
◆ Regional Outlook ◆

FEDERAL DEPOSIT INSURANCE CORPORATION

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DIVISION OF
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In Focus This Quarter

◆ *Falling Prices in Commodities and Manufacturing Pose Continuing Risks to Credit Quality*—Falling prices are causing problems for a wide range of *commodity industries*—a collection of agricultural, mining, and manufacturing industries that produce standardized products and face global competition, mostly on the basis of price. Firms in these industries have experienced slow or negative profit growth even as they reduce payrolls to cut costs. There are signs that these trends are contributing to higher credit risk for insured institutions. The effects of these problems on local economies and community banks could grow if low prices persist. *See page 3.*

By Richard A. Brown and Alan Deaton

◆ *Shifting Funding Trends Pose Challenges for Community Banks*—Several long-term trends are making it more difficult for some institutions to economically fund asset growth with deposits in today's marketplace. As a result, traditional measures of liquidity and liability composition for commercial banks reflected record-low levels of deposit funding at year-end 1998. The need to augment lagging deposit growth to meet loan demand has led many community banks to seek more wholesale funding sources, particularly borrowings. If the trend toward greater reliance on nondeposit funding continues, liability management may become more important and more challenging for community banks that have historically relied upon deposits for funding and net interest revenues for profitability. *See page 11.*

By Allen Puwalski and Brian Kenner

Regional Perspectives

◆ *Region's Economic and Banking Conditions*—The San Francisco Region's economy continues to outpace the nation's economy despite slowing employment growth...Declines in the Region's manufacturing and agricultural sectors continue to present concerns...While most insured financial institutions continue to report strong earnings and asset quality, agricultural banks, particularly in Montana, are showing weakening agricultural loan quality...The Region's mortgage lenders have significantly increased their reliance on noncore funds, partly because of the adverse effects of a relatively flat yield curve on institutions' earnings...Rural community banks, faced with slowing population and deposit growth, have increased their reliance on noncore funds. *See page 18.*

By the San Francisco Region Staff

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Falling Prices in Commodities and Manufacturing Pose Continuing Risks to Credit Quality

- **Prices have fallen sharply across a wide range of commodities and manufactured goods.**
- **Signs of stress are apparent in some industry sectors.**
- **These trends are contributing to rising credit risk for insured institutions.**
- **Effects on local economies and community banks could grow if low prices persist.**

The performance of the U.S. economy during the mid- to late-1990s has been generally positive for banking. Economic activity grew in 1998 at an inflation-adjusted rate of 3.9 percent for the second consecutive year. Continued low inflation has helped to hold interest rates low and extend the expansion into its ninth consecutive year. However, one downside of low inflation has been that firms in certain commodity industries have encountered slow or negative growth in revenues because of the low prices they receive for their products.

Commodity industries are defined in this article as a collection of agricultural, mining, and manufacturing industries that produce standardized products and face global competition, mostly on the basis of price. Since the beginning of 1997, price weakness has extended across a wide range of commodity industries, from agricultural products to oil, chemicals, textiles, paper, semiconductors, steel, and even some segments of the auto industry. While many firms have retooled and restructured to cut costs, clear signs of financial stress have become apparent.

The potential importance of problems in commodity industries to the FDIC was illustrated by the banking problems related to oil and agriculture during the 1980s and early 1990s. As documented in a 1997 study by the *FDIC Division of Research and Statistics*, regional economic dislocations related to declining farmland values and declining oil prices contributed to large increases in credit losses and the eventual failure of hundreds of federally insured banks and thrifts. The analogy to the 1980s is far from perfect—for example, oil and agriculture have not experienced booms comparable to those that preceded their collapse in the

1980s—but exposures to commodity industries remain important for many insured institutions.

This article summarizes recent adverse trends in commodity and manufacturing sectors and discusses why industry-sector problems are important in banking. It takes a high-level approach, emphasizing the economic fundamentals that are driving prices across the economy while ignoring many of the industry-specific factors that are also driving the performance of individual sectors. The goal is to evaluate the effects of these trends on bank credit quality if they persist through 1999 and beyond.

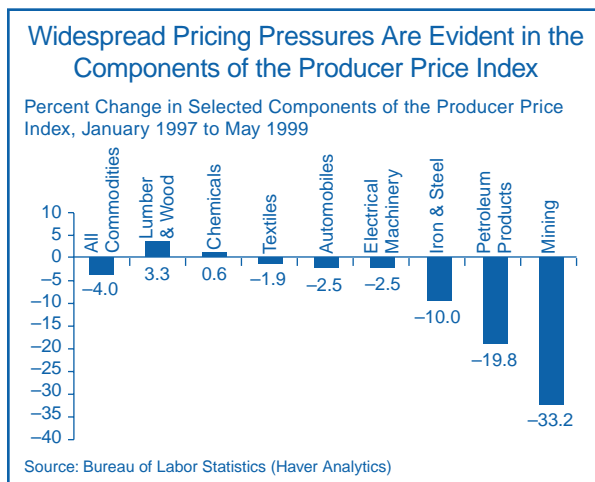
Prices Have Been Declining across a Range of Commodities and Manufactured Goods

Low inflation has been a boon for consumer spending and business investment during the economic expansion of the 1990s. As of March 1999, the Consumer Price Index had risen at an annualized rate of less than 2.0 percent for 8 consecutive quarters and at an annualized rate of less than 4.0 percent for 33 consecutive quarters. The prices of many popular and essential consumer goods—from computers to gasoline—have generally fallen throughout the decade, even as the prices of most services continue to rise steadily. Businesses, too, have benefited from the ability to purchase goods cheaply, as well as from the generally low interest rates that have accompanied low inflation.



The declining average wholesale price of goods is reflected in Chart 1 (next page), which shows changes in the producer price index (PPI) and some of its key components since the beginning of 1997. The PPI focuses on goods, omitting changes in the price of services. The decline of nearly 5 percent in the PPI since the beginning of 1997 has been led by falling prices for mining products, petroleum, and steel. Moreover, economy-wide price declines for wholesale goods have been steady over time, with the PPI registering year-over-year declines for 26 consecutive months through May 1999.

CHART 1



Although they are only indirectly included in the PPI numbers, the prices of several important agricultural commodities have also fallen substantially. Chart 2 shows that the price of wheat has fallen by more than 35 percent since January 1997, with the price of corn, hogs, and cotton also registering double-digit rates of decline. While the price of hogs has rebounded significantly since the end of 1998—more than doubling from its low of less than 15 cents per pound—prices for corn, wheat, and cotton continued to decline through May 1999.

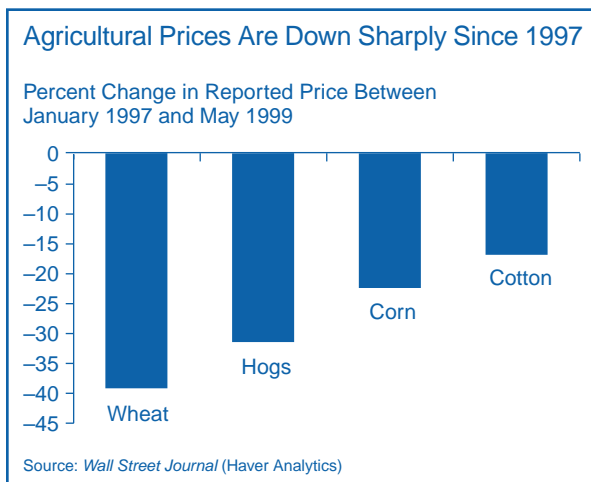
Reasons for Broad-Based Commodity Price Weakness

Pricing trends in disparate industries such as electronics and agriculture, or oil and steel, are driven in part by industry-specific factors. For example, weather patterns heavily influence agricultural prices, while global politics tends to drive world oil price levels. In manufacturing, technological developments can significantly alter the demand for a product or its cost of production, thereby influencing its market price. For example, improvements in semiconductor manufacturing techniques—from shrinking the size of chips to using larger silicon wafers—have significantly increased production yields in that industry during the 1990s.¹

However, the pervasiveness of recent price declines across a wide range of commodities and manufactured

¹ See “Semiconductor Industry Trends,” *Standard and Poor’s Industry Surveys*, May 27, 1999, p. 4.

CHART 2



goods suggests that a number of common factors are driving prices lower:

- **Low inflationary expectations.** Since 1980, inflation rates have gradually declined worldwide as central banks shifted their focus toward price stability. *Disinflation* has profoundly altered the expectations of investors, consumers, and businesses, and in the process has altered the course of events in individual markets and in the economy as a whole. As a result, commodities have lost much of their appeal as a hedge against inflation. This has contributed to a decline of more than 50 percent in the price of gold since 1980. The expectations of many businesses have also changed, because with less pricing power they must continually cut costs to remain competitive.
- **Overcapacity because of large-scale investment.** Global investment in productive capacity accelerated during the early to mid-1990s in a number of commodity and manufacturing industries. Many U.S. firms have implemented new technologies and moved their operations closer to their markets or to areas where low-cost labor is available. For example, major U.S. and foreign automakers have invested billions of dollars in recent years in new production facilities in the emerging markets of Asia and Latin America as part of a “build-where-you-sell” strategy.² Because these additions to capacity largely have not been offset by the closure of existing plants, analysts say that global productive capacity in autos

² Barbara McClellan, “Asia Woes Worsen,” *Ward’s Auto World*, November 1998, pp. 28–31.

could exceed demand by more than 20 million units annually by 2000.³ A similar situation has developed in the semiconductor industry, where capital investment in chipmaking equipment tripled between 1993 and 1996, contributing to a glut of memory chips and plunging prices.⁴

- Curtailed global demand in the wake of emerging market crises.** The economic crises that have developed in Asia, Russia, and parts of Latin America since 1997 have crimped global demand for commodities and manufactured goods. For example, demand for new cars in Korea fell by 50 percent in 1998.⁵ Asia received approximately 30 percent of U.S. feed grain exports in 1996, but declining Asian demand since then has contributed to a sharp decline in global grain prices. The slowdown of economic activity in crisis countries and the resulting decline in their demand for imports is only one factor that has hurt the pricing power of U.S. producers. Another problem is the pricing advantage conferred on countries that have experienced currency devaluation. Firms operating in a country that has devalued its currency experience a reduction in the price of their exports in U.S. dollar terms. This process further depresses the pricing power of U.S. farmers and businesses that sell their goods in global markets.

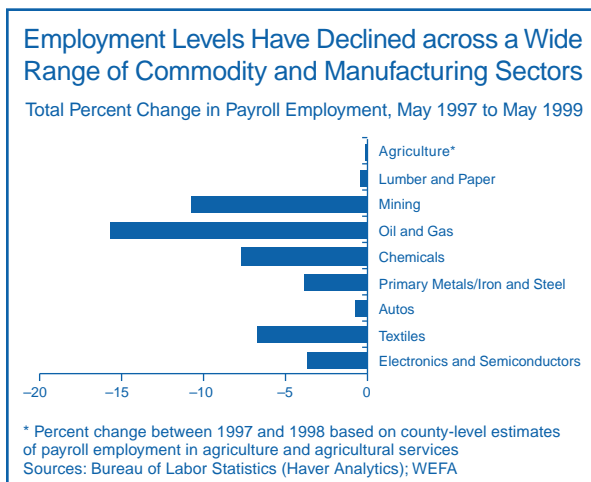
Recently, there have been signs that some hard-hit Asian economies may soon begin to recover. However, the other factors cited above—low inflationary expectations and rapid investment in productive capacity—may well be longer-term trends. In any event, U.S. farmers and businesses that participate in commodity industries must be prepared for the possibility that pricing pressures will not dissipate in the near term.

Signs of Stress Are Showing for Affected Industry Sectors

As commodity prices continue to stagnate, signs of stress are emerging among firms in the commodity industries. A long-term trend toward reduced levels of employment in manufacturing has accelerated in the midst of the current economic expansion. Chart 3 shows that employment levels declined in a wide range of commodity industries in the 24 months ending in May

³ "1997 Automotive Outlook," *Automotive Industries*. This report is available at <http://www.ai-online.com>.
⁴ "Semiconductor Industry Trends" (1999), p. 3.
⁵ Barbara McClellan (1998).

