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# ◆ Regional Outlook ◆

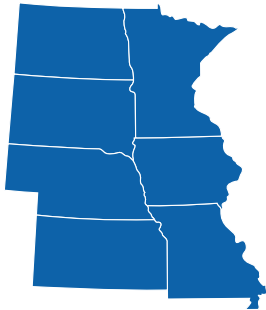
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FEDERAL DEPOSIT INSURANCE CORPORATION

THIRD QUARTER 1999

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## FDIC KANSAS CITY REGION



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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

◆ *Agricultural Sector under Stress: The 1980s and Today*—With prices for wheat, corn, soybeans, hogs, and cattle depressed again in 1999, many people are beginning to ask if the agricultural crisis of the 1980s is about to recur. However, today's economic environment differs from the one that led to the agricultural crisis of the 1980s. Interest rates are low and stable, farm debt levels are moderate, and real farmland values have been relatively stable throughout the 1990s. In addition, the Region's farm banks are reporting higher capital and loan loss reserve levels than in the 1980s, indicating that institutions today can better absorb an increase in loan losses. Although the Region does not appear to be entering a crisis period like that of the 1980s, several factors may pose significant risks to farm banks, including continuing low commodity prices, higher loan levels, and uncertainty regarding the future of federal farm programs. *See page 18.*

*By John M. Anderlik and Jeffrey W. Walser*

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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.

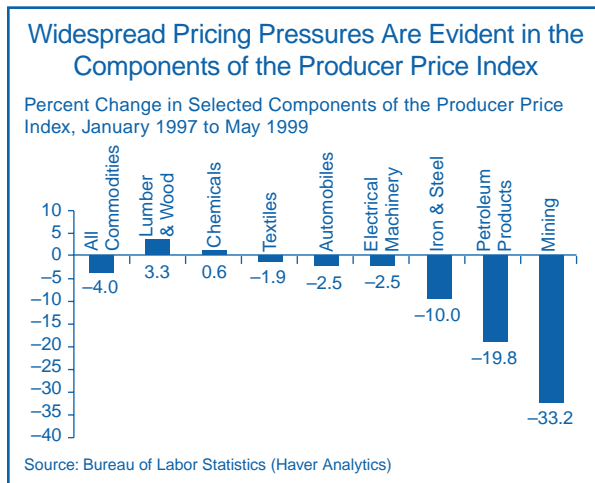
### *Prices Have Been Declining across a Range of Commodities and Manufactured Goods*

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.

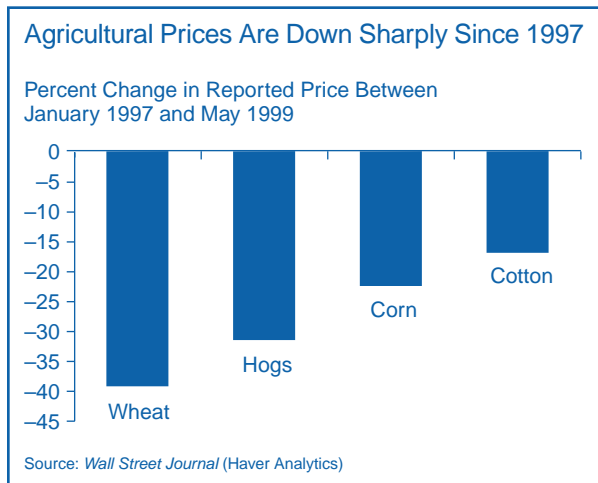
**Reasons for Broad-Based Commodity Price Weakness**

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.<sup>1</sup>

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

<sup>1</sup> 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.<sup>2</sup> Because these additions to capacity largely have not been offset by the closure of existing plants, analysts say that global productive capacity in autos

<sup>2</sup> 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.<sup>3</sup> 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.<sup>4</sup>

- 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.<sup>5</sup> 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.

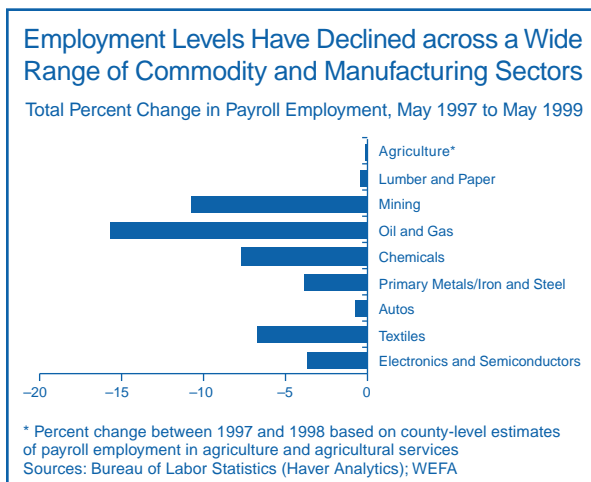
Recently, there have been signs that some hard-hit Asian economies may soon begin to recover. However, the other factors cited above—low inflationary expectations and rapid investment in productive capacity—may well be longer-term trends. In any event, U.S. farmers and businesses that participate in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

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

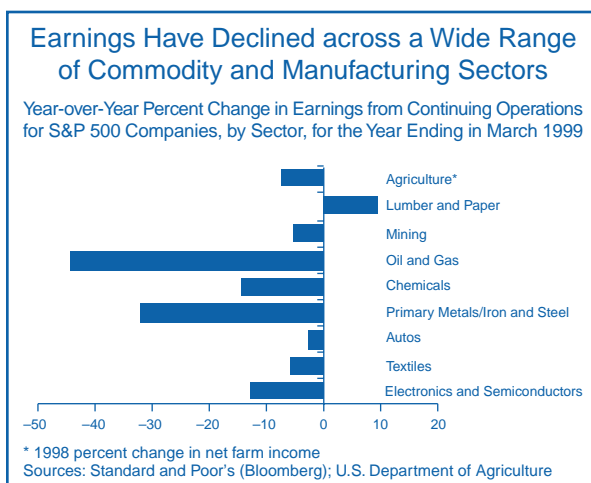
**CHART 3**



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**



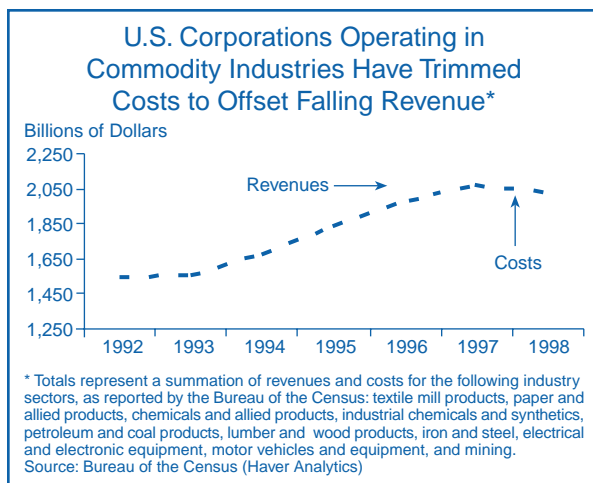
incomes fell by more than 7 percent in 1998, according to the *U.S. Department of Agriculture*.

