Regional Outlook

Federal Deposit Insurance Corporation — Second Quarter 2000

FDIC Boston Region

Division of Insurance

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Regional Perspectives

◆ ***Region's Economic and Banking Conditions*—The Boston Region's economy continued to grow in 1999, but more slowly than a year ago. Insured institutions reported stable financial conditions; however, falling margins continued to depress profitability. Consumer and commercial loan growth remained strong.** *See page 3.*

◆ ***Region's Insured Institutions Exhibit Increased Exposure to Interest Rate Risk*—Recent trends suggest that many insured institutions in the Region have become increasingly exposed to rising interest rates. The concentration of assets that either mature or reprice in excess of five years has grown without offsetting extensions on the liability side. Because of the sensitivity of nonmaturity deposits to changing interest rates, institutions cannot rely solely on containing costs on nonmaturity deposits to manage interest rate risk in a rising rate environment.** *See page 7.*

By the Boston Region Staff

In Focus This Quarter

◆ ***Banking Risk in the New Economy*—This article summarizes current economic conditions, with a primary focus on potential risks to insured depository institutions. It explores the implications of long-term trends that have led to the *New Economy*. Recent high rates of economic growth with low inflation have been made possible by increases in productivity arising from new technologies, higher investment spending by businesses, and large-scale industrial restructuring. Underlying these trends has been a financial environment that has largely accommodated the growing borrowing needs of consumers and businesses. Market-based financing, provided in large part through securitizations and mutual funds, has made capital readily available to start-up "new economy" firms as well as mature companies that seek to merge or restructure. Despite the clear benefits of market-based financing in supporting economic activity, there are also concerns. A recurrence of financial market turmoil, such as that experienced in fall 1998, has the potential to quickly change the currently positive economic outlook to one that is far more challenging. Detail is provided on commercial credit quality, market sources of revenue, and other risks to watch in banking.** *See page 13.*

By the Analysis Branch Staff

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Regional Perspectives

- **The Boston Region's economy experienced another year of solid growth in 1999, but the pace slowed from 1998.**
- **Home sales have moderated, while home resale prices continue to post strong gains as a result of dwindling inventory.**
- **Insured institutions are reporting strong results despite lower net interest margins. Commercial loan growth remains strong.**
- **Growing concentrations in long-term assets have exposed many of the Region's insured institutions to rising interest rates.**

Region's Economic and Banking Conditions

Economic Overview of 1999

Employment Growth Slowed in 1999

Nonfarm employment rose by 1.9 percent in the Region during 1999, a deceleration from the pace seen in the previous two years. This slowdown was in line with national trends. Only **Maine** posted a (modestly) higher employment advance for the year (see Chart 1). Maine and **New Hampshire** again showed the Region's strongest percentage job gains, with growth even exceeding the nation's. During first quarter 2000, job growth generally followed the prior year's trend, although manufacturing showed a more moderate rate of decline.

Minimal job growth during 1998 in the manufacturing sector developed into an outright decline last year, as the Region's factory payrolls fell by 2.8 percent. This decline was greater than that seen nationally. However, the losses in New England factory payrolls bottomed out in second quarter 1999 as improving global economies and strong domestic demand helped lift manufacturing output. This improvement mitigated the decline in factory payrolls through the nine months ending March 2000. The most pronounced manufacturing job losses last year were in southern New England (see Chart 2). States such as Maine and **Rhode Island** continued to shed payrolls in old-line industries such as shoes, textiles, and paper mills in the former and mis-

CHART 1

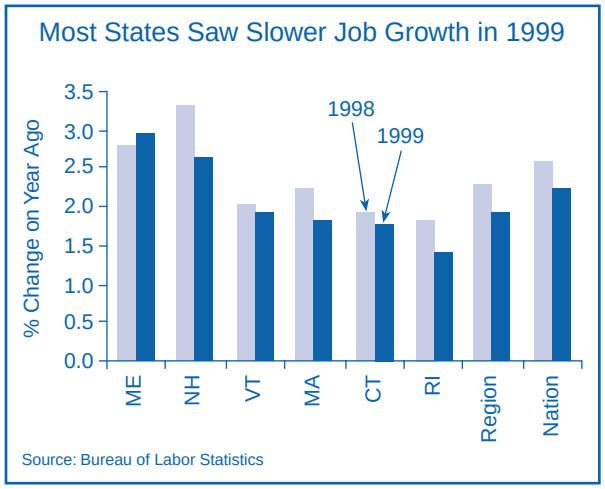
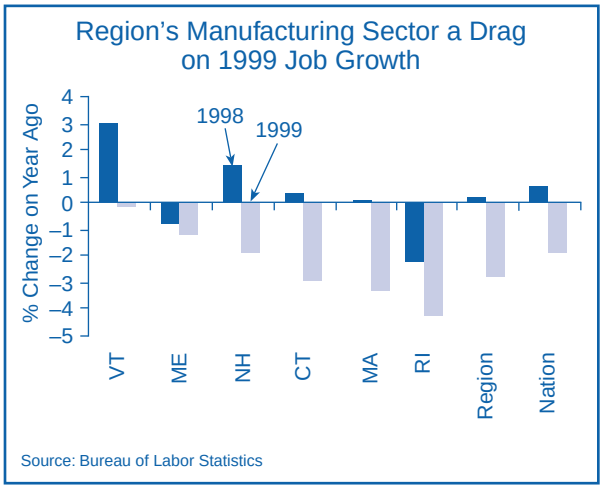


CHART 2



cellaneous manufacturing (jewelry and metal goods) in the latter. **Connecticut, Massachusetts,** and New Hampshire experienced layoffs at certain aerospace/defense-related plants as well as at some larger computer hardware facilities, primarily because of industry mergers and corporate restructuring.

Unemployment Rates Fell Again in 1999

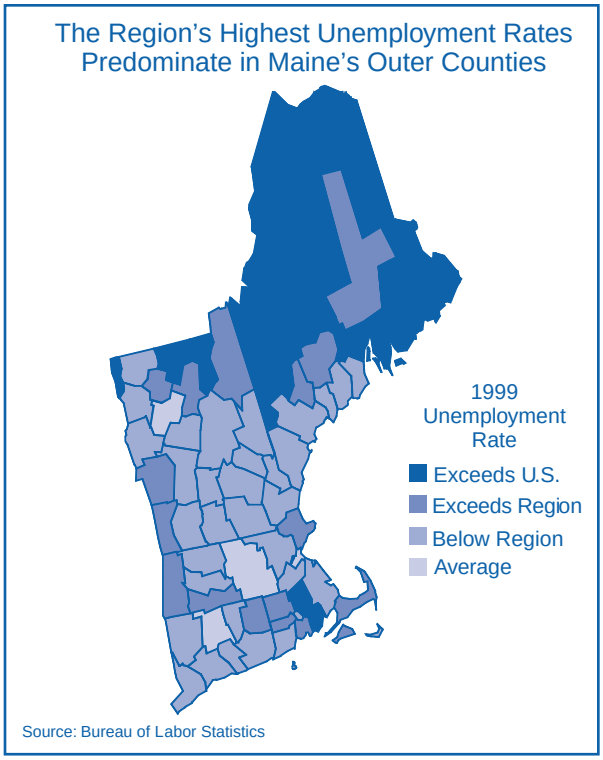
The U.S. labor market tightened again in 1999, marking the seventh unemployment rate decline in as many years. New England followed this trend. The Region's unemployment rate fell to an average of 3.3 percent last year (its lowest in 11 years), while the national unemployment rate averaged 4.2 percent in 1999. Last year, New Hampshire reported the Region's lowest unemployment rate and Rhode Island its highest. The Region's most populous states (Massachusetts and Connecticut) experienced modestly lower unemployment last year versus 1998. Rhode Island, **Vermont,** and Maine posted some of the larger declines. Rhode Island's unemployment rate fell from 4.9 percent to 4.2 percent, the largest decline in the Region. Through first quarter 2000, all the Region's state seasonally adjusted unemployment rates remained below the nation's rate, with Connecticut and Massachusetts achieving some of the largest declines since year-end 1999.

Map 1 shows the Region's county-level unemployment rates for 1999. While some areas of higher unemployment persist, the number of counties with unemployment exceeding that of the nation fell to 12, from 22 in 1998. Unemployment rates of some counties—such as Bristol County, Massachusetts, and several counties in Maine and Vermont—remained above the nation's, even though their actual unemployment rates declined from 1998. Only three counties saw their unemployment rates increase from 1998. Grand Isle County, Vermont, and Franklin County, Maine, inched up a tenth of a percent each, to 5.0 and 6.8 percent, respectively. Oxford County, Maine, saw its unemployment rate exceed the nation's in 1999 as it rose 0.3 percent from 1998 to 6.3 percent. The Region's highest unemployment rate remained in Washington County, Maine, at 8.3 percent (down from 9.5 percent in 1998). New England's lowest unemployment rate was again found in New Hampshire (Grafton County, at 1.7 percent), although Vermont's Chittenden County was a close second at 1.9 percent.

Income

At the time of this writing, personal income information was available for only the first three quarters of 1999. On the basis of that information and state population estimates for 1999, the Region's income per capita rose 5.2 percent from the same period in 1998. If this rate persisted during the fourth quarter, the Region's income growth will have matched its 1998 pace and exceeded that of the nation for the sixth consecutive year. Other than the period surrounding the last recession (1989–93), the Region's annual income growth has surpassed the nation's over the past 20 years. As of this writing, it appeared that Connecticut was the only state in the Region to see an acceleration in its per capita income growth rate relative to 1998.

Map 1



Existing Home Sales and Prices

Existing home sales in New England, as reported by the ***National Association of Realtors,*** are estimated[1] to have increased by about 2 percent last year, after surging nearly 13 percent in 1998 (see Table 1). Nationally, sales volume also increased more slowly than in 1998. Growth moderated significantly in all states except Maine, which continued to advance at a very rapid pace.

[1] As of this writing, sales data were not reported for third quarter 1999 in New Hampshire, for the last two quarters of 1999 in Maine, and for fourth quarter 1999 in Vermont. Annual percentage changes were derived for these states from available data and an annualized estimate was established. As a result of this estimation, the Region's total sales for 1999 are also approximated.

Table 1

Housing Activity Slowed in 1999, after Strong 1998 (Percent Change on Year Ago)

	Existing Home Sales*		Residential Permits		Home Price Index	
	1999	1998	1999	1998	1999	1998
Nation	5.9	13.7	2.2	11.9	5.9	5.5
Region	2.3	12.6	-1.2	16.8	8.7	6.4
Connecticut	2.2	13.9	-13.7	27.4	5.7	5.3
Maine	13.3	13.8	-1.6	33.4	6.6	5.5
Massachusetts	-2.3	10.4	-1.4	12.0	10.9	7.2
New Hampshire	1.9	13.1	8.6	6.8	9.3	6.6
Rhode Island	8.9	20.3	24.1	-1.1	3.8	4.2
Vermont	1.1	6.3	17.2	20.0	4.8	2.8

* 1999 figures are estimated for Region, Maine, New Hampshire, and Vermont.
Sources: National Association of Realtors (sales), Census (permits), Fannie Mae/Freddie Mac (quality-constant price index)

Sales in Massachusetts actually declined modestly in 1999. Much of the slowdown in that state was reportedly the result of a limited inventory of homes for sale, particularly in the state's dominant greater **Boston** market.