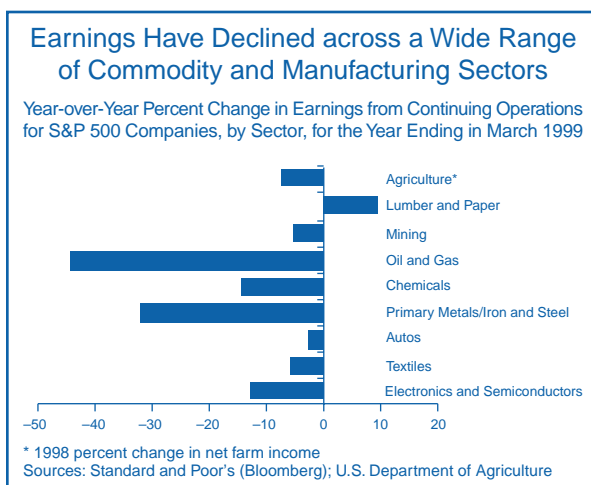
CHART 3



1999. The total manufacturing sector lost more than 420,000 jobs during that period, while another 64,000 jobs were lost in the mining sector, which includes oil and gas extraction. The trend toward lower levels of employment in mining and manufacturing not only reflects pricing pressures but also attempts by firms in these sectors to maintain profitability by investing in labor-saving technologies.

The profit picture has begun to deteriorate as well for firms operating in commodity industries. Four-quarter trailing earnings through March 1999 for oil-sector firms in the Standard & Poor's 500 dropped by more than 44 percent from a year ago (see Chart 4), while the earnings of steel firms fell by almost 32 percent. The losses experienced by firms in some of these industrial sectors extended to the farm sector as well, where net

CHART 4



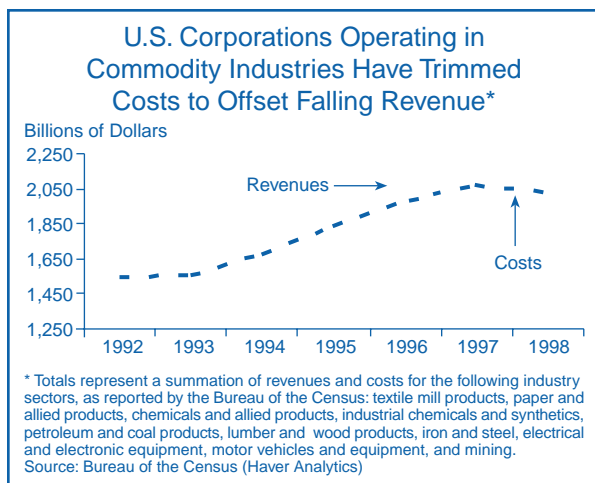
incomes fell by more than 7 percent in 1998, according to the *U.S. Department of Agriculture*.

Affected Industries Have Found Ways to Cope with Pricing Pressures Thus Far

Despite the signs of stress in industries where prices are weak or declining, U.S. farmers and industrial firms have shown themselves to be fairly resilient thus far in their ability to cope with the situation. Agricultural producers have been making greater use of carryover debt to keep their operations running even if they were not able to fully retire their operating loans during the previous crop year. The *FDIC Report on Underwriting Practices* shows that 29 percent of FDIC-supervised agricultural lenders reported at least a moderate increase in carryover debt during the six-month period ending in March 1999, compared with only 10 percent in March 1998. Although the use of carryover debt is not an uncommon practice in agriculture, it indicates that low prices and declining subsidies have contributed to financial stress for farmers.

Many industrial firms have found ways to increase productivity and cut costs to offset declining revenues. Chart 5 follows trends in annual total revenue and costs for U.S. corporations operating in a selected group of commodity industries. It shows that growth in revenue and costs slowed noticeably in 1997. Both revenue and costs in these sectors declined in 1998, illustrating that firms in these sectors have needed to cut costs to preserve profit margins. Cost cutting in the manufacturing sector is further illustrated by a steady decline in the index of unit labor costs for manufacturing, which started from a value of 100 in 1992 and fell to less than 96

CHART 5



by the first quarter of 1999. Falling unit labor costs means that the productivity of manufacturing workers is rising faster than the cost of their services. This trend demonstrates that manufacturing firms have been successful at implementing new technologies and new capital equipment to cut production costs.

Cost savings and industry consolidation have been accomplished in part through mergers. According to *Merger Stat*, the dollar volume of merger and acquisition transactions involving U.S. firms exceeded \$1.2 trillion in 1998, an increase of more than 80 percent from 1997 levels. Both the number and dollar volume of mergers announced in 1998 far exceeded the volumes recorded during the “merger mania” of the 1980s. Some of the largest mergers announced in 1998 involved firms looking for ways to increase market share and cut costs in markets characterized by overcapacity. Examples include the \$39 billion Daimler-Chrysler transaction announced in May 1998 and the \$80 billion Exxon-Mobil transaction announced in December 1998. Furthermore, merger activity recorded in early 1999 suggests that total merger volume for the year could exceed the record pace of a year ago.

Industries plagued by oversupply and weak prices require consolidation to reduce capacity and improve profit margins. Mergers and acquisitions represent a fairly orderly way for firms operating in a troubled industry to consolidate on their own terms. Bankruptcy filings are an alternative means for severely troubled firms to reduce capacity and achieve consolidation within an industry. Regardless of how industry consolidation is achieved, it often results in reductions in employment (such as those documented in Chart 3). However, from a lender’s perspective, an orderly consolidation process through mergers and acquisitions is preferable to a disorderly shakeout of firms through bankruptcies.

Recent favorable capital market conditions have allowed firms in troubled industries to consolidate through mergers. Acquisitions are sometimes financed through corporate borrowings or, more commonly, by swapping equity shares that have been rising in value during the bull market of the 1990s.⁶ Recent consolidation in commodity industries could be depicted as an

⁶ According to Loan Pricing Corporation’s *Gold Sheets*, syndicated and leveraged lending related to mergers and acquisitions reached a record high of \$80 billion in the second quarter of 1998, which represents about 30 percent of the total syndicated and leveraged lending market for that period.

orderly process, associated with record-high merger and acquisition activity, near-record-low business bankruptcy filings, and low credit losses on commercial and industrial (C&I) loans. However, a sudden change in financial market conditions characterized by sharply higher interest rates, lower stock values, or both could inhibit the ability of businesses to restructure and retool on their own. This could lead to a much more disorderly shakeout of firms accompanied by a rise in business bankruptcies and losses to lenders.

Signs Point to Rising Credit Risk in the Commodity Industries

In dollar terms, the largest commercial bank exposures to the commodity industries are in the portfolios of large banks. Chart 6 provides an estimated breakdown of the aggregate exposure of insured institutions to commodity industries based on corporate balance sheet information collected by the Bureau of the Census.⁷ The chart shows that the aggregate exposure of the bank and thrift industries to these sectors is approximately \$206 billion, or 26 percent of the total industry C&I portfolio. The largest single industry exposure is to the chemical industry, which represents approximately 9.5

percent of bank C&I loans. In the syndicated loan market, where large U.S. banks dominate in terms of originations, about 25 percent of all loans made in 1998 were to firms operating in the manufacturing sector.

A rough indicator of recent trends in the credit risk associated with bank loans to commodity industries can be found in expected default frequencies (EDFs) calculated by KMV Corporation. The EDF is an estimate of the probability that a firm will default on its bond obligations within one year.⁸ Chart 7 tracks the median EDF for firms operating in commodity industries compared with the median for all other firms rated by KMV. This chart shows that while the median EDF for commodity industries has consistently exceeded the median for all other firms in the recent past, this difference has widened appreciably since the middle of 1998. Over the past year, the median EDF for commodity industries has more than doubled, rising from 0.8 percent to 1.9 percent, while the median EDF for all other firms has doubled as well, from 0.6 percent to 1.2 percent. These data indicate that the level of credit risk associated with corporate borrowers has been increasing, led by an increased probability of default among firms operating in commodity industries.

⁷ Because of the limitations of the data, bank exposures to corporations engaged in agriculture are not broken out in Chart 6.

⁸ KMV's proprietary calculation for EDF is based on 1) the current market value of the firm, 2) the structure of the firm's current obligations, and 3) the vulnerability of the firm to large changes in market value.

CHART 6

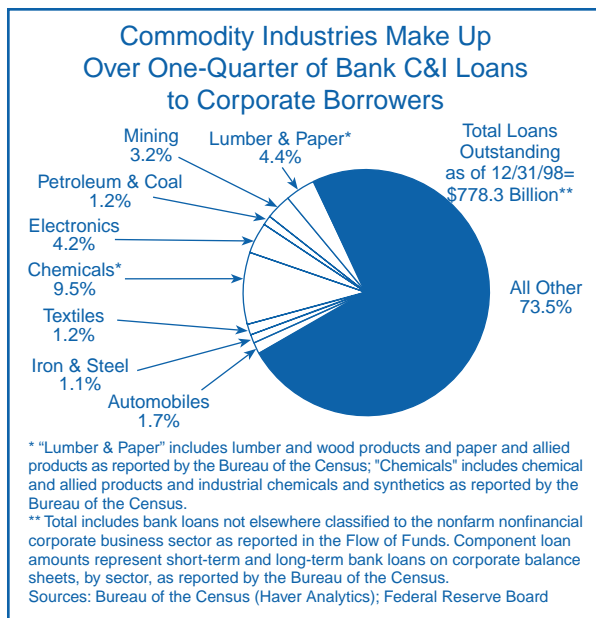
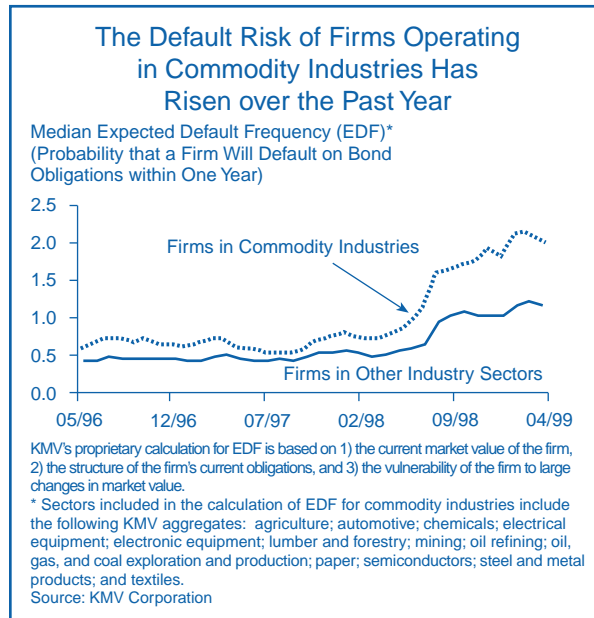


CHART 7



Effects on Local Economies and the Banks That Operate in Them

The economic effects of adversity in commodity industries tend to be most severe in local areas that depend heavily on these sectors for employment and income. In the 1980s, problems in the agricultural and oil sectors kicked off a “rolling recession” that spread through the Plains states and oil-producing regions of the south-central and western states. In agricultural regions, farmland values began to decline around 1981, contributing to the failure of hundreds of FDIC-insured banks between 1984 and 1990.⁹ Similarly, declining oil prices in the mid-1980s contributed to the failure of federally insured banks and thrifts in Texas, Oklahoma, Louisiana, and other states, while the attempts of some institutions to diversify into risky real estate investments resulted in still more failures. The FDIC’s analysis of these episodes emphasizes how industry-sector problems can affect local economies and bank credit quality.¹⁰ Moreover, the study shows that there can be a significant lag between the onset of industry-sector problems and the emergence of performance problems

⁹Federal Deposit Insurance Corporation, 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*. pp. 275–276, <http://www.fdic.gov/databank/hist80/index.html>.