### *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.<sup>6</sup> Recent consolidation in commodity industries could be depicted as an

<sup>6</sup> 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.<sup>7</sup> 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

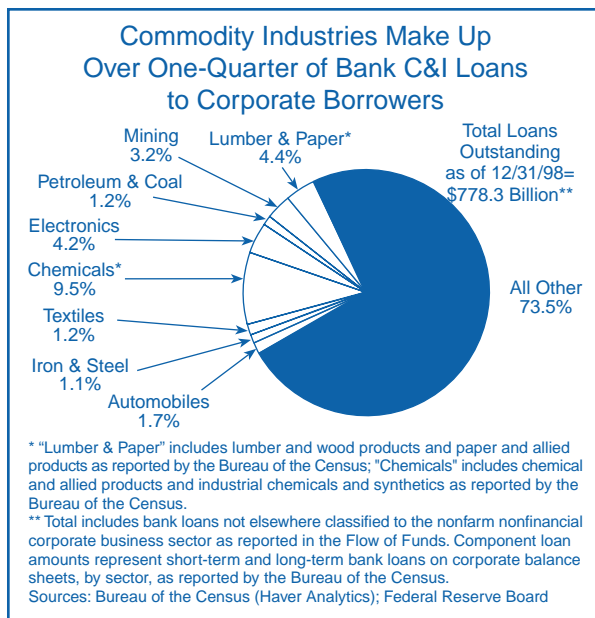
percent of bank C&I loans. In the syndicated loan market, where large U.S. banks dominate in terms of originations, about 25 percent of all loans made in 1998 were to firms operating in the manufacturing sector.

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.<sup>8</sup> 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.

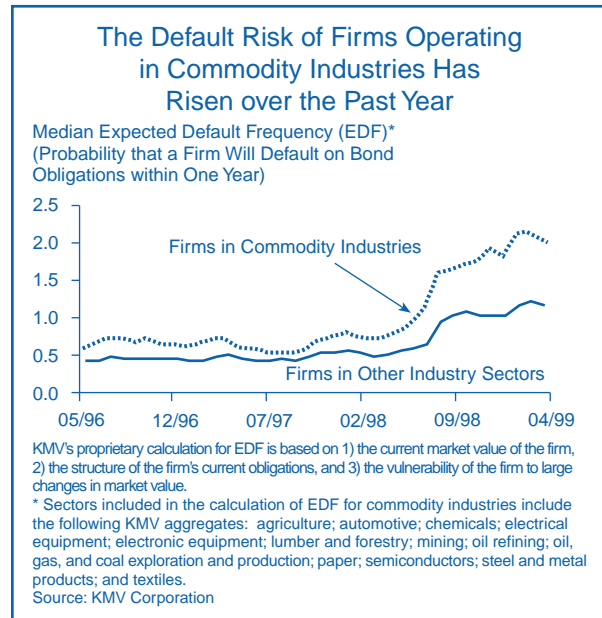
<sup>7</sup> Because of the limitations of the data, bank exposures to corporations engaged in agriculture are not broken out in Chart 6.

<sup>8</sup> 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.<sup>9</sup> 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.<sup>10</sup> Moreover, the study shows that there can be a significant lag between the onset of industry-sector problems and the emergence of performance problems

<sup>9</sup>Federal 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>.

<sup>10</sup>Federal 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).<sup>11</sup> 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

<sup>11</sup> 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.<sup>12</sup> 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.<sup>13</sup> 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.<sup>14</sup> These considerations suggest that bankers in commodity-dependent counties should continually

<sup>12</sup> 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.

<sup>13</sup> 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.

<sup>14</sup> 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,<sup>1</sup> 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.

<sup>1</sup> Defined here as banks with total assets of \$1 billion or less.

### **Trends in Household Wealth Accumulation**

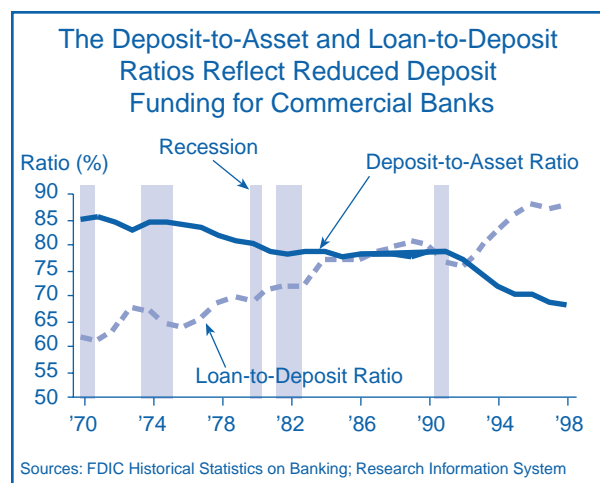
One factor affecting the ability of banks to attract deposits is the recent trend in the way households are amassing wealth. While the total wealth of U.S. households has soared in recent years because of unrealized capital gains on housing and investments, annual net purchases of new financial assets<sup>2</sup> 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**

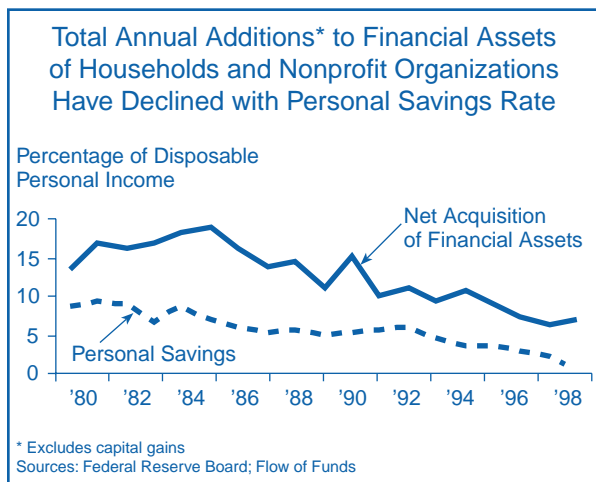
At the same time that households have been setting aside less of their current income for savings, the share of total new household savings flowing into bank deposits has declined in the 1990s as competition from higher-yielding alternatives has increased. During the 1980s, over 30 percent of the cumulative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

<sup>2</sup> 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*,<sup>3</sup> but they also

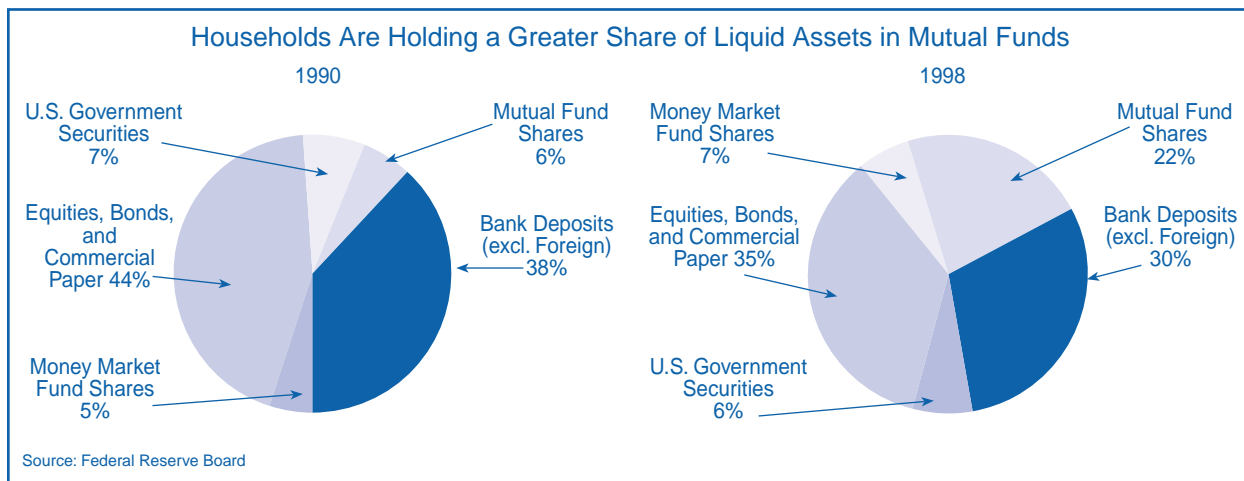
<sup>3</sup> Grant Thornton's 1999 Sixth Annual Survey of Community Bank Executives, "Community Banks: A Competitive Force," <http://www.granthornton.com/resources/finance/banksurvey99/survey99w.html>.

