
◆ Regional Outlook ◆

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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

◆ **Regional Economic and Banking Conditions**—Employment growth remains stagnant, with slowing growth reported in most sectors other than the rapidly growing construction segment. The gaming industry also continues to expand. Within a generally weak manufacturing sector, the automobile industry is performing well, but rising gas prices could lead to slower sales for larger vehicles. Continuing weakness in the agricultural sector could affect agricultural lenders. Overall, banking conditions remain strong, although earnings performance continues to decline on lower net interest margins. *See page 18.*

◆ **Funding Issues**—Funding sources have changed as deposit growth has lagged loan growth during this expansion. Greater use of noncore funding sources appears to be one factor contributing to lower net interest margins. Such funding sources tend to exhibit greater volatility and carry higher interest costs than more traditional core funding sources. *See page 21.*

By the Memphis 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.

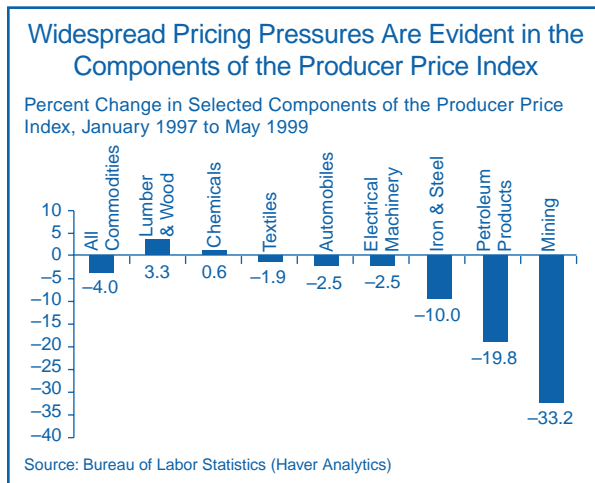
Prices Have Been Declining across a Range of Commodities and Manufactured Goods

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.

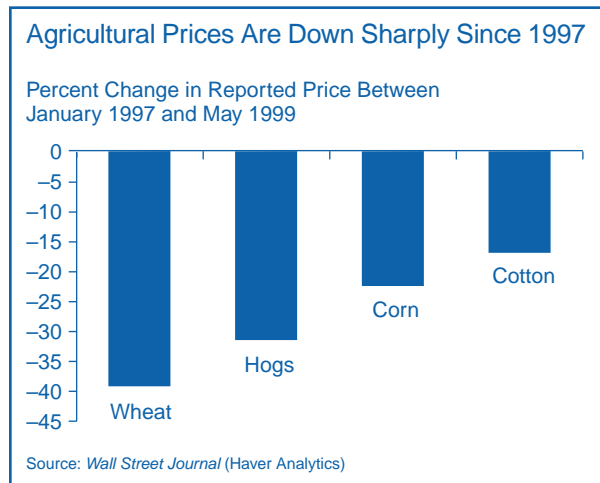
Reasons for Broad-Based Commodity Price Weakness

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.

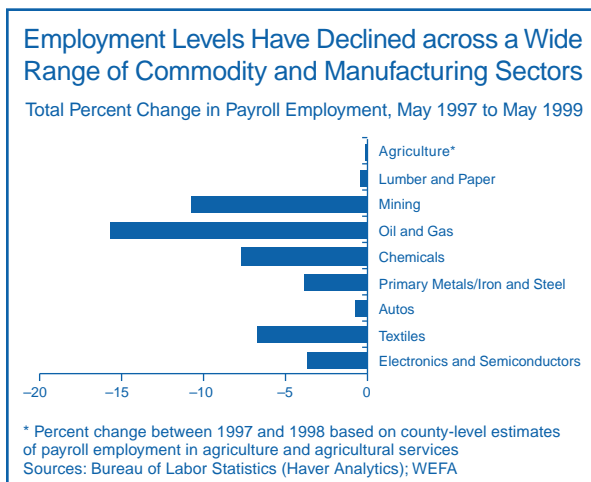
Recently, there have been signs that some hard-hit Asian economies may soon begin to recover. However, the other factors cited above—low inflationary expectations and rapid investment in productive capacity—may well be longer-term trends. In any event, U.S. farmers and businesses that participate in 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).

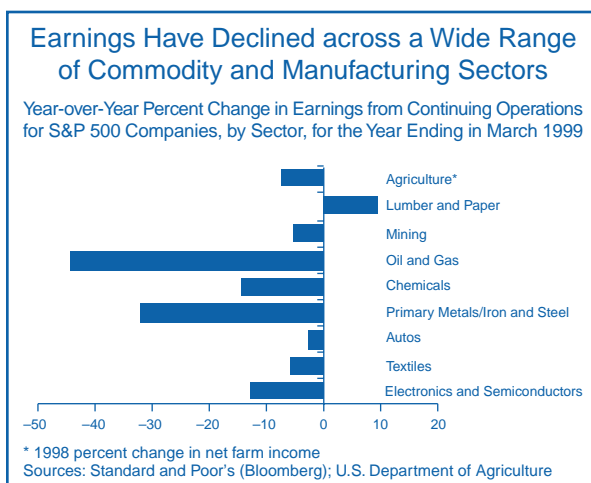
CHART 3



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



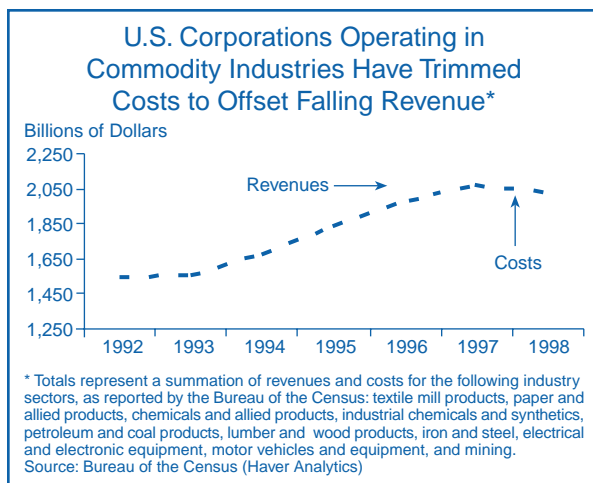
incomes fell by more than 7 percent in 1998, according to the *U.S. Department of Agriculture*.