¹⁰Federal Deposit Insurance Corporation (1997). See Chapters 8 and 9.

in the banking industry. Although banks with direct credit exposures to a troubled industry are likely to be affected first, virtually all banks that operate in areas that are heavily dependent on a troubled sector will eventually have to contend with the indirect effects on the local economy.

To evaluate the extent of local economic effects that might have resulted from the recent adverse trends in the commodity industries, we have conducted analysis on 1,027 U.S. counties identified as particularly dependent on at least one commodity industry (see Table 1 for a list of the commodity industries studied).¹¹ The purpose of this analysis is not to identify every county that might be affected by these trends; instead, this analysis focuses on the U.S. counties *most concentrated* in the commodity industries and determines if these counties and banks that operate in them are showing any symptoms of widespread distress.

Table 2 compares 1998 average job growth and unemployment rates in these “most concentrated counties” against the average for all U.S. counties. This comparison shows that the concentrated counties tended to have moderately lower job growth and higher unemployment than the U.S. average. However, further analysis shows

¹¹ Counties identified as being highly dependent on one or more commodity industries had an average population of 36,250 in 1998 versus 86,055 for all U.S. counties.

TABLE 1

U.S. COUNTIES MOST CONCENTRATED IN COMMODITY INDUSTRIES BY 1998 PAYROLL EMPLOYMENT			
	PERCENT OF 1998 COUNTY EMPLOYMENT IN THE INDUSTRY	NUMBER OF COUNTIES WITH EMPLOYMENT CONCENTRATION IN 1998	STATES WITH THE MOST DESIGNATED COUNTIES
AGRICULTURE	>30	295	TX, NE, SD, KS, MO
LUMBER AND PAPER	>5	305	GA, AL, MS, AR
OIL AND GAS	>5	83	TX, OK, LA
CHEMICALS	>5	46	TN, IL, NC, TX
STEEL	>5	70	KY, OH, AR, IN
AUTOS	>5	118	MI, IN, OH, KY, TN
TEXTILES	>5	156	GA, NC, SC, VA, AL
ELECTRONICS AND SEMICONDUCTORS	>5	33	TX, NY, IN, IA
ANY COMMODITY INDUSTRY	N/A	1,027	TX, GA, NC, TN, AL
ALL U.S. COUNTIES	N/A	3,142	N/A

SOURCE: WEFA, BASED ON DATA FROM THE BUREAU OF LABOR STATISTICS

TABLE 2

RELATIVE ECONOMIC PERFORMANCE OF COUNTIES MOST CONCENTRATED IN COMMODITY INDUSTRIES		
	1998 AVERAGE EMPLOYMENT GROWTH (%)	1998 AVERAGE UNEMPLOYMENT RATE (%)
AGRICULTURE	1.1	4.8
LUMBER AND PAPER	1.3	6.9
OIL AND GAS	1.4	5.6
CHEMICALS	1.3	6.0
STEEL	1.7	5.6
AUTOS	1.8	4.4
TEXTILES	0.9	5.1
ELECTRONICS AND SEMICONDUCTORS	1.9	3.7
ANY COMMODITY INDUSTRY	1.3	5.5
ALL U.S. COUNTIES	1.6	5.1

SOURCE: BUREAU OF LABOR STATISTICS, HOUSEHOLD SURVEY (HAVER ANALYTICS)

that the current situation is not unusual in that job markets in concentrated counties have tended to consistently underperform other U.S. counties over the past two decades. On the whole, the economic picture did not noticeably deteriorate in 1998 for the concentrated counties. Average unemployment declined in 1998 for every group of concentrated counties except oil counties, and average job growth increased in every group of counties except textile counties. These data indicate that while recent problems in the commodity industries might be having severe effects in specific areas, these problems had not translated into a broader weakening of economic performance through the end of 1998.

The financial performance of insured institutions operating in concentrated counties is evaluated in Table 3 (next page). The table provides average C&I loan performance and profitability ratios for 1,915 banks and thrifts identified as having at least 25 percent of their deposits in at least one of the concentrated counties as of June 1998.¹² The average C&I loan charge-off ratio for concentrated counties overall was higher than the U.S. average, driven largely by higher average charge-

offs in both agricultural and oil and gas counties. Comparisons of past-due and noncurrent C&I loans also indicate that institutions operating in agricultural and oil and gas counties tend to have more problem credits than the U.S. average.¹³ During the 12 months ending in December 1998, the average noncurrent loan ratio jumped from 4.8 percent to 6.1 percent for institutions operating in agricultural counties, while the average ratio rose from 2.7 percent to 3.8 percent for institutions operating in oil and gas counties.

These results indicate that while profitability in 1998 remained solid for the average bank operating in concentrated counties, credit losses appeared to be on the rise in agricultural and oil and gas counties. However, because this analysis relies on annual data that extend only through 1998, it is by design a backward-looking test for the local effects of problems in the commodity industries. There is every reason to expect these credit problems to intensify over time if commodity prices remain low.¹⁴ These considerations suggest that bankers in commodity-dependent counties should continually

¹² This analysis identifies the location of deposits by county through the Summary of Deposits report for June 1998, the most recent report available. The analysis is limited to institutions reporting at least \$1 million in C&I loans as of December 31, 1998. Institutions operating in one or more concentrated counties and meeting all the selection criteria averaged \$195 million in total assets as of December 31, 1998, compared with an average of \$733 million in assets for institutions operating in any U.S. county.

¹³ Past-due loans are defined as loans that have been past due for 30 to 89 days. Noncurrent loans are defined as loans that have been past due for 90 or more days plus loans placed in nonaccrual status.

¹⁴ For more information on how the agricultural outlook could affect FDIC-insured institutions, see the statement of FDIC Chairman Donna Tanoue to the Committee on Agriculture, U.S. House of Representatives, February 12, 1999, <http://www.fdic.gov/publish/speeches/99spchs/spc13apr.html>.

TABLE 3

RELATIVE FINANCIAL PERFORMANCE OF INSURED INSTITUTIONS OPERATING IN COUNTIES MOST CONCENTRATED IN COMMODITY INDUSTRIES					
INCLUDES ONLY INSURED INSTITUTIONS WITH AT LEAST \$1 MILLION IN C&I LOANS	NUMBER OF BANKS WITH AT LEAST 25% OF DEPOSITS IN A DESIGNATED COUNTY	AVERAGE C&I LOANS PAST DUE 30 TO 89 DAYS, AS PERCENT OF LOANS, 12/31/98	AVERAGE NONCURRENT C&I LOANS, AS PERCENT OF LOANS, 12/31/98	AVERAGE NET C&I LOAN CHARGE-OFFS, AS PERCENT OF AVERAGE LOANS, 1998	AVERAGE RETURN ON ASSETS, 1998
AGRICULTURE	416	5.08	6.12	1.58	1.16
LUMBER AND PAPER	465	3.38	1.89	0.78	1.21
OIL AND GAS	163	3.44	3.78	1.18	1.29
CHEMICALS	81	2.47	2.97	0.79	1.18
STEEL	186	2.53	2.06	0.59	1.08
AUTOS	341	2.64	2.05	0.66	1.12
TEXTILES	264	2.91	1.92	0.70	1.10
ELECTRONICS AND SEMICONDUCTORS	107	2.71	2.36	0.68	0.87
ANY COMMODITY INDUSTRY	1,915	3.39	3.03	0.93	1.13
ALL U.S. COUNTIES	8,485	2.91	2.50	0.76	1.05

NONCURRENT LOANS INCLUDE LOANS PAST DUE 90 OR MORE DAYS PLUS LOANS PLACED ON NONACCRUAL STATUS.
 C&I = COMMERCIAL AND INDUSTRIAL.
 SOURCES: SUMMARY OF DEPOSITS, DIVISION OF RESEARCH AND STATISTICS, FDIC; BANK AND THRIFT CALL REPORTS (RESEARCH INFORMATION SYSTEM)

monitor their local economy for signs of stress related to problems in the commodity industries.

Conclusion

Businesses operating in a range of commodity and manufacturing industries continue to grapple with weak or declining prices. This problem is not solely the result of industry-specific factors; it is part of long-term economic trends that may continue for some time. Signs of stress among firms in these industries are apparent in the form of declining levels of employment and slow or negative profit growth. However, there are few signs to date of any disorderly industry shakeouts involving widespread business bankruptcies and losses to lenders. Thus far, most firms have managed to cope with the situation by cutting costs and consolidating operations through mergers. At the same time, more forward-

looking indicators show that the level of credit risk associated with commodity industries may be on the rise. An analysis of the U.S. counties most heavily dependent on these industries showed few signs of a widespread deterioration in the performance of their economies or in the profitability of their local depository institutions through the end of 1998. However, there are signs of rising credit losses among local depository institutions in counties with the highest concentrations of agriculture and oil and gas extraction. A continuation of today's weak pricing picture in these industries has the potential to result in higher credit losses for insured institutions during the next few years.

*Richard A. Brown, Chief,
 Economic and Market Trends Section
 Alan Deaton, Economic Analyst*

Shifting Funding Trends Pose Challenges for Community Banks

- **Several long-term trends are making it more difficult for some institutions to economically fund asset growth with deposits in today's marketplace.**
- **Lagging deposit growth in recent years has resulted in greater reliance on alternative funding sources to meet loan demand.**
- **Liability management may become more important and more challenging for community banks that have historically relied upon deposits for funding and net interest revenues for profitability.**

For the past few years, assets have been expanding faster than deposits at many commercial banks. The result is an increased reliance on equity and borrowings for funding. Since 1992, commercial bank assets have grown at an average annual rate of 6.3 percent compared with a 3.9 percent average annual growth rate for deposits. Traditional measures of liquidity and funding for commercial banks reflected record-low levels of deposit funding at year-end 1998. Large commercial banks have traditionally made greater use of nondeposit funding alternatives. However, many community banks,¹ which have typically relied more on deposit funding, may face liability management challenges as a result of shifting funding trends. This article surveys the factors influencing the ability of banks to fund loan growth with deposits, discusses community bank funding trends, and considers the implications of these trends for community banks.

Factors Influencing Deposit Funding Trends

The percentage of commercial bank assets, particularly loans, funded with deposits has declined steadily in the 1990s. As shown in Chart 1, the industry's ratios of deposits to assets and loans to deposits reflect a longer-term shift away from deposit funding. Although the level of these industry ratios is heavily influenced by larger banks, the trend toward lower deposit funding exists for both large banks and community banks and points to secular factors that are affecting banks' ability to raise deposits in step with asset growth.

¹ Defined here as banks with total assets of \$1 billion or less.

Trends in Household Wealth Accumulation

One factor affecting the ability of banks to attract deposits is the recent trend in the way households are amassing wealth. While the total wealth of U.S. households has soared in recent years because of unrealized capital gains on housing and investments, annual net purchases of new financial assets² by households as a percentage of disposable income have actually trended downward since the mid-1980s (see Chart 2, next page). A falling personal savings rate and fewer purchases of financial assets may suggest that households are more comfortable consuming a higher percentage of current income as long as capital gains are adding to their accumulated wealth. However, because households have been setting aside less of their current income for savings, the pool of new funds available to purchase bank deposits has been growing more slowly.

Higher-Yielding Investment Alternatives

At the same time that households have been setting aside less of their current income for savings, the share of total new household savings flowing into bank deposits has declined in the 1990s as competition from higher-yielding alternatives has increased. During the 1980s, over 30 percent of the cumulative net increase in

² Financial assets are defined as deposits, money market and mutual fund shares, credit market instruments, corporate equities, life insurance reserves, pension fund reserves, and trust reserves.