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.<sup>4</sup> 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.<sup>5</sup> 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.

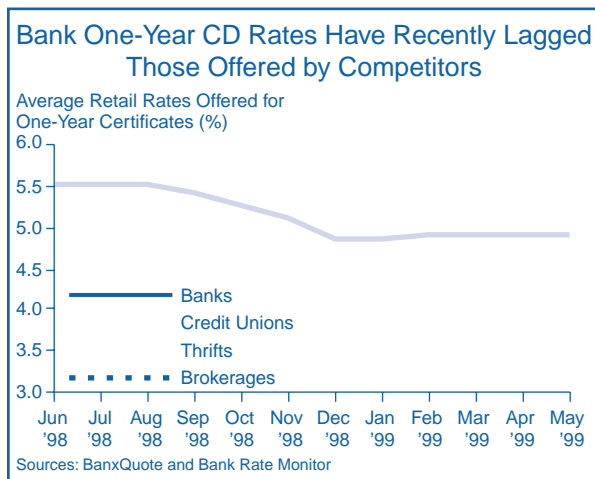
While large banks have responded to factors influencing deposit growth by making greater use of alternative funding sources, funding options for community banks tend to be more limited.



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).

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

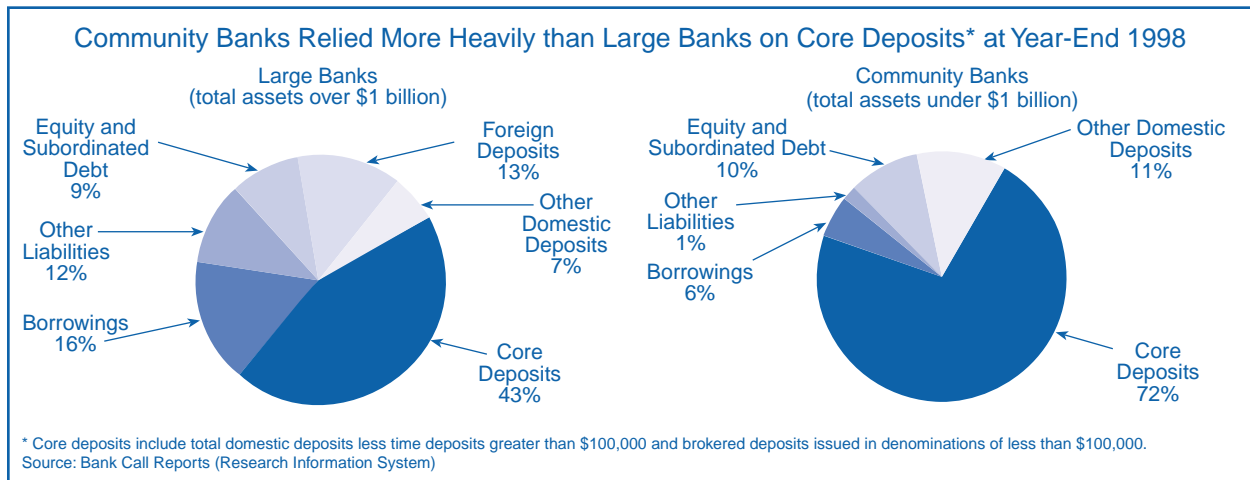
**CHART 4**



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.

<sup>5</sup> 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,<sup>6</sup> 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.

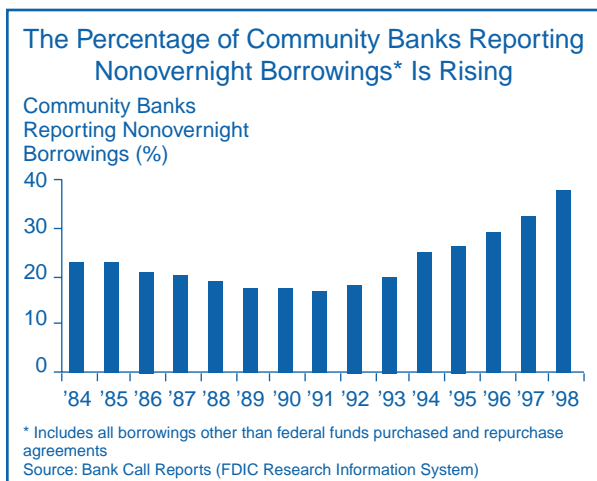
**Federal Home Loan Bank Membership**

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



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

*Survey*<sup>7</sup> 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

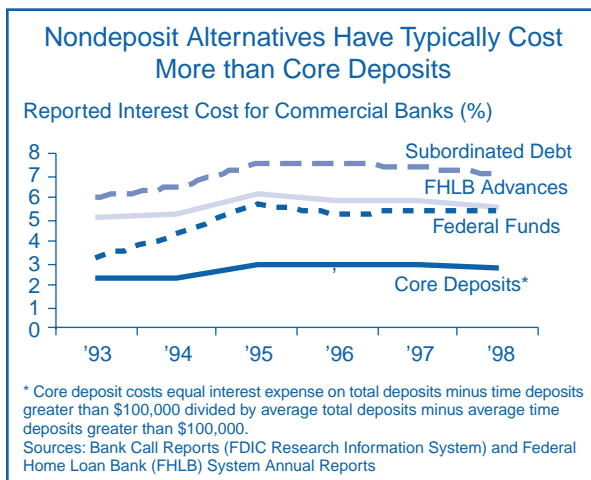
According to community banker opinion surveys, the trend toward greater reliance on noncore or alternative funding sources appears likely to continue. *Grant Thornton's 1999 Annual Survey of Community Bank Executives* found that 75 percent of community bankers expect funding with core deposits to be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

<sup>7</sup> *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.<sup>8</sup> 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.

<sup>8</sup> *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

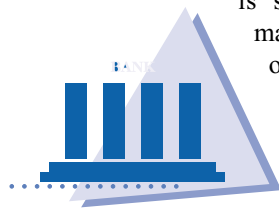
COMPARISON OF BANKS WITH HIGH AND LOW LEVELS OF CORE DEPOSIT FUNDING						
	ALL COMMUNITY BANKS <sup>1</sup>		COMMUNITY BANK AGRICULTURAL LENDERS <sup>2</sup>		COMMUNITY BANK COMMERCIAL LENDERS <sup>3</sup>	
	HIGH CORE DEPOSIT FUNDING <sup>4</sup>	LOW CORE DEPOSIT FUNDING <sup>4</sup>	HIGH CORE DEPOSIT FUNDING	LOW CORE DEPOSIT FUNDING	HIGH CORE DEPOSIT FUNDING	LOW CORE DEPOSIT FUNDING
<b>SELECTED AGGREGATE MEASURES</b>						
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
<b>SELECTED MEDIAN LIQUIDITY AND FUNDING MEASURES (%)</b>						
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
<b>SELECTED MEDIAN PERFORMANCE RATIOS (%)</b>						
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 <sup>5</sup>	8.17	8.02	8.24	7.89	8.45	8.26
COST OF FUNDING EARNING ASSETS <sup>6</sup>	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 <sup>7</sup>	69.01	63.68	68.59	57.48	68.99	67.00
<b>SELECTED MEDIAN CREDIT QUALITY MEASURES (%)</b>						
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