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

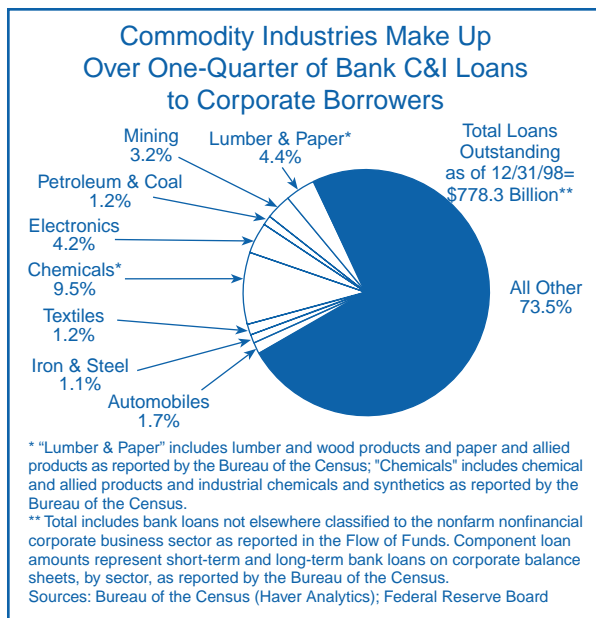
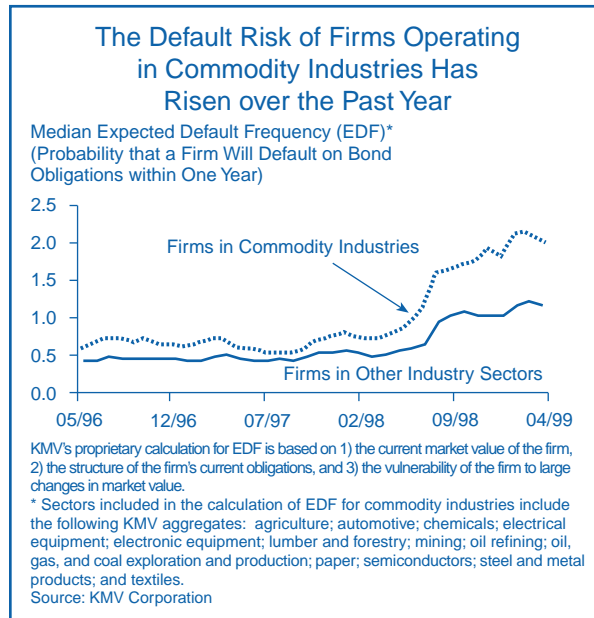


CHART 7



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

¹¹Counties 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

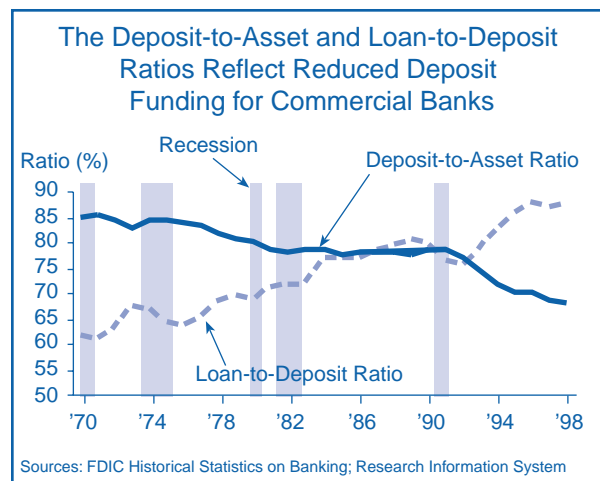
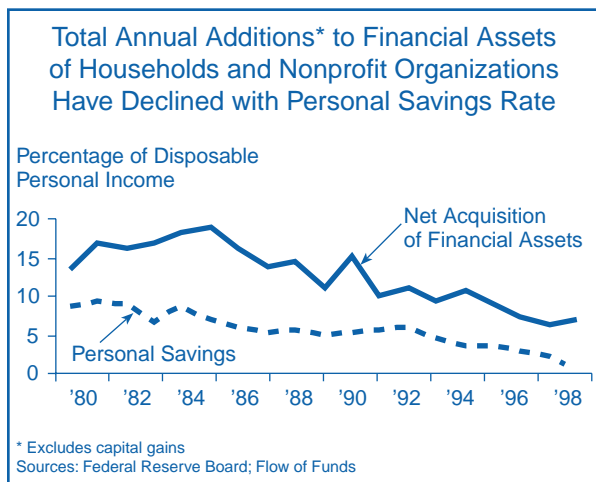


