Regional Outlook

Federal Deposit Insurance Corporation — Second Quarter 1998

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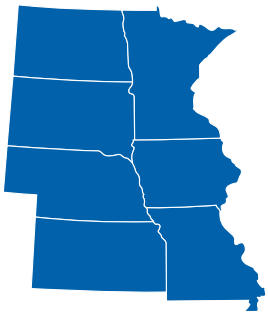

Division of
Insurance

Craig A. Rice,
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Jeffrey W. Walser,
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In Focus This Quarter

◆ ***Gain-on-Sale Accounting Can Result in Unstable Capital Ratios and Volatile Earnings*—The accounting for transferring and servicing financial assets causes asset sellers, particularly high-growth lenders, to recognize significant noncash income related to retained economic interests in the sold assets. This is true whether a company securitizes its own assets or sells its assets as a conduit to another securitizer. Values are often driven by management assumptions about future performance of the sold assets. Major writedowns of gain-on-sale assets by some finance and mortgage companies underscore the importance of careful scrutiny of these assumptions by banks and their supervisors.** *See page 3.*

By Allen Puwalski

◆ ***How Will the Expansion End?*—Analysts are now focusing on when and how the current expansion will end. Although no one can accurately predict when a recession will begin, two possible scenarios have emerged. Each scenario has important implications for lenders as they prepare for the possibility of slower economic growth or recession.** *See page 7.*

By Paul C. Bishop

◆ ***Trends Affecting the Allowance for Loan and Lease Losses*—In today's environment, in which loan availability is abundant, growth is strong, and competition is fierce, some industry leaders and regulators have expressed concern about the loosening of underwriting standards and greater risk in bank loan portfolios. At the same time, the allowance for loan and lease losses (ALLL) relative to total loans at many insured institutions is declining. As the economic expansion reaches an advanced age, an important question for insured institutions is whether their ALLLs adequately reflect the risks associated with changing industry practices.** *See page 11.*

By Andrea Bazemore

Regular Features

◆ ***Regional Economy*—The Asian financial crisis brings uncertainty for the Region's agriculture and aircraft industry…the dairy industry faces continued transformation…labor shortages persist in the Region.** *See page 16.*

By Jeffrey W. Walser

◆ ***Regional Banking*—1997 banking results are strong…but underwriting flags surface in growing loan portfolios…some North Dakota banks are feeling the effects of several poor years for wheat farmers…important differences are noted in the financial performance of rural and metropolitan community banks.** *See page 21.*

By John M. Anderlik, Craig A. Rice

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Gain-on-Sale Accounting Can Result in Unstable Capital Ratios and Volatile Earnings

- **Gains generated from asset sales under SFAS 125 rely on management assumptions about the lifetime performance of the assets sold and may not materialize in cash if the assumptions prove incorrect.**

- **Gain-on-sale accounting has been most significant to securitizers, but nonsecuritizers can and do retain economic interests that give rise to significant gain-on-sale assets.**

- **Finance companies seeking to shift attention from gain-on-sale assumptions may find willing bank correspondents.**

- **The rating services have modified capital and earnings analysis in order to lessen what they consider distortions caused by SFAS 125.**

Statement of Financial Accounting Standards No. 125 (SFAS 125), Accounting for Transfers and Servicing of Financial Assets and Extinguishing of Liabilities, causes asset sellers, particularly high-growth lenders, to recognize significant noncash income. Applying SFAS 125, which became effective on January 1, 1997, can give rise to significant noncash gains and related assets if an economic interest is retained in assets sold. The value of retained interests in assets sold is quantified on the basis of management's assumptions about future charge-off rates, repayment rates, and the rate used to discount the expected cash flows from the loans sold. Because the value of these assets changes when actual performance deviates from the assumptions, the quality of earnings, capital, and liquidity for a lender that relies significantly on gains on sale must be considered carefully.

The recent writedowns of interest-only (IO) assets by a few major finance companies have led to a higher level of scrutiny of companies whose financial statements are influenced significantly by gain-on-sale accounting. The Securities and Exchange Commission has recently increased its scrutiny of publicly traded companies that use gain-on-sale accounting, and it may soon require assumptions regarding defaults, prepayments, and discount rates to be disclosed in financial statements. The same companies that enjoyed soaring stock performance thanks to high earnings growth caused by gain-on-sale accounting have seen their stock values tumble as they have had to write down their gain-on-sale-related assets.

Several major credit rating companies have recognized the significant effect of gain-on-sale accounting under SFAS 125 on interpreting financial statements. These companies have issued comments or reports dealing with SFAS 125's effect on the quality of earnings and capital of the companies they rate and how they adjust their analysis as a result. The consensus of these papers is that gain-on-sale accounting for companies that securitize often results in significantly higher reported earnings and equity compared to balance sheet lenders—without, in many cases, materially changing the underlying economics or credit risk to the originator of the assets.[1] Generally, the rating services have modified capital and earnings analysis in order to lessen what they consider distortions caused by SFAS 125.