<sup>1</sup> COMMUNITY BANKS ARE BANKS WITH \$1 BILLION OR LESS IN TOTAL ASSETS.  
<sup>2</sup> AGRICULTURAL LENDERS ARE BANKS WITH 25 PERCENT OR MORE OF ASSETS IN AGRICULTURAL REAL ESTATE LOANS OR AGRICULTURAL PRODUCTION LOANS.  
<sup>3</sup> COMMERCIAL LENDERS ARE BANKS WITH 25 PERCENT OR MORE OF ASSETS IN COMMERCIAL AND COMMERCIAL REAL ESTATE LOANS.  
<sup>4</sup> 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.  
<sup>5</sup> GROSS EARNING ASSET YIELD EQUALS INTEREST INCOME DIVIDED BY AVERAGE EARNING ASSETS.  
<sup>6</sup> COST OF FUNDING EARNING ASSETS EQUALS INTEREST EXPENSE DIVIDED BY AVERAGE EARNING ASSETS.  
<sup>7</sup> 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.<sup>9</sup> 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.

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

## *Regional Perspectives*

- **Today's economic environment differs from the one that led to the agricultural crisis of the 1980s. Interest rates are low and stable, farm debt levels are moderate, and real farmland values have been relatively stable throughout the 1990s.**
- **The Region's farm banks are reporting higher capital and loan loss reserve levels than in the 1980s, indicating that they can better absorb an increase in loan losses.**
- **Many farm banks have apparently increased their tolerance for risk by increasing lending volume, yet some maintain lower-than-average capital levels.**
- **Although conditions are different from those of the 1980s, several factors may pose significant risks to farm banks: continuing low commodity prices, higher loan levels, and uncertainty regarding the future of federal farm programs.**

### *Agricultural Sector under Stress: The 1980s and Today*

The 1980s were marked by a turbulent agricultural economy that saw rapid declines in farm income and real estate values. This situation led to the failure of many farm banks,<sup>1</sup> especially in the Kansas City Region. Map 1 shows the location of the 297 farm bank failures that occurred nationwide between 1977 and 1993. As the map shows, the Region was disproportionately affected, with 182 failures, 61 percent of total farm bank failures.

With prices for wheat, corn, soybeans, hogs, and cattle depressed again in 1999, many people are beginning to ask if the agricultural crisis of the 1980s is about to recur. This question has important ramifications for the Kansas City Region, because over half the Region's institutions are farm banks, and over half the nation's farm banks are located in the Region. This article compares the economic conditions that led to the farm crisis of the 1980s with those of today. While evidence indicates that the agricultural crisis is not about to recur, certain factors in the farm sector could cause serious problems for the Region's farmers and farm banks.

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<sup>1</sup> The Federal Deposit Insurance Corporation (FDIC) defines farm banks as FDIC-insured financial institutions that have at least 25 percent of their loans in agricultural production or secured by agricultural real estate.

### *Agriculture Prospered in the 1970s*

To understand the 1980s farm crisis, it is necessary to review the conditions of the 1970s, a decade of unprecedented agricultural prosperity. Chart 1 shows the path of farm income in the Region, restated in 1998 dollars. From 1972 through 1975, real net farm income in the Region reached levels never seen before or since and remained high through 1979.

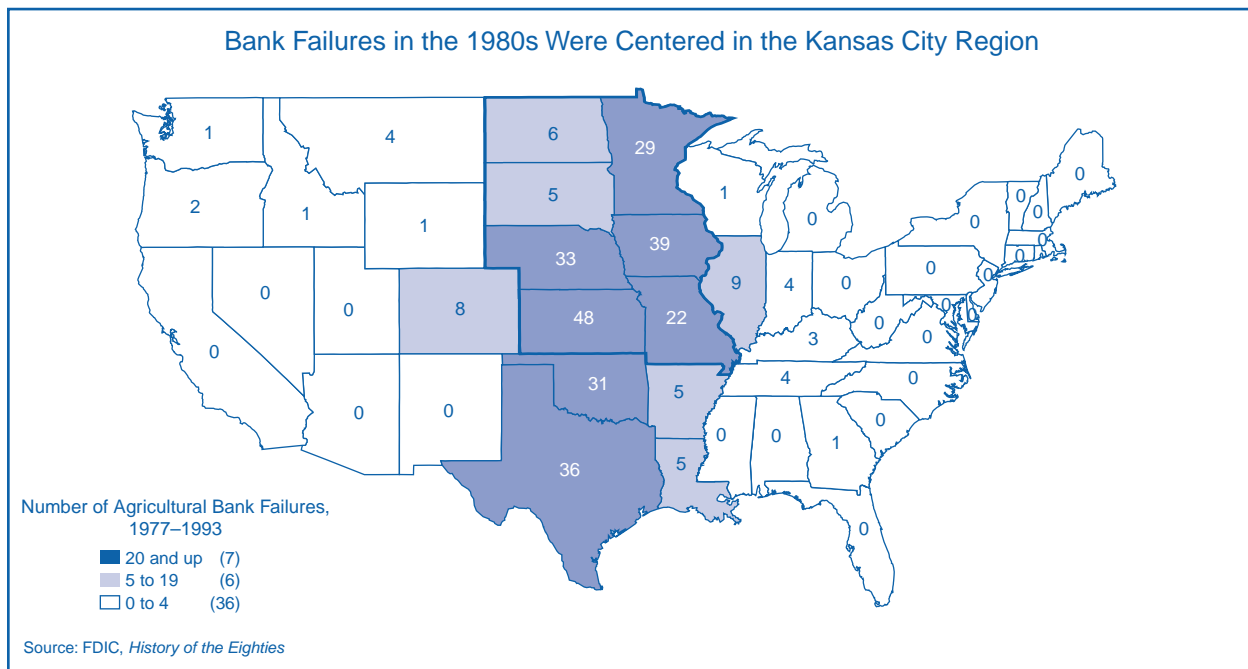
Export demand for farm products grew rapidly in the first half of the 1970s, when a number of trends converged to boost U.S. agricultural exports to record levels. Strong income and population growth among importing countries increased demand for U.S. products. At the same time, these importers gained access to external sources of credit, which, together with a weak U.S. dollar, improved their ability to import food and feed from the United States. Finally, a 1972 drought in the Soviet Union led to the enormous 1973 grain deal.<sup>2</sup>

The early 1970s also witnessed tremendous technological changes as many farmers adopted improved machinery, chemicals, and fertilizers that led to rapid

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<sup>2</sup> Cochrane, W. *The Development of Agriculture—A Historical Perspective*. 1993. Minneapolis: University of Minnesota. p. 134.

MAP 1



production increases. In addition, the federal government shared in the exuberance of the era, as the **United States Department of Agriculture (USDA)** encouraged farmers to produce as much as possible. It was during this period that Secretary of Agriculture Earl Butz made his famous appeal for farmers to “plant fencerow to fencerow.”<sup>3</sup> And they did. Between 1972 and 1981, the nation’s wheat acreage increased from 55 million to 88

million acres, corn acreage increased from 67 million to 84 million acres, and soybean acreage increased from 47 million to 67 million acres. By 1981, planted acreage of these crops reached levels that have never been matched.