As in 1998, strong demand coupled with declining inventory pushed the Region's home resale prices almost 9 percent higher, as measured by the Fannie Mae/Freddie Mac quality-constant home price index. This was the second consecutive year that the Region's prices increased more rapidly than the nation's (the Region lagged the nation between 1989 and 1997). Table 1 shows the recent trend in home sales price appreciation, excluding the effect of new home sales (a small share of overall volume). Massachusetts generates the largest volume of sales in the Region and had the most dramatic appreciation last year, propelling the Region's price index higher. Like Massachusetts, New Hampshire and Maine also saw home sale price gains in excess of the nation's. Slower sales growth and the Region's weakest job market likely weighed on the home price index in Rhode Island—the only state not to see an acceleration in price growth last year. In general, owner-occupied demand continues to dominate sales activity, although significant demand has arisen for second and vacation homes as well the past few years. There does not appear to be any significant speculative activity in home purchases at this time. Such action, and the unsustainable price appreciation it produced, preceded the Region's home price collapse of the early 1990s.

Residential Building Permits

After surging almost 17 percent in 1998, residential permit issuance in the Region slid modestly in 1999. Because Massachusetts and Connecticut lead the Region in the number of permits issued each year, weakness in these states can weigh heavily on regional activity. Issuance in Connecticut, one of the Region's most heated markets in 1998, declined by nearly 14 percent last year, while Maine and Massachusetts each saw a modest drop in permit issuance (see Table 1). None of these shifts are particularly surprising, given the significant gains these states experienced in the previous year. Rhode Island experienced a turnaround in permit issuance last year. Although growth in permit issuance eased in 1999 for Vermont, the state's two-year average gain was the highest for the Region. During first quarter 2000, permit issuance fell about 2 percent across the Region from the same period in 1999. Maine and Rhode Island posted double-digit advances, while all other states in the Region saw declines from a year earlier. The first quarter trend may not imply much for the overall pattern in 2000, as most of the Region's residential construction activity occurs in the final three quarters of every year. Still, over the past ten years in the Region, the year-ago percent changes for first quarter and fourth quarter permit issuance (year-to-date) demonstrated a positive correlation of about 0.80. If this relation continues, the first quarter trend may signal a downturn in residential building in the Region this year.

Banking Overview of 1999

Boston Region insured institutions reported stable financial conditions in 1999 (see Table 2). Insured institutions in the Region (excluding credit card institutions) reported an aggregate return on assets of 1.09, down slightly from 1998 because of merger-related charges in the Region's larger institutions. The profitability of the Region's insured institutions was weighed down by a declining net interest margin (NIM), which has fallen 23 basis points from 1997, largely because of the lengthy refinancing wave that persisted between 1997 and early 1999. While profitability has softened slightly, asset quality indicators remain generally favorable. Past-due ratios in the Region's institutions continued downward, falling 11 basis points in 1999, to 1.57 percent. Net charge-offs remained stable at 0.44 percent of total loans. Noncore funding as a percentage of assets continued to increase in all asset size categories in the Region. Overall, the Region's insured institutions continue to perform well compared to the nation.

Commercial and industrial (C&I) loans and consumer loans continue to drive loan growth in the Region. C&I loan growth has been brisk over the past two years; the Region's insured institutions report a median C&I growth rate of 16 percent, up from 12 percent in 1998. While robust C&I loan growth has occurred throughout the Region, growth in consumer loans is primarily driven by the Region's larger lenders and has not been as widespread. Consumer loan growth remained stable in 1999, with an aggregate growth rate of 10 percent, up slightly from 9 percent the previous year. Net charge-offs of consumer and C&I loans increased slightly from 1998 to 1999 as a result of increases at the larger institutions in the Region.

Merger and acquisition activity slowed in 1999 because of precautions and concerns regarding the year 2000 date change. The number of insured institutions in the Region decreased to 420 at year-end 1999 from 434 a year earlier. De novo activity approximated the pace of 1998, as four new institutions opened for business in 1999 compared with five in 1998. Two of these new banks are headquartered in Connecticut, increasing the number of de novos in the state to six in the past two years, two-thirds of the Region's de novo activity during that period.

Table 2

Financial Performance Remains Solid despite Falling Margins

	Boston Region*			< $1 billion*			> $1 billion – < $25 billion*			> $25 billion*		
	Dec '99	Dec '98	Dec '97	Dec '99	Dec '98	Dec '97	Dec '99	Dec '98	Dec '97	Dec '99	Dec '98	Dec '97
Return on Assets	1.09	1.20	1.24	1.04	1.09	1.09	1.15	1.21	1.16	1.07	1.22	1.32
Net Interest Margin	3.80	3.88	4.03	3.88	3.91	4.08	3.75	3.79	3.96	3.80	3.93	4.04
Past-Due Ratio	1.57	1.68	1.97	1.42	1.87	2.30	1.19	1.69	1.98	1.89	1.59	1.80
Net Charge-off Ratio	0.44	0.43	0.38	0.07	0.10	0.14	0.21	0.22	0.28	0.76	0.73	0.55
Core Deposits/Assets	47.64	53.73	57.17	70.39	72.46	74.43	61.09	66.66	67.66	32.23	38.81	43.99
Noncore Funding/Assets	40.18	34.58	31.63	18.55	15.94	14.24	29.87	24.55	23.15	53.60	47.92	43.76

* All data exclude credit card institutions.
Source: Bank and Thrift Call Reports; reported on a merger-adjusted basis

Interest Rate Risk Trends

Concentrations in Mortgage-Related Investments Elevate Interest Rate Risk

In the previous edition of the ***Boston Regional Outlook,*** it was noted that the Region's insured institutions displayed a relatively lower risk profile than institutions in other parts of the country, in large part because the Region is heavily populated with savings institutions. These institutions have traditionally concentrated investments in residential real estate loans and mortgage-backed securities, assets that have historically contained very low credit risk. In addition, the Region's commercial banks typically hold a greater percentage of earning assets in residential-real-estate-related investments than do their peers. This large overall investment in mortgage-related assets, while reducing credit risk, results in above-average levels of interest rate risk for many institutions in the Region. Recent trends suggest that many insured institutions in the Region have become increasingly exposed to rising interest rates. The following discussion evaluates events and trends that contribute to this exposure, as well as the long-term implications of this heightened interest-rate risk posture.

1997 Refinancing Wave Revisited

During 1997, long-term interest rates began a slow and steady decline that resulted in an upswing of refinancing activity. The mortgage refinancing index, published by the ***Mortgage Bankers Association of America (MBA),*** was nearly twice as high in the second half of the year as it was in the first, and was reaching levels attained during the refinancing waves seen earlier in the decade. What was different about this renewed refinancing wave relative to those seen in the early 1990s was that applications for mortgage refinancing were primarily for fixed-rate loans because of a general flattening of the yield curve as the year progressed. This shift in consumer preference for fixed-rate mortgages was discussed extensively in the ***Boston Regional Outlook,*** first quarter 1998. That article also suggested that New England banking institutions could experience a disproportionately high volume of refinancing activity caused by several factors beyond those generated by lower interest rates alone. The reader is encouraged to review the earlier article for a detailed discussion of those factors.

Several concerns were raised at that time, particularly in the event that the yield curve remained low and flat for a prolonged period. These concerns included the potential for a general easing of underwriting standards to generate the volume needed to replace elevated runoff; impairment of mortgage-servicing-related assets, including interest-only strips; and declining NIMs. However, the greater concern raised at that time centered on how the Region's insured institutions ultimately positioned themselves for the future during a prolonged period of refinancing activity, most of which would be directed toward fixed-rate instruments. Low long-term rates were attracting borrowers into long-term structures, while depositors remained averse to any long-term deposit instrument.

A prolonged low, flat yield curve may create an environment that could cause insured institutions to get "whipsawed" by rapidly rising interest rates if the changing interest rate risk posture of an institution is not managed carefully. In a whipsaw scenario, (1) interest rates drop and the yield curve flattens; (2) rates remain low long enough for a significant portion of earning assets to lengthen in duration while liabilities remain short; and (3) a sharp increase in interest rates, particularly short-term rates, results in rapidly rising funding costs while asset yields adjust more slowly, depressing NIMs and earnings.

Asset Duration Increases as Refinancing Wave Extends into Early 1999

As we progressed into 1998, interest rates continued to fall and the yield curve remained flat, giving rise to an unprecedented refinancing boom that extended through the second quarter of 1999. During this stretch, over 90 percent of refinancing activity was into fixed-rate mortgages, according to the ***MBA,*** and a great deal of the activity was conversions from existing adjustable-rate mortgages, the primary investment vehicle for many of the Region's insured institutions. As can be seen in Chart 3 (next page), a significant extension of mortgage portfolio maturities in the Region resulted. The shift has been significantly large for state-chartered savings institutions, where the median percentage of residential first lien mortgages maturing or repricing after five years rose to 57 percent as of December 31, 1999, up from only 36 percent in June 1997. While comparable data are not available for the Region's federally chartered thrifts, the median percentage of residential-real-estate-related assets held, or backed by, adjustable-rate

CHART 3

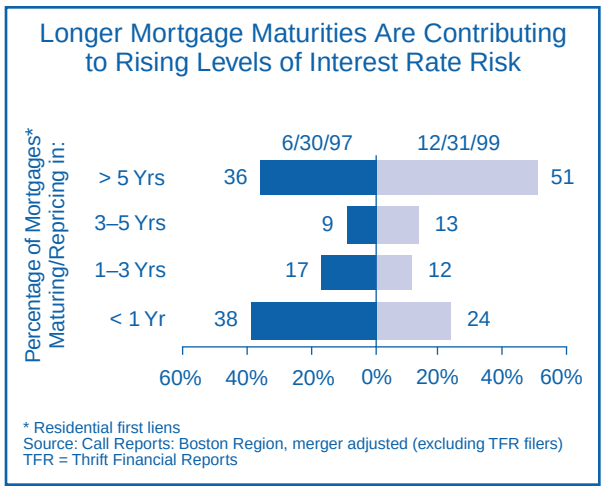
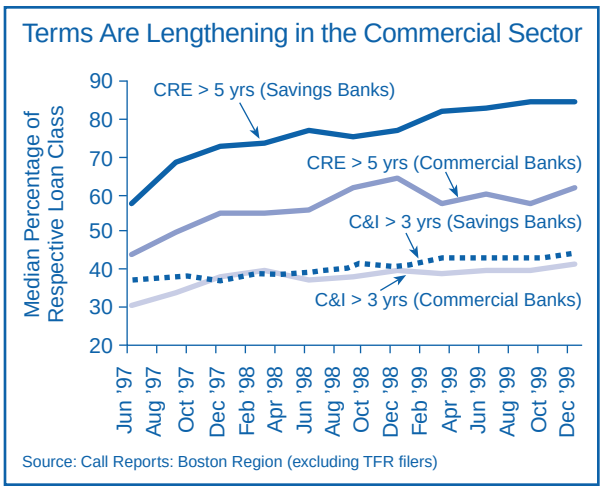


CHART 4



loans was 40 percent at year-end 1999. That percentage hovered near 60 percent three years ago. The remaining analysis is limited to those institutions filing Call Reports, although it is expected that the experience of federally chartered thrifts (which file Thrift Financial Reports [TFRs]) would be similar to that of state-chartered savings institutions, as the asset compositions are similar.