There Are Risks Associated with Gain-on-Sale Accounting

The asset booked in connection with an SFAS 125 loan sale is an IO strip that represents the present value of future excess spread cash flows generated by the transferred assets. Generally, asset-backed securitizations, including some classified as mortgage-backed securities, are structured so that each month the expected cash flows from the underlying assets will be sufficient to pay the investor coupon, the trust expenses, the servicing fee, and net charge-offs. The cash flow that the underlying assets will generate each month cannot be known with certainty because the underlying asset may allow for variable principal payments (e.g., credit card accounts), or the borrowers may default. Securitizations are structured so that there is enough cushion between the *expected* cash flows and the required payments and

[1] Duff & Phelps Credit Rating Company, "Securitization and Corporate Credit Risk." *Special Report Financial Services Industry,* July 1997; T. E. Foley and M. R. Foley. "Alternative Financial Ratios for the Effects of Securitization Tools for Analysis." *Moody's Special Comment,* September 1997; H. L. Moehlman, R. W. Merrit, and N. E. Stroker. "Capital Implications of Securitization and Effect of SFAS 125." *Fitch Research*, September 16, 1997.

expected charge-offs to absorb fluctuations in *actual* cash flows and *actual* charge-offs. This cushion is excess spread. As actual cash flows vary from projections, so does the excess spread generated.

According to SFAS 125, when a company sells assets and retains the right to future excess spread cash flows, the calculation of the gain on the sale includes the capitalization of this right. In many transactions, the gain on sale consists entirely of the fair value of the IO strip that represents this right—none of which is necessarily received in cash. In addition, with many transactions, cash receipt is further delayed while cash flows go to fund the spread account, which is analogous to an internal loan loss reserve.

SFAS 125 states that quoted market prices in active markets are the best evidence of fair value and should be used whenever available. Although there have been some sales of these IO strips, the number of sales is not yet sufficient to constitute an active market. When market prices are not available, SFAS 125 states that the estimate of fair value should be based on the best information available. In practice, fair value of the excess spread is determined by present valuing the expected cash flows using a discounted cash flow model.

The value of the right to future cash flows is determined on the basis of management's assumptions about the charge-off rate, the average life of loans, and the rate used to discount the cash flows. *These input assumptions drive the model results and, therefore, the magnitude of the gain.* The stability of the value of the IO will depend greatly on the extent to which the input assumptions accurately describe the pool performance over the life of the transferred assets. Changes in economic or market conditions that were not anticipated in the initial cash-flow assumptions will likely cause the pool of loans to perform differently than initially projected.

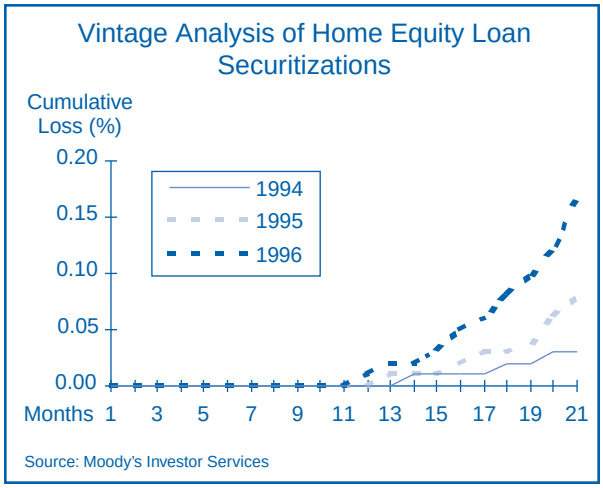
Gain-on-sale accounting is significant to securitizers. To illustrate the significance of the IO account to a securitizer's reported income, consider one major subprime lender. During fiscal year 1997, this company's IO asset grew by over $141 million. Despite a $28 million writedown of the IO asset, the net growth of the asset constituted over half of total revenue and over eight times net income. The revaluation of the IO was necessitated by higher-than-expected prepayment rates.

Current market conditions were not anticipated by many companies that benefited from high earnings related to gain-on-sale accounting. Several other major securitizers have reduced the carrying value of their IO assets in the face of either rising charge-off rates or higher prepayment rates. Writing down an IO strip largely represents a company's admission that it will not generate on a cash basis income that was booked previously.

Chart 1 displays the cumulative charge-off rates by vintage for ***Moody's*** index of home equity loan securitizations. The index consists mostly of prime mortgages, so the loss rates are still low. However, the rising trend in losses is noteworthy and reflects the growing influence of subprime securitizations on the index and the related decline in underwriting standards as competition has increased in this market. Loans originated in 1995 and 1996 are causing progressively larger and earlier losses. After 21 months of seasoning, the cumulative loss rate on loans originated in 1996 is .17 percent—almost six times the loss rate experienced by the 1994-originated cohort at the same age. Despite the continued low loss rates for the home equity market in general, subprime lenders are experiencing accelerated loss rates that are eroding the value of their interests in excess spreads.