CHART 1

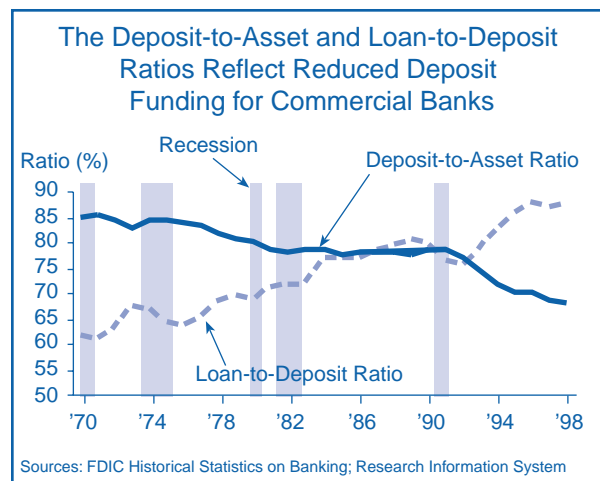
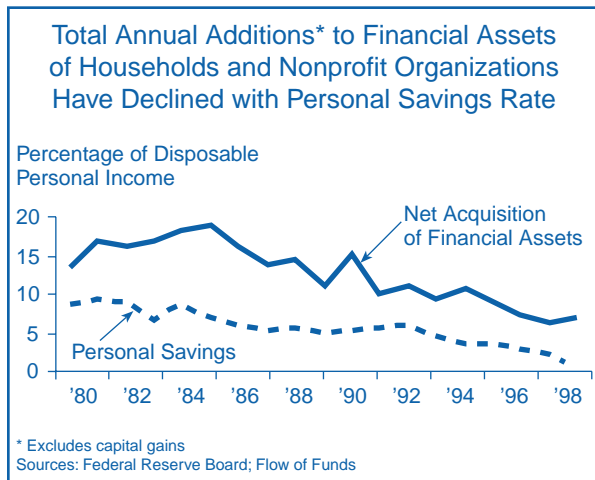


CHART 2



financial assets by households and nonprofit organizations flowed into deposits. In contrast, less than 15 percent of the cumulative net increase in financial assets has flowed into deposits during the 1990s, although an increasing proportion has been allocated to deposits in recent years.

Not only do banks face intensifying competition from other banks and thrifts, as indicated by 66 percent of the respondents in *Grant Thornton's 1999 Sixth Annual Survey of Community Bank Executives*,³ but they also

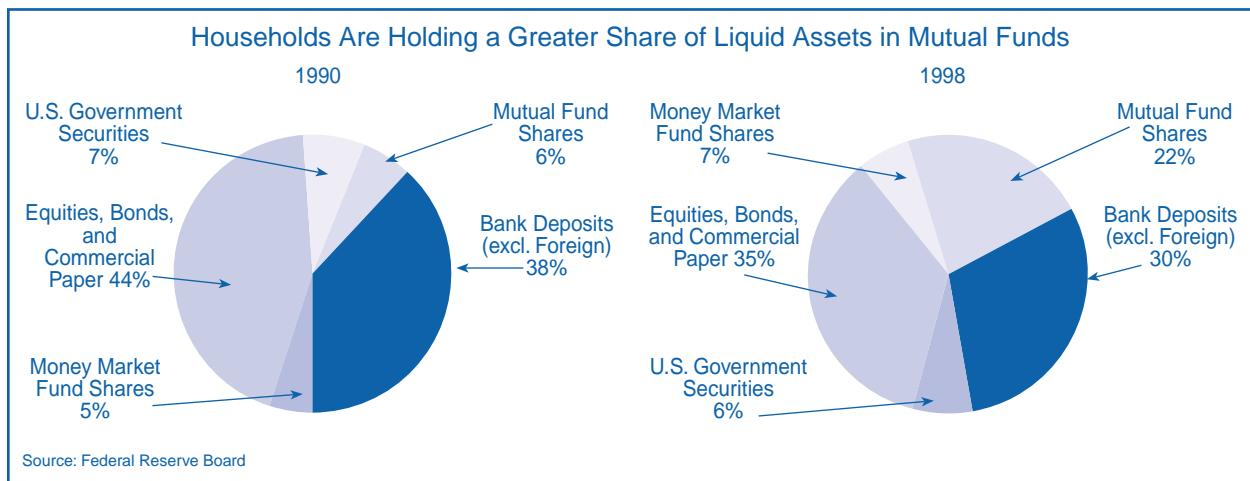
³ Grant Thornton's 1999 Sixth Annual Survey of Community Bank Executives, "Community Banks: A Competitive Force," <http://www.grantthornton.com/resources/finance/banksurvey99/survey99w.html>.

face increasing competition from mutual funds and other nonbank financial service providers, such as credit unions.

Mutual Funds. Increasingly, consumers are pursuing higher yields by investing in mutual funds. Beyond yields, however, many mutual fund companies also are competing effectively with banks on the basis of convenience by offering money market accounts that allow check writing, automated teller machine cards, and check cards. Chart 3 shows the changes in the composition of household liquid assets during the 1990s. In 1990, bank deposits constituted 38 percent of households' liquid assets versus 11 percent for mutual funds and money market funds; at year-end 1998, the shares were nearly even. While some of the change in composition can be explained by rising mutual fund share prices, other measures indicate a shifting preference for mutual funds as a savings vehicle. For example, data from the *Investment Company Institute* show that net inflows into mutual funds have exceeded net increases in insured institution deposit accounts in all but three quarters during this economic expansion. Moreover, the first quarter of 1999 marked the seventeenth consecutive quarter that mutual fund inflows outstripped increases in deposits for all FDIC-insured institutions.

Credit Unions. In addition to mutual funds, credit unions also are formidable competitors for consumer savings. Membership in credit unions has increased more than 20 percent over the past decade, while deposits and share accounts have risen by over 90 per-

CHART 3



cent.⁴ Credit unions also offer federal insurance on share accounts as well as competitive rates on comparable deposit-type vehicles relative to other types of financial institutions. For example, according to information from the *National Credit Union Association*, on average, credit unions have offered rates on one-year share certificates in excess of one-year bank certificates of deposit in nine of the past ten years. As shown in Chart 4, average rates paid by credit unions on one-year share certificates over the 12 months ending May 1999 were consistently higher than rates offered by banks or thrifts and approached retail rates offered by brokerages.

Demographic Shifts

Some analysts maintain that rural community banks face additional funding challenges as a result of demographic shifts. According to the *Federal Reserve Bank of Kansas City*, rural bankers perceive that sluggish deposit growth is at least partially attributable to the migration of deposits to cities as urban-dwelling heirs of rural depositors relocate funds. While evidence for this deposit migration remains anecdotal, economists at the Federal Reserve Bank of Kansas City indicate that the demographic shift is still in process, and its full effect may not be felt for some time. Further challenging deposit growth for banks, additional evidence suggests that urban dwellers tend to place less of their

savings in banks than their rural counterparts do.⁵ This trend poses additional consequences for bank deposits as rural populations migrate to suburban areas.

Community Bank Funding Trends

Community banks traditionally rely more heavily upon core deposit funding than larger banks do. For example, Chart 5 (next page) shows that 72 percent of aggregate community bank assets were funded with core deposits at year-end 1998. In contrast, 43 percent of aggregate large bank assets at year-end 1998 were funded with core deposits. This difference in liability structures reflects large banks' broader use of wholesale funding alternatives and greater access to capital markets instruments.

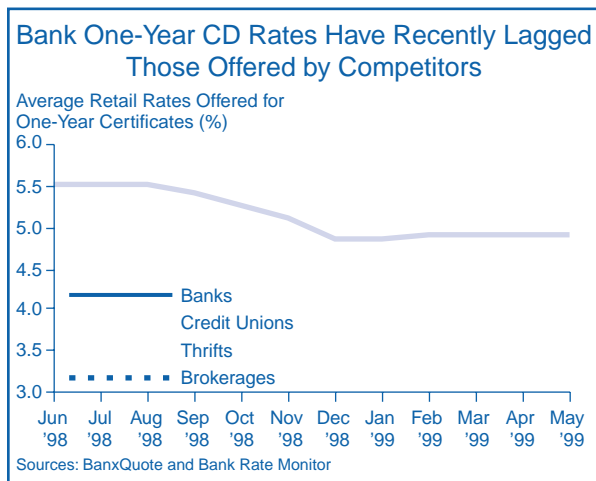
While large banks have responded to factors influencing deposit growth by making greater use of alternative funding sources, funding options for community banks tend to be more limited.



Because of high fixed costs, community banks may find it more difficult than larger institutions to make cost-effective use of capital market instruments such as securitizations or public debt and equity offerings (see *"Industry Consolidation Presents Unique Risks and Challenges for Community Banks," Regional Outlook, Fourth Quarter 1998*, for a discussion of additional non-deposit funding sources for community banks).

⁴ Center for Credit Union Research, "Credit Union FAQ," <http://wiscinfo.doit.wisc.edu/bschool/cu/cufaq.html>.

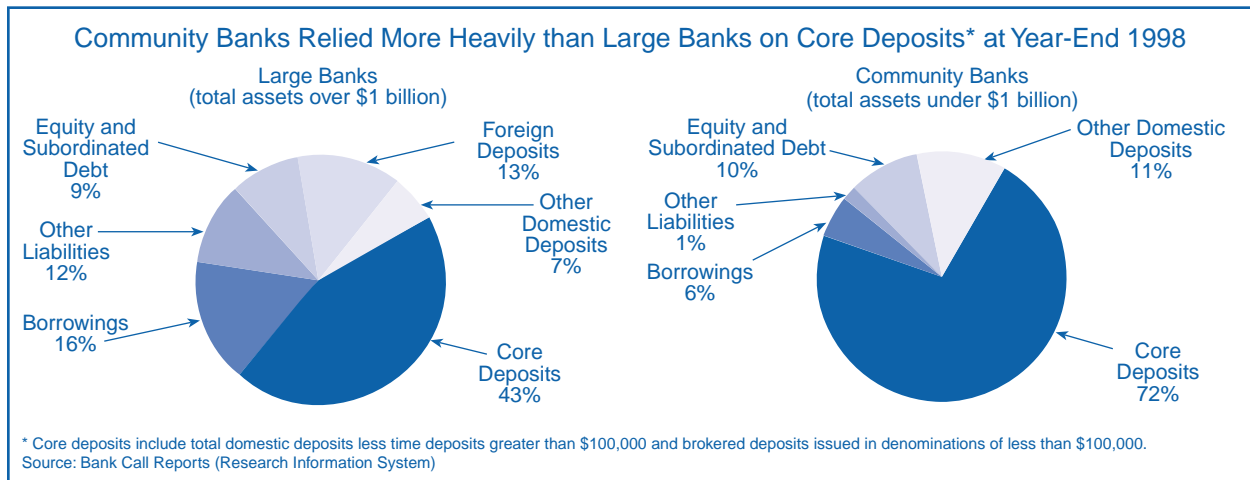
CHART 4



The need to augment lagging deposit growth to meet loan demand has led many community banks to acquire more noncore funds. These funds include time deposits greater than \$100,000, borrowings, foreign deposits, brokered deposits, and demand notes. At year-end 1998, nearly 75 percent of community banks held noncore liabilities representing 10 percent or more of total liabilities. As recently as 1993, only 42 percent of community banks exceeded that threshold. Moreover, over the same five-year period, the ratio of core deposits (defined here as total deposits less time deposits greater than \$100,000 and brokered deposits) to total deposits for all community banks declined each quarter.

⁵ William R. Keeton, Federal Reserve Bank of Kansas City. "Are Rural Banks Facing Increased Funding Pressures? Evidence from Tenth District States." *Economic Review*, Second Quarter 1998, p. 56. Also see "Regional Banking," *Regional Outlook, Kansas City Edition*, Second Quarter 1998, p. 24.

CHART 5



As community banks' use of noncore funds has increased, they are relying more on federal funds purchased, repurchase agreements, other borrowings, demand notes, and mortgages (collectively referred to as borrowings). After adjusting for mergers, borrowings funded 12 percent of new community bank asset growth from 1992 through 1998—three times more than the percentage of new asset growth funded by borrowings from 1985 to 1990. Possibly reflecting a shift toward greater acceptance of wholesale funding by community bankers, growth in borrowings has been largely driven by increased use of nonovernight borrowings,⁶ which have become the dominant form of borrowings at community banks. As shown in Chart 6, the proportion of community banks reporting nonovernight borrowings has doubled in the 1990s. This trend coincides with growing community bank membership in the Federal Home Loan Bank (FHLB) system and increasing use of FHLB borrowings.