The refinancing and extension pressure has not been limited to residential portfolios. The median percentage of nonresidential real estate loans maturing in excess of three years has risen from 21 percent to 34 percent since June 1997, with the majority of the migration related to loans that historically repriced within three months, presumably prime-rate-based credits. Since June 1997, Call Report filers have separately reported the volume of commercial loans that mature in excess of three years and the volume of commercial real estate loans that mature in excess of five years. Chart 4 shows the trend for these categories as a percentage of total commercial and commercial real estate loans, respectively. While the reported totals do include loans with variable interest rates, the lengthening maturities clearly suggest that the extension of duration for nonresidential real estate loans is centered in these categories. The chart also depicts a clear easing in terms of commercial credits resulting from extending maturities that raises credit risk to the extent that lenders are potentially locked in to borrowers for longer periods. Savings institutions have been particularly willing to extend maturities in the commercial real estate category.

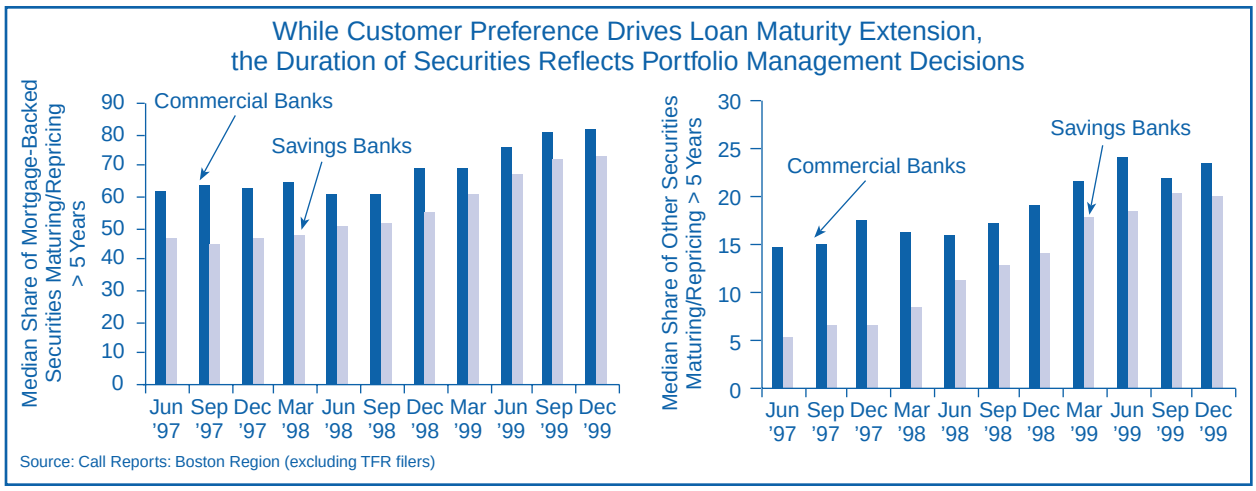
Borrower preference for fixed-rate financing has clearly driven the extension of maturities noted in loan portfolios. However, holding these loans has raised the level of banks' exposure to rising interest rates. Institutions can mitigate this risk through active management of securities portfolios, extending liabilities, or off-balance-sheet mechanisms. The following section looks at trends in these aspects of overall asset/liability management.

Risk Mitigation Activities Are Generally Lacking

The first quarter 1998 ***Regional Outlook*** article suggested that many institutions would be faced with the decision to either book long-term assets or sell them and reinvest in shorter duration instruments, the latter of which would put downward pressure on earnings. The magnitude of the refinancing was so great that most institutions were unwilling to retain the interest rate risk associated with the 15- and 30-year fixed-rate mortgages that were being originated. As a result, a great deal of this paper was securitized. However, NIMs were falling steadily through this period, and in response, many institutions opted to hold the securitized loans to offset declining margins. In addition, rather than shortening the nonmortgage sector of the securities portfolio, many institutions have actually lengthened maturities to pick up higher returns than those offered on the very short end of the yield curve (see Chart 5).

As a result of these shifts, both market and management driven, the concentration of assets that either mature or reprice in excess of five years has tremendously increased. The trend has been particularly evident in the Region's savings institutions, where the median percentage of mortgage-related assets to total earning assets is 58 percent (30 percent for commercial banks).

CHART 5

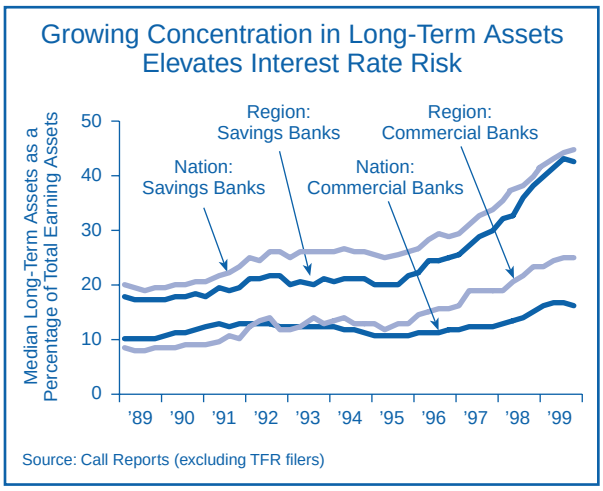


These institutions, which outnumber commercial banks by nearly a 2.5:1 margin, also have been aggressively expanding the commercial sectors of loan portfolios in an effort to diversify away from large holdings of residential real estate loans. As seen in Chart 4, savings institutions have been willing to book longer-term commercial credits, particularly in the real estate sector. The competitive pressure posed by savings institutions appears to have had a disparate effect on the Region's commercial banks as these institutions have increased the concentration in long-term assets at a much greater pace than that seen for commercial banks nationally (see Chart 6).

While there has been a significant extension of maturities on the asset side of the balance sheet, the liability side has been a decidedly different story. The maturity structure of time deposits for the Region's insured institutions has steadily shortened since mid-1997. At that time, approximately 73 percent of all time deposits matured within one year. That percentage increased to 77 percent by year-end 1999. There has been some lengthening of borrowings to offset the shortening of deposit liabilities; however, the overall duration of liabilities with fixed maturities has remained fairly stable. In addition, longer-term borrowings contain a significant percentage of advances that are callable if interest rates rise appreciably. Thus, liabilities would shorten at the same time that asset duration would be increasing because of a further dampening of prepayment activity on mortgage-related assets. With recent increases in interest rates, prepayment rates have already fallen to "normal" levels, because most outstanding residential loans now bear coupons that are below current market rates and refinancing activity is low.

In summary, there appears to be little change in the maturity structure of time deposits and borrowings to offset the growth in long-term assets. In addition, institutions are not using off-balance-sheet mechanisms to mitigate the increasing risk. Approximately 12 percent of the Region's commercial banks and only 3 percent of the savings institutions reported interest rate derivative holdings as of December 1999, and these percentages have not changed materially since mid-1997. Therefore, it appears that the ability to hold down the cost of nonmaturity deposits is becoming increasingly important as an interest rate risk management tool. Nonmaturity deposits (NMDs) are a significant portion of interest-bearing liabilities (IBLs) for the Region's insured institutions. The median percentage of NMDs to IBLs for commercial banks and savings institutions is 45 percent and 42 percent, respectively. These levels

CHART 6



compare favorably with national median levels of 38 percent and 36 percent and may provide New England institutions with a little more flexibility to manage costs and control interest rate risk. While these deposits do not show the same sensitivity to interest rate movements as do borrowings and time deposits, there is some sensitivity to interest rate swings, particularly in money market deposit accounts (MMDAs) and savings deposits. The key question is, how sensitive are these deposits? The presumption of a low sensitivity for interest rate risk management and measurement purposes may be a problem for some institutions in a rapidly rising interest rate environment, to the extent that the assumption leads to the adoption of a highly liability-sensitive risk posture.

Chart 7 depicts an analysis undertaken to evaluate the sensitivity of nonmaturity deposit balances to interest rate changes. The analysis evaluated the effective cost of each nonmaturity deposit type (MMDA, Savings, NOW) for all insured institutions (excluding TFR filers) for the years 1987 to 1999. All institutions were segregated into ten deciles for each period, based on the effective cost of their deposits during each year. The median cost and median growth rate were then determined for each decile. The points plotted in Chart 7 are the median growth rates for all deciles, for each year, compared with the number of basis points that the median cost of those deposits was below the average Federal Funds rate for each respective year (NMD spread). As the chart suggests, there appears to be a certain spread beyond which depositors will seek alternative investments, either within the institution in a higher yielding instrument or elsewhere. In either case, the deposit flight must be replaced with higher cost funding, effectively raising the sensitivity of the deposit class.

The chart shows the growth vs. spread patterns for MMDA and savings deposits, as these depositors clearly demonstrate a willingness to seek alternative investment vehicles if rates fall below certain thresholds relative to market rates. For NOW accounts, the relationship is not as clear, as these accounts are transaction oriented as opposed to the investment-oriented savings and MMDA accounts. Institutions paying the lowest rates on NOW accounts generally post nominal growth, although these institutions also have a lower percentage of deposits in NOW accounts than do more aggressive rate payers.

