New England Banks and the Texas Experience

re New England banks going the way of Texas banks? The prospect that they might be is indeed alarming, given the magnitude of the collapse of the Texas banking industry. Of Texas's nine largest bank holding companies, all but one have either merged with an out-of-state organization or sought federal assistance. The loss absorbed by the Federal Deposit Insurance Corporation has thus far amounted to \$8 billion, or about 44 percent of the 1987 balance of the FDIC fund.

New England banks are currently suffering from problems similar to those that caused the demise of many Texas banks. Nevertheless, this article concludes that the comparison of New England to Texas is unwarranted. Section I compares banking statistics of Texas and New England. Particular attention is paid to the influence of real-estate lending on bank performance. Section II relates the fortunes of the banking industry to the underlying health of the regional economy. It describes the leading sectors of the two economies and compares the real-estate cycles in Texas and New England. Section III concludes with a discussion of the future course of banking in New England.

I. Real Estate Lending and Bank Performance

The financial losses of Texas banks were largely due to the poor credit quality of their commercial real-estate portfolios. Texas banks lent heavily to developers constructing office buildings, strip shopping centers, shopping malls, industrial parks and warehouses—projects that suffered from serious overbuilding. As a result, in 1985, real-estate loans¹ accounted for 25 percent of nonperforming assets in Texas banks. Loans are classified as nonperforming when they are at least 90 days past due, nonaccruing, or renegotiated. Nonperforming assets are defined as nonperforming loans plus other real estate owned (OREO),

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Economist, Federal Reserve Bank of Boston. The author thanks Thomas Cimeno, Lynn Browne, Richard Kopcke, Richard Randall, Eric Rosengren, and Steven Sass for helpful comments. Lawrence D. Herman provided valuable research assistance. which consists primarily of foreclosed real estate. From 1985 to 1989, nonperforming real-estate assets in Texas banks had increased from \$1 billion to \$7 billion and accounted for almost 76 percent of nonperforming assets. As a result of these loan losses, from 1986 to 1989, Texas banks lost over \$6 billion.

Nonperforming assets are an important indicator of the health of the banking system because they are closely related to the future level of loan losses; they also reduce interest receipts and equity capital. Nonperforming assets increased dramatically for New England banks in the first quarter of 1990, reflecting the deterioration in quality of banks' loan portfolios. As in Texas, the problems are mostly due to the declining value of real estate.

Texas banks reached a high point in their realestate loan concentrations in the mid-1980s. By that time, the decline in real-estate values had already occurred. The Texas banks were slow, however, to recognize the problems of their borrowers and the declines in collateral values on real-estate loans they had already approved. Thus, the ratio of nonperforming assets to total loans did not reach its peak until 1988. At the same time, heavy charge-offs of construction and commercial real-estate loans were taken on the balance sheets of Texas banks.

In New England, on the other hand, banks quickly reported increases in nonperforming loans as real estate declined in value. Therefore, current conditions in New England are more reminiscent of Texas in the mid 1980s in terms of the point reached on the real-estate cycle, and a proper comparison of nonperforming loans and equity levels of New England banks today is better made to those of Texas banks in the late 1980s. Accordingly, charts and tables in this section compare current concentrations of real-estate loans in New England to those of Texas in 1985, and compare current New England nonperforming and equity ratios to those in Texas in 1988.

Nonperforming Assets and Equity Capital in New England and Texas Banks

Chart 1 compares the ratio of nonperforming assets to total loans of Texas commercial banks, at its highest point in 1988, to similar ratios of New England and U.S. commercial banks in the first quarter of 1990, the most recent data available at the time of writing this article. The chart shows that while the ratio of nonperforming assets to total loans is now substantially higher for New England banks than for banks nationwide, the ratio for Texas banks in 1988 Chart 1



Source: Board of Governors of the Federal Reserve System, call report data. Nonperforming assets include nonaccrual loans, loans more than 89 days past due but still accruing and other real estate owned. was almost twice the current New England ratio. This suggests that the future loan losses of New England banks may not be expected to approach the levels suffered by Texas banks.

A substantial capital cushion is the primary line of defense against the threat of bank failure. Chart 2 compares the ratio of equity capital to total assets for New England banks with those of banks nationwide for the first quarter of 1990 and Texas banks in 1988. While New England banks have a smaller capital cushion than the current national average, it is larger than that of Texas banks in 1988. Chart 3 compares nonperforming assets to equity capital. In New England nonperforming assets are currently 85 percent of equity capital, a much higher level than the national average. In Texas, though, nonperforming assets exceeded equity capital in 1988.