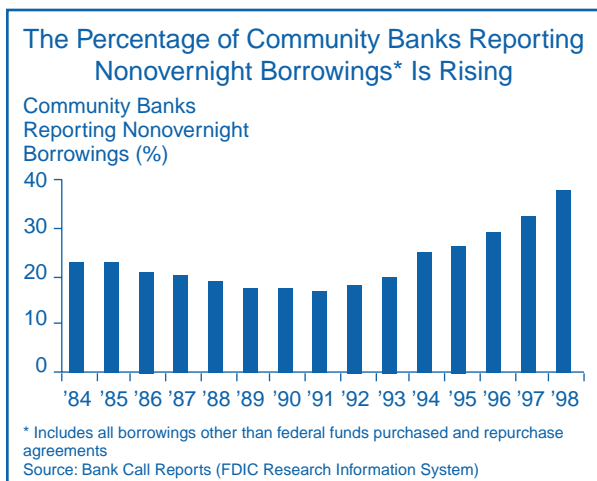
Federal Home Loan Bank Membership

Over the past five years, community banks have substantially increased their membership and participation in the FHLB system. According to data from the *Federal Housing Finance Board*, for the five-year period ending in 1998, the percentage of FDIC-insured community banks that were members of the FHLB more than doubled to 50 percent. Over the same period, FHLB advances outstanding for community banks grew by more than 50 percent to \$47 billion. At year-end 1998,

FHLB advances represented approximately 80 percent of all nonovernight borrowings for community banks.

Analysts have cited a number of reasons why community banks are joining the FHLB system. Community banks are using FHLB advances to meet contingent liquidity needs, manage interest rate risk, fund new asset growth, and leverage capital to maintain or boost returns on equity. Recent surveys indicate that FHLB advances will continue to have a role in community bank liability management. Almost one-half of respondents to *Grant Thornton's 1999 Annual Survey of Community Bank Executives* considered FHLB borrowings an important funding source over the next three years, and 43 percent plan to increase the use of FHLB advances in 1999. Similarly, the *American Bankers Association's 1999 Community Bank Competitiveness*

CHART 6



⁶ Nonovernight borrowings are defined here as all borrowings other than federal funds purchased and repurchase agreements.

*Survey*⁷ reported that FHLB advances are the preferred nontraditional funding product. In addition, legislative changes enacted in third-quarter 1998 have eased membership requirements for banks with assets less than \$500 million, significantly increasing access to FHLB advances for smaller banks in rural areas.

Implications of Funding Trends for Community Banks

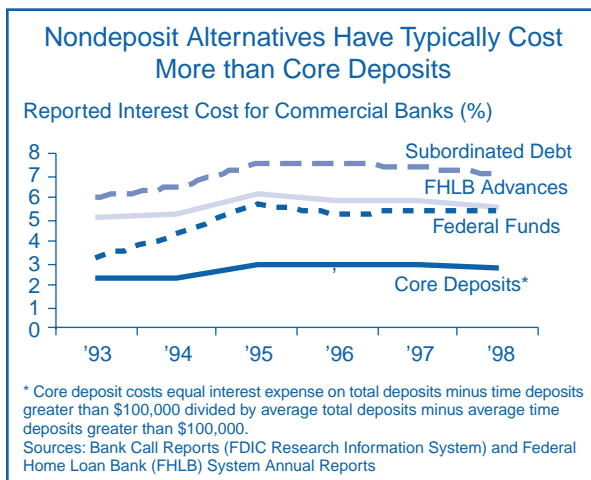
According to community banker opinion surveys, the trend toward greater reliance on noncore or alternative funding sources appears likely to continue. *Grant Thornton's 1999 Annual Survey of Community Bank Executives* found that 75 percent of community bankers expect funding with core deposits to be more difficult in three years than it is today. Moreover, more than 20 percent of community bankers responding to the *American Bankers Association's 1999 Community Bank Competitiveness Survey* do not expect to derive the bulk of their funding from deposits five years from now. Liability management is an important aspect of a bank's operations and a key driver of interest expense. Responses to funding challenges will likely influence strategic business decisions that shape the risk profiles of insured institutions, particularly community banks that historically have relied more heavily upon core deposits to fund asset growth and net interest income for profitability.

A fundamental challenge that confronts bank management is the strategic response to the increased costs associated with wholesale funding sources. As shown in Chart 7, the reported interest costs of nondeposit funding alternatives, such as federal funds purchased and repurchase agreements, subordinated notes, and FHLB advances, have traditionally exceeded the interest cost of core deposits for commercial banks. Therefore, as institutions that have typically relied upon core deposits increase the use of nondeposit sources, funding costs will likely rise relative to asset yields. As a result, net interest margins (NIMs) may be pressured.

To some extent bank managers may be able to offset the higher interest costs of wholesale funding strategy by improving efficiency through greater management of overhead expenses and increases in noninterest income. However, community banks face challenges to their ability to increase noninterest income (see "*Industry Consolidation Presents Unique Risks and Challenges*

⁷ *ABA Banking Journal*, February 1999, p. 30.

CHART 7



for Community Banks," *Regional Outlook*, Fourth Quarter 1998), and there are limits to cost cutting. If banks are unable to fully offset higher funding costs with increases in noninterest income or reductions in noninterest expenses, overall profitability could suffer. Community bankers in the upper Midwest expressed this concern in a 1998 survey conducted by *The Federal Reserve Bank of Minneapolis*, which found that 57 percent of respondents expect the shift away from deposit funding to decrease bank profitability.⁸ As bank managers search for additional ways to offset the relative rise in funding costs, they may be tempted to increase asset yields by pursuing additional portfolio risk, in the form of credit or market risk, to generate higher asset yields.

Funding challenges also could alter the liquidity and interest rate risk positions of community banks. The relative complexity and volatility of some nondeposit sources require greater expertise and attention to asset-liability policies and practices to avoid unexpected liquidity strains or exposures to changing interest rate environments. Strategies that result in the pledging of liquid assets, overreliance on purchased funds, or concentrations in price-sensitive long-term assets could adversely affect a bank's relative liquidity or interest rate risk position. Moreover, interest rate risk management can be further challenged by the complexity of nondeposit funding sources. For instance, some FHLB advances may contain embedded options that required greater expertise and attention to policies and practices that, if not managed properly, could lead to undesirable outcomes if interest rates change adversely.

⁸ *Fedgazette*, July 1998, p. 2.

In Focus This Quarter

Differences between Community Banks with High and Low Levels of Core Deposit Funding

To evaluate how a shift from a core deposit funding strategy might change the profile of a community bank,

performance and condition measures for community banks that rely most heavily on core deposits were contrasted with those that are least reliant on core deposit funding. Table 1 compares 1998 funding, earnings, and asset performance measures for these community bank

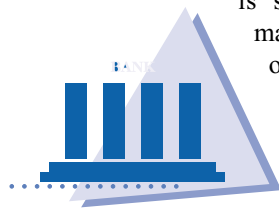
TABLE 1

COMPARISON OF BANKS WITH HIGH AND LOW LEVELS OF CORE DEPOSIT FUNDING						
	ALL COMMUNITY BANKS¹		COMMUNITY BANK AGRICULTURAL LENDERS²		COMMUNITY BANK COMMERCIAL LENDERS³	
	HIGH CORE DEPOSIT FUNDING⁴	LOW CORE DEPOSIT FUNDING⁴	HIGH CORE DEPOSIT FUNDING	LOW CORE DEPOSIT FUNDING	HIGH CORE DEPOSIT FUNDING	LOW CORE DEPOSIT FUNDING
SELECTED AGGREGATE MEASURES						
NUMBER OF BANKS IN GROUP	405	405	106	51	126	185
MEDIAN TOTAL ASSETS (\$000s)	46,244	118,358	23,274	58,223	69,479	130,923
MEMBERS OF FHLB (%)	32.10	49.38	17.92	47.06	38.89	50.81
HAVE OUTSTANDING FHLB ADVANCES (%)	7.65	40.25	6.60	45.10	7.14	38.38
SELECTED MEDIAN LIQUIDITY AND FUNDING MEASURES (%)						
1998 GROWTH IN TOTAL ASSETS	9.02	11.16	5.96	6.42	12.75	18.50
1998 GROWTH IN TOTAL DEPOSITS	9.74	8.79	6.40	5.31	13.56	11.93
1998 GROWTH IN BORROWINGS	(50.00)	28.62	(64.49)	31.85	(51.87)	42.87
1998 GROWTH IN TOTAL EQUITY CAPITAL	5.93	7.53	3.46	5.39	9.94	8.85
TOTAL DEPOSITS-TO-TOTAL ASSETS RATIO	91.04	75.68	90.35	80.22	91.23	77.94
CORE DEPOSITS-TO-TOTAL ASSETS RATIO	87.29	53.87	87.10	55.81	87.21	54.03
BORROWINGS TO TOTAL ASSETS RATIO	0	9.58	0	4.15	0	8.55
TOTAL EQUITY CAPITAL TO TOTAL ASSETS RATIO	8.25	10.24	9.00	10.09	7.74	10.16
SELECTED MEDIAN PERFORMANCE RATIOS (%)						
RETURN ON EQUITY	12.65	10.19	11.10	10.93	14.49	9.52
RETURN ON ASSETS	1.07	1.04	1.01	1.19	1.10	0.92
NET INTEREST MARGIN	4.76	4.03	4.51	3.98	5.25	4.22
GROSS EARNING ASSET YIELD ⁵	8.17	8.02	8.24	7.89	8.45	8.26
COST OF FUNDING EARNING ASSETS ⁶	3.33	4.07	3.74	4.05	3.21	4.05
NONINTEREST INCOME TO AVERAGE ASSETS	0.76	0.61	0.59	0.44	1.01	0.64
NONINTEREST EXPENSE TO AVERAGE ASSETS	3.49	2.90	3.23	2.40	3.99	3.12
EFFICIENCY RATIO ⁷	69.01	63.68	68.59	57.48	68.99	67.00
SELECTED MEDIAN CREDIT QUALITY MEASURES (%)						
NONPERFORMING ASSETS TO TOTAL ASSETS RATIO	0.39	0.44	0.40	0.51	0.46	0.61
NONCURRENT LOANS TO TOTAL LOANS RATIO	0.53	0.72	0.53	1.02	0.52	0.77
NET LOAN CHARGE-OFF RATIO	0.11	0.12	0.04	0.15	0.14	0.11
1998 GROWTH IN NONPERFORMING ASSETS	(9.10)	7.50	10.57	11.79	(17.32)	23.97
1998 GROWTH IN NET LOAN LOSSES	6.09	10.24	(3.90)	23.73	9.59	30.64

¹ COMMUNITY BANKS ARE BANKS WITH \$1 BILLION OR LESS IN TOTAL ASSETS.
² AGRICULTURAL LENDERS ARE BANKS WITH 25 PERCENT OR MORE OF ASSETS IN AGRICULTURAL REAL ESTATE LOANS OR AGRICULTURAL PRODUCTION LOANS.
³ COMMERCIAL LENDERS ARE BANKS WITH 25 PERCENT OR MORE OF ASSETS IN COMMERCIAL AND COMMERCIAL REAL ESTATE LOANS.
⁴ HIGH CORE DEPOSIT FUNDING GROUP IS COMPOSED OF COMMUNITY BANKS WITH CORE DEPOSITS-TO-ASSETS RATIOS IN THE TOP 5 PERCENT OF ALL COMMUNITY BANKS, EXCLUDING THOSE WITH EQUITY-TO-ASSETS RATIOS IN EXCESS OF 25 PERCENT. THE LOW CORE DEPOSIT FUNDING GROUP IS COMPOSED OF COMMUNITY BANKS WITH CORE DEPOSITS-TO-ASSETS RATIOS IN THE BOTTOM 5 PERCENT OF ALL COMMUNITY BANKS.
⁵ GROSS EARNING ASSET YIELD EQUALS INTEREST INCOME DIVIDED BY AVERAGE EARNING ASSETS.
⁶ COST OF FUNDING EARNING ASSETS EQUALS INTEREST EXPENSE DIVIDED BY AVERAGE EARNING ASSETS.
⁷ EFFICIENCY RATIO EQUALS NONINTEREST EXPENSE DIVIDED BY THE SUM OF NET INTEREST AND NONINTEREST INCOME.
 FHLB = FEDERAL HOME LOAN BANK
 SOURCES: BANK CALL REPORTS (RESEARCH INFORMATION SYSTEM); FEDERAL HOUSING FINANCE BOARD

groups. High core deposit funders are defined as those community banks with core deposit-to-asset ratios in the top 5 percent of all community banks at year-end 1998. Low core deposit funders are those community banks with a core deposit-to-asset ratio in the bottom 5 percent.⁹ A similar comparison is included for agricultural banks and commercial lending specialists, which combined make up roughly 60 percent of each of the total community bank funding groups.