CHART 2



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

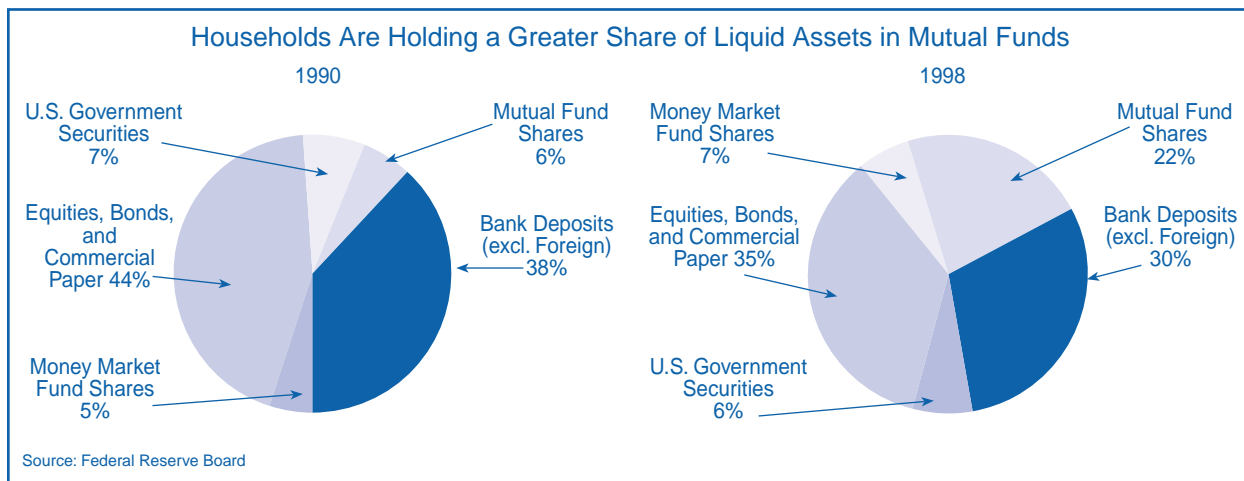
³ Grant Thornton's 1999 Sixth Annual Survey of Community Bank Executives, "Community Banks: A Competitive Force," <http://www.grantthornton.com/resources/finance/banksurvey99/survey99w.html>.

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.

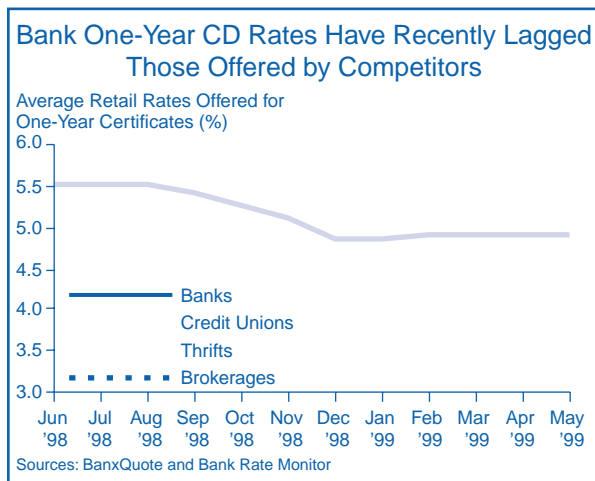
While large banks have responded to factors influencing deposit growth by making greater use of alternative funding sources, funding options for community banks tend to be more limited.



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>.

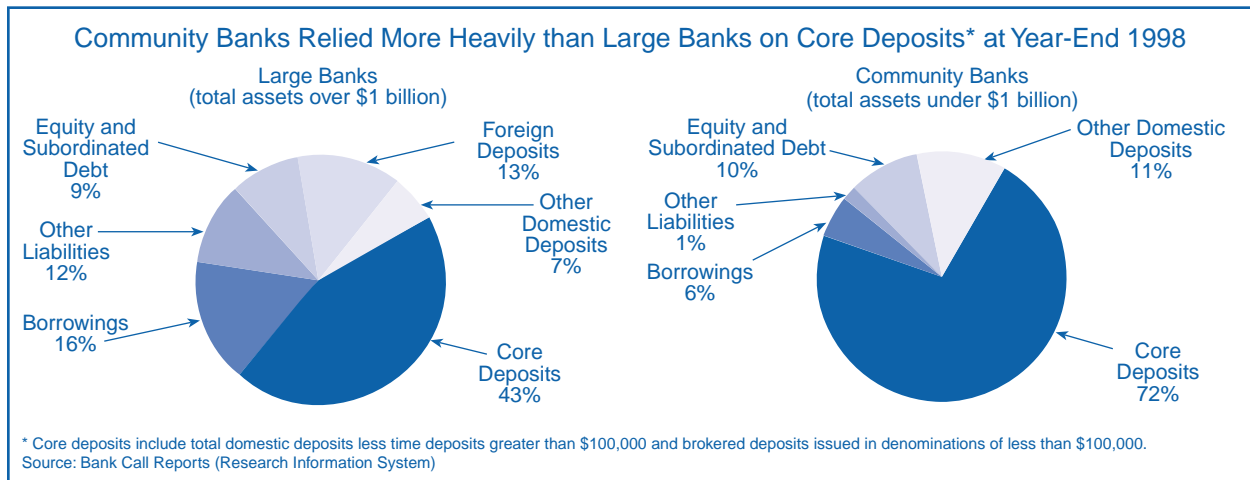
CHART 4



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.

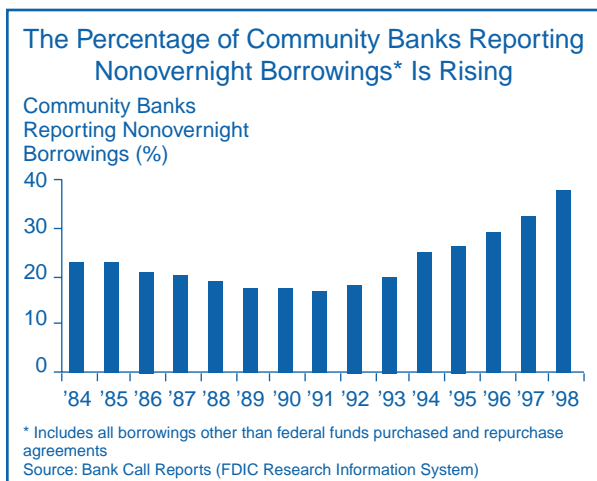
Federal Home Loan Bank Membership

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

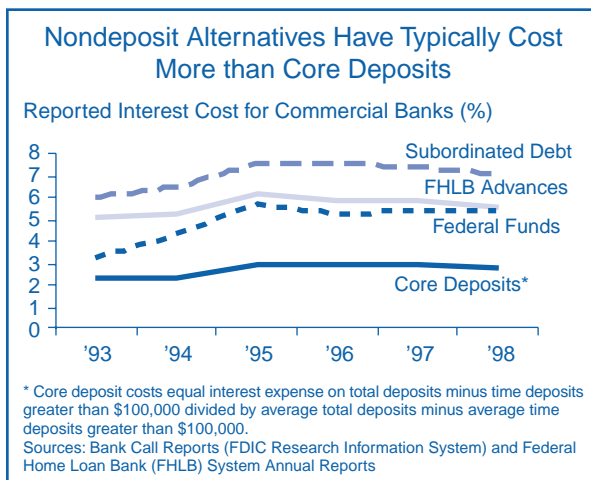
According to community banker opinion surveys, the trend toward greater reliance on noncore or alternative funding sources appears likely to continue. *Grant Thornton's 1999 Annual Survey of Community Bank Executives* found that 75 percent of community bankers expect funding with core deposits to be 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.