Generally speaking, NMD spreads have widened during periods of rising interest rates because of the industry tendency to lag deposit rates to protect earnings in such an environment. Table 3 sets forth, by decile, the median growth rates and NMD spread for MMDA accounts for the institutions discussed above. As can be seen, there was a significant outflow of MMDA deposits in 1988–89 and 1994–95. These periods correspond with Federal Reserve increases in the targeted Federal Funds rate of 331 basis points and 300 basis points, respectively. For comparative purposes, the median loss rates for MMDA deposits for the Region's savings institutions in 1989 and 1995 were 18 percent and 15 percent, respectively. The median decline for commercial banks was 12 percent for both years. Savings deposits behave in a similar manner to MMDA deposits; however, the growth rates are less volatile. For example, in 1995 the median loss rate for savings

Chart 7

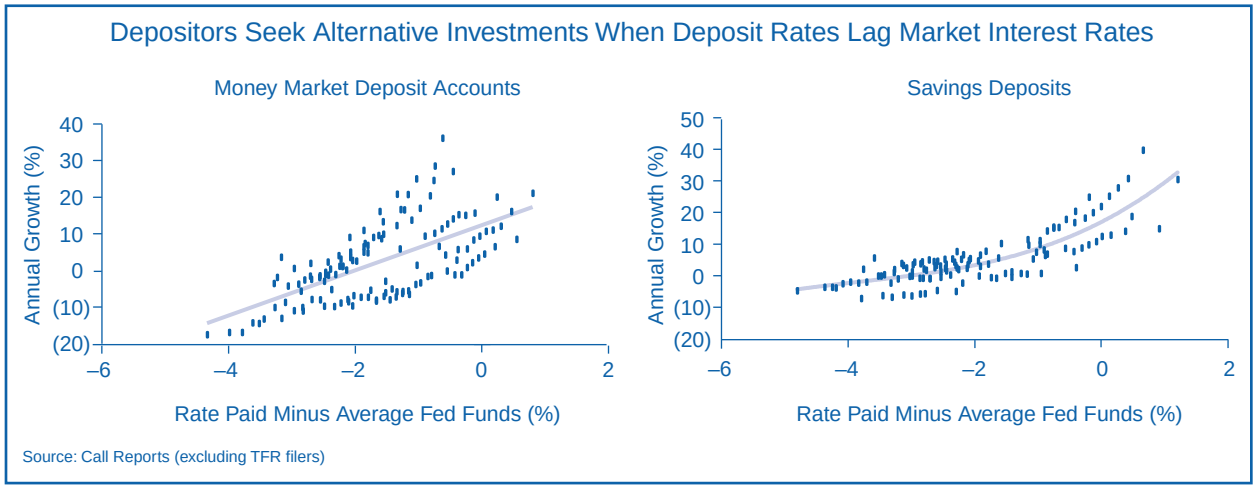


Table 3

Wide Spreads during Periods of Rising Interest Rates Have Led to Deposit Runoff

Annual percent change in money market deposit accounts (MMDAs)													
Decile*	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99
1	-8.26	-9.82	-17.30	-3.33	6.17	6.83	-1.07	-9.42	-14.21	-3.96	-1.68	3.92	0.79
2	-8.13	-9.54	-16.70	-3.49	9.66	5.96	0.15	-7.07	-12.85	-2.18	-2.29	2.20	-0.26
3	-5.86	-9.63	-16.64	-1.29	10.44	6.15	-0.95	-7.83	-10.71	-2.71	-1.63	2.59	1.30
4	-4.80	-8.67	-14.04	-1.16	11.69	8.56	-0.89	-6.83	-10.83	-0.81	-1.05	4.29	2.80
5	-5.55	-7.71	-13.02	0.66	12.93	9.65	1.12	-7.73	-7.68	1.42	1.44	9.28	7.12
6	-5.98	-6.60	-9.90	3.38	14.35	10.95	2.38	-6.94	-7.73	3.01	3.83	11.22	8.98
7	-5.31	-7.05	-8.45	5.26	15.50	11.29	3.71	-5.47	-4.96	5.28	7.61	16.38	12.50
8	-3.55	-5.10	-5.39	6.78	15.31	12.38	4.71	-6.27	0.41	9.79	13.59	21.08	13.99
9	-1.36	-2.68	-0.87	10.20	15.99	16.36	6.74	-3.10	5.09	16.87	16.86	25.30	20.70
10	3.10	1.67	9.33	17.22	20.29	21.34	8.76	4.48	21.05	24.85	28.79	36.43	27.29
Median MMDA rate paid in each decile less the effective Federal Funds rate													
	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99
1	-2.12	-2.84	-4.35	-3.29	-1.30	-0.69	-0.81	-2.06	-3.53	-3.07	-3.24	-3.18	-2.98
2	-1.68	-2.50	-4.00	-2.91	-0.91	-0.39	-0.53	-1.81	-3.17	-2.71	-2.81	-2.71	-2.48
3	-1.54	-2.34	-3.80	-2.72	-0.76	-0.25	-0.44	-1.68	-2.98	-2.50	-2.57	-2.44	-2.21
4	-1.43	-2.24	-3.63	-2.57	-0.61	-0.14	-0.33	-1.56	-2.84	-2.32	-2.43	-2.27	-1.99
5	-1.35	-2.13	-3.45	-2.40	-0.55	-0.05	-0.24	-1.46	-2.69	-2.21	-2.26	-2.10	-1.81
6	-1.26	-2.04	-3.28	-2.24	-0.47	0.06	-0.16	-1.37	-2.56	-2.05	-2.08	-1.88	-1.59
7	-1.17	-1.92	-3.12	-2.08	-0.38	0.16	-0.06	-1.26	-2.38	-1.88	-1.86	-1.62	-1.35
8	-1.05	-1.77	-2.87	-1.87	-0.27	0.29	0.03	-1.16	-2.15	-1.64	-4.57	-1.35	-1.12
9	-0.86	-1.53	-2.48	-1.56	-0.12	0.45	0.19	-0.98	-1.81	-1.29	-1.24	-1.04	-0.83
10	-0.41	-1.03	-1.73	-0.99	0.23	0.79	0.54	-0.58	-1.18	-0.77	-0.75	-0.63	-0.46
Effective Federal Funds rate													
	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99
	6.66	7.57	9.22	8.10	5.69	3.52	3.02	4.20	5.84	5.30	5.46	5.35	4.97

* Each decile represents the lowest to the highest 10 percent of institutions based on average rates paid on MMDA deposits for the respective period.
Source: Call Reports (excluding TFR filers)

deposits for both commercial and savings institutions was approximately 11 percent.

In 1999, the median cost of MMDA deposits was approximately 3 percent, 300 basis points below the targeted Federal Funds rate at the time of this writing. In 1989 and 1995, the two years registering the greatest level of deposit outflows, the median cost of these accounts averaged 257 and 283 basis points under the average Federal Funds rate, respectively. The NMD spread for savings accounts has also widened to levels seen in those earlier periods. With NMD spreads already at historically wide levels, MMDA and savings deposit balances may be at risk if acceptable rates (in the eyes of the depositor) are not maintained as interest rates rise. In light of the prospects for further rate increases, relying on an asset/liability management strategy centered on holding down NMD costs may be unwise.

While interest rate risk is difficult to quantify from the information in Call Reports, aggregate trends can be evaluated by creating proxy instruments for each interest-bearing asset and liability based on the reported time to repricing and/or maturity. Then earnings and equity at

risk can be broadly estimated by projecting cash flows for each reported category and by evaluating changes based on varying assumptions relative to the sensitivity of nonmaturity deposits to rate changes. An analysis was performed to determine general trends in exposure to rising interest rates, as this scenario appears to pose the greatest risk to the Region's insured institutions at present. Two broad observations were derived from this analysis. The first (and no surprise) is that short-term exposure to higher rates, as measured by traditional gap analysis, has risen significantly, even when low sensitivity estimates are used for NMDs. *More important, however, is that the duration of the exposure has increased as well,* particularly for institutions with high concentrations in long-term assets. Historically, bank balance sheets were structured so that liability-sensitive positions that exceeded a one-year time horizon would generally reverse in years two and three because of maturing or repricing adjustable rate or balloon mortgages. Because of the refinancing-driven restructuring of balance sheets, this pool of assets has dwindled in many institutions, and, as a result, a highly liability-sensitive posture could persist for a number of years, as was the case for many thrifts in the early 1980s.

Maturity Imbalances Heighten Importance of Risk-Reduction Strategies

Interest rates have been rising since mid-1999, resulting in a sharp decline in refinancing activity. The share of new residential mortgage applications composed of adjustable rate instruments has risen to approximately 25 percent of all volume, but the yield curve remains generally flat and borrowers continue to lean toward fixed-rate financing. Long-term financing that might ordinarily be priced at some spread over the prime rate (presently 9 percent) also remains attractive for commercial borrowers. Thus, it will be difficult to correct the imbalances that exist in many institutions' interest rate risk postures through the normal course of business in a reasonably short period. With interest rates poised to continue rising, institutions should carefully assess current exposure to rising rates, including the price behavior of NMDs, and take appropriate action to mitigate any undue exposure. Net interest income remains a significant percentage of the operating income for the median savings bank (91 percent) and commercial bank (85 percent) in the Region. For many institutions, margin erosion arising from excessive exposure to higher interest rates could translate into sharply lower earnings or outright losses. On a stand-alone basis, this exposure to rising interest rates would likely not result in a significant problem. However, periods of rising/high interest rates have often been followed by a slowdown of economic activity or a recession. Institutions with weak earnings postures at the onset of an economic downturn will be least able to absorb rising credit losses through current earnings.

Fortunately, the third leg of the whipsaw scenario—a prolonged period of high interest rates—has not played out, and may not occur. Rates have started to rise but not significantly, and expectations are that short-term rates will rise only another 50 to 75 basis points. If this happens, no harm, no foul. However, market expectations have underestimated the actual course of events many times in the past. Interest rate risk management must ensure that an institution can weather conditions that can be *reasonably expected* to occur. A 300–400-basis-point rise in rates has not been particularly uncommon in the past and may sometimes be driven by unanticipated international events. Under such conditions, many institutions, as presently postured, would likely experience heavy margin erosion. Steps should be taken to mitigate excessive exposure while the opportunity to do so exists.

Securities portfolios, for the most part, have nominal levels of depreciation and can be restructured to mitigate the rising risk embedded in loan portfolios. Other balance-sheet-restructuring activities or off-balance-sheet-hedging strategies also can be used to lower the level of interest rate risk. Clearly, the cost associated with any risk reduction strategy could affect near-term earnings, but the cost of not protecting against a significant rise in interest rates could be far greater.

Boston Region Staff

Banking Risk in the New Economy

The Division of Insurance periodically assesses conditions in the economy and the banking industry to identify and evaluate trends that could adversely affect the performance of insured depository institutions. At this time, the banking industry as a whole continues to enjoy record profits and solid financial ratios.[1] Much of the industry's strength derives from the remarkable performance of the U.S. economy, which has been expanding for the past nine years. This article explores factors that have shaped this unusually robust economic environment and discusses how changes in the economy may create new types of risks for insured depository institutions.

During 1999, the FDIC reported the first annual loss for the Bank Insurance Fund since 1991. This loss primarily resulted from an uptick in unanticipated and high-cost bank failures. Some of these failures were associated with high-risk activities such as subprime lending, and some were related to operational weaknesses and fraud. The emergence of these problems in the midst of a strong economic environment raises concerns about how the condition of the banking industry might change if economic conditions deteriorate.

The Longest U.S. Expansion

In February 2000, the U.S. economy entered its 108th month of expansion, making this the longest period of uninterrupted growth in U.S. history.[2] This record-setting performance has also been marked by a recent acceleration in the rate of real gross domestic product (GDP) growth, which has exceeded 4 percent in each year since 1997. Meanwhile, price inflation has remained relatively subdued. The core inflation rate, which excludes the volatile food and energy components, was just 2.1 percent in 1999, the lowest core rate since 1965.