There may be a tendency for management to base assumptions about expected loss rates on loans sold solely on past experience with similar loans. Such an approach may not capture changes in market conditions and trends. For example, the Moody's data demonstrate that loss rates on home equity loans, including first liens, have been trending upward rapidly. This trend implies that when estimating loss rates, management should consider the potential for changes in market con-

CHART 1



ditions over the life of the sold assets as well as the past performance of similar assets.

Like loss rates, prepayment rates have risen substantially in the subprime mortgage market. Several factors have contributed to the rise. One factor is the trend toward higher loan-to-value (LTV) loans in the mortgage market, which has allowed borrowers to obtain additional cash from their homes without waiting to pay down principal. Mortgage bankers report the tendency of some subprime borrowers, often debt consolidators, to maintain outstanding balances at the highest possible LTV. With maximum LTV ceilings rising, debt consolidators can refinance home equity loans without having to amortize existing debt.

Another important factor contributing to rising prepayment rates is competition among lenders for volume growth. To continue to grow volume, lenders have been sacrificing margins on loans to offer a better rate to borrowers. When estimating prepayment rates for subprime borrowers, it has been normal to expect that they would need to improve their credit rating, or "credit cure," before they would find it economical to refinance. Stiff competition for volume has allowed borrowers to find better rates without credit curing and has stimulated them to refinance prior to the time estimated at origination. Falling interest rates and a relatively flat yield curve are likely to increase prepayment rates.

In standard finance theory, uncertainty about the future level of losses and prepayment rates is compensated for by discounting the cash flows at a higher rate. Some analysts advocate using a discount rate similar to the required rate of return for equity investments. Faced with changing conditions, one large finance company that specializes in high LTV lending announced in December 1997 that it was increasing the discount rate it uses to value new IO strips from 12.5 percent to 33 percent.

The IO Strip Asset Is Growing at Insured Depository Institutions

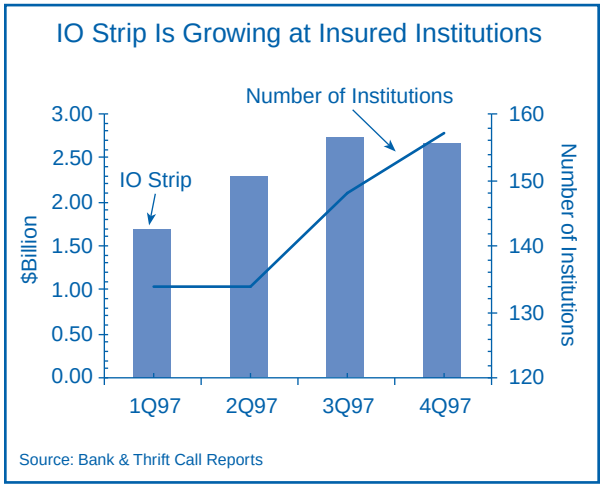
As of December 31, 1997, only 30 institutions reported this IO asset at more than 5 percent of tier 1 capital. However, some institutions have booked gains that should have given rise to a call-reportable IO strip but did not properly report the assets. Therefore, the current reporting may understate the prevalence of the asset.

Furthermore, the recent attention to gain-on-sale accounting from the public equity markets has at least a few large finance and mortgage companies seeking business strategies that shed IO strip-related volatility from their financial statements. One such strategy already in use is to leave the economic interest in excess spread with the correspondents that originate the loans. This is done as follows: The correspondent originates loans for purchase by a finance company. The finance company pays par for the loans, and instead of being paid an origination fee or a premium for the loans, the *seller* retains the right to excess spread generated over the life of the loan. The seller books a gain and an IO asset that capitalizes this right to receive future cash flows. The nature of the IO asset is exactly the same whether it arises directly from a securitization or from a sale of loans to a securitizer. *If this strategy is used widely by finance and mortgage companies, then IO strips are likely to grow among institutions that originate loans for sale to these companies* (see Chart 2).

For insured depository institutions, the capital effects of SFAS 125 need to be evaluated carefully. Analysis of the financial statements and leverage ratios of insured institutions should consider fully issues related to the quality of earnings and the stability of capital posed by the volatility of the IO strip. Insured institutions that engage in significant asset sales while retaining economic interests that give rise to SFAS 125–related assets are subject to distortions similar to those of nonbank financial companies.

The activity of originating and selling loans and booking associated gains can lead to capital ratios that

Chart 2



appear high by traditional bank standards. For several reasons, the leverage ratio can appear particularly high. First, although the asset may be more volatile than mortgage serving rights, there is no limit to the amount of IO strip that a bank can include in tier 1 capital. Second, the amount of IO strip booked increases capital by a gain on the net of the tax effect. The extent to which the amount remains in capital depends, of course, on the institution's dividend policy. Third, the denominator of the leverage ratio is reduced by the sale because the loans are no longer assets of the bank. The cumulative result can be a significant boost to the leverage ratio.