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

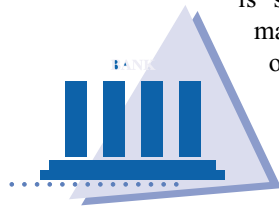
TABLE 1

COMPARISON OF BANKS WITH HIGH AND LOW LEVELS OF CORE DEPOSIT FUNDING						
	ALL COMMUNITY BANKS ¹		COMMUNITY BANK AGRICULTURAL LENDERS ²		COMMUNITY BANK COMMERCIAL LENDERS ³	
	HIGH CORE DEPOSIT FUNDING ⁴	LOW CORE DEPOSIT FUNDING ⁴	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

- **The Memphis Region’s employment growth continues a slowing trend. Mississippi’s gaming industry and growing construction employment throughout the Region provide some strength. While the manufacturing sector remains generally weak, the automobile industry continues to add jobs, although rising gas prices could slow sales of large vehicles. Agricultural conditions continue to worsen.**
- **Banks continue to report strong financial conditions. Earnings performance, however, continues to be pressured by lower net interest margins.**
- **Funding sources for insured financial institutions have changed as deposit growth has lagged strong loan demand during this economic expansion. Institutions are increasingly turning to alternative sources for funding.**

Economic Overview

Employment Growth Remains Subdued

The Region’s economy remains sluggish relative to that of the nation, as measured by employment growth. The first-quarter employment growth rate¹ is below the national average (see Table 1) and reflects a significant decline since first-quarter 1998. Declining growth in the services sector, which represents 24.8 percent of total employment, has been a major factor in the overall slowing in employment growth. Moreover, the manufacturing sector continues to report job losses. Employ-

ment in nondurable goods manufacturing dropped 3.0 percent, led by Tennessee’s 4.6 percent decline.

Despite losses in the manufacturing sector, Tennessee reported the highest employment growth among the Region’s states at 1.3 percent, bolstered by a strong construction sector. **Memphis** continues to report high residential permit activity, and almost all market segments in **Nashville** remain active. Proposals for considerable new road construction are likely to add more jobs to the state’s construction sector. Construction employment growth was strong throughout the Region at 5.6 percent in the first quarter and remains a major factor in new job formation.

Slower job creation was evident in the Region’s other states. **Kentucky** and **Louisiana** had the lowest growth, primarily because of continued job losses in nondurable goods manufacturing. Employment growth in **Arkansas** and **Mississippi** was somewhat better, but also was affected by losses in the manufacturing industry. Mississippi has benefited considerably from direct employment and construction employment related to the gaming industry.

Mississippi’s Gaming Industry Remains Strong in a Slowing State Economy

Employment gains in Mississippi can be attributed primarily to the continued strength of the state’s gaming industry. According to a *Mississippi Gaming Commission* report in March, approximately 38,000 people, or

¹ Unless otherwise noted, employment growth rates represent seasonally adjusted year-over-year growth determined from the *Bureau of Labor Statistics Household Employment Establishment Survey*.

TABLE 1

EMPLOYMENT GROWTH IS SLOWING IN THE REGION (YEAR-OVER-YEAR)		
	1 Q98 (%)	1 Q99 (%)
ARKANSAS	3.6	1.1
KENTUCKY	2.9	0.4
LOUISIANA	3.3	0.2
MISSISSIPPI	2.7	0.7
TENNESSEE	4.4	1.3
REGION	3.5	0.8
UNITED STATES	1.8	1.7

SOURCE: BUREAU OF LABOR STATISTICS, HOUSEHOLD EMPLOYMENT SURVEY

3 percent of the state's total employment, were directly employed in the gaming industry. Another 28,000 people were indirectly employed by the industry. The opening of the Beau Rivage Hotel/Casino in March 1999 with 1,800 hotel rooms has added jobs to the thriving **Gulf Coast** gaming market. The size of this segment of the economy is apparent in the national revenue rankings of fifth and sixth largest individual gaming markets for **Tunica County** and the Gulf Coast, respectively. Other aspects of the state's economy have also gained from the rapid expansion of the gaming industry since its birth in 1992. Businesses in gaming areas benefit from the out-of-state and local tourism sparked by the casinos.

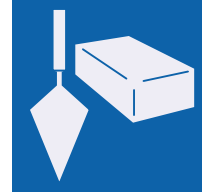
Spurred largely by new casino development and to a lesser extent by the rebuilding of structures damaged by Hurricane Georges in the fall of 1998, Mississippi's construction industry employment increased 8.7 percent in the first quarter of 1999 from one year ago. Highway projects in Tunica County related to increased commuting to casinos from nearby metropolitan Memphis have also contributed to rising construction levels. In addition, the Gulf Coast's residential market is beginning to see increases in construction activity; *Builder Magazine* named **Gulfport** one of the next big growth markets for residential construction. The Mississippi hotel and gaming segment, however, is not the only area experiencing continued real estate development in the Region, as discussed below.

Real Estate Activity Remains High in Some Markets

As a result of continuing strong construction activity, vacancy rates in both the office and industrial markets of Nashville are rising, and occupancy levels in the hotel sector remain lower than average occupancy levels from 1993 to 1997. There is some concern that proposals for increased taxation could hurt Nashville's image as a destination for relocating businesses at a time when construction is increasing. The planned construction of a new manufacturing facility by Dell Computer Corporation is expected to create between 3,000 and 5,000 direct jobs and should provide a boost to all segments of the city's real estate market.