Recent economic conditions have been highly conducive to strong loan growth, low credit losses, and record earnings for the banking industry. The important question going forward is how long these favorable conditions might last. Is this remarkable economic performance the result of some long-term upward shift in the pace of economic activity, or is it the temporary result of a few transitory factors? More important, are there new and unfamiliar dangers that, at some point, could significantly impair banking industry performance? To evaluate these questions, we must assess the factors that have contributed to recent economic performance and think ahead to possible developments that could end this expansion.

What Is the New Economy?

The term used most often to describe the recent period of economic performance has been somewhat controversial: the *New Economy.* Much of the controversy has arisen because people interpret the term in different ways. Wall Street analysts use the term to refer to the high-technology sectors of the economy, such as computers and software, biotechnology, and especially the Internet. Some of these New Economy firms have been able to raise large amounts of capital and command market valuations in the tens of billions of dollars well in advance of earning a profit or even booking significant cash revenues.

Economists tend to employ the term New Economy in a slightly different way. To them, it refers to evidence that some of the traditional economic relationships have changed. For example, intangible assets now appear to play a much larger role in the valuation of investments than they have in the past.[3] Firms in some industries now may exhibit increasing returns to scale (rather than diminishing returns), reflecting the fact that the value of their product rises as it becomes a de facto industry standard.[4] Individual decision making, too, may be changing. Some believe that investors have reduced the risk premium they demand to hold equity positions

[1] For a recent summary of financial performance and condition of the banking and thrift industries, see the FDIC *Quarterly Banking Profile,* fourth quarter 1999, http://www2.fdic.gov/qbp/.

[2] The chronology of U.S. business cycles is available from the National Bureau of Economic Research, http://www.nber.org/cycles.html.

[3] Nakamura, Leonard. Federal Reserve Bank of Philadelphia. July/August 1999. Intangibles: What Put the New in the New Economy? *Business Review.* http://www.phil.frb.org/files/br/brja99ln.pdf.

[4] Brown, William S. March 2000. Market Failure in the New Economy. *Journal of Economic Issues,* 219–27.

because of their perception that holding equity is not, after all, substantially riskier than holding debt.[5] Such a shift in investor attitudes could help explain why the price-to-earnings ratio for the S&P 500 index has recently approached all-time highs.[6]

Perhaps the most important underlying change in the economy is the relationship between high rates of economic growth and changes in inflation. Economists have long maintained that rapid growth in economic activity has a tendency to lead to excess demand for goods (thereby raising consumer and producer prices) and excess demand for labor (thereby raising wage rates). But during the late 1990s, as growth accelerated and inflation remained low, economists began to reevaluate their notions of these trade-offs. Some argued that the low rate of inflation during this expansion was the fortunate result of temporary factors, such as a strong dollar and low energy prices, both of which could diminish or reverse direction over time.[7] Only a few analysts were so bold as to suggest that the fundamental workings of the economy had changed in such a way as to allow a sustained period of high economic growth with low inflation.

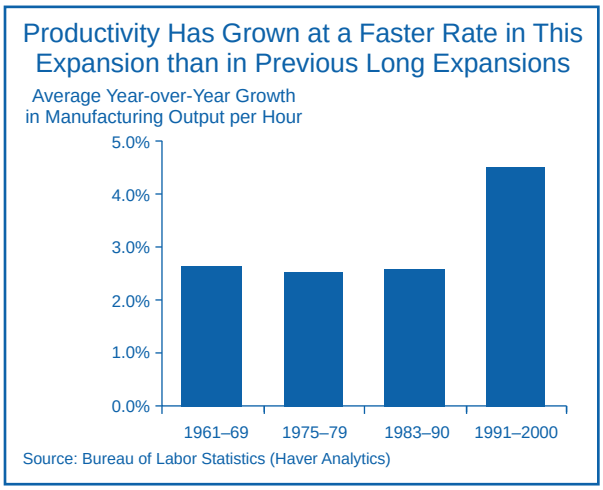
An early Wall Street description of the New Economy appeared in an article released by ***Goldman Sachs*** in January 1997.[8] It describes a number of fundamental changes in the economy—driven by global competition and advancing technology—that may permit business cycle expansions to last longer than they have in the past. At the same time, it warned that longer economic expansions might have a tendency to contribute to greater financial excess and the possibility of more severe recessions and more sluggish recoveries.

If this hypothesis is correct, and an emerging New Economy would contribute to longer expansions and more severe recessions, there may be implications for how banks manage risks. Since the Great Depression, U.S. business cycle recessions have not necessarily been catalysts for large numbers of bank and thrift failures. During the period from 1983 to 1989, when the U.S. economy was in the midst of a long expansion, some 1,855 insured banks and thrifts failed. This wave of failures has been attributed to a variety of factors, including severe regional economic downturns, real-estate-related problems, stress in the agricultural sector, an influx of newly chartered banks and banks that converted charters, and high nominal interest rates.[9] However, the potential for significantly more severe national recessions would represent largely uncharted territory that could cause losses and loss correlations to depart from historical norms, posing a new set of risk management challenges for the industry going forward.

The Productivity Revolution

As the essential element that links faster economic growth and low inflation, productivity growth is the cornerstone of the New Economy. Productivity refers generally to the amount of output that can be obtained from a fixed amount of input. Labor productivity is usually measured in terms of output per hour. Chart 1 shows that output per hour in manufacturing has risen at an average annual rate of 4.5 percent during the current expansion, compared with rates of just over 2.5 percent in the three previous long economic expansions. Moreover, productivity growth accelerated in 1999 to a rate of 6.3 percent. Why is productivity growing so fast now compared with previous expansions? Even economists who believe that economic relationships have funda-

CHART 1



[5] January 24, 2000. Has the Market Gone Mad? *Fortune.*

[6] September 1999. Earnings: Why They Matter. *Money.*

[7] Brown, Lynn Elaine. Federal Reserve Bank of New England. May/June 1999. U.S. Economic Performance: Good Fortune, Bubble, or New Era? *New England Economic Review.* http://www.bos.frb.org/economic/pdf/neer399a.pdf, and Brinner, Roger E. Federal Reserve Bank of New England. January/February 1999. Is Inflation Dead? *New England Economic Review.* http://www.bos.frb.org/economic/pdf/neer199c.pdf.

[8] Dudley, William C., and Edward F. McKelvey. January 1997. The Brave New Business Cycle: No Recession in Sight. *U.S. Economic Research,* Goldman Sachs.

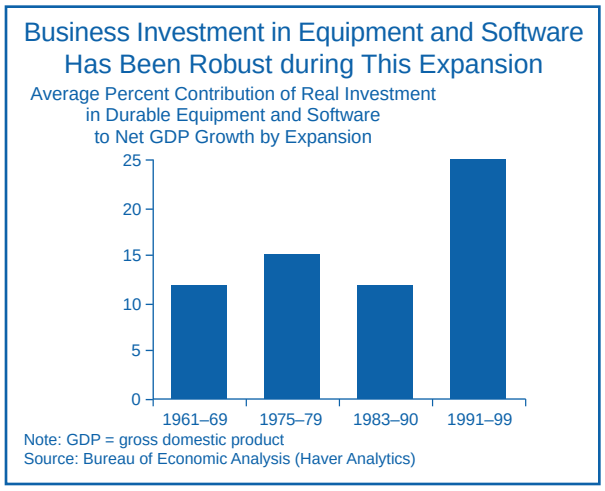
[9] FDIC Division of Research and Statistics. 1997. *History of the Eighties: Lessons for the Future, Vol. 1, An Examination of the Banking Crises of the 1980s and Early 1990s,* 16–17. http://www.fdic.gov/bank/historical/history/contents.html.

mentally changed are hard-pressed to explain why all of the factors came together in the late 1990s and not before.[10] Still, explanations for the increase in productivity tend to focus on three main factors.

Increased Competition. Expanding global trade during the 1980s and 1990s has subjected U.S. firms to new competition from around the world. Annual U.S. exports of goods and services grew by over 230 percent (after inflation) between 1982 and 1999, while imports grew by 315 percent. The construction of new production facilities around the world in industries such as autos and chemicals has led to excess manufacturing capacity that has kept prices low. In other industries, including air travel, trucking, telecommunications, and banking, competition has been intensified through domestic deregulation. Facing intense competitive pressures and a low rate of general price inflation, firms cannot rely on annual price increases to help expand top-line revenue. Instead, there is pressure to continually cut costs in order to increase earnings. For many firms, this means adopting new technologies and new ways of organizing operations.

Expanded Investment. U.S. firms of all sizes have invested in new technologies at a rapid pace during this expansion. Chart 2 shows that business investment in equipment and software represents almost one-quarter of total net GDP growth during this expansion, compared with around 15 percent or less during previous long expansions. While this investment has been motivated by the need to cut costs, it has also been fueled by the availability of new computer technologies that have fallen in cost over time and by the ready availability of financial capital on favorable terms.

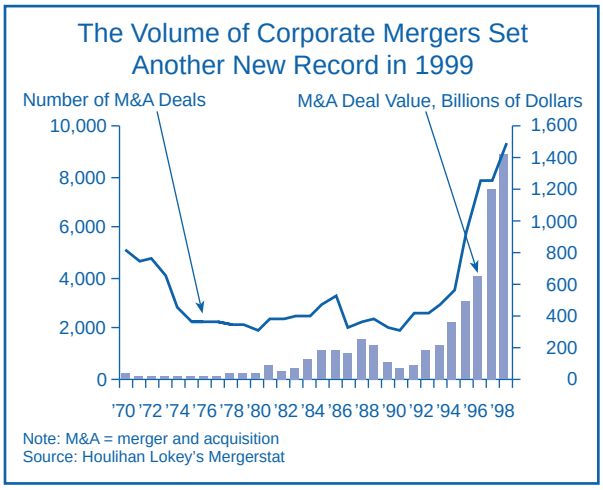
CHART 2



Industrial Restructuring. The third aspect of the productivity revolution is large-scale restructuring in the U.S. corporate sector. Chart 3 shows that both the annual number and dollar volume of mergers in the late 1990s far exceeded the pace of the so-called merger mania of the late 1980s. Two classes of firms are leading the new wave of mergers. First, companies in mature industries such as oil, autos, and banking are faced with excess productive capacity and intense price competition. For these firms, mergers are useful in expanding market share and removing redundant operations. Second, the largest dollar volume of mergers is in some of the most volatile emerging industries, including telecom, media, and the Internet. It is in these sectors of the economy, in particular, where the business models are evolving rapidly and where technological standards are still being determined. Firms in these industries that can grow rapidly through mergers have the chance to achieve long-term market dominance in what appear to be some of the fastest growing industries of the new century.