### Inflation in the 1970s Led to a Negative Real Interest Rate

Macroeconomic developments in the 1970s had far-reaching effects on the agricultural sector. Inflation (measured by the annual change in the Consumer Price Index) had been low throughout the 1950s and 1960s but began to increase somewhat as the nation’s involvement in Vietnam and domestic spending for the Great Society programs led to budget deficits. Inflation spiked significantly in 1974, as the Federal Reserve Board attempted to soften the effects of increased energy prices caused by the Arab oil embargo. Inflation continued to escalate in the last half of the 1970s, reaching 13.5 percent by 1980.

<sup>3</sup> Peoples, K., et al. *Anatomy of an American Agricultural Credit Crisis*. 1992. Lanham, Md.: Rowan and Littlefield Publishers. p. 20.

CHART 1

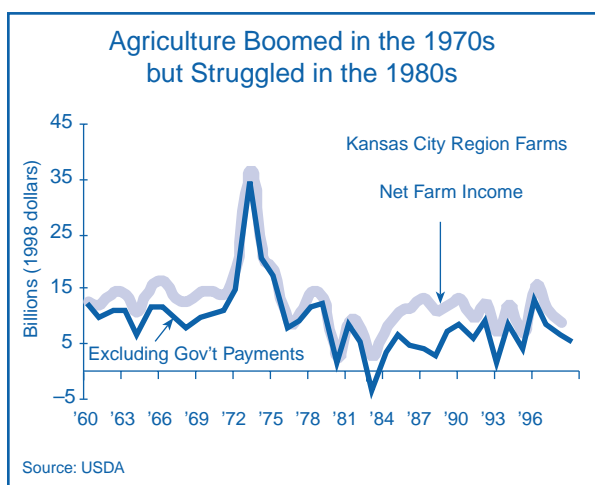
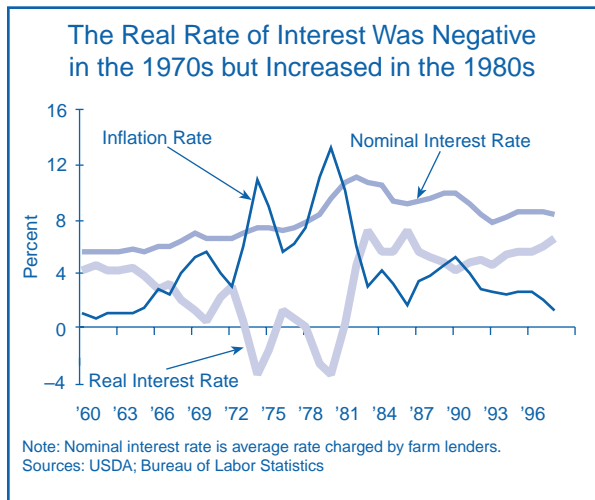


Chart 2 (next page) shows that interest rates charged by agricultural lenders rose significantly and steadily during the 1970s, from an average of 6.7 percent in 1970 to more than 11 percent in 1981. However, nominal interest rates, which reflected bankers’ expected inflation rates, did not rise commensurately with actual increases in inflation. As a result, the “real” interest rate (calculated by subtracting the inflation rate from the nominal

CHART 2



interest rate) was negative for most of the 1970s. This unusual situation enabled farmers to borrow today and repay tomorrow with fewer real dollars.

Historically high farm incomes and the negative real interest rate that prevailed in the 1970s led to a large increase in borrowing by farmers, who increased the scale of their operations by purchasing land and machinery. The Farm Credit System, commercial banks, and insurance companies increased their levels of farm lending in the Region from \$14 billion in 1970 to a peak of \$57 billion by 1984 (see Chart 3, which shows farm debt adjusted for inflation to 1998 dollars).

### Farmland Values Rose to New Heights in the 1970s

The 1970s also saw a significant escalation in farmland values (see Chart 4, which shows changes in farmland

values, adjusted for inflation to 1998 dollars). The gradual upswing in farmland prices is evident for 1960 to 1972, reflecting long-run increases in economic returns to farming, largely because of technological improvements in the industry. Farmland prices then rose dramatically, by 2.4 times in the eastern states of the Region and 2.0 times in the western states between 1970 and 1981 (in inflation-adjusted terms), stimulated by strong farm income and the increased availability of credit. Rapid increases in land values improved farmers' equity positions, allowing them to continue borrowing and expanding.

As Chart 5 shows, despite increasing debt, rapidly increasing land values allowed farmers to maintain low debt-to-equity ratios. For example, land prices in **Iowa** rose faster and to higher levels than in other states in the Region. As a result, the average debt-to-equity ratio of Iowa's farmers actually *declined* during the 1970s. In this environment, the level of lending seemed sustainable.

### Prosperity Unraveled in the 1980s

The Region's farm income declined appreciably by the late 1970s, as the demand for farm exports began to subside. A combination of factors led to the drop in export demand: improved worldwide production that increased global inventory levels; a strengthening U.S. dollar that diminished the global competitiveness of U.S. products; the emergence of the European Community as an aggressive competitor in world grain markets; and enactment of the 1981 Farm Bill, which increased U.S. grain price supports and made U.S. products more

CHART 3

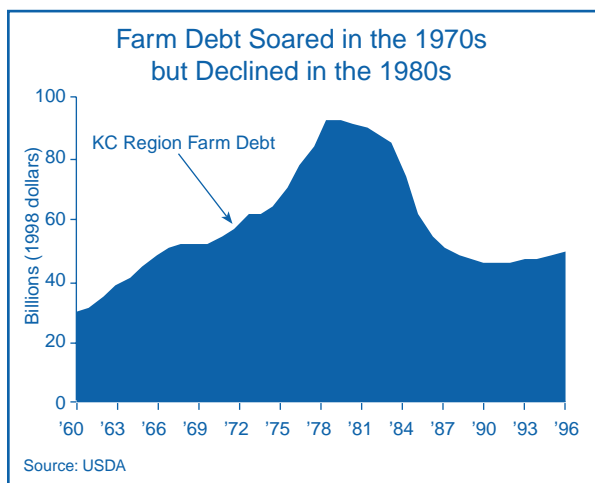


CHART 4

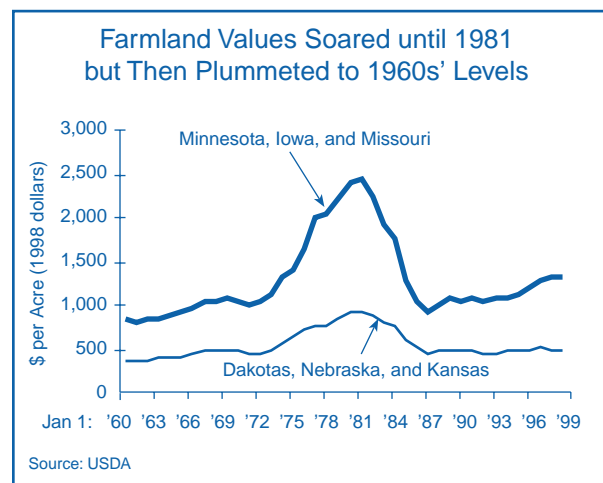
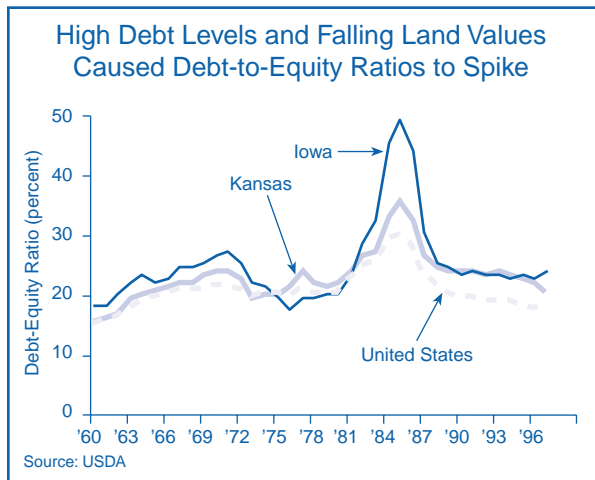


CHART 5



expensive in foreign markets. As a result, in the first half of the 1980s the Region's farm income (in 1998 dollars) averaged only \$6 billion annually, compared with \$17 billion in the 1970s. Even these modest returns were possible only because of government payments (see Chart 1); excluding government payments, the Region's agricultural sector lost money during drought-ravaged 1983.