Construction and development (C&D) and commercial real estate (CRE) loans by banks and thrifts in Nashville continue to increase. As of March 31, 1999, the ratio of C&D loans to total loans was 11.2 percent, up from 9.5

percent one year ago. The ratio of CRE loans to total loans has likewise increased from 28.1 percent to 32.1 percent. With growing levels of C&D and CRE loans, institutions are increasing their exposure at a time when **Torto Wheaton Research** predicts that office vacancy rates will continue to rise during the next year.



Segments of the **New Orleans** real estate market have been stressed by recent trends. The hotel market remains vulnerable to excess capacity caused in part by lower demand, as hotels in the city face increased competition from neighboring Mississippi Gulf Coast casinos and lodges. The office segment in New Orleans could be severely affected by announced major relocations and layoffs in the energy sector. Amoco is closing its New Orleans office, and Texaco, Chevron, and Shell have all announced significant layoffs.

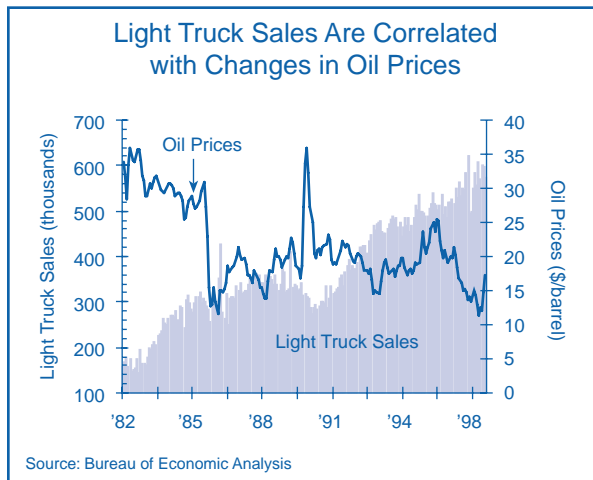
Banks and thrifts headquartered in New Orleans have only limited exposure to the city's real estate market. As of March 31, 1999, area institutions reported average C&D and CRE levels of 4.7 percent and 19.3 percent, respectively. These levels are basically unchanged from one year ago and remain well below the Region's averages.

Rising Gasoline Prices Could Affect the Region's Automobile Sector

Changes in the energy sector affect more than just the New Orleans office market. Automobile manufacturers in Tennessee and Kentucky, particularly in the truck and sport utility vehicle (SUV) market, may be hurt by increases in oil prices. The recent surge in truck and SUV sales occurred during a period of declining oil prices, as shown in Chart 1 (next page). With increases in oil prices, some consumer demand could be redistributed to the smaller, more efficient car market. As the chart shows, however, the moderate increases in oil prices in the mid-1990s appeared to have only a limited effect on sales. Many industry analysts feel that oil and gasoline prices at their current levels would likewise have only a limited negative effect on truck and SUV sales. However, some analysts project declining SUV sales should oil prices reach \$20 per barrel.

In addition to being sensitive to gasoline prices, sales of these large-ticket items are likely responsive to changes

CHART 1



in interest rates. The strong sales during the mid-1990s occurred during a period of historically low interest rates. Should interest rates and gasoline prices both rise, sales could be affected more significantly.

Ford's Kentucky assembly plant would likely be affected most quickly from decreased demand for SUVs and trucks, as it focuses on the assembly of the Explorer sport utility and trucks. The plant is currently undergoing major expansion for the production of an even larger SUV, the Excursion. Tennessee's automobile sector, previously concentrated in small-vehicle production, could also be affected, as these producers are entering the SUV market. In response to high auto inventory levels, Nissan's **Smyrna** plant has begun changing its facilities to produce its own SUV, the Xterra, in the spring of 2000. Likewise, Saturn in **Spring Hill** announced plans to produce an SUV by 2002.

Agricultural Conditions Are Deteriorating

Risks in the agricultural sector are rising, as most agricultural commodity prices remain low (see ***Falling Prices in Commodities and Manufacturing Pose Continuing Risks to Credit Quality***). With a near-term outlook for continued low prices (barring any weather-related supply shocks), farm conditions are likely to

worsen. While the financial condition of agricultural lenders² in the Memphis Region remains strong, trends in certain asset-quality indicators, such as rising past-due loan ratios and carryover debt levels, point to potential future credit problems.

The 121 agricultural banks in the Region reported a sharp increase in past-due agricultural loans in the first quarter of 1999, to 6.16 percent of total agricultural loans. First-quarter results tend to represent peak levels in past-due agricultural loans because of the extension and reworking of seasonal credits at that time. The past-due ratio at the end of the first quarter of 1999, however, is considerably higher than the 3.97 percent and 3.64 percent average past-due ratios reported in the first quarters of 1998 and 1997, respectively. Anecdotal evidence suggests that carryover debt is also increasing. The **FDIC's Report on Underwriting Practices** for October 1998 through March 1999 noted that nationally, almost one-third of FDIC-supervised banks engaged in agricultural lending experienced at least a moderate increase in carryover debt during the six-month period. Even if production improves in 1999, low prices and generally rising input costs are likely to considerably extend the time required by farmers to repay carryover debt.

Unless commodity prices improve, most industry observers expect farm loan collateral values to decline. So far, farm real estate values in the Region are generally holding steady, with some declines noted in Louisiana. Equipment values are already plunging. Anecdotal evidence from bankers suggests that used farm equipment values have been halved over the past 12 months.

The agricultural sector is not the only area hurt by lower commodity prices. See the ***Memphis Regional Outlook***, Second Quarter 1999, for a more detailed analysis of the agricultural, energy, timber, and steel industries.

² Agricultural lenders are defined as those reporting 25 percent or more of total loans in agricultural production or agricultural real estate loans at the most recent seasonal borrowing peak on September 30, 1998.