The statistics in the charts describe the condition of New England banks at an isolated moment. They do not necessarily indicate the conditions that will prevail in the future. However, the numbers alone do not suggest that New England banks are headed for a Texas-style collapse. Moreover, the asset composition of banks in New England differs markedly from that of Texas banks, and, more importantly, the composition of industry in New England is more diversified than that of Texas.

Concentrations of Real-Estate Loans in Texas and New England

Table 1 compares the share of real-estate loans in the loan portfolio of Texas commercial banks at the end of 1985 with that of New England banks and U.S. banks in the first quarter of 1990. It shows that New England banks have a substantially higher concentration of real-estate loans (47.7 percent) than all banks in the nation (37.8 percent) and Texas banks in 1985 (34.7 percent). The heavy commitment of New England banks to real-estate lending is often cited as a reason for concern for their future performance.

The risks inherent in real-estate loans vary greatly. Construction and land development loans are commonly considered to be the most risky kind of real-estate lending, while residential mortgages are regarded as the safest. Commercial real-estate lending occupies an intermediate position.

Unfortunately, no national data record the losses associated with different categories of real-estate loans. A study by First Boston Corporation (1990), however, reports estimated losses on real-estate loans in Texas, based on a survey of a number of chief

Table 1	
Real Estate Loans as a	Percentage of Total
Loans and Leases	0,1

Loan Category ^a	First District Commercial Banks, Q1:1990	Texas Commercial Banks, 1985	All U.S. Commercial Banks, Q1:1990	
All Real Estate				
Loans	47.7	34.7	37.8	
Construction and Land			6.6	
Development	8.2	14.1	0.0	
Commercial Real-	14.4	10.5	10.8	
Posidential Real	14,4	10.5	10.0	
Estate Loans	24.8	9.3	18.4	

"Categories will not add to total, which includes farm loans.

Source: Board of Governors of the Federal Reserve System, call report data.

financial officers of Texas banks. According to these estimates, 60 percent of construction loans became nonperforming and one-half of these (that is, 30 percent of total construction loans) were eventually charged off; 20 percent of commercial mortgage loans would become nonperforming, and again, one-half of these would ultimately be charged off. The study did not report on losses on residential mortgages, because these were deemed too minor to be of importance.

Table 1 also compares the composition of current real-estate lending of New England banks to the national average and to Texas banks in 1985. It shows that Texas banks concentrated their real-estate lending in construction and development. In contrast, New England banks have concentrated their realestate lending in the safest category of real estate lending, residential mortgage loans. New England banks hold 25 percent of their loans in residential mortgages, while Texas banks had only 9 percent of loans in that category. New England banks also made a heavier commitment than Texas banks to commercial real-estate loans.

Although the proportions of nonperforming loans in different categories of real-estate lending are not available, they can be estimated by regression analysis. Table 2 presents estimates of ratios of nonperforming loans for New England banks for construction, commercial and residential real-estate loans in the past two years and the first quarter of 1990. (See the Appendix for a more complete descrip-

Table 2	2		
Non	performing	Real-Estat	e Loans as a
Perce	entage of A	Il Real-Est	ate Loans at
New	England (Commercial	Banks ^a

	1988	1989	1st Quarter 1990
Construction	4.4	10.2	18.8
Commercial	1.1	2.1	3.3
Residential	.1	.6	.4
Total Nonperforming Real-Estate Loans	1.0	2.2	3.2

^aEstimated for subcategories by regression analysis. Source: See the Appendix.

tion of the regressions.) The results show that construction loans have the highest ratio of nonperforming loans among the categories, thus confirming the common wisdom that they are the riskiest type of real-estate loan. The results also show that during this period the proportion of nonperforming loans increased for all categories of real-estate lending. The only exception is residential loans, for which the proportion of nonperforming loans fell in the first quarter of 1990.

Although the emphasis on residential rather than construction lending among New England banks is encouraging, it is not, in and of itself, sufficient to avoid a Texas-style collapse. If the future losses on construction and commercial real-estate loans in New England eventually equal those of Texas, these losses would eliminate nearly one-half of the current equity capital of New England banks—a proportion similar to that in Texas. Because of differences in the regional economies of Texas and New England, however, New England banks are less likely to experience losses on their construction and commercial real-estate loans mirroring the magnitude in Texas.