This comparison reveals several differences. First, a tradeoff between heavy reliance on core funding and asset growth is evident. Median measures for the groups indicate that the typical bank that relies less on core deposit funding is larger and growing faster than the typical bank in the high core funding group. Second, less core deposit funding appears to be associated with a lower NIM, primarily the result of higher funding costs.



However, overall profitability is similar between the groups mainly because of a lower ratio of overhead expenses to average assets for the low core funders. These characteristics are also evident across the agricultural and commercial specialists groups.

Asset quality indicators suggest that the low core funding groups may exhibit greater credit risk. Although higher asset yields resulting from increased portfolio risk are not evident, median measures for each low core funding group reflect higher levels of noncurrent loans and higher growth in nonperforming assets and net loan losses relative to its high core funding group counter-

part. For example, the median growth in nonperforming assets for commercial lending specialists with less reliance upon core deposits was nearly 24 percent in 1998 versus a 17 percent decline for the high core funding group.

Summary and Conclusions

Commercial banks have been experiencing a long-term trend toward lower deposit funding of loans and assets. Increasing competition among banks and from thrifts, nonbanks, and higher-yielding investment alternatives has made it more difficult and expensive for some banks to attract deposits in step with asset growth. While some nondeposit funding alternatives may provide a stable source of funds for insured institutions (especially those located in areas characterized by aggressive competition and slow deposit growth), better matching of asset cash flows, and greater flexibility in asset-liability management, they also may pose certain risks. To some extent community banks may be able to manage noninterest expense and noninterest income to offset the relative increase in interest expense incurred to acquire nondeposit funding sources. However, if overall profitability suffers, banks may be tempted to pursue additional portfolio risk to generate higher offsetting asset yields. As a result, liability management may become more challenging for community banks that have historically relied upon deposits for funding and net interest revenues for profitability. In addition, the complexity of some nondeposit funding sources requires greater expertise and attention to policies and practices to avoid unexpected liquidity strains or exposures to changing interest rate environments.

*Allen Puwalski, Senior Financial Analyst
Brian Kenner, Financial Analyst*

⁹ These groups exclude community banks with equity-to-asset ratios greater than 25 percent.

Regional Perspectives

- Despite a modest slowing combined with specific concerns in the manufacturing and agriculture sectors, the San Francisco Region's economy continued to expand faster than the nation's economy.
- Most insured financial institutions in the Region continued to report healthy financial conditions. However, stresses are apparent in the Region's farm banks,¹ particularly in Montana, where almost 7 percent of the agricultural loans are past due.
- The gap between loan and core deposit growth in the Region's insured financial institutions has led some institutions to increase their reliance on noncore funding.² This strategy may create new challenges for managing liquidity, interest rate, and operational risks.

Regional Economic and Banking Conditions

The Region's Economic Growth Outpaced the Nations' through May 1999, but Concerns in the Manufacturing and Agriculture Sectors Remain

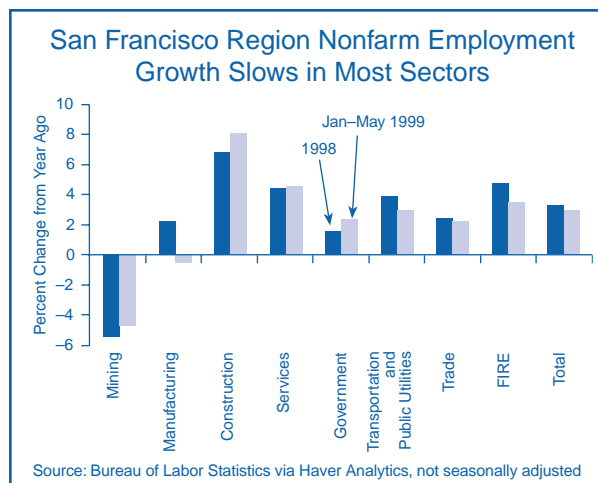
Employment growth in the San Francisco Region slowed modestly during the first five months of 1999 relative to the same period in 1998,³ partly because of a weakening in **California's** manufacturing sector. Despite this slowdown, the Region's employment growth rate exceeded the nation's during this period as a result of solid performances in the construction, government, and services sectors. Specifically, employment growth rates in **Nevada, Idaho, and Oregon** were stronger in 1999 than in 1998, while **Montana** saw moderate nonfarm job growth. However, several states in the Region experienced a weakening in job growth, including California, **Arizona, Washington, Utah, Alaska, and Wyoming.** The labor markets in these six states account for about 80 percent of the Region's nonfarm employment. Employment growth in **Hawaii** remained relatively soft through May 1999 but showed only a modest decline from year-earlier levels.

Various measures illustrated the Region's modest economic deceleration in the first five months of 1999. Declines in manufacturing and mining were evident but were nearly offset by gains in the construction, govern-

ment, and service sectors, which were outpacing 1998 growth rates through May 1999 (see Chart 1). In addition, movement of per capita personal income levels appeared to indicate a slowing in the Region's growth rate. Finally, the pace of single-family housing permit issuance slowed in eight of the Region's states in early 1999, suggesting that the advance in residential construction in the Region also had weakened since the beginning of the year.

The Region's economy has been adversely affected by a sharp slowdown in manufacturing employment growth as well as declines in agriculture owing to weak commodity prices. Oregon, Utah, Washington, and California continued to experience job losses in the manufacturing sector during the first five months of 1999 compared with the same period in 1998, while Arizona saw much slower growth in the sector. This

CHART 1



¹ An agricultural or farm bank is an insured institution with agriculture loans greater than 25 percent of total loans.

² Noncore funding sources include certificates of deposit greater than \$100,000, foreign deposits, federal funds purchased and repurchase agreements, all other borrowed money, and all deposits acquired through a deposit broker.

³ Growth rates are computed using data that are not seasonally adjusted, year-to-date averages unless otherwise noted.

Regional Perspectives

slowdown was most likely due to a general slowdown in export demand from Asia (see *Regional Outlook*, Second Quarter 1999). In addition, agribusiness in the Region felt the strain of very low commodity prices. For example, the average national price of wheat, one of the most important crops in the Region, fell from \$5.44 per bushel in 1996 to \$3.20 in 1998. This downward trend suggests potential for deterioration in Montana, Washington, and Idaho, the three states in the Region ranked in the top ten for wheat production nationally by the *United States Department of Agriculture (USDA)*. As of the first quarter of 1999, problems were most apparent in Montana's insured institutions in the form of rising delinquency rates on agricultural loans.

Year-end 1998 data show that the San Francisco Region continued to post relatively low levels of per capita personal income relative to the nation. Per capita personal income can serve as an indicator of an area's growth potential. As shown in the second column of Table 1, only three states—Washington, Arizona, and California—ranked higher than the national average in per capita personal income growth between 1997 and 1998. However, of particular note, Utah dropped below the U.S. rate of per capita personal income growth in 1998 after growing faster than the nation since 1995. The remaining seven states ranked in the lowest 20 percent of the nation in per capita personal income growth in 1998. Table 1 shows the ranking of states in the San Francisco Region by 1998 levels of per capita income.

Again, Washington ranked highest in the Region, suggesting that jobs created in the state (in fields such as aerospace and software) were more likely to generate higher average wage levels. It should also be noted that Hawaii ranked last in growth rate of per capita personal income and fell below the average national level of per capita personal income for the first time since 1959.

Preliminary permit data seemed to indicate that the Region's housing markets were also moderating. Housing permits issued during the year can serve as a leading indicator for trends in economic activity. For the first four months of 1999, total residential building permits in the Region increased only 3.6 percent over 1998 levels. Although housing permit issuance typically increases in the late spring and summer months, the growth rate for 1999 does not appear to be on pace with the 9.5 percent growth in 1998. California, Hawaii, and Wyoming were the only states to post increases in permits during early 1999. The seemingly large percentage increases in California and Hawaii may have been due, in part, to the fact that the two states were recovering from a lower base. Similarly, Wyoming's permit growth may have been misleading, given typically large fluctuations in year-to-date comparisons for that state. In other markets, such as Las Vegas, however, a gradual slowdown in housing markets might be beneficial, as the rate of household formation has been lagging new building during the past several years (see *Regional Outlook*, First Quarter 1999).

TABLE 1

PER CAPITA PERSONAL INCOME GROWTH WAS SLOW IN MOST OF THE REGION'S STATES				
	1998 PER CAPITA INCOME LEVEL	1997-98 % GROWTH RATE	NATIONAL RANK (1997-98 GROWTH RATE)	NATIONAL RANK (1998 LEVEL)
WASHINGTON	\$27,961	5.7	3	10
ARIZONA	\$23,060	4.8	13	35
CALIFORNIA	\$27,503	4.5	21	12
UTAH	\$21,019	4.1	31	45
OREGON	\$24,766	3.5	40	26
IDAHO	\$21,081	3.4	43	43
ALASKA	\$25,675	2.8	46	20
MONTANA	\$20,172	2.6	47	47
NEVADA	\$27,200	2.6	48	14
WYOMING	\$23,167	2.5	49	34
HAWAII	\$26,137	2.1	50	17
UNITED STATES	\$26,412	4.4		

SOURCE: BUREAU OF ECONOMIC ANALYSIS VIA HAVER ANALYTICS

Banking Conditions in the San Francisco Region Improve in 1999

Despite the San Francisco Region's slower economic growth in early 1999, insured institutions reported that return on assets (ROA) increased from 1.08 percent at year-end 1998 to 1.27 percent as of March 31, 1999. The first-quarter return tracks the national level and the Region's performance for the first quarter of 1998. Although profits throughout the Region continue to be pressured by a declining net interest margin (NIM), lower provision expenses for the allowance for loan and lease losses (ALLL) boosted profits at commercial banks. Improved profits at the Region's commercial banks offset a slight decline in the reported returns of savings institutions. In addition, the Region's insured financial institutions reported higher capital ratios and improved credit quality during the first quarter of 1999. However, asset quality declined at farm banks in several states, likely as a result of lower agricultural commodity prices. Furthermore, Hawaii's insured institutions continued to post improved, but below peer, returns because of the state's weak economy. Several of the Region's insured financial institutions, particularly mortgage lenders⁴ and rural community banks,⁵ are relying more heavily on noncore funding sources.