Several insured institutions report an IO strip at greater than 25 percent of tier 1 capital. For an institution whose primary line of business is originating and selling subprime mortgages, the asset can quickly reach a level exceeding tier 1 capital. In a little more than a year of originating and selling subprime mortgages to a major securitizer, one institution has amassed IO assets that it has valued at more than 150 percent of tier 1 capital.

The institutions that have concentrations of 25 percent or more of tier 1 capital in IO assets have a median leverage ratio of about 11 percent. In contrast, the median equity capital ratio for nonbank mortgage securitizers tracked by ***SNL DataSource*** is about 30 percent. Public debt markets or banks that lend to these finance companies appear to require significantly higher capital levels than regulatory minimums required for banks.

The potential for growth of the IO strip asset at insured institutions seems strong. In some circumstances, minimum capital standards for banks may require significantly less capital for IO asset exposure than the public equity markets. Perhaps more important, the quick rise of the significance of gain-on-sale accounting to the mortgage and consumer credit markets exemplifies the speed with which exposure to risk can be acquired through the securitization market. Strong demand for asset-backed securities coupled with changing accounting emphases, which in this case favor asset sellers, can lead quickly to substantial exposures.

Allen Puwalski, Senior Financial Analyst

Risk-Based Capital (RBC) Treatment of the Gain-on-Sale–Related IO Asset

If the IO asset derives from excess spread that absorbs charge-offs from the sold assets, then the IO strip constitutes recourse from the sold assets for RBC purposes. RBC standards require capital to be held against this exposure. In general, the capital requirement for this exposure is the amount of capital that would have been required for the assets had they not been sold. If the sold assets are one- to four-family residential mortgages, they may receive a 50 percent risk weighting. Subprime mortgages are not necessarily precluded from receiving this weighting.

In order to apply the 50 percent risk weighting, the capital standards require that one- to four-family residential mortgages be fully secured and prudently underwritten. The "fully secured" requirement precludes high-LTV loans with LTV ratios of greater than 100 percent from receiving reduced capital requirements, but the language of the RBC regulations does not necessarily preclude subprime mortgages in general from receiving the reduced risk weighting. Although the capital standards require that mortgages be prudently underwritten to qualify for the 50 percent risk weighting, it is not entirely clear how the term "prudently underwritten" applies to subprime mortgages. A higher expected loss rate alone may be insufficient cause for presuming that the mortgages are not prudently underwritten.

The rationale for reducing the capital requirement for traditional one- to four-family mortgage lending is related to the maturity of the market and consistently low loss rates. As noted above, the subprime mortgage market is changing rapidly, and loss rates can be much higher than in traditional mortgage lending. Accordingly, bank managements need to be aware of the potential volatility and risks associated with gain-on-sale assets associated with subprime mortgages.

How Will the Expansion End?

- **Despite a very low unemployment rate and high industry capacity utilization, inflation has been unusually subdued during this expansion, with price declines in some sectors.**

- **After seven years of expansion, most analysts expect the economy's growth to slow in the coming months.**

- **The last seven expansions have ended with an inflation-driven increase in short-term interest rates; in contrast, some analysts believe that the next recession will be caused by a period of falling prices for commodities, finished goods, and perhaps wages.**

- **Insured institutions that base lending and strategic decisions on assumptions of continued robust economic growth should scrutinize and test those decisions against possible adverse change in economic conditions.**

The current economic expansion is the third longest on record since World War II. Since mid-1991, when the expansion began, more than 15 million new jobs have been created and inflation-adjusted gross domestic product (GDP) has increased by nearly 20 percent. In fact, the unemployment rate reached a 24-year low when it fell to 4.6 percent in November 1997 and again in February 1998. At the same time, inflation has remained unusually low, at only 2.3 percent during 1997.

Analysts are now focusing on when and under what circumstances the current expansion will end. While no one can accurately predict *when* the expansion will end, two related but competing theories about *how* it will end have emerged in recent months. The first and more familiar scenario occurs when the Federal Reserve increases short-term interest rates to prevent a rapid increase in inflation caused by an overheating economy. The second scenario, a deflation-induced contraction, is less familiar in the context of recent recessions. This scenario posits a period of falling prices for commodities, finished goods, and, under the most severe circumstances, even wages.

Whatever the cause of the next downturn, its effects are likely to be important for the performance of lenders. During the 1990–91 recession, for example, the widespread deterioration of economic conditions was reflected in a number of indicators: Inflation-adjusted GDP fell by 2 percent; the number of business failures rose by nearly 40 percent; unemployment increased by more than 40 percent to 9.8 million; the unemployment rate peaked at more than 7 percent; single-family housing starts fell by almost 22 percent; and the bank card delinquency rate increased from 2.4 percent to 3.3 percent. This experience suggests that no matter what triggers the next downturn, dramatic adverse changes in the drivers of bank performance will likely result.