Banking Overview

Banking Conditions Remain Favorable

The Region's banks and thrifts reported generally strong financial conditions in the first quarter of 1999. Average leverage capital ratios increased to 11.79 percent, compared with 11.14 percent at the end of the first quarter of 1998 and 11.76 percent at year-end 1998. First-quarter 1999 asset-quality levels remained virtually unchanged from the first quarter of 1998. Average total past-due loans for banks and thrifts in the Region were 3.02 percent of total loans, comparable with levels reported one year ago. The Region's slowing economic

growth does not yet appear to have affected the asset quality of its insured financial institutions.

Recent negative trends in earnings performance continued in the first quarter. The average return on assets ratio was 0.92 percent, down 23 basis points from first-quarter 1998. The major factor in declining earnings was the continuing slide in net interest margins. The average net interest margin was 4.22 percent, down from 4.38 percent in the first quarter of 1998. Many factors are contributing to declining net interest margins, including increasing competition and changing funding trends discussed later in this article.

Funding Issues

Traditional Funding Measures³ Point to Tightening Liquidity

Consistent with national trends, banks and thrifts in the Memphis Region are reporting rising loan-to-deposit ratios and changing funding trends (see *Shifting Funding Trends Pose Challenges for Community Banks*). As shown in Chart 2, both loan-to-asset and loan-to-deposit levels have increased steadily during the current economic expansion. This increase is attributable to both substantial growth in loans and generally weak deposit growth.

As shown in Table 2 (next page), total loans have increased at an average annual rate⁴ of 8.47 percent since 1992. This robust growth is attributable to both increased consumer loan demand and a shift in institution asset composition from investment securities to loans. As loans typically offer higher yields than investment securities, the shift to loans likely has been driven in part by efforts to improve net interest margins. Loan growth did slow somewhat in 1998 as many consumers and busi-

nesses curtailed major expenditures and some institutions began efforts to limit growing credit exposure.

Loan growth is only part of the equation for rising loan-to-deposit ratios; weak deposit growth appears to have been a much more important factor in recent trends. As shown in Table 2, deposit growth, particularly core deposit growth, has not kept pace with loan growth during the expansion. Core deposits grew at an annual rate of 4.07 percent from 1992 to 1998. As this growth would naturally include some retention of interest paid on existing deposits, banks and thrifts have obviously encountered considerable difficulty in attracting new deposits during this period. Some reasons for this weak

³ Traditional funding measures discussed in this article, such as the loan-to-deposit ratio, have readily acknowledged limitations in assessing the true liquidity position of individual financial institutions, but are considered useful as an introduction to changing funding trends in the Region.

⁴ These growth rates have been adjusted for merger activity and do not include reported results of financial institutions in operation for less than three years at each reporting date. The rates presented are median growth rates at each period.

CHART 2

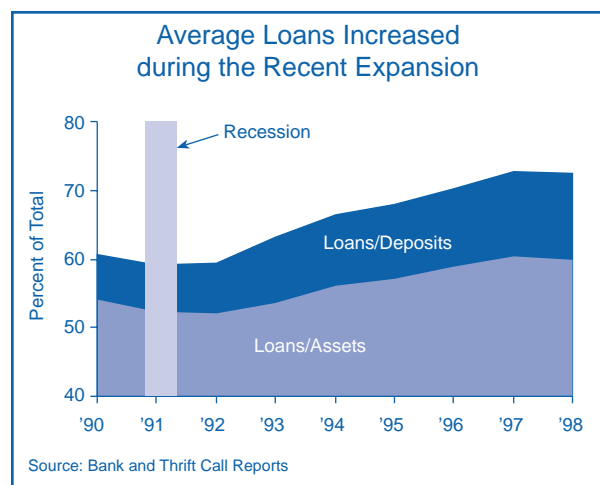


TABLE 2

DEPOSIT GROWTH HAS LAGGED LOAN GROWTH DURING THE EXPANSION								
	1992	1993	1994	1995	1996	1997	1998	AVERAGE
LOAN GROWTH (%)	4.70	7.18	9.64	10.22	9.71	10.09	7.73	8.47
CORE DEPOSIT GROWTH (%)	5.17	1.97	1.97	4.13	4.51	3.91	6.81	4.07
DEPOSIT GROWTH (%)	4.43	2.18	2.97	6.10	5.90	5.35	7.83	4.97

NOTE: GROWTH RATES ARE MERGER ADJUSTED AND EXCLUDE NEW BANKS.
SOURCE: BANK AND THRIFT CALL REPORTS

deposit growth include lower consumer savings rates, rising consumer investments in mutual funds and other alternative vehicles, and increasing competition from credit unions and brokerage firms.

Investments in mutual funds and other vehicles have grown considerably during the expansion. While direct evidence of the growth in these investments is not available at a state level, reported annual capital gains realizations can be used as a proxy for this growth. From 1991 to 1996, net capital gains increased 158 percent in the Region, compared with 140 percent nationally.⁵ This finding implies that the national trend of rising mutual fund and stock market investing is occurring at a similar rate in the Memphis Region. The diversion of a larger share of declining consumer savings to mutual fund and direct equity investments is likely a limiting factor in the growth of insured institutions' deposits.

Rising direct competition for deposits also is hindering growth at banks and thrifts. Credit union membership has increased significantly in the Memphis Region. From 1993 to the first quarter of 1999, membership rose by over 17 percent. More significantly, the total assets of credit unions headquartered in the Region grew by 107 percent during the same period. This shift of at least a portion of customers' deposit relationships to credit unions is likely the result of highly competitive interest rates offered by these institutions. Credit unions are not the only source of competition to the traditional domain of banks and thrifts, however. Anecdotal evidence suggests that consumers are increasingly migrating to brokerage firms offering deposit functions similar to those of banks and thrifts, such as transaction accounts, often at higher interest rates.