II. The Regional Economies in Texas and New England

It is generally agreed that the Texas banking crisis was brought on by two distinct but related developments—the decline of oil prices and the subsequent collapse of the real-estate market. New England now appears to suffer from similar problems: a decline in the leading sectors of its economy, namely defense and high technology, and a weakness in real estate. Analogies between the current business conditions in New England and those of Texas in the mid-1980s are drawn with increasing frequency.² Nevertheless, important differences can also be found. First this section will compare the leading industries of Texas with those of New England, and then it will discuss potential consequences for the real-estate cycles in the two regions.

Leading Industries in Texas and New England

Both areas experienced substantial and prolonged weakness in industries that are commonly seen as economic drivers-mining and manufacturing in Texas and manufacturing in New England. Table 3 gives the composition of employment in Texas in 1985 and New England in 1988. Mining and manufacturing in Texas and manufacturing in New England both represent approximately 17 percent of employment. (Mining is insignificant in New England.) Mining and manufacturing employment in Texas was at its highest level in 1981. Between 1981 and 1984, the years that could be considered a peak for the Texas economy, employment in these two industries fell 10 percent. In New England, manufacturing employment has fallen roughly 16 percent since its highest point in 1984.

Traditionally, the performance of manufacturing and resource-based industries such as mining has

Table 3 Employment Shares in New England and Texas

	1988	1985
	New England	Texas
Mining	.1	4.1
Manufacturing	17.4	12.1
Construction	5.9	7.1
Transportation and Public Utilities	3.9	5.1
Trade	21.6	22.4
Finance, Insurance	5.5	4.5
Real Estate	2.6	3.6
Services	29.0	23.0
Government	12.3	15.2
Agriculture	1.6	3.8

Note: Shares may not add to 100.0 because of rounding. Source: U.S. Bureau of Economic Analysis, BE-55 release. been regarded a critical determinant of regional economic growth. These industries, commonly referred to as "export" industries, serve national and international markets and their expansion is driven by developments outside the region. An expanding manufacturing sector creates a demand for industrial and R&D space; and indirectly through the jobs and income created, the expansion in manufacturing provides a stimulus to housing.

Texas. The Texas experience is consistent with the traditional view of economic growth. Although overall employment continued to grow for several

The engine of growth in Texas was the booming gas and oil industry.

years after employment in manufacturing and mining began to fall, eventually the weakness in these sectors spilled over to the rest of the economy.

Several features make the Texas experience unique. The engine of growth in Texas was the booming oil and gas industry, which benefited from the surge in oil prices stemming from the Arab oil embargo in 1973 and the growing power of oilproducing countries to influence world oil prices. The price of Texas crude oil increased from \$3 per barrel in 1971 to \$35 per barrel in 1981. Such a spectacular rise in the price of oil created an atmosphere of heady optimism in Texas. New wealth was created at an unprecedented rate. Between 1978 and 1981, for example, the value of daily oil production in the state increased from \$10 million to \$33 million.

The oil boom accelerated the pace of Texas's economic growth and spurred the creation of new jobs in all sectors of the Texas economy. The growth of the oil and gas extraction industries increased the demand for professional, financial, and business services. It also stimulated the development of oil field machinery manufacturing. This industry, in turn, increased the demand for primary and fabricated metal products. The expansion of the energy sector increased personal income in the state and stimulated the demand for health care, education, and other consumer products. Thus, although the mining sector accounted for only 4 percent of the Texas employment in 1984, a study by Hill (1986),

using an input-output model of the Texas economy, has estimated that 45 percent of all the new jobs created in Texas between 1972 and 1982 were the result, direct and indirect, of oil and gas exploration and development.

The sharp rise in oil prices carried with it the seeds of the subsequent oil price correction. After 1982 Texas crude oil prices weakened, falling to \$15 per barrel by 1986. This pushed the Texas economy into a deep contraction; gross state product declined by more than 10 percent between the end of 1984 and the start of 1988.

New England. Table 4 shows the DRI/McGraw-Hill August 1990 forecast of the unemployment rate and the change in disposable income for New England and the United States between 1990 and 1992. According to the forecast, the downturn in New England will continue through 1990 and 1991, but the economy is expected to improve somewhat in 1992. All the while, the unemployment rate is expected to remain within 0.6 percentage points of the national average. By contrast, in 1986 and 1987, Texas unemployment rates were 9.3 and 8.3 percent, respectively, compared to rates of 6.9 and 6.7 percent for the nation as a whole.