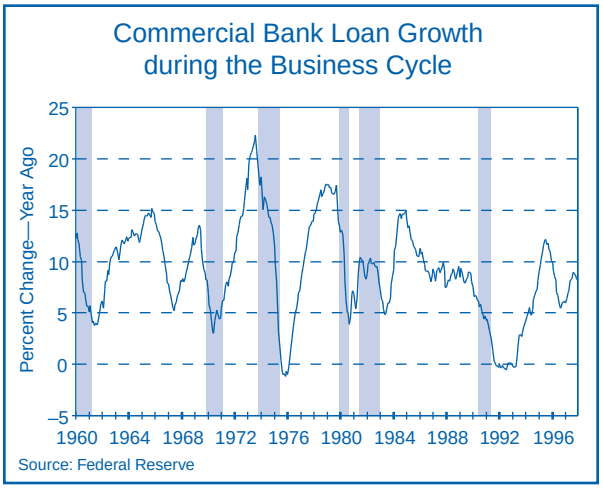
How Have Economic Expansions Usually Ended?

Although to some extent each business cycle is unique, virtually all of the post–World War II expansions have shown a similar characteristic: Toward the end of the expansion, inflation has accelerated. As the economy expands, the prices of inputs, including the wages of workers, are bid up as firms compete for resources to meet demand. The overall inflation rate will rise if prices increase across a large number of industries. Left unchecked, an increase in the overall price level may itself feed back into the labor market through demands for higher wages.

By raising short-term interest rates, the Federal Reserve can limit what might otherwise lead to a rapid increase in both wages and prices. Higher interest rates will reduce sales of capital goods, housing, and consumer durables, the demand for which is very sensitive to the level of interest rates. One reflection of this sensitivity is the changing pattern of loan growth over the business cycle. During periods of expansion, the demand for loans grows rapidly as businesses and households borrow to finance purchases of capital goods and consumer durables. If short-term interest rates are increased in response to inflationary pressures, loan growth will slow as businesses and consumers reduce their demand for loans. If interest rates continue to increase, loan growth may decline as it has done before and during each recession. The cyclical movement of loan growth (with vertical bars indicating periods of recession) is shown in Chart 1 (next page).

Looking more closely at short-term interest rates, Chart 2 (next page) illustrates the federal funds rate during the

Chart 1



last seven business cycles. While an increase in short-term interest rates has preceded each recession, it should be noted that an increase in rates is not sufficient to induce a recession. An increase in rates in 1984 was followed by a period of rapid growth that lasted until 1990. More recently, the increase in rates during 1994 was accompanied by a slowdown in the economy, but not a recession.

What Is Different about Inflation during This Expansion?

With history as a guide, one would expect inflation to rise as the current expansion matures. Chart 3 illustrates consumer price inflation during the four longest postwar expansions, including the current one. The chart shows the inflation rate at various points after the expansion began. During the expansion between 1975 and 1980, for example, the inflation rate was nearly 12 percent at the start of the expansion but fell to just over 6 percent after four quarters. Inflation remained at approximately 6 percent until the twelfth quarter of the expansion, after which it accelerated to more than 12 percent by the end of the 20-quarter expansion.

The current inflation trend differs from previous expansions in two ways. First, by the later stages of previous expansions, inflation was accelerating (see Chart 3). In contrast, there are few signs of accelerating consumer price inflation during the current expansion. In fact, it appears that the rate of inflation is declining; the United States has experienced disinflation.[1] Second, among expansions that have lasted more than 20 quarters, the current rate of inflation is one of the lowest since World War II. Consumer inflation is both decreasing and low by historical standards.

What Are the Two Views about Future Inflation?

Two views have developed about how the current expansion will end. The debate, couched in terms of the expected rate of future inflation, is of more than academic concern. The Federal Reserve's decision about

[1] In popular discussions of inflation rates and the price level, terminology is sometimes used loosely. To clarify, a declining rate of inflation, properly described as disinflation, means that prices are increasing at a progressively slower rate over time. Deflation is defined as a generally falling price level or, equivalently, a negative inflation rate.

Chart 2

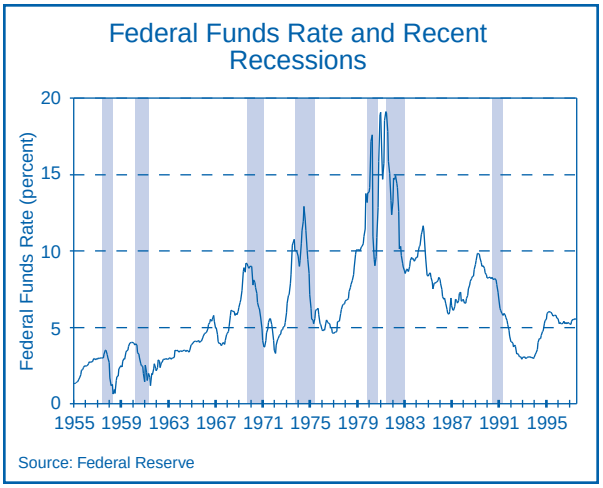
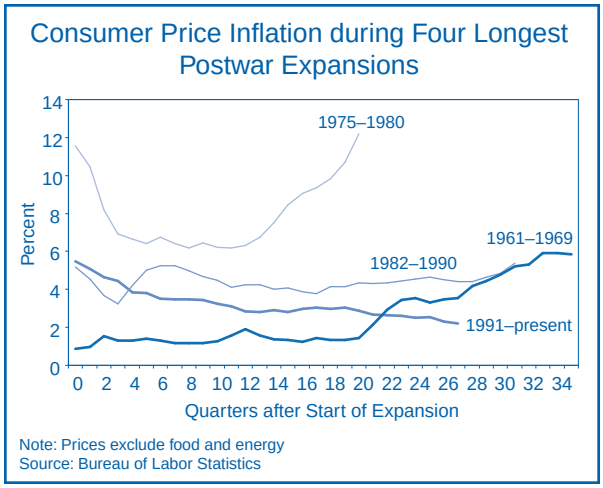