In addition to farm sector problems, macroeconomic events worked against highly leveraged farmers in the 1980s. As seen in Chart 2, inflation declined dramatically in the 1980s, from over 13 percent in 1980 to less than 2 percent by 1986. In August 1979, the Federal Reserve Board instituted a fundamental change in monetary policy by targeting money supply growth rates rather than interest rates. This shift to a more restrictive monetary policy enabled the Federal Reserve Board to "wring out the demon" of inflation that had characterized the U.S. economy during the 1970s.<sup>4</sup>

Nominal interest rates again lagged this relatively rapid change in the inflation rate. As a result, the relatively high nominal interest rates that had prevailed in the 1970s persisted into the early 1980s, leading to a rapid increase in the real interest rate farm borrowers paid. Increases in federal borrowing in the first half of the 1980s also contributed to the rise in the real interest rate.

<sup>4</sup> Mussa, Michael. "U.S. Monetary Policy in the 1980s," in *American Economic Policy in the 1980s*. Edited by Martin Feldstein. 1994. Chicago: University of Chicago Press. p. 103.

Declining farm incomes reduced farmers' ability to service large debts accumulated in the 1970s. The supply of available credit declined in the early 1980s as bankers became more cautious about lending to farmers. During this period, many farmers sold out or went bankrupt, and collateral values were often less than underlying debt because of the decline in real estate values. As debts were charged off from lenders' portfolios, the aggregate level of debt declined appreciably.<sup>5</sup> As Chart 3 shows, by 1987 the real value of farm debt in the Region had fallen to 1960s levels.

As Chart 4 shows, by 1987 real farmland values fell to mid-1960s levels and returned to the historical trend of gradual increase. The rapid decline in land values led to a sharp increase in farmers' debt-to-equity ratios (see Chart 5). As noted earlier, the effect was most pronounced in Iowa because that state's land values registered the largest percentage decline.

Financial stress was widespread in the Region's agricultural sector during 1984 through 1986 (see Table 1). Iowa had the highest number of distressed farms (more than 12,000), while **Minnesota** and **Missouri** each had the highest percentage of stressed farms (24 percent). Missouri had the nation's highest percentage of insolvent farms (12 percent).

The aggregate financial ratios only suggest the magnitude of the problem. A USDA survey of Iowa farmers

<sup>5</sup> Peoples, et al., p. 38.

TABLE 1

MANY FARMS WERE STRESSED AT THE HEIGHT OF THE FARM CRISIS			
	FINANCIALLY STRESSED FARMS 1984-1986		
	NUMBER OF FARMS	PERCENT OF FARMS	PERCENT TECHNICALLY INSOLVENT
IOWA	12,580	20	8
MINNESOTA	11,510	24	10
MISSOURI	5,740	24	12
NEBRASKA	5,390	17	6
KANSAS	5,230	18	8
SOUTH DAKOTA	4,080	19	6
NORTH DAKOTA	3,790	18	4

SOURCE: USDA

## Regional Perspectives

conducted in 1984 showed that farmers with debt-to-asset ratios above 40 percent represented 28 percent of total operators in the state but held 65 percent of the outstanding debt. The most highly leveraged farmers (those with debt-to-asset ratios over 70 percent) represented 10 percent of operators but held 25 percent of the debt. Clearly, the most highly leveraged farmers were most at risk, as their equity positions declined with the fall in land prices.

However, farmers' fortunes improved considerably between 1987 and 1990. Aggregate debt levels declined significantly as a result of an increase in loan charge-offs and farmers' attempts to reduce debt levels. According to one estimate, the share of dollar sales devoted to interest expense by financially stressed farmers declined from 25 percent in 1984 to 13 percent in 1990.<sup>6</sup>

Farmers also benefited greatly from federal government payments during the last part of the 1980s. Payments to farmers averaged nearly \$13 billion annually between 1986 and 1990, compared with an average of less than \$3 billion per year in the 1970s.

### *Current Difficulties in Agriculture Differ from Those in the 1980s*

The Region's agricultural sector is again experiencing financial distress. In June 1999, the USDA forecast 1999 national farm net income at \$45.1 billion, the third consecutive year of decline. According to the USDA, large stocks of corn, wheat, and soybeans in domestic and international inventories point to continued low prices for these commodities through the year 2000 (see Table 2). A slight improvement in hog prices is forecast for 2000, but not to the 1997 level. Although the USDA forecasts an increase in cattle prices, forecasters have significantly overestimated cattle prices in each of the past two years.

In addition, farmland values in the Region have shown the first indication of decline since 1986. In fact, *Iowa State University's* annual survey of land values showed a 1.8 percent decline in farmland values in Iowa for 1998. The *Federal Reserve Bank of Kansas City* reported a second consecutive quarter of declining farmland values in **Kansas, Nebraska,** and Missouri for the fourth quarter of 1998. The *Federal Reserve Bank of Minneapolis*

<sup>6</sup> Peoples, et al., p. 63.

TABLE 2

PRICES ARE EXPECTED TO REMAIN DEPRESSED THROUGH 2000				
	1997	1998	Est. 1999	Proj. 2000
CORN	2.71	2.43	2.00	2.00
WHEAT	4.30	3.38	2.65	2.85
SOYBEANS	7.35	6.47	5.05	4.35
HOGS	51.36	34.72	37.00	41.50
CATTLE	66.32	61.48	64.50	73.50

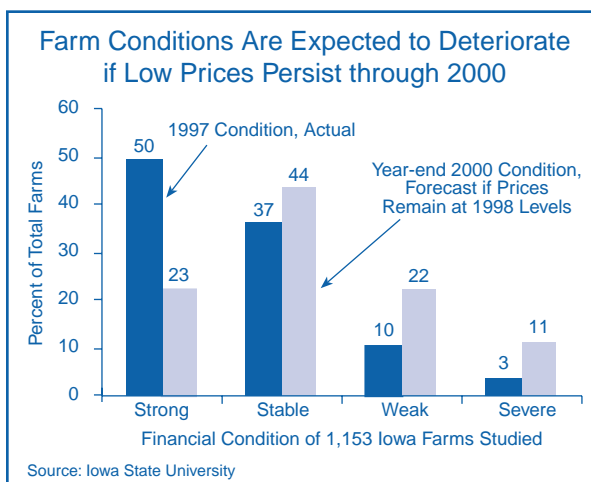
NOTE: GRAIN PRICES ARE FOR MARKETING YEAR OF EACH CROP. CROP QUANTITIES ARE PER BUSHEL; LIVESTOCK ARE PER HUNDREDWEIGHT.  
SOURCE: USDA

survey of agricultural credit conditions reports a year-over-year decline in **North Dakota** land values.

