form of residential mortgages than do United States REBs. During the important 1984-1989 period, for example, 1-4 family mortgages comprised between 17 and 19 percent of total assets for the Texas REBs, while these loans represented 27-29 percent of the assets of United States REBs. During the 1990s the importance of 1-4 family loans increased in the portfolios of the Texas REBs to the same levels found in the portfolios of United States REBs. Other Texas banks hold substantially lower percentages throughout the entire 1978-1993 period.

12 The growth of securitized markets may also make these real estate loans more liquid than other traditional bank assets, lowering the need to hold Treasury obligations and other assets for liquidity purposes.

There are not economically significant differences between the Texas and the United States banks holdings of multifamily (apartment) loans, or of loans secured by farmland. The holdings of the Texas REBs were actually slightly below the national figures for REBs. The key differences in Texas and United States banks are found in the two categories of mortgage lending generally believed to involve the greatest risk: non-farm nonresidential mortgages, and loans for construction and land development.¹³ In both of these categories, the involvement of the Texas REBs was significantly greater than that of the REBs outside of Texas. From 1983 on, the Texas REBs averaged about 22% of their total assets invested in these two types of commercial real estate loans, whereas the comparable figure for the banks outside Texas was about 17%. During the critical years 1983-1986 preceding the crash of Texas real estate values, Texas REBs reported more than 12% of their assets as loans for construction and land development, almost triple the amount reported by REBs in the rest of the United States. Other Texas banks also reported construction loan investments approximately three times as large as their counterparts in the rest of the United States, evidence of the generally higher level of risk-taking by Texas bankers.

Because of the riskier portfolios and the Texas real estate collapse, holdings of foreclosed real estate also were much greater for the Texas banks than for the other United States banks. From 1983 on, the United States real estate banks had foreclosed real estate assets that only varied between 0.65% and 1.07% of total assets. Texas REBs, which consistently had lower foreclosed assets than the United States banks in each year from 1978 to 1984, experienced a substantial increase in foreclosures during the mid-1980s. These holdings amounted to more than 4% of assets in each year from 1987 to 1991, and increased substantially after 1987. This is more than three years after the construction and land development loans had peaked and then begun their significant decline. Moreover, accounting and reporting rules require banks to write assets down to appraised value at the time of foreclosure, so the original loan values of the foreclosed assets almost certainly were higher than those reported in table 5. The high levels of loan loss provisions reported in table 3 support this notion.

It is interesting to compare the foreclosed asset ratios of the REBs with those of non-REBs. For United States banks, foreclosed real estate assets, as a percentage of *total real estate assets*, were consistently lower for the REBs than for the non-REBs.¹⁴ The typical figure for the REBs during the mid-1980s was about 1.7%, as compared with an average of over 3% for the non-REBs. This is consistent with the findings of Eisenbeis and Kwast¹⁴ that REBs tend to be more conservative and less risky than non-REBs. The comparison goes the other way in Texas. From 1987-1991, the Texas REBs held foreclosed real estate assets equal to about 11% of total real estate assets, as compared with about 7% for the non-REBs.

As a result of all these factors, it is not surprising that the earnings performance of the Texas REBs during the 1980s was abysmal. While Eisenbeis and Kwast found little difference in the profitability of REBs and non-REBs and this general pattern continued, with some exceptions, in the 1988-1993 period as well. In Texas, however, the differences were very large. The 1980s were a difficult period for all Texas banks. Texas banks had

13 Numerous studies have documented the relationship between commercial real estate asset concentrations and thrift failure.

14 Foreclosed real estate loans as a percentage of loans are not detailed in the tables. Rather the numbers arise from separate computations and are available upon request.

losses in 1986, 1987, 1988 and 1989. The losses of the Texas REBs were very much larger than those of the non-REBs. A bank that starts out with reasonable capital can survive a few years of losses equal to 50 or 60 basis points on assets. Banks cannot survive multiple years of losses of greater than 2% of assets, and that was the experience of many of the Texas REBs.

4. Summary and Conclusions

Thrift institutions specializing in mortgage lending are playing a declining role in the United States financial system. The demand for mortgage financing is still, and will continue to be, a major factor in financial markets. It has been noted that commercial banks have expanded their participation in mortgage lending in recent years. Earlier work by Eisenbeis and Kwast suggests that commercial banks can specialize in this activity safely, and can move into and out of this role as market conditions dictate. This paper examines the experience of Texas REBs to see whether the general conclusion of Eisenbeis and Kwast holds up in this very difficult market.

Our results show that Texas REBs performed very poorly during the 1980s and early 1990s, because the Texas REBs were clearly different from the majority of the banks classified as REBs in the rest of the country. While the REBs in the rest of the country emphasized relatively safe single-family mortgage loans, the Texas banks with a heavy involvement in real estate lending put substantial assets into much riskier construction and development loans, and in loans on commercial property, such as office buildings, hotels and shopping centers. In a poor real estate market, these loans performed very poorly.

Our analysis of the reasons for the poor performance of the Texas REBs indicates that the Texas experience is not a basis for rejecting the view that the commercial bank industry can safely replace the declining thrift industry as a major source of residential mortgage financing.

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