Chart 3



whether to change short-term interest rates may be influenced by arguments on either side of the debate.

The Traditional View

Although inflation has been tame during this expansion, adherents of the traditional view believe that impending inflation still poses a danger to the longevity of the expansion. Evidence cited to support this view includes a very low unemployment rate and rising inflation-adjusted wages. The reasons for the low inflation rate include low energy prices, inexpensive imports, and brisk domestic and international competition. These factors have delayed the onset of inflationary pressures, but they will not remain favorable indefinitely. The underlying dynamics have not changed significantly from those that led to rising inflation during every other recent economic expansion. This is also the view of the Federal Reserve Open Market Committee, as stated in the minutes of its November 12, 1997, meeting:

> *The reasons for the relative quiescence of inflation were not fully understood, but they undoubtedly included a number of special factors…the risks remained in the direction of rising price inflation though the extent and timing of that outcome were subject to considerable debate.*
>
> ***—Federal Reserve Bulletin, February 1998, p. 104***

The Deflation View

Alternatively, some analysts suggest that a recession may be brought about by a period of deflation. Advocates of this scenario base their view on the unusually low and falling inflation rate in the United States, even after seven years of economic expansion. They also suggest that the national economy of the 1990s is markedly different from that of the 1970s and 1980s. Intense global competition is now the norm and not the exception. Worker productivity growth is believed to be higher than the official data show, meaning that wage growth will not translate as readily as before into price increases. The U.S. economy is more prone to a period of falling prices than at any time in the recent past, especially in view of decreasing rates of inflation and deflationary forces originating from the ongoing Asian financial crisis.

What Does the Evidence Show?

Because determining economic policy is necessarily a forward-looking process, policymakers look at many indicators to determine the likely future course of inflation. A brief review of some of the more popular indicators reveals contradictory readings that can support either the inflation or deflation scenario.

Wage Growth

The national unemployment rate is currently very low, signaling that labor markets are near capacity in terms of their ability to create new jobs. The nation's unemployment rate was below 5 percent for nine months during 1997. This rate has been well below what many analysts thought possible without a sharp rise in inflation. As labor market conditions have tightened, wage growth has increased. Since 1993 the rate of growth has been on a steady upward trend, from a low of just over 2 percent to about 4 percent in the first quarter of 1998.

Capacity Utilization

Capacity utilization, the percentage of industrial capacity that is currently in use, has risen since early 1997. Utilization has been around 83 percent since mid-1997, a threshold rate that has traditionally signaled impending inflationary pressures at factories, mines, and utilities.

Commodity Prices

Many commodities, such as metals, crude oil, and unprocessed food products, have exhibited weak prices during the past several months. Between mid-1996 and early 1998, the ***Knight-Ridder Commodity Research Board Price Index*** fell by more than 15 percent. Key to the decline was a 35 percent decrease in crude oil prices.

Finished Goods Prices

Since the data show that both labor and physical capital are at high rates of utilization, the traditional inflation scenario suggests that there will be increasing price pressures. In the manufacturing sector, such price pressures would likely show up first in the prices of goods as they leave the factory. The price of finished goods rose by only 0.4 percent during 1997, however. On a monthly basis, prices declined during eight months in 1997.

Service Sector Prices

The service sector accounts for a growing portion of all output and employment in the U.S. economy. Labor costs generally account for a much higher percentage of input costs in the service sector than in the manufactur-

ing industries. Additionally, many service industries operate in local markets and are insulated from national or global competition. Consequently, inflation rates in the service sector are generally higher than in the goods sector. Service sector inflation has, however, been on a downward trend, falling from 5.5 percent in 1990 to 3.1 percent in 1997.

Import Prices

Since early 1996, import prices have fallen precipitously. The decline is due in part to the rising value of the dollar, which has reduced the cost of imports. Nonpetroleum import prices have fallen by 5 percent since early 1996. Within that group, capital goods prices have decreased by 12 percent over the same period.