For the New England economy to become as weak as Texas, its unemployment rate would have to rise 2 to 3 percentage points above the national average. There are two reasons why this is unlikely to happen. One is regional diversification, which may be measured by comparing the composition of employment in the region with that of the entire nation. Using this approach, Rosengren (1990) has concluded that the New England economy is diversified sufficiently to benefit from favorable national develop-

Table 4

Fored	cast of Ge	nera	l Ec	onomic	Indicators	for
New	England	and	the	United	States	

	1990	1991	1992
Unemployment Rate	(%)		
New England	5.6	6.6	6.3
United States	5.5	6.0	5.9
Real Disposable Per (% change from p	sonal Income (revious year)	per Capita	
New England	+.9	-1.0	+.7
United States	+.5	4	+.9

Source: DRI/McGraw-Hill Forecast, August 1990.

ments. The second reason why the New England economy has been expected to experience a relatively limited contraction is the support that a growing national economy would provide to the New England manufacturing sector. Specifically, the DRI forecast is based on the assumption of 0.5 percent real GNP growth in the second half of 1990. Should a nationwide recession occur, however, New England may experience an even more significant contraction.

New England is, indeed, more dependent on high technology and defense than other parts of the country. Henderson (1990) estimates that the share of economic activity in New England that can be attributed to purchases by the Department of Defense is 6.2 percent. This figure includes both the direct and indirect purchases generated by defense, but does not include spillovers into the finance and service industries. For the New England states, this share ranges from a high of 7.5 percent for Connecticut to a low of 4.2 percent for Vermont. The comparable figure for the United States is 4.7 percent. Computerrelated employment in New England accounts for 5 percent of the total employment in the region. All high-technology employment in New England, including computers, electronics and biotechnology,

New England is more dependent on high technology and defense than other parts of the country.

amounts to 10 percent of the total employment in the region. The comparative figures for the United States are 3 percent and 6 percent, respectively.

On the other hand, firms in the high technology and defense industries employ a highly skilled labor force and provide a diverse industrial base that can adapt its skills, capital, and technology to other products. This gives New England the advantage of having a clustering of diverse but related skills and technologies. The research conducted at New England's major universities creates new technologies, attracts new ventures, and supplies highly skilled labor. The region's medical institutions also play a role as catalysts of new business opportunities, especially in the medical instruments industry. Computer and software industries are another important ingredient in the development of medically related firms. Thus the climate in New England is highly conducive to innovation, adaptation, and development.

In summary, New England has not yet experienced anything comparable to the Texas oil boom and bust. Accordingly, the current outlook for the region is that employment will decline, but that the unemployment rate will not exceed the national average by 2 or 3 percentage points, the way it did in Texas. As with all projections, this outlook will change with shifting developments in the national economy, particularly as the Gulf crisis brings added uncertainty.

The Real-Estate Cycle

The problems in the energy sector in Texas were compounded by speculation in real estate and overbuilding. For a time, the expansion of the finance, insurance, and real-estate industry and the sustained high levels of construction activity helped to offset the job losses in mining and manufacturing. In view of the subsequent collapse of the construction industry and the failure of many financial institutions in Texas, however, such rapid growth in the real-estate and financial sector can be seen as a sign of trouble. In the end, such speculation worsened the contraction caused by falling oil prices.

Growth in the finance, insurance, and real-estate industry in New England has been almost as rapid as that in Texas. Construction employment rose more rapidly in New England in the mid-1980s than it did in Texas. Of course, construction had been growing in Texas for a much longer period, and the construction industry was somewhat larger in Texas than in New England.

New England did not experience the significant overbuilding that contributed to the collapse of the real-estate market and the troubles of financial institutions in Texas. Office vacancy rates were low in New England before the downturn. The metropolitan office vacancy rate in Boston was 13.7 percent and that in Hartford was 17.3 percent in December of 1988. Nationwide, the metropolitan vacancy rate was 19.7 percent. In contrast, vacancy rates in Texas were high even before the slump; in 1984 the rate in Dallas was 20.7 percent, in Houston 27.6 percent, and in San Antonio 22.9 percent. The national average was 17.2 percent in that year. Current office vacancy rates are higher for nearly all these areas, but Boston remains well below the national average.

Vacancy rates alone do not measure the degree of construction "overhang," the amount of extra

Chart 4





Source: U.S. Bureau of the Census, Statistical Abstract of the United States, 1982-3, 1988.

space that must be absorbed before excess supply ceases to be a problem. Both residential and office space is built in anticipation of future demand, which is sustained by continued low unemployment and the influx of new workers.