The implications of the productivity revolution for the banking industry have been decidedly positive. Higher productivity has allowed a long expansion and faster economic growth with low inflation, all of which are conducive to robust financial performance by depository institutions. Higher rates of business investment

CHART 3



[10] One possible explanation is that there is a learning curve for adopting new technologies and that technology diffusion is an inherently slow process. David, Paul A. Organization for Economic Cooperation and Development. 1991. Computer and Dynamo: The Modern Productivity Paradox in a Not-Too-Distant Mirror. In *Technology and Productivity: The Challenge for Economic Policy,* 315–47.

have generated demand for credit that is supplied, in part, by banks and thrifts. Perhaps most important, the recent large-scale industrial restructuring has been highly supportive of strong business credit quality. This process has moved economic resources to more productive uses in an orderly fashion, without the high levels of bankruptcies and defaults that often accompany industrial restructuring. Given the volumes of corporate assets that have changed hands in recent years (more than $1.4 trillion in 1999 alone), it is fortunate indeed that this restructuring has proceeded in this fashion.

The Role of the Capital Markets

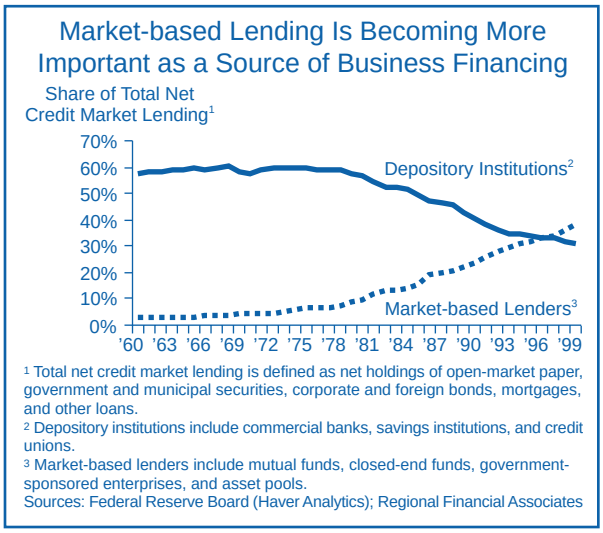
A critical factor in heightened business investment and restructuring during this expansion has been the remarkably favorable conditions in the financial markets. Financial capital has generally been readily available to business borrowers, usually on favorable terms. One factor that has held down the cost of capital for publicly traded corporations has been sharply rising stock prices. Many of these firms have been able to use equity shares as a currency with which to finance mergers. Furthermore, existing accounting rules do not always require the amortization of good will that comes onto the balance sheet as a result of a merger.[11]

By far the largest amount of external business financing has been debt financing. U.S. nonfinancial corporations issued net debt in the amount of $535 billion in 1999 and repurchased equity shares, on net, for the sixth consecutive year. Businesses have used this debt to purchase capital equipment, finance mergers, and buy back equity shares. This increase in debt issuance has not been limited to highly rated corporations. Venture capital financing amounted to almost $15 billion in the fourth quarter of 1999 alone, with over 60 percent of that amount going to Internet firms.[12]

Banks have been active participants in nearly every facet of this financing activity. Syndicated loan origination volumes rose by 17 percent in 1999 to just over $1 trillion, despite relatively high credit costs and facility fees, factors that helped keep total volume below 1997's record $1.1 trillion in issuance. Syndicated loans to leveraged companies also rose 17 percent in 1999 to a record $320 billion. More impressive still was the growth in high-yield transactions, which rose nearly 50 percent in 1999 to $190 billion. It is difficult to determine precisely how much syndicated loan exposure resides on the books of insured institutions or, more important, how much high-yield exposure is retained by commercial banks. ***Loan Pricing Corporation*** estimates that 64 percent of high-yield volume in the first half of 1999 was retained by banks.[13] Insured commercial banks are the dominant originators of syndicated loans, with a 79 percent market share of investment-grade originations and a 56 percent market share of non-investment-grade originations in 1999. Commercial banks have also expanded their presence in the venture capital market. For some of the largest banks, profits from venture capital operations account for a large portion of total earnings. Chase Manhattan reported venture capital investment earnings of $2.3 billion in 1999, accounting for 22 percent of total net income.[14]

Innovation in the capital markets continues to provide new and more efficient vehicles for business financing. For example, issuance of asset-backed securities totaled $346 billion in 1999, up from only $50 billion in 1990. In this ongoing revolution in finance, market-based intermediaries, such as mutual funds and asset pools, have assumed an increasing role in the credit markets. Chart 4 shows that net holdings of credit market instruments by mutual funds, government-sponsored enterprises, and asset pools exceeded the debt held by depository institutions for the first time in 1997.

CHART 4



[11] April 17, 2000. Techdom's New Bean-Counting Battle. *Business Week.*

[12] May 2000. Venture financing data are derived from a PriceWaterhouseCoopers/Money Tree survey, as cited in *Upside,* 43.

[13] September 13, 1999. Junk Loan Market Is Feeling the Pinch of Oversupply and Rising Interest Rates. *The Wall Street Journal.*

[14] April 3, 2000.What's Really Driving Banks' Profits. *Business Week.*

While the expansion in market-based financing has made credit more available to business and consumer borrowers, it also creates some concerns. One issue is the susceptibility of the financial markets to periodic bouts of turmoil. These episodes, such as the one triggered by the Russian government bond default and the near-failure of the Long Term Capital Management hedge fund in the fall of 1998, can result in the interruption of capital flows even to creditworthy borrowers. During the 1998 episode, private yield spreads widened sharply as investors sought the safety of U.S. Treasury securities. Some companies that had planned to issue debt to the markets during that period were unable to do so. For companies whose business models depend heavily on a continuous supply of liquidity from the financial markets, the effects of these episodes can be catastrophic. For example, the relatively short-lived episode of financial turmoil during late 1998 resulted in significant liquidity problems for a number of commercial mortgage firms. Nomura, Lehman Brothers, CS First Boston, and others incurred losses, while Criimi Mae, Inc., was forced to declare bankruptcy.

Because market-based financing has played such a large role in facilitating the orderly restructuring of the U.S. economy through mergers and the formation of new businesses, a recurrence of financial market turmoil could contribute to the end of the current expansion. Moreover, such an event could have serious consequences for business credit quality. A prolonged interruption of market-based financing could, in this very competitive economic environment, prevent businesses from restructuring themselves through mergers and deprive them of capital needed to invest in cost-cutting technologies. The loss of financial flexibility would leave businesses much more vulnerable to the effects of competition and could result in more firms seeking bankruptcy protection. Such a scenario has the potential to bring about a significant increase in charge-off rates for business lenders.

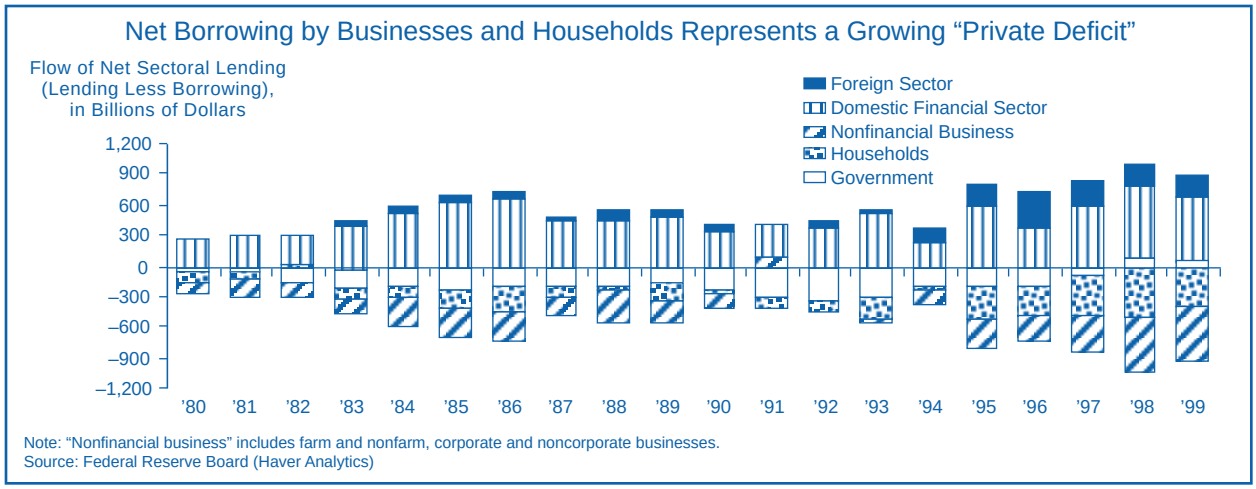
Financial Imbalances

Another concern that arises from increased dependence on market-based financing is that it may contribute to the emergence of financial imbalances in the economy. These imbalances could, in turn, increase the potential for financial market turmoil as a result of some unforeseen shock to the markets.

As recently as 1993, the public deficit was near the top of the list of economists' concerns about the U.S. economy. During that year, the combined deficit of the federal, state, and local government sectors exceeded $300 billion. However, on the strength of a long economic expansion, lower interest rates, and lower federal spending on defense, the consolidated government sector posted its second consecutive surplus in 1999 (Chart 5).

As the government has moved from deficit to surplus, households and businesses have continued to borrow hundreds of billions of dollars every year. Taken together, the annual net borrowing of businesses and households has been referred to as the "private deficit." In 1999, the private deficit narrowed to $913 billion from a record $1.02 trillion the year before. Although this private borrowing indicates confidence on the part of consumers and businesses about future prospects, it also raises concerns about the ability to service debt if interest costs rise or if incomes level off or decline.

Chart 5



The largest part of the private deficit was again financed in 1999 by domestic financial institutions ($649 billion) and an inflow of capital from abroad ($207 billion). Both of these sources of financing are potential causes for concern. The rapid expansion in credit created by the financial sector raises questions about credit quality. Financial institutions theoretically serve as the gatekeepers of the economy, financing only the most creditworthy projects and rejecting those that are not viable. The sheer volume of credit extended to businesses and households—almost $1.4 trillion in new net lending over the past two years—raises the possibility that underwriting has become more lax and that average credit quality is slipping. (See the inset box on page 17 for a discussion of recent trends in commercial credit quality.)

Reliance on inflows of foreign capital raises a different set of issues. The fact that the U.S. economy has been growing significantly faster than the economies of its major trading partners has contributed to a U.S. trade deficit that reached $268 billion in 1999 and could exceed $300 billion in 2000. This deficit puts hundreds of billions of dollars annually in the hands of foreign investors. As long as foreign investors largely choose to reinvest their excess dollars in U.S. factories and financial instruments, as has been the case in recent years, the United States can continue to enjoy a strong dollar and relatively low inflation and low interest rates. However, if foreign investors should choose to invest elsewhere, they must sell their dollars in foreign exchange markets. Doing so would put downward pressure on the dollar and upward pressure on U.S. inflation and interest rates.

Recent Shocks to the U.S. Economy

Despite the potential for a declining dollar as a result of U.S. reliance on foreign capital, other adverse developments have confronted the U.S. economy over the past year. The two factors of most consequence to the macroeconomic outlook have been rising energy costs and rising interest rates. These trends have played a role in recent equity market volatility that may have implications for the future direction of the economy.