One factor that will continue to put downward pressure on prices is the turmoil in Asian markets. Asian exporters are now much more competitive with the rest of the world, following the drop in the value of their currencies. Consequently, U.S. firms that compete with Asian producers will be under greater pressure to cut prices. At the same time, reduced Asian demand for U.S. exports could lead to a ballooning trade deficit and a softening of export prices. In January 1998, for example, the United States reported a record-breaking trade deficit of $12 billion, caused in part by slower export growth.

From this brief review, it is apparent that signs of impending inflation are at best mixed. Clearly, U.S. labor markets are at or near full effective capacity, and the utilization of factories and physical capital is also very high. There is little evidence that these factors are causing an increase in prices at either the producer or consumer levels.

How Will the Expansion End?

Although no one can accurately determine when the expansion will end, most analysts are predicting slower economic growth in the second half of 1998. Indicators such as the unemployment rate suggest that growth will be limited by the availability of labor needed to produce an increasing supply of goods and services. Weak or declining output prices in some sectors could act as a further constraint on economic growth.

Among economists, the traditional view that the expansion will end following a rise in inflation and an increase in short-term interest rates appears to be the more prevalent view. Nevertheless, the possibility that the next economic downturn might be triggered by the ripple effects of declining output prices should not be dismissed, especially in light of the potentially adverse and less familiar risks associated with deflation. What is clear for insured institutions is that at this stage of the economic expansion, lending and strategic decisions predicated on an assumption of continued robust economic growth should be carefully scrutinized and considered in light of a possible deterioration of economic conditions.

Paul C. Bishop, Economist

Why Might Deflation Be a Concern?

The most significant difference between the inflation and deflation scenarios is reflected in the response of financial markets. One of the consequences of inflation is that a dollar in the future is of less value than today's dollar. In a deflationary environment, the opposite is true—a dollar in the future will buy more goods and services than a dollar today.

In a deflation scenario, debtors would see the real value of their financial obligations rise and might therefore be hesitant to borrow. A fixed monthly mortgage payment, for example, would be paid back with increasingly valuable dollars over time. Asset values could fall, especially since the purchase of an asset, such as a house, would require inflation-adjusted debt repayments that increase through time. Likewise, consumer credit debt obligations, such as payments on outstanding credit card balances, would become increasingly onerous. For households already experiencing credit problems, the prospect of a period of sustained deflation would worsen their financial position. At the very least, deterioration in credit quality would be expected, along with an increase in the number of business and personal bankruptcies.

Trends Affecting the Allowance for Loan and Lease Losses

- **Allowance for loan and lease loss (ALLL) levels are declining relative to total loans.**

- **Some industry leaders and regulators have expressed concern about the loosening of underwriting standards and greater risk in bank loan portfolios.**

- **Significant growth in riskier loan types calls attention to the need to scrutinize closely the adequacy of the allowance.**

Weakening underwriting standards and significant growth in riskier loan types have increased the risk exposures of some insured institutions to an economic downturn. Meanwhile, the ALLL relative to total loans has declined in recent years. This article provides information on trends in the ALLL over time and by loan type and discusses the factors analysts consider when evaluating the adequacy of the ALLL. Special attention is given to issues related to the volatility of loan losses and the composition of the loan portfolio.

Historical Perspective on the Allowance for Loan and Lease Losses

The nation is currently witnessing one of the longest economic expansions since World War II. It is to be expected that some institutions will reduce their ALLL coverage during periods of improved economic conditions. However, in the current environment—in which loan availability is abundant, growth is strong, and competition is fierce—some industry leaders and regulators have expressed concern about the loosening of underwriting standards and greater risk in bank loan portfolios. At the same time, the ALLL relative to total loans for commercial banks has declined to the lowest point in a decade (see Chart 1). This allowance ratio has diminished because commercial banks' loan loss provisions have not kept pace with new loan growth. In some cases, banks have determined that their allowances are higher than necessary and have taken negative loan loss provisions, which are credited back to income.

This decline in reserve coverage has been broad based, with the exception of credit card specialists. Commercial banks with concentrations in commercial lending and large multinational banks have significantly reduced the level of reserves to total loans in recent years. Table 1 (next page) shows that since 1993, ALLL ratios at both commercial lending banks and multinational banks have declined 31 percent. Moreover, commercial lending banks with assets exceeding $10 billion have reduced ALLL ratios by slightly over 37 percent, or 98 basis points, over the same period.