As shown in Table 2, both deposit and core deposit growth rates increased significantly in 1998. This growth appears to have continued into the first quarter

of 1999 and may be attributable in part to increased stock market volatility in the second half of 1998. Rising interest rates on many deposit products during the year also may have contributed. Even with the surge in deposit growth and a slowing of loan growth in 1998, core deposit growth continued to trail loan growth. As a result, institutions had to rely on noncore funding sources to support loan growth, as discussed later in this article.

Tightening Liquidity Is Most Evident for Larger Institutions

Large insured institutions (those with assets over \$500 million) have experienced a greater increase in average loan-to-deposit ratios than other institutions. From 1992 to 1998, the median loan-to-deposit ratio for large institutions grew from 66.4 percent to 82.0 percent. This growth is greater than that reported by smaller institutions.

Compared with their smaller counterparts, large institutions have reported a combination of slightly faster loan growth and substantially slower deposit growth. The annual loan growth rate for large institutions from 1992 to 1998 was 8.56 percent, only slightly higher than the growth rate of other institutions. Large institutions reported an annual deposit growth rate of 4.0 percent, almost 100 basis points lower than that reported by small institutions. The disparity is even more obvious if only core deposits are considered. Core deposits⁶ at larger institutions grew at only a 2.8 percent annual rate during the period.

⁵ Source: *RFA Industry Services*.

⁶ While the distinction between core and noncore funding is becoming increasingly blurred, core deposits are still considered a generally more stable source of funding. Core deposits include the sum of demand deposits, negotiable order of withdrawal accounts, automatic transfer service accounts, money market demand accounts, other savings, and time deposits under \$100,000.

Regional Perspectives

Some possible factors driving the slow core deposit growth among large banks include greater competition and the effects of merger activity. As larger banks tend to have operations centered in metropolitan areas, they often face greater competition for deposits. This competition is not limited to other banks and thrifts, as many more alternatives for both loans and deposits, such as mortgage companies and brokerage firms, tend to operate in metropolitan areas. Also, larger banks in recent years have tended to be active acquirers of other financial institutions. Acquiring institutions tend to lose market share in the first few years following an acquisition (see "Effects of Mergers on Community Banks," *Memphis Regional Outlook*, Fourth Quarter 1998). The loss of a portion of acquired deposits would result in a lower overall deposit growth rate.

The tightening in the Region's average liquidity ratios is not being driven just by large institutions, however. As shown in Chart 3, the distribution of loan-to-deposit ratios at all the Region's banks and thrifts has shifted appreciably. Most institutions now fall into higher loan-to-deposit ratio ranges than in 1992. The median loan-to-deposit ratio has increased from 59.5 percent in 1992 to 70.6 percent at the end of 1998.

Institutions Are Increasingly Relying on Other Funding Sources

With core deposit growth unable to keep pace with deposit growth, banks and thrifts are increasingly using noncore funding sources. As shown in Chart 4, noncore funding has grown steadily, from 11.9 percent of total

CHART 3

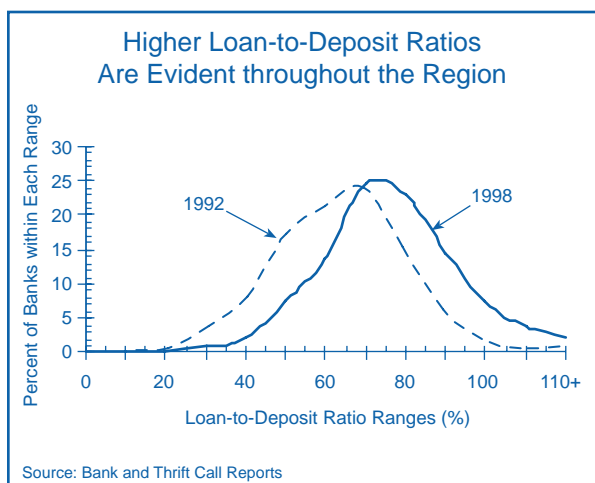
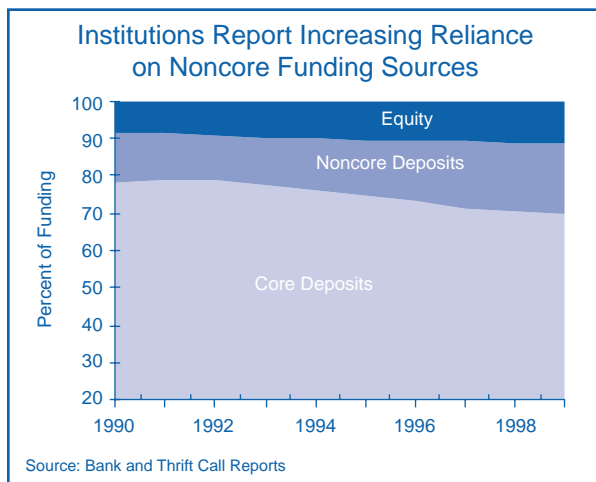


CHART 4



funding (including equity) in 1992 to 18.9 percent in 1998. These noncore funding sources include brokered deposits, certificates of deposit in amounts of \$100,000 or more, federal funds purchased and securities sold subject to repurchase agreements, and other borrowed funds. The latter category consists primarily of Federal Home Loan Bank advances.⁷ The recent growth in noncore funding has been concentrated in large certificates of deposit and other borrowed funds.

Consistent with the decline in average core deposit levels, the number of institutions reporting low core deposit levels is growing. In 1992, only 33 institutions, or less than 3 percent of all institutions in the Region, reported core funding to total liabilities ratios below 70 percent.⁸ By March 31, 1999, this number had increased to 134, or almost 15 percent of insured institutions.

Lower Core Funding Levels Point to Lower Net Interest Margins

A comparison of earnings performance from 1992 to 1998 by a group of banks and thrifts with low core funding relative to other insured institutions reveals some potential earning implications of recent funding trends. The low core funding group is defined as institutions reporting core deposit totals that are less than 70 percent of total liabilities.