Rising Energy Prices. After declining to a low of around $10 per barrel in December 1998, oil prices have risen dramatically over the past year and a half. The spot price per barrel of West Texas Intermediate crude peaked in March 2000 at just under $30 before declining slightly in April. The rapid increase in oil prices during 1999 was sparked by a cutback in output by oil-producing nations that was instituted just as global economic growth was recovering from the crisis of 1998. The OPEC nations and other major oil producers reached a new agreement in March 2000 that provides for a production increase of some 1.5 million barrels a day. But, because demand is rising and gasoline inventories remain lean, analysts do not look for a significant decline in gasoline prices in the near term.[15]

The effects of higher oil prices on the U.S. economy at this time are uncertain. According to some estimates, the economy is only half as dependent on oil as it was 25 years ago, when the United States was experiencing the effects of its first "oil shock."[16] Still, higher oil prices were responsible for nearly all the increase in consumer price inflation during 1999. While year-over-year growth in the Consumer Price Index rose from 1.6 percent in December 1998 to 2.7 percent in December 1999, the core rate of inflation (excluding food and energy items) actually fell. The question now is whether higher energy prices will be passed along to the rest of the economy through rising wage and price demands during the remainder of 2000.

Rising Interest Rates. From low points at the end of 1998, both short-term and long-term interest rates have risen substantially, contributing to a higher cost of debt service for businesses and households. At the short end of the yield curve, the Federal Reserve (the Fed) raised the Federal Funds rate six times between June 1999 and May 2000, for a total increase of 175 basis points. While part of this increase merely reversed the reduction in rates that took place in late 1998, the Fed also voiced concerns that inflationary pressures might be emerging because of continued rapid U.S. economic growth. Given the stated commitment of the Federal Reserve to price stability, most analysts expect the Fed to continue to push short-term rates higher until growth in the economy slows to a more sustainable pace.[17]

Bond markets also pushed up long-term interest rates during this period. The yield on the ten-year Treasury

[15] Energy Information Agency (U.S. Department of Energy). April 2000. Short-Term Energy Outlook. http://www.eia.doe.gov/emeu/steo/pub/contents.html.

[16] March 11, 2000. Fueling Inflation? *The Economist.*

[17] See, for example, U.S. House of Representatives. February 17, 2000. Testimony of Chairman Alan Greenspan Before the Committee on Banking and Financial Services. http://www.federalreserve.gov/boarddocs/hh/2000/February/Testimony.htm.

As Commercial Credit Quality Indicators Slip, Trends in Commercial Lending Come to the Forefront

Commercial lending, which includes both commercial and industrial (C&I) and commercial real estate (CRE) loans, represents the greatest source of credit risk to insured institutions and the deposit insurance funds. C&I loan growth continued to be strong in 1999, although it did moderate from 1998 levels, and recent underwriting surveys have reported a slight tightening of terms.[18] Nevertheless, there are signs that commercial credit quality is deteriorating.[19] Most notably, as seen in Chart 6, C&I loan charge-off rates, corporate bond defaults, and corporate bond rating downgrades relative to upgrades have all been trending upward recently. For example, C&I loan loss rates rose to 0.56 percent of total loans in 1999, nearly double the rate of loss experienced in 1997. Although C&I loan loss levels are well below historical highs experienced throughout the 1980s and early 1990s, these signs of credit quality deterioration are occurring despite extremely favorable economic conditions.

At least three factors have contributed to weakening in corporate credit quality. First, corporate indebtedness has been rising, as businesses have been spending to increase productivity, cut costs, repurchase equity, and finance mergers and acquisitions. The second factor relates to a greater risk appetite in the financial markets. For example, originations of leveraged syndicated loans—in particular, highly leveraged loans—have tripled over the past five years. Finally, stresses within industry sectors hard hit by structural changes, global competition, and deflationary pressures have resulted in challenges for borrowers.

Construction and development (C&D) lending continues to be one of the fastest growing segments of banks' loan portfolios, while loss rates among CRE and C&D loans remain extremely low. However, there are indications that conditions could be worsening in some markets. In particular, as shown in Chart 7, strong office completions and construction activity have begun to outpace absorptions and are projected to continue to do so over the next several years. Moreover, these trends have implications for vacancy rates. The national office vacancy rate moved higher during 1999 for the first time since 1991 and is projected to climb higher.

In addition, some local CRE markets continue to show signs of overbuilding. Last year, the FDIC's Division of Insurance identified nine markets in which the pace of construction activity threatened to outstrip demand for at least two property sectors.[20] Seven of these nine markets reported an increase in office vacancy rates in 1999.

Chart 6

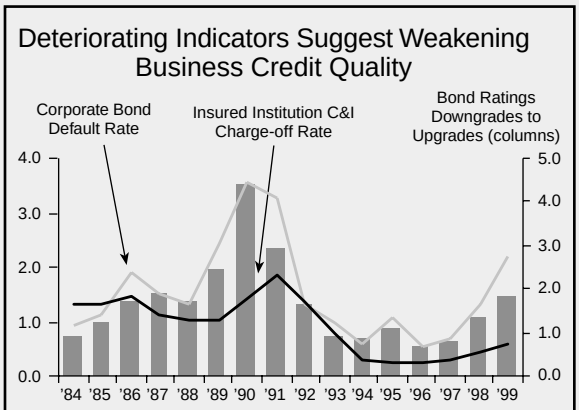
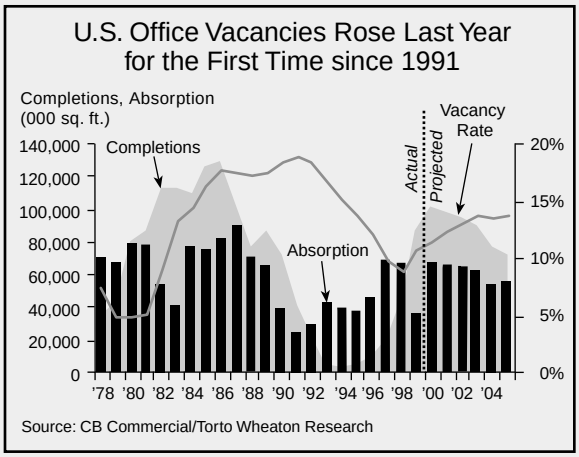


Chart 7



[18] Both the 1999 *Senior Loan Officer Opinion Survey* (Federal Reserve Board) and 1999 *Survey of Credit Underwriting Practices* (Office of the Comptroller of the Currency) point to more stringent C&I loan terms since the latter part of 1998. This tightening follows a four-year period of easing C&I loan standards and predominantly reflects an increase in loan pricing.

[19] For additional detail, see Sothoron, Arlinda, and Alan Deaton. FDIC Division of Insurance. First quarter 2000. Recent Trends Raise Concerns about the Future of Business Credit Quality. *Regional Outlook.* http://www.fdic.gov/bank/analytical/regional/ro20001q/na/Infocus1.html.

[20] These markets are Charlotte, Orlando, Salt Lake City, Dallas, Las Vegas, Phoenix, Nashville, Atlanta, and Portland. See Burton, Steve. FDIC Division of Insurance. First quarter 1999. Commercial Development Still Hot in Many Major Markets, But Slower Growth May Be Ahead. *Regional Outlook.* http://www.fdic.gov/bank/analytical/regional/ro19991/na/Infocus2.html.

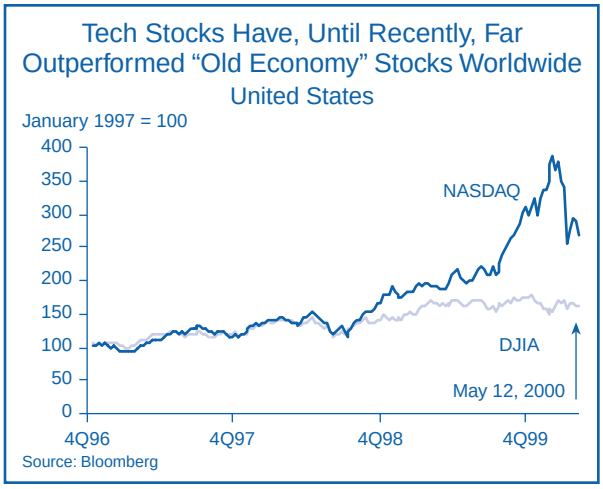
note rose from a low of 4.5 percent in October 1998 to 6.5 percent by May 2000. Analysts have cited renewed demand for credit by a recovering world economy as well as concerns about inflation arising from the increase in energy prices as factors behind the rise in long-term rates.

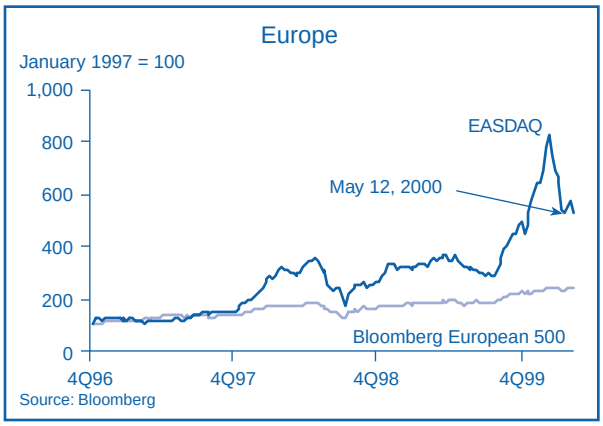
Higher energy costs and higher interest rates do not appear to have significantly slowed the pace of U.S. economic activity during the first quarter of 2000. The preliminary estimate of real gross domestic product growth during the quarter was 5.4 percent—a slowdown from the 7.3 percent rate of the fourth quarter of 1999 but still well above what is considered a sustainable pace. Home construction, usually a sector that is particularly sensitive to movements in long-term interest rates, has remained surprisingly resilient. Still confident of their future prospects, homebuyers have increasingly turned to adjustable-rate mortgages to avoid some of the immediate costs of higher fixed mortgage rates.

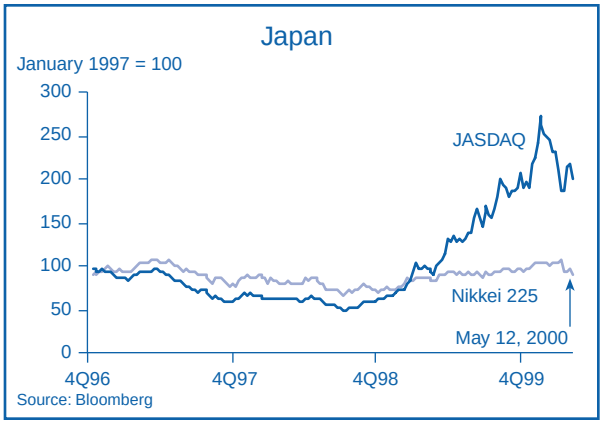
As for the business sector, higher costs for energy and debt service are most significantly affecting "Old Economy" firms that purchase commodity inputs and carry significant debt on their balance sheets. Airline companies in the S&P 500, for example, posted a year-over-year decline of 27 percent in net income from continuing operations during the first quarter of 2000.[21] Analysts have argued that New Economy firms, by contrast, are less vulnerable to recent economic shocks because they tend to carry little debt and consume relatively little energy.