Low commodity prices and decreased exports have negatively affected the Region's farmers and farm banks, particularly those headquartered in Montana. ROA of the Region's 94 agricultural banks, with total assets of \$7.4 billion, dipped to 1.18 percent during the first quarter of 1999, lagging returns reported a year earlier (1.29 percent) and for the full year of 1998 (1.34 percent). As shown in Chart 2, past-due agricultural loans⁶ at these institutions continue to edge up and represent 5.23 percent of total agricultural loans. Chart 2 also shows that the ALLL coverage of noncurrent loans⁷ at the Region's agricultural banks has not kept pace with the rise in problem credits. While Chart 2 does show that these two ratios vary seasonally, the coverage ratio is lower than its March 1998 level, and the past-due

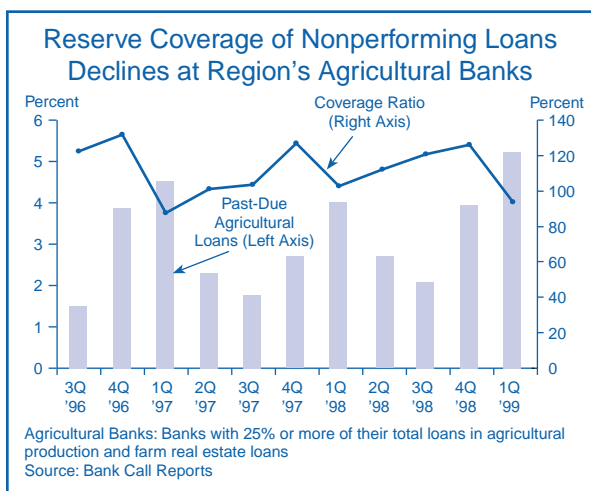
⁴ A mortgage lender is defined as any institution with more than 50 percent of total assets in residential mortgage loans or mortgage-backed securities.

⁵ A rural community bank is a commercial bank with total assets less than \$1 billion, not located in a metropolitan statistical area. Rural community banks exclude credit card, mortgage, consumer, and other specialty lenders, as well as Utah's Industrial Loan Companies.

⁶ Past-due agricultural loans are agricultural loans and leases 30 days and over past due plus agricultural loans on nonaccrual.

⁷ Noncurrent loans are loans 90 days and over past due plus loans on nonaccrual.

CHART 2



agricultural loan ratio is higher than its March 1997 levels. The deterioration in agricultural loan quality is significant for agricultural banks because agricultural loans represent, in aggregate, 42 percent of total outstanding loans at these institutions.

In Montana, where over 50 percent of the Region's farm banks are headquartered, total past-due agricultural loans at these banks accounted for 6.99 percent of the total outstanding agricultural loans as of March 31, 1999. In the aggregate, Montana's farm banks have the Region's highest agricultural loan past-due ratio. This ratio also substantially exceeds the past-due agricultural loan ratio of 4.28 percent at peer institutions nationwide as of March 31, 1999. In addition, the ALLL coverage of noncurrent loans and leases in Montana's agricultural banks continues to decline. In fact, during the first quarter, the coverage ratio in Montana's agricultural banks declined to 71 percent. Not only is this ratio the lowest statewide coverage ratio of peer institutions in the San Francisco Region, but it is also well below the aggregate average coverage ratio of 120 percent for all agricultural banks nationwide.

Although improving, banking performance in Hawaii's 14 financial institutions, with total assets of almost \$31 billion, continues to be hampered by Hawaii's subpar economic performance and poor real estate market, as well as lingering effects of the Asian economic crisis. The annualized ROA for the first quarter of 1999 for all insured Hawaiian institutions rose to 0.98%, but remains well below the nation's and the Region's ROAs of 1.27 percent. Hawaii's community banks appear to be improving but continue to fare worse than the state's larger financial institutions, primarily because of their lack of

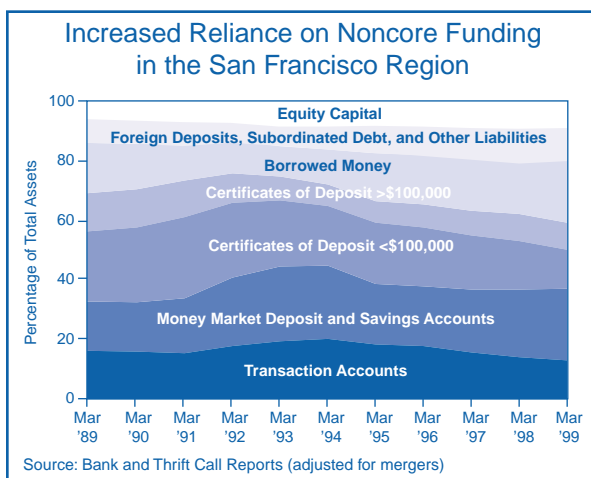
Regional Perspectives

geographic diversification. Combined ROA at community banks increased to 0.70 percent as of March 31, 1999, after falling to a low of 0.22 percent at year-end 1998. Although some progress is noted in asset quality, in aggregate, the community bank past-due ratio remains the highest in the Region at 5.5 percent and is more than double the Region's and the nation's peer institution past-due ratio of 2.4 percent at March 31, 1999.

Over the past several years, the Region's strong economy has stimulated credit demand throughout the majority of the Region's states. Rapid loan growth in many of the Region's institutions is occurring during a time when traditional, low-cost core deposits⁸ have become more difficult to acquire. As shown in Chart 3, noncore funding sources, particularly borrowings, have comprised an increasing share of total assets since 1992, when much of the Region began to emerge from the 1990–91 recession. Noncore funds now account for a

⁸ Core deposits are defined as all transaction accounts, money market deposit accounts, savings accounts, and certificates of deposit less than \$100,000.

CHART 3



higher percentage of the Region's total assets than at any time in the past ten years. While increases in noncore funding are evident in most of the Region's insured institutions, the rise in noncore funding is particularly evident in the Region's mortgage lenders and rural community banks.

San Francisco Region Institutions Alter Their Funding Strategies

National macroeconomic forces, such as higher relative yields in the stock market, lower consumer savings rates, and increasing competition from non-FDIC-insured financial service providers, have created a noticeable gap between core deposit and loan growth in FDIC-insured financial institutions (see *Shifting Funding Trends Pose Challenges for Community Banks*, page 11). Additionally, during this expansion, federal legislation has allowed smaller commercial banks with residential mortgage loans to gain access to wholesale funding sources that were previously available only to large commercial banks and savings banks.

Mortgage Lenders: Profitability Pressure and Increasing Reliance on Borrowings

The most noteworthy change in funding strategy has occurred among the Region's mortgage lenders, which held over 33 percent of the Region's total assets as of March 31, 1999. As shown in Table 2 (next page), the Region's mortgage lenders have significantly increased their loan-to-deposit ratios and use of noncore funds. Of particular note is mortgage lenders'

increased reliance on other borrowings, which has coincided with a material drop in the percentage of assets funded with retail certificates of deposit (CDs).⁹ While the trend toward increased reliance on borrowing is particularly pronounced among the Region's mortgage lenders with total assets greater than \$1 billion, the trend is also evident among the Region's smaller mortgage lenders.

While several macroeconomic forces and industry trends may explain the increased use of borrowings and reduced emphasis on retail CDs among the Region's mortgage lenders, pressure on earnings—attributable to a relatively flat yield curve from 1990 to 1998—appears to be the main reason. Charts 4 through 6 show that mortgage lenders' net interest margins are particularly sensitive to the direction of interest rate movements and changes in shape of the yield curve; these charts also show that non-mortgage lenders' net interest margins have been essentially flat since 1990. Chart 4 (next page) shows that mortgage lenders benefited from falling interest rates and the steepening yield curve,

⁹ Retail CDs are CDs in denominations of less than \$100,000.

Regional Perspectives

TABLE 2

MORTGAGE LENDING SPECIALISTS DRAMATICALLY CHANGE THEIR LIABILITY STRUCTURE												
YEAR	MORTGAGE LENDING SPECIALISTS						OTHER INSTITUTIONS					
	MAR 94	MAR 95	MAR 96	MAR 97	MAR 98	MAR 99	MAR 94	MAR 95	MAR 96	MAR 97	MAR 98	MAR 99
LOANS TO DEPOSITS	96.3%	103.6%	108.0%	115.3%	121.5%	131.9%	76.78%	84.27%	82.84%	82.94%	84.20%	84.52%
RETAIL CDs/TA	34.6%	35.1%	32.4%	30.3%	24.1%	16.0%	16.08%	17.26%	17.99%	17.39%	16.82%	15.41%
BORROWINGS/TA	16.6%	22.9%	25.8%	27.5%	31.2%	39.6%	8.54%	11.14%	10.11%	8.30%	8.36%	9.02%
NONCORE FUNDS/TA	26.3%	32.4%	35.8%	37.7%	41.6%	49.7%	17.81%	21.80%	21.29%	20.76%	21.32%	22.31%
ADJUSTABLE-RATE MORTGAGES/TA	39.60%	42.55%	41.21%	44.22%	41.01%	34.20%	7.08%	8.75%	7.28%	6.35%	5.71%	4.55%
MORTGAGE-BACKED SECURITIES/TA	15.31%	18.70%	20.07%	17.94%	19.60%	25.69%	10.83%	9.57%	8.70%	7.90%	7.37%	8.32%

NOTES: TA=TOTAL ASSETS
MORTGAGE LENDERS INCLUDE ANY INSTITUTION WITH 50% OR MORE OF TOTAL ASSETS IN RESIDENTIAL MORTGAGE LOANS OR MORTGAGE-BACKED SECURITIES.
OTHER INSTITUTIONS ARE THOSE INSURED INSTITUTIONS THAT ARE NOT MORTGAGE, CREDIT CARD, OR INTERNATIONAL LENDERS.
SOURCE: BANK AND THRIFT CALL REPORTS (ADJUSTED FOR MERGERS)

denoted by the movement from yield curve A to B, from 1990 through 1993. Mortgage lenders, however, were hurt significantly by rising interest rates and the flattening yield curve from 1993 through 1995, denoted in Chart 5 as the movement from yield curve B to C. Margins have not materially changed, although interest rates fell, from 1995 through 1998 because of the almost parallel downward shift in the yield curve, shown by the movement from C to D in Chart 6. According to *Thrift Investor*, profits have been squeezed in this flattened yield curve and stagnant NIM environment because of borrowers' preferences for fixed-rate loans—which mortgage lenders generally sell to the secondary market for interest rate risk purposes. This interest rate environment also makes the origination and retention of adjustable-rate mortgages more difficult.

Although the flattened yield curve has made generating earnings growth more challenging for the Region's mortgage lenders, it also has presented unique funding opportunities, particularly for mortgage lenders that are members of the Federal Home Loan Bank (FHLB) system. When the yield curve is flat, longer-term borrowings are increasingly competitive with shorter-term funding options. Research reports from several brokerage houses, including *Morgan Stanley Dean Witter* (November 1998 and April 1999), *JP Morgan* (March 1999), and *Lehman Brothers* (April 13, 1999), suggest that some of the Region's larger mortgage lenders may be replacing higher cost retail CDs with borrowings. Anecdotal evidence suggests that some smaller mortgage lenders also have used this strategy.

CHART 4

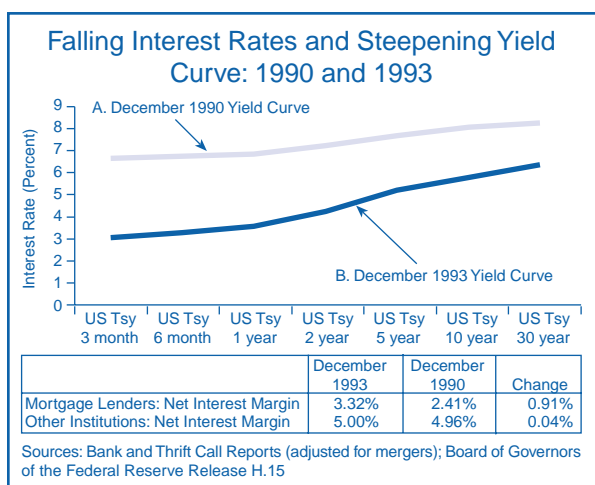
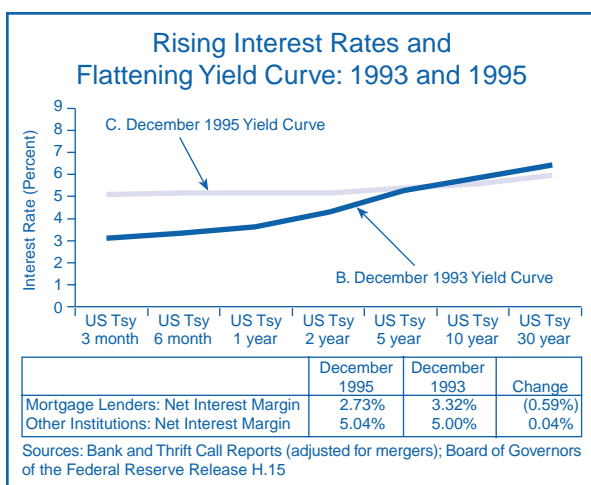


CHART 5



Profitability pressures that some mortgage lenders have encountered have prompted them to increase financial leverage to improve return on equity and earnings per share. These leveraging strategies generally involve the borrowing of wholesale funds to purchase mortgage-backed securities, which are generally collateralized by fixed-rate mortgages previously sold into the secondary market. Brokerage house research reports suggest that such strategies have been more prevalent among the larger mortgage lenders in the Region, which have had problems generating asset growth because of high prepayment levels on their adjustable-rate mortgage portfolios. Table 2 supports the reports' conclusions and shows an increasing percentage of mortgage-backed securities on mortgage lenders' balance sheets since 1995, coinciding with increases in borrowings and declines in adjustable-rate mortgages during that time.