⁷ As of March 31, 1999, Federal Home Loan Bank advances in the Region represented 72.7 percent of reported other borrowed funds. For a more detailed discussion of the use of Federal Home Loan Bank advances, see the *Memphis Regional Outlook*, First Quarter 1998.

⁸ This analysis excludes institutions that had been in operation for less than three years as of each reporting date.

Funding by Business Specialization

Funding trends also vary by primary lines of business. As shown in Chart 5, average loan-to-deposit ratios have increased across business specialization lines, but are higher for commercial and mortgage lenders. While agricultural lenders have reported a considerable increase in ratios since 1992, average loan-to-deposit ratios in this group remain lower than for other groups. Mortgage lenders reported the greatest increase among the specialization groups.

Mortgage lenders also reported the lowest utilization of core deposits as a funding source, at 76.9 percent

of total liabilities, and the greatest reliance on other borrowed funds such as Federal Home Loan Bank borrowings, at 10 percent of total liabilities. Their higher use of other borrowed money is consistent with their need to fund longer-term mortgage-related assets. In many cases, mortgage lenders may be able to match borrowing terms to the expected maturing of assets.

Definitions for Business Specialization:

Agricultural Banks: Institutions with 25 percent or more of total loans in agricultural production and farm real estate loans.

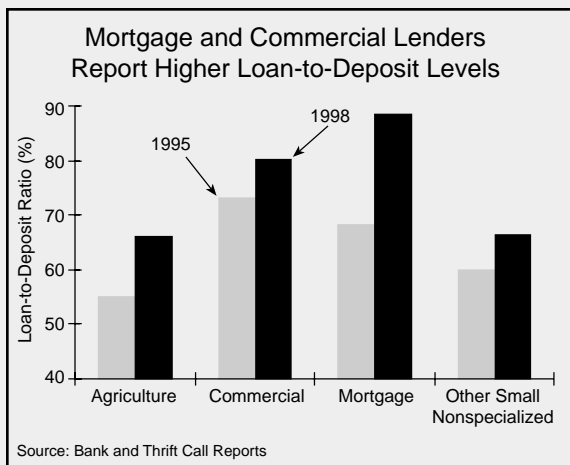
Commercial Lenders: Institutions with 25 percent or more of total assets in commercial and industrial loans and commercial real estate loans.

Mortgage Lenders: Institutions with 50 percent or more of total assets in one- to four-family mortgage loans and mortgage-backed securities.

Other Small Nonspecialized Banks: Institutions with less than \$1 billion in total assets and no direct specialization.

Other categories of institutions not depicted in Chart 5 because of their limited numbers in the Region include International Banks, Credit Card Banks, Consumer Lenders, Other Specialized Banks, and Other Large Nonspecialized Banks.

CHART 5



Earnings performance differed considerably between the two groups of institutions. While both groups reported similar ratios of interest income to average earning assets, the low core funding group reported considerably higher interest expenses. These higher cost liabilities have resulted in a lower average net interest margin for these institutions. Since 1992, the average net interest margin of the low core funding group has ranged between 40 and 50 basis points below that of other institutions. While institutions with lower core funding levels reported lower average overhead expenses than other institutions, the reduced costs did not entirely offset lower margins. As a result, average returns on assets for institutions with low core funding levels have ranged between 10 and 20 basis points below those of other institutions in recent years. While Table 3 displays only 1998 performance, similar results were reported in recent years.

Funding Trends Implications

The performance of the low core funding group may have implications for the entire banking industry if current funding trends continue. The increasing reliance on noncore funding sources is likely contributing to the recent declines in net interest margins described in the “Banking Overview” section of this article. As the use of noncore funding continues to grow, banks and thrifts may face additional pressure on margins. The potential for lower net interest margins also raises a concern that some institutions may seek higher returns on assets, which could involve accepting higher levels of credit or interest rate risk.

Although core and noncore funding definitions are easy to apply, the distinction between these two categories is becoming increasingly blurred. Noncore funding

TABLE 3

BANKS WITH LOW CORE FUNDING LEVELS REPORT LOWER EARNINGS		
CORE FUNDING/ TOTAL LIABILITY	70% OR LESS	MORE THAN 70%
NUMBER OF BANKS	125	850
AVG. INTEREST INCOME/EARNING ASSETS	8.14	8.29
AVG. INTEREST EXPENSE/EARNING ASSETS	4.16	3.85
AVG. NET INTEREST MARGIN	3.98	4.44
AVG. RETURN ON ASSETS	0.97	1.17
NOTE: EXCLUDES BANKS ESTABLISHED WITHIN PAST THREE YEARS. SOURCE: BANK AND THRIFT CALL REPORTS; 1998 RESULTS SHOWN.		

sources have traditionally been considered both more volatile and expensive to obtain than core funding. While this is true in general, individual institutions may be able to utilize noncore funding sources to lower costs or better match asset and liability maturities.

Changing funding trends and consumer preferences are likely to contribute to greater volatility in funding and increase most institutions' sensitivity to market conditions. These factors in turn require greater effort by institution officers and directors to properly manage both liquidity and interest rate risk.

Memphis Region Staff

Some Institutions Face Near-Term Funding Considerations

The current agricultural situation discussed in the "Economic Overview" suggests that higher carry-over debt is likely next year, which could affect agricultural lenders' funding needs in 2000. Most agricultural lenders have borrowing arrangements in place to accommodate increases in seasonal loan demand. High levels of carryover debt that could take several years to be repaid may require more than just seasonal funding, however. Institutions that expect significant carryover may need to make arrangements to replace seasonal funding sources with longer-term funding for these loans. As described in the "Funding by Business Specialization" box, many agricultural lenders appear to retain considerable flexibility in accommodating higher levels of longer-term loans and may not require additional funding.

Institutions should also be well prepared for possible short-term funding complications arising from year 2000 (Y2K) concerns. Some customers may choose to withdraw higher-than-normal levels of cash immediately before January 1, 2000, as a precaution against potential disruptions in any form of services, financial or otherwise. Institutions should be educating their customers about Y2K preparedness as well as planning to meet these potential withdrawals.

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