Low prices in the major commodity markets are expected to compound the financial distress of many farmers in the Region. Iowa State University economists simulated the financial effects on Iowa's farms if commodity prices remained at the 1998 level through 2000. Using financial data from 1,153 farms in Iowa, the researchers classified the farms into four categories of financial health: strong, stable, weak, and severe. Chart 6 shows the results of this study.

Projected average net income declined approximately 60 percent, from \$68,000 in 1997 to slightly more than \$29,000 in 1998. In particular, net cash flow was negative for the farms in the weak and severe categories. The economists concluded that if the 1998 price levels continue through 2000, more than one-third of Iowa's com-

CHART 6



mercial farms will require restructuring or liquidation. The results of the Iowa State University study may also apply to other states in the Region, such as Minnesota, Nebraska, and Missouri, that depend on similar commodities. As in the 1980s, a significant subset of highly indebted farmers is at risk today.

Despite these difficulties, the level of risk in the agricultural sector is considerably lower than in the 1980s. Current debt levels, in real terms, are similar to 1969 levels, before the buildup of the 1970s. Similarly, land values have not increased as dramatically as they did in the 1970s, instead increasing with steady improvements in agricultural productivity. As a result, despite recent small declines, farmland values appear less vulnerable to the precipitous declines seen in the 1980s. Finally, low debt levels and stable farmland values have led to aggregate debt-to-equity ratios in line with those reported over most of the past 40 years.

### ***New Federal Farm Policy and New Problems***

The future of U.S. agricultural policy remains uncertain, and risks are very different from those that farmers faced in the 1980s. U.S. agricultural policy appeared to have shifted with the enactment of the Federal Agricultural Improvement and Reform Act of 1996, which dismantled the system of deficiency payments to farmers that had been in effect since the Great Depression. In return, farmers were promised a series of payments, unrelated to their production decisions, that would decline to zero by the end of 2002. "The Federal Agricultural Improvement and Reform Act of 1996 Increases Risks and Opportunities," ***Regional Outlook***, Third Quarter 1998, argued that this legislation likely will negatively affect states with limited crop alternatives, such as the wheat-growing areas of North Dakota and Kansas.

Developments since 1996 have blunted the impact of the intended reform. In 1998, in response to low commodity prices, Congress approved a \$6 billion emergency aid package for agriculture. Senators from farm states have discussed reversing the 1996 reforms, but the likelihood of this occurring is unclear. Additionally, this November, World Trade Organization negotiations resume, during which U.S. agricultural policy will be scrutinized. Negotiators are expected to attempt to reduce domestic agricultural supports as part of a free trade policy.

### ***Farm Banking—the "Lag Effect" Masks Problems***

Before comparing farm banking in the 1980s with the present, it is important to understand the "lag effect." The "lag effect" describes the phenomenon whereby problems in the agricultural sector typically do not manifest themselves in farm bank performance measures for two to three years. For example, farm banks' reported conditions in the 1980s did not deteriorate significantly until 1984, three years into the farm crisis.

The primary cause of this lag is the carryover debt process, in which loans not repaid in one season are carried over into the next season. The reason this process is more prevalent in farm lending than in commercial lending is that farm income tends to be volatile. In farming, it is common for one or two bad years to be made up entirely by a third healthy year. Other industries are more cyclical, and lenders tend to be less optimistic that the coming year will be strong enough to cover borrowers' current losses. The lag effect is heightened when farm equity levels are strong, because farmers will have more real estate equity to convert carryover debt to term loans.

### ***Farm Banking—the Crisis of the 1980s***

The 1980s farm crisis caused widespread problems for farm banks. Table 3 (next page) shows how certain financial performance ratios declined dramatically between year-end 1982 (the first year of depressed farm income) and 1985 (when farm bank financial performance bottomed out).



Although 1982 farm income declined 22 percent from a year earlier and 43 percent from 1979, farm banks reported strong aggregate operating results in 1982. The lag effect masked the impact of the emerging farm crisis on farm banks. Equity capital ratios were relatively high, and loan loss reserves compared favorably with the 1 percent benchmark that existed at the time. The aggregate return on assets (ROA) ratio remained high at 1.23 percent, and few banks were unprofitable. Past-due loans were low at 2.8 percent.

By 1985, the situation for farm banks had changed significantly. Their financial performance measures fully

**TABLE 3**

FARM BANKS IN THE REGION DETERIORATED SIGNIFICANTLY BETWEEN 1982 AND 1985		
KANSAS CITY REGION FARM BANKS		
	PERCENT	
	1982	1985
CAPITAL/ASSETS	8.65	8.78
ALLL/TOTAL LOANS	0.98	1.91
LOANS/ASSETS	51.08	47.05
RETURN ON ASSETS	1.23	0.29
% OF BANKS UNPROFITABLE	3.26	25.22
PAST-DUE LOANS/ TOTAL LOANS	2.80*	7.63
FARM LOANS/TOTAL LOANS	49.90	49.58
FARM LOANS/TOTAL ASSETS	25.49	23.33

NOTE: FARM LOANS ARE FOR FARM PRODUCTION OR SECURED BY FARM REAL ESTATE.  
\* ESTIMATED FROM DATA IN FDIC, "HISTORY OF THE EIGHTIES."  
SOURCES: BANK CALL REPORTS; "HISTORY OF THE EIGHTIES"

reflected the magnitude of the agricultural crisis. Past-due loans were up to 7.6 percent, and loan loss reserve levels were much higher to compensate for the increase in problem loans. The aggregate ROA ratio was just 0.29 percent, and more than a quarter of farm banks lost money. It is interesting to note that equity capital levels rose between 1982 and 1985 as farm banks with low levels of capital failed, increasing the aggregate ratio of the remaining institutions.

### Why Did Some Banks Fail, While Others Survived?

Although aggregate farm bank financial performance declined dramatically between 1982 and 1985, all farm banks were not affected equally. As Map 1 shows, a significant number of farm banks in the Region failed in the 1980s. However, despite the agricultural crisis, 93 percent of farm banks in the Region did not fail.

What distinguished the failures from the survivors? A 1990 study by the *Federal Reserve Bank of St. Louis*<sup>7</sup> attempted to answer this question. First, researchers noted that the majority of failures were in agricultural areas, but beyond that, the failures were not geographically clustered. This finding suggested that local eco-

<sup>7</sup> Belongia, Michael T., and R. Alton Gilbert. "The Effects of Management Decisions on Agricultural Bank Failures." *American Journal of Agricultural Economics*. November 1990. pp. 901-910. Note that the authors' definition of farm banks (those with a ratio of agricultural loans to total loans greater than the national average) differs from the FDIC's.

omic conditions were not the primary cause of farm bank failures. In fact, the researchers found that most counties in which a failed farm bank was headquartered also included headquarters of other farm banks that reported sound financial results throughout the crisis. Few counties in agricultural areas experienced more than one farm bank failure between 1984 and 1986.

Many studies point to management decisions as the primary cause of farm bank failures. Commonly cited qualitative characteristics of failed banks include relaxed underwriting standards, misconduct by bank officers, high tolerance for risk, and low involvement by bank directors. However, the St. Louis Federal Reserve Bank researchers attempted to determine if there were quantitative factors *relating to management decisions* that explained why some farm banks failed and others did not.

The researchers created a statistical model<sup>8</sup> that explained how changes in certain variables affected the probability of farm bank failure. They included only failed farm banks from counties where banks also survived, and they tested only financial ratios that management directly controls.