The low level of nonperforming and charged-off loans, coupled with prevailing favorable economic conditions, is doubtless a significant factor in the reduction of

CHART 1

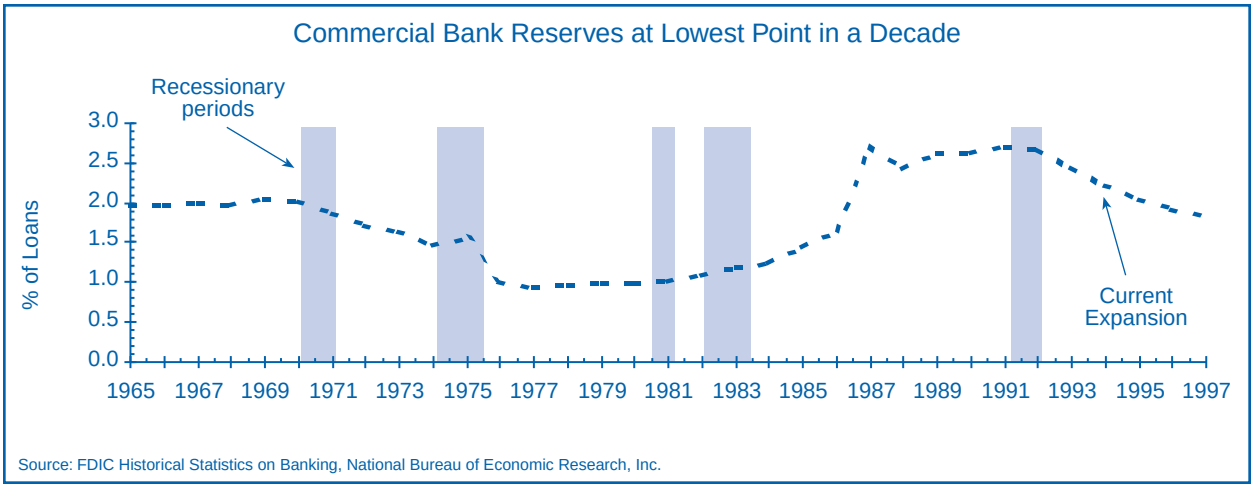


Table 1

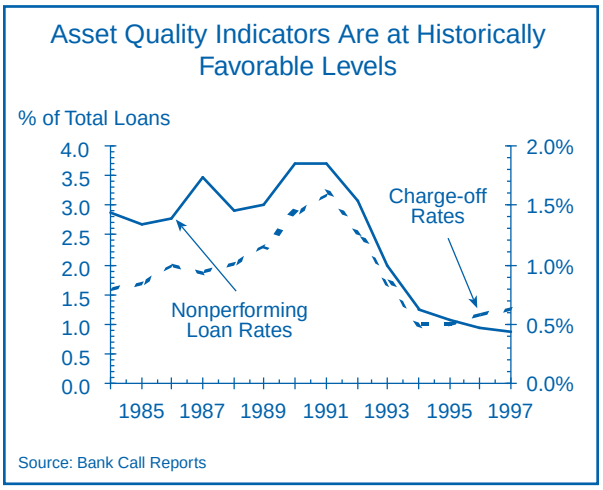
Commercial Bank Allowance for Loan and Lease Losses to Total Loans by Lender Type							
Type of Lender	Number of Banks	Assets ($Billions)	1997	1996	1995	1994	1993
Multinational	11	$1,383	2.14	2.25	2.55	2.83	3.10
Commercial	3,207	$1,915	1.63	1.71	1.90	2.16	2.37
Credit Card	67	$202	4.21	3.48	3.21	2.89	3.35
Mortgage	286	$120	1.26	1.45	1.45	1.69	1.87
Agricultural	2,373	$120	1.53	1.66	1.69	1.75	1.83

Definitions for lender types by order of priority: Multinational—assets >$10 billion and foreign assets >25% of assets; Commercial—C&I plus CRE loans >50% of assets; Credit Card—credit card loans >50% of assets; Mortgage—1- to 4-family mortgages and mortgage-backed securities >50% of assets; Agricultural—agricultural production and agricultural real-estate loans >25% of total loans.
Source: Bank Call Reports

ALLL levels. Asset quality indicators such as nonperforming loans and loan loss rates are at historically favorable levels. At year-end 1997, the banking industry's nonperforming loans were just under 1 percent of total loans, the lowest in 13 years. The industry's loan charge-off rates (with the exception of consumer loans) are also at historical lows. (See the ***Regional Outlook,*** first quarter 1997, for a detailed discussion of consumer loan losses.) However, even with the problems in consumer lending, the banking industry's aggregate loan loss rate is down significantly from levels in the early 1990s (see Chart 2).

As the economic expansion reaches an advanced age, an important question for insured institutions is whether their ALLLs adequately reflect the risks associated with changing industry practices. Insured institutions could experience strains on profitability and capital if allowance levels are inadequate. Given changing underwriting trends and loan delinquency patterns, a related question is whether reliance on past loss experience in setting the allowance will be an adequate measure for current losses.

Chart 2



Trends in Underwriting Prompt Regulatory Cautions

Over the past year, various underwriting and lending practices surveys by the FDIC, the Office of the Comptroller of the Currency (OCC), and the Federal Reserve have noted easing of terms and weakening underwriting standards on loans, especially in commercial loan portfolios. *It is important to note that, in 1997, nearly two-thirds of the commercial banking industry's loan growth was centered in the commercial real estate (CRE) and commercial and industrial (C&I) loan categories* (Chart 3).