Equity Market Volatility. The notion that New Economy firms are less vulnerable to the effects of higher energy costs and higher interest rates may be one of the reasons that equity shares of firms in the technology sector began to dramatically outperform the broader market, beginning around the middle of 1999. Chart 8 shows that the technology-heavy NASDAQ index performed more or less in tandem with the Dow Jones Industrial Average between the end of 1996 and the middle of 1999, but thereafter the NASDAQ soared far ahead of the Dow. Between October 1, 1999, and February 29, 2000, the NASDAQ rose by 72 percent while the Dow declined by 4 percent. Moreover, this striking divergence between the equity returns of Old and New Economy companies was not limited to the U.S. markets. Parallel trends were observed in Europe, Japan, Korea, and Hong Kong. The similarity in performance of the high-tech sectors across three continents suggests a worldwide flow of liquidity from investors to the shares of technology firms.

Chart 8







However, emerging concerns about the technology sector contributed to significant volatility in technology

[21] Bloomberg. The S&P 500 airline industry is composed of AMR Corp., Delta Air Lines, Southwest Airlines, and U.S. Airways Group.

shares during March and April 2000. The NASDAQ index lost 30 percent of its value between March 10 and May 12, 2000. Analysts cited the Justice Department finding against Microsoft and doubts about the ultimate profitability of business-to-consumer Internet firms as two factors in the sell-off.

Equity market volatility also poses a threat to the economic outlook. One concern is the so-called "wealth effect" that a declining stock market may have on consumer spending. Since 1995, rising stock prices have helped raise the market value of equities held by U.S. households, plus their holdings of mutual funds, by some $5.7 trillion. This windfall is an important reason that households have continued to reduce annual personal savings (to just 2.4 percent of disposable income in 1999) and increase spending on homes, autos, and other consumer goods. Although it is uncertain what effect a prolonged stock market correction might have on consumer spending, the potential wealth effect has surely grown as more households hold a higher percentage of wealth in corporate equities and mutual fund shares. (See the inset box at right for a discussion of how financial market volatility could affect banks.)

The Economic Outlook

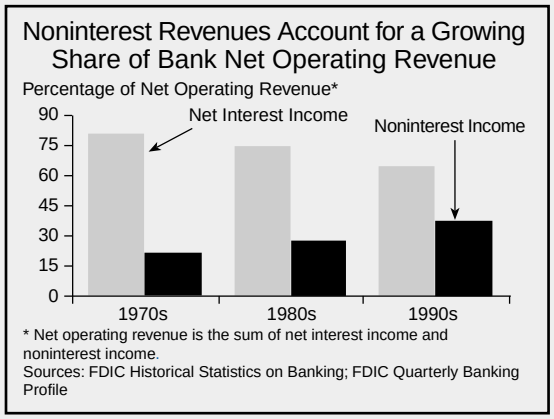
Despite the effects of rising energy costs, increasing interest rates, and equity market volatility, the U.S. economy continues to grow at a robust pace. The consensus forecast of 50 corporate economists surveyed by the May 1999 ***Blue Chip Economic Indicators*** suggests that the economy will grow by 4.7 percent in 2000, while consumer prices are projected to rise by 3.0 percent from 1999 levels. Short-term interest rates are projected to rise only slightly by year-end from early May levels. In short, the consensus forecast indicates that the New Economy formula of rapid economic growth combined with low inflation will continue for the foreseeable future. If actual events conform to this forecast, the result will likely be another year of generally low loan losses and solid earnings for much of the banking industry. (See the inset box on the following page for a discussion of other risks to watch in banking.)

Clearly, risks are associated with the economic outlook. Recently, higher oil prices and higher interest rates have been the most visible signs of trouble for the economy. New Economy companies may be less vulnerable to these effects, but even these firms have experienced a sharp decrease in equity valuations as investors reeval-

Financial Market Volatility Could Pare Earnings for Banks Most Reliant on Market Sources of Revenue

FDIC-insured banks are deriving an increasing proportion of earnings from noninterest sources (see Chart 9), particularly market-sensitive sources of revenue. This is especially true for larger institutions. According to ***Deutsche Banc Alex. Brown,*** the 18 most active generators of market-sensitive sources of revenue earned over 25 percent of net operating revenue from these potentially volatile business lines.[22] While market-sensitive sources help to diversify revenue streams, they can also introduce increased income volatility in the event of financial market turbulence. Deutsche Banc Alex. Brown also reports that for those 18 banks that generated the largest amounts of market-sensitive revenues during the third quarter of 1998, the share of total revenue derived from market-sensitive sources declined from 23 percent to 13 percent. Thus, a more sustained downward trend in the financial markets could particularly affect the earnings of large banking companies that rely heavily on income from sources such as venture capital, asset management and brokerage services, and investment banking.

CHART 9



[22] Net operating revenue is the sum of interest income and noninterest income less interest expense. According to Deutsche Banc Alex. Brown, these companies are Bank of America Corporation; Bank of New York Company, Inc.; Bank One Corporation; Bank Boston; BB&T Corporation; Chase Manhattan Corporation; Citigroup, Inc.; First Union Corporation; FleetBoston Financial; JP Morgan; KeyCorp; Mellon Financial Corporation; National City Corporation; PNC Bank Corp.; SunTrust Banks, Inc.; US Bancorp; Wachovia Corporation; and Wells Fargo & Company.

Other Risks to Watch in Banking

Subprime Lending

- ***Subprime consumer loan portfolios contributed to the large losses associated with recent high-cost bank failures.*** During 1999, the FDIC reported the first annual loss for the Bank Insurance Fund since 1991. The loss was primarily the result of an uptick in unanticipated and high-cost bank failures. FDIC-insured institutions with at least 20 percent of Tier 1 capital in subprime loans accounted for 6 of the 13 bank failures that occurred between January 1998 and March 2000. Fraud and inappropriate accounting for residuals also played a role in some of these failures.[23]

- ***Subprime lending remains an area of concern.*** Insured depository institutions that engage in subprime lending represent a disproportionate share of problem institutions. Of the 79 banks and thrifts on the problem bank list as of year-end 1999, 21 percent were institutions with at least 20 percent of their Tier 1 capital in subprime loans.[24]

Agricultural Lending

- ***While a majority of agricultural institutions remain relatively strong, external conditions have put pressure on some agricultural producers***. Many agricultural areas are experiencing low commodity prices as well as weather- and disease-related problems. Strong global competition and high worldwide production over the past several years have resulted in increasing inventories of many crops and poor prospects for a price turnaround in the near term. Moreover, in spite of record government farm payments in 1999, the U.S. Department of Agriculture projects that in the year 2000 one in four farms will not cover cash expenses, up to 20 percent of farmers will experience repayment problems, and 5 percent of farmers will be "vulnerable."[25]

- ***Some signs point to growing stress for agricultural institutions.*** Forty-two percent of FDIC-supervised banks active in agricultural lending showed a moderate or sharp increase in the level of carryover debt during third quarter 1999, compared with just 26 percent during third quarter 1998.[26] In addition, net loan loss rates for agricultural production loans increased in 1999 to the highest level since 1991. However, at 0.32 percent, the 1999 net loss rate is just one-tenth the rate experienced during the height of the agricultural crisis of the mid-1980s.[27]

Operational Risk

- ***Operational risks are becoming more prominent in the banking industry.*** Driven by consolidation and expansion into new product lines and markets, financial institutions are seeing an increase in operational complexity. Operational risk encompasses a host of factors not related to credit or market activities, including risks associated with processing transactions, legal liability, fraud, strategic missteps, and internal control weaknesses. Operational risks tend to be more pronounced when institutions engage in rapid growth, far-flung operations, and complex business processes.

- ***Greater attention is being paid to operational risks in the financial industry***. Recently, analysts have noted that the pressure to meet ambitious postmerger earnings predictions can result in cost-cutting measures that jeopardize the comprehensiveness and integrity of risk-management systems. In addition, the role that fraud has played in recent bank problems and failures reinforces the importance of adequate internal controls and audit procedures. The significance of operational risks to financial institutions has been noted in industry surveys and information-sharing efforts among financial firms.[28] NetRisk Inc., a Greenwich, Connecticut, consulting firm, recently estimated that operational losses among financial institutions have exceeded $40 billion over the past five years.

[23] See Puwalski, Allen. FDIC Division of Insurance. Second quarter 1998. Gain-on-Sale Accounting Can Result in Unstable Capital Ratios and Volatile Earnings. *Regional Outlook.* http://fdic01/division/doi/outlook/2q1998/atlanta/infocus1.html.

[24] The problem bank list includes all insured depository institutions rated a composite "4" or "5."

[25] "Vulnerable," as defined by the U.S. Department of Agriculture Economic Research Service, applies to institutions that have debt/asset ratios above 0.40 and negative income such that they cannot meet current expenses or reduce existing indebtedness.

[26] September 1999. *FDIC Report on Underwriting Practices*.

[27] See Anderlik, John M., and Jeffrey W. Walser. FDIC Division of Insurance. Third quarter 1999. Agricultural Sector Under Stress: The 1980s and Today. *Regional Outlook.* http://www.fdic.gov/bank/analytical/regional/ro19993q/kc/agricult.html.

[28] For additional detail, see March 2000. Operational Risk: The Next Frontier. *RMA/PricewaterhouseCoopers Survey.* April 6, 2000. Tech Bytes: Banks Join Forces Against Operational Risk. *American Banker.*

uate the long-term prospects. Equity market volatility threatens to dampen consumer confidence and the ability of businesses to continue to merge, restructure, and invest.

The economy has become particularly dependent on financing delivered through the capital markets. In this more permissive financial environment, rising debt levels and greater dependence on foreign capital have emerged as financial imbalances that may contribute to future problems for the economy. Businesses and households with high levels of debt are more vulnerable to problems if interest rates continue to rise or income growth falters. Rapid credit creation by the domestic financial sector suggests the possibility of lax credit underwriting standards. Reliance on foreign capital raises concerns about what would happen to the value of the dollar and to domestic inflation if foreign investors decide to invest elsewhere.

Some analysts suggest that the New Economy, driven by increased productivity, heightened competition, and robust investment, may be characterized by longer expansions. Financial market imbalances may, however, contribute to deeper recessions and more sluggish recoveries compared with earlier business cycles.

For the banking industry, it is clear that a recession would mean slower loan growth, deteriorating credit quality, and impaired profitability. But the biggest threat to the banking industry is a recession that is tied to disruptions in the financial markets. The ready availability of financing to start new businesses and restructure old businesses has been key to the New Economy. The process by which businesses have invested and restructured in response to competition has been orderly from the perspective of bank creditors. If this process should be disrupted, we could see a much more disorderly process, with more bankruptcies and higher losses to lenders.

This article was prepared and coordinated by the management and staff of the Analysis Branch of the Division of Insurance. Contributions and feedback from analysts across the Division were essential to its completion.

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