In Texas, the pattern of population growth tended to exacerbate construction "overhang," which is not the case in New England. The Texas population grew very fast before the downturn, as a result of immigration into the state. This fed the boom in construction of both office space and residential housing. When oil prices collapsed, the increase in unemployment halted immigration. Consequently, population grew more slowly than had been anticipated, with two results: first, a further slowdown of the service economy, thus reducing demand for office space; second, a reduced rate of household formation, thus eliminating the need for much new residential housing. As a result, construction overhang was exacerbated in Texas, further depressing realestate prices.

In New England, on the other hand, expectations of future demand for office space and residential housing were not as great as in Texas, partly because most projections did not rely on immigration. Chart 4 compares annual percentage changes in population in New England and Texas between 1976 and 1989. As the chart shows, population growth in New England has been slow and without abrupt changes. As a result, the expected demand for both commercial and residential housing has been relatively stable. Thus New England does not suffer from construction overhang to the same extent as Texas.

The prospects of the residential housing market in New England depend to a large extent on the length and severity of the regional recession and the speed of recovery. Real per capita disposable income is a particularly relevant measure, since it mainly determines the prices people can afford to pay for housing. Table 4 shows a forecast of the change in this measure. After declining in 1991, real per capita disposable income in New England is expected to increase, beginning in 1992, at a rate close to the national average. This is significant in view of the Texas experience, where banks had losses even on residential mortgages, although their main problems were in commercial development. Chart 5 shows that Texas experienced sizable declines in real per capita disposable income in 1986 and 1987, contrasted with the much smaller decline in New England income

Chart 5

Rate of Change in Real Disposable Personal Income, Per Capita: New England Forecast 1990-92 vs. Texas 1986-88



Source: DRI/McGraw Hill August 1990 Forecast and U.S. Bureau of the Census.

expected in 1991. These numbers do not foretell a serious decline in the value of residential housing. This is good news for the residential real-estate lending prospects of New England banks, whose assets are more concentrated in this category than in commercial and construction real-estate loans.

III. Conclusion

The current New England banking situation and the Texas experience have a number of similarities. In both cases, a boom in the real-estate sector was followed by a sharp contraction caused by weakness in the leading sectors of the economy. In both cases, banks had greatly expanded their real-estate lending and the declining real-estate prices produced substantial loan losses. The similarities, however, do not imply that New England will go on to repeat the Texas experience. The expansion in Texas was driven primarily by increases in the price of oil. In contrast to Texas, employment in New England does not depend to a large extent on the price of a single commodity.

Rather than comparing New England to Texas, it may be more useful to regard the New England experience as an omen of financial stresses that could appear nationwide as the current economic expansion matures. Banks throughout the country have been increasing their commercial real-estate lending relative to their total assets. Should high office vacancy rates and low absorption rates depress realestate markets, rising loan losses may depress the profits and equity capital of banks throughout the nation.

Appendix

The following equation was estimated for all insured commercial banks in New England.

$$\frac{\text{NON PERF RE LOANS}}{\text{RE LOANS}} = b_1 \frac{\text{CONSTR}}{\text{RE LOANS}} + b_2 \frac{\text{COMM}}{\text{RE LOANS}}$$
$$+ b_3 \frac{\text{RESID}}{\text{RE LOANS}} + b_4 \frac{\text{FARM}}{\text{RE LOANS}}$$

where:

NON PERF RE LOANS — nonperforming real-estate loans

RE LOANS — real-estate loans

CONSTR — construction and land development loans

COMM — commercial loans

RESID — residential loans

FARM — farm loans

The share of nonperforming farm loans was estimated but not reported in the body of this article, because the share of farm loans is less than 0.5 percent of real-estate loans of New England banks. The equation was estimated separately for 1988, 1989, and the first quarter of 1990.

	Nonperforming Real-Estate Loans			
Independent Variables	1988	1989	Q1:1990	
Construction	.044	.102	.188	
	(6.68)	(7.59)	(8.15)	
Commercial	.011	.021	.033	
	(2.86)	(2.99)	(3.25)	
Residential	.0007	.006	.004	
	(.33)	(1.47)	(.75)	
Farm	.085	.043	011	
	(2.00)	(.47)	(09)	
Mean of dependent variable	.01	.02	.03	
Standard Error of Regression	.02	.03	.04	
R-squared	.13	.14	.21	

Note: t-statistics in parentheses.

¹ Real-estate loans are defined as all loans secured by real estate and they include business and personal loans that are so secured.

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² For example, see Fox Butterfield, "In New England, Worst Recession in U.S. Takes Hold," *The New York Times*, July 23, 1990; and Franklin Tucker, "Massachusetts May Not Be Texas, But It's Doing An Awfully Good Imitation," *Banker and Tradesman*, April 4, 1990.