The results of the study were striking:

- *The loan-to-asset (LTA) ratio was the most significant indicator of bank failure.* The study found that for every 1 percent increase in a bank's LTA ratio, its chance of failure rose by 3.3 percent. Loans typically carry more risk than other bank investments; as a result, management that opted for increased loan volume may have had a higher tolerance for risk and followed more relaxed underwriting standards.

FDIC researchers working on the *History of the Eighties* project also determined that the LTA ratio was the most significant indicator of farm bank failure in the 1980s.<sup>9</sup> They found that farm banks with LTA ratios in the top 20 percent in 1980 failed at a rate of 6.2 percent, or five times the rate of other farm banks. Researchers conducted the test again in

<sup>8</sup> This model was a multiple regression analysis using 145 failed banks and approximately 600 surviving banks. Results shown in this article are for independent variables lagged three years prior to failure. This model best portrays the effect of management decisions before problems surfaced at their institutions.

<sup>9</sup> Federal Deposit Insurance Corporation, *History of the Eighties—Lessons for the Future*, Volume I. 1997. Washington, D.C. pp. 280-282.



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1982 and found that banks with the highest LTA ratios had a failure rate of 10.3 percent, more than six times that of the remaining farm banks.

- *Concentration in farm loans was also a factor, but not as significant as the LTA ratio.* For each 1 percent increase in the ratio of farm loans to total loans, the probability of failure increased 0.9 percent. Because the depressed farm economy was a driver of farm bank problems, higher concentrations in farm lending led to higher rates of failure. However, management decisions about lending volume were more predictive than concentrations in farm loans.
- *Higher capital levels were the most significant factor preventing farm bank failures.* For each 1 percent increase in a farm bank's equity capital-to-assets ratio, the institution's probability of failing declined by 13.4 percent.

Although most farm banks would find it difficult to diversify their lending portfolios, management can control their institutions' overall risk profile by adjusting their lending volume and equity capital levels. Thus, the study suggests that management prudence in the 1980s helped some farm banks survive.

### ***The Present Situation: The 1980s All Over Again?***

Just as 1982, 1998 could represent the first year of a period of depressed farm income. Comparing the Region's farm banks at year-end 1982 and year-end 1998 illustrates similarities but important differences as well.

Despite 1998's depressed farm income, farm banks reported good conditions at year-end. Table 4 shows that, in aggregate, equity capital levels were strong, earnings were high, and past-due loan levels remained low.

Important differences are apparent between farm banks today and in 1982. The aggregate LTA ratio has increased significantly from 1982 levels. This fact could raise concern given the prospect for continued low commodity prices and the studies that identified the LTA ratio as a significant correlating factor with farm bank failures in the 1980s. However, farm banks are significantly better capitalized now than they were in 1982. Aggregate equity capital levels are up almost 2 percentage points compared with 1982. In addition, loan loss

**TABLE 4**

REGION'S FARM BANKS REPORTED HIGHER CAPITAL AND LOAN LEVELS IN 1998 VERSUS 1982		
	PERCENT	
	1982	1998
CAPITAL/ASSETS	8.65	10.42
ALLL/TOTAL LOANS	0.98	1.57
LOANS/ASSETS	51.08	60.08
RETURN ON ASSETS	1.23	1.19
% OF BANKS UNPROFITABLE	3.26	1.70
PAST-DUE LOANS/ TOTAL LOANS	2.80*	2.42
FARM LOANS/TOTAL LOANS	49.90	47.30
FARM LOANS/TOTAL ASSETS	25.49	28.41

NOTE: FARM LOANS ARE FOR FARM PRODUCTION OR SECURED BY FARM REAL ESTATE.  
\* ESTIMATED FROM DATA IN FDIC, "HISTORY OF THE EIGHTIES."  
SOURCES: BANK CALL REPORTS, "HISTORY OF THE EIGHTIES"

reserve levels are much higher, suggesting that today's farm banks are better positioned to handle an increase in loan losses.

Although farm banks' aggregate ratio of farm loans to total loans has declined over the past 16 years, their aggregate ratio of farm loans to total assets has increased because they have a higher LTA ratio (see Table 4). This higher ratio indicates that farm banks are more concentrated in farm lending than they were in 1982 and may be more susceptible to a continued weak farm economy.

In aggregate, management decisions in the 1990s have led to farm banks comparing negatively in some respects and positively in others with their counterparts of the early 1980s. Farm banks have a much higher aggregate LTA ratio than they did before the farm crisis, suggesting higher risk levels. On the other hand, the increased level of risk appears to be offset in the aggregate by higher capital and loan loss reserve levels.

However, some individual farm banks in the Region appear to be aggressively increasing their lending volume relative to capital. Of the 1,355 farm banks in the Kansas City Region at year-end 1998:

- 312 have an LTA ratio over 60 percent and equity capital of less than 9 percent.
- 77 have an LTA ratio over 70 percent and equity capital of less than 8 percent.

If the St. Louis Federal Reserve Bank study results are assumed to be applicable to the next prolonged agricultural downturn, these banks may be more susceptible to failure than those with lower loan levels or higher capital levels.

Not surprisingly, the latter 77 institutions are in states reporting relatively strong farm income during the 1990s because bankers are more likely to manage their institutions aggressively in healthy economies. Iowa has 25 of the 77 and Nebraska has 18. **South Dakota** and **North Dakota**, which have had more troubled farm sectors, have a total of seven.

These 77 banks' potential vulnerability to an agricultural downturn can be seen in their financial statements, which are already beginning to reflect the weakening farm economy. For example, the Region's 1,355 farm banks posted an aggregate ROA of 1.19 percent in 1998, just 5 basis points below 1997's aggregate ROA. By contrast, the 77 banks posted an aggregate ROA of 0.85 percent, down 28 basis points from their 1997 level. This reduction was caused largely by provision expenses necessary to cover increasing charge-offs in light of below-average loan loss reserve levels.

### ***Conclusion—No Recurrence of the Farm Crisis, but Problems Persist***

We do not expect to see a recurrence of the agricultural crisis of the 1980s, which led to the failure of many farm banks. Problems in the farm sector today appear different from those in the 1980s. The macroeconomy is more stable today, export growth has not led to overinvestment in the farm sector, and land values have not increased as dramatically as they did during the 1970s. On the banking side, farm banks are better capitalized

and have higher levels of loan loss reserves than they did in the 1980s. Therefore, institutions are more capable of absorbing loan and operating losses.

However, concerns persist. Most importantly, if commodity prices continue at their low level, highly leveraged farmers will be at risk of failure. As shown by the Iowa State University study, if low prices persist through 2000, one-third of Iowa farms could be at risk. Farms in parts of North Dakota and Minnesota, plagued by poor wheat yields and low prices over the past few years, would likely be affected more dramatically than the study suggests, as they began 1998 in weaker financial condition than farms in Iowa.



In addition, the strong U.S. economy that has continued through nearly all of the 1990s has apparently increased some farm bankers' tolerance for risk, as shown by the aggregate increase in the LTA ratio. Farm banks that have relaxed their underwriting standards to achieve loan growth will likely be more vulnerable to continued low crop and livestock prices.

Finally, the safety net for farmers is shrinking. While the political climate is uncertain, federal transition payments are scheduled to expire at year-end 2002. This event is likely to affect more seriously the Region's wheat growers, who do not have the planting choices of corn and soybean growers. Without federal aid, many farms in the Region may not be viable, and banks in the hardest-hit areas could experience serious problems.

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