Implications: Many mortgage lenders in the Region have experienced profitability pressure because of a relatively flat yield curve, prompting changes in their funding patterns. In response, some of the Region's mortgage lenders appear to be increasing their reliance on borrowings at the expense of retail CDs. Industry experts suggest that some mortgage lenders, particularly larger ones, may be using leverage to generate asset growth and increase return on equity and earnings per share. These strategies, however, may result in increased levels of interest rate risk if potential maturity, interest rate index, or optionality mismatches are not properly addressed. Because of the sensitivity of mortgage lenders' net interest margins to interest rate changes, future changes in yield curve structure or the general level of interest rates may cause strategies that were profitable while the yield curve was flat to suddenly become unprofitable.

Funding Trends in the Region's Non-Mortgage Lenders—Important Differences Emerge in San Francisco Region Community Banks

Unlike the Region's mortgage lenders, non-mortgage lenders, with the exception of rural community banks, have not seen material increases in their loan-to-deposit ratios. In fact, deposit growth at community banks located in metropolitan areas has kept pace with loan growth. Conversely, community banks located in the Region's rural areas have seen a steady increase in their loan-to-deposit ratios (see Chart 7). Some economists have noted that the rise in rural banks' loan-to-deposit

CHART 6

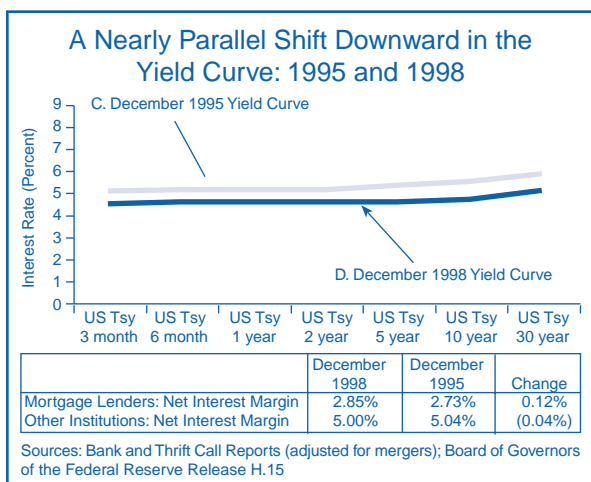
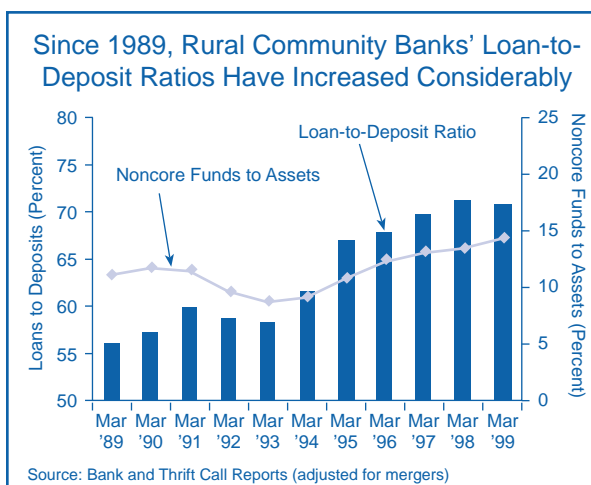


CHART 7

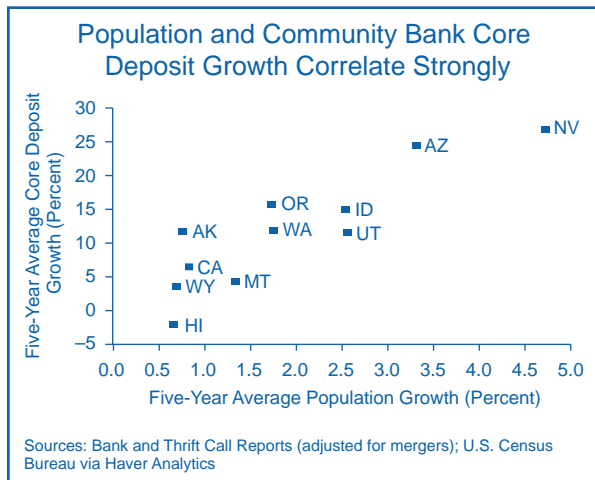


ratios does not represent a liquidity crisis but a return to normal levels after the rural lending slump of the 1980s. However, others suggest that the increase represents significant liquidity pressure that could force rural banks to curtail lending.¹⁰ In the San Francisco Region, loan-to-deposit ratios between metropolitan and rural community banks contrast sharply.

One explanation could be population growth. In the Region's faster growing states, such as Arizona and Nevada, population growth has occurred primarily in metropolitan areas, where essentially all of these states' community banks are located. The Region's slower growing states are either remotely located, such as

¹⁰ See William R. Keeton, "Are Rural Banks Facing Increased Funding Pressure? Evidence from the Tenth District States," Federal Reserve Bank of Kansas City, Economic Review, Second Quarter 1998.

CHART 8



Hawaii and Alaska, or largely rural, such as Montana and Wyoming. (The majority of Montana’s and Wyoming’s community banks, 88 percent and 82 percent, respectively, are located in rural counties.) Chart 8 shows that core deposit growth and population growth for the Region’s community banks appear strongly correlated. This finding coincides with the *July 1998 Federal Reserve Bank of Minneapolis FedGazette* article entitled “Declining Deposits...Is It All Bad News?” which stated, “The demographic trend of falling population will also make it hard for banks relying on local populations to fund through insured deposits.” This article notes declining population in

several rural counties in the Federal Reserve Bank of Minneapolis District, which includes Montana.

Faced with slower population growth and an increasing gap between loan and core deposit growth, the San Francisco Region’s rural community banks have relied increasingly on alternative funding sources. One source, the FHLB system, opened to commercial banks with the 1989 passage of the Financial Institutions Reform and Recovery Act. This legislation allowed commercial banks with at least 10 percent of their assets in residential mortgages and mortgage-backed securities to become FHLB members. Additionally, a recent change in the definition of a residential mortgage loan that allowed certain agricultural loans to qualify as collateral for FHLB advances permitted increased access to funds for more rural, agricultural community banks. As Table 3 shows, community banks in the San Francisco Region have increasingly become FHLB members and have increased their use of FHLB advances. Further, Map 1 (next page) shows that FHLB membership is higher, as a percentage of total banks, in the rural counties of Idaho, Montana, Oregon, Washington, and Wyoming than in the metropolitan counties.

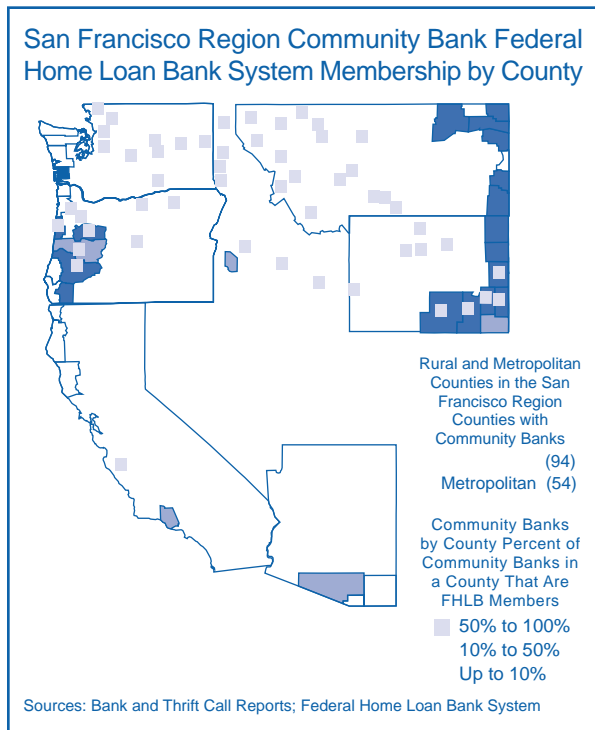
The change in the definition of qualified collateral for FHLB advances to include more agricultural credits has been particularly beneficial to Montana’s community banks, most of which are considered agricultural banks. These community banks, hard hit by problems in the

TABLE 3

COMMUNITY BANKS, ESPECIALLY IN MONTANA, RELY MORE ON FHLB BORROWINGS					
	DEC 95	DEC 96	DEC 97	DEC 98	MAR 99
SAN FRANCISCO REGION COMMUNITY BANKS					
FHLB MEMBERS	223	264	288	304	313
MEMBERS AS % OF BANKS	33%	41%	47%	52%	56%
BORROWINGS/ASSETS	2.57%	3.18%	3.08%	3.87%	3.55%
FHLB ADVANCES OUTSTANDING (000)	607,174	805,891	854,062	1,337,271	1,492,525
FHLB ADVANCES/OTHER BORROWINGS	60.53%	53.73%	53.10%	62.56%	76.15%
MONTANA COMMUNITY BANKS					
FHLB MEMBERS	36	42	44	45	49
MEMBERS AS % OF BANKS	37%	44%	47%	54%	59%
BORROWINGS/ASSETS	4.39%	5.10%	4.18%	4.66%	5.02%
FHLB ADVANCES OUTSTANDING (000)	30,723	64,880	84,663	133,469	152,573
FHLB ADVANCES/OTHER BORROWINGS	82.02%	94.92%	99.42%	98.54%	99.04%

NOTES: COMMUNITY BANKS INCLUDE ALL COMMERCIAL BANKS WITH TOTAL ASSETS LESS THAN \$1 BILLION, WITH THE EXCEPTION OF CREDIT CARD, CONSUMER, MORTGAGE, INDUSTRIAL LOAN COMPANIES, AND OTHER SPECIALTY LENDERS.
SOURCES: BANK CALL REPORTS; FEDERAL HOME LOAN BANK SYSTEM

MAP 1



agricultural sector, rely increasingly on FHLB advances for funding. Additionally, Montana's community banks, despite an average asset size of only \$65 million, are second only to Hawaii's community banks in the per-

centage of total assets funded with borrowings. The increase in FHLB advances outstanding at Montana's community banks, however, is not surprising given their rural location, the stress in the agricultural sector, and the change in the definition of a residential mortgage loan.

Implications: The increased reliance on noncore funding sources at community banks could increase these institutions' levels of liquidity, operational, and interest rate risk. In particular, reliance on any one funding source could present problems if the institution's financial condition deteriorates. The potential for an increase in liquidity pressure could be more relevant to the Region's rural community banks, which are experiencing increasing loan-to-deposit ratios and, in general, have more limited access to alternative funding sources than metropolitan community banks. Montana is a case in point, as stress in the agricultural sector has begun to erode some community banks' asset quality. Further, the level of operational risk could be heightened in the event that management of an insured financial institution is not familiar with how to use wholesale funding sources. Finally, wholesale funding sources also create new challenges in asset-liability and interest rate risk management.

*San Francisco Region Staff,
Norm Williams, Economist, Boston Region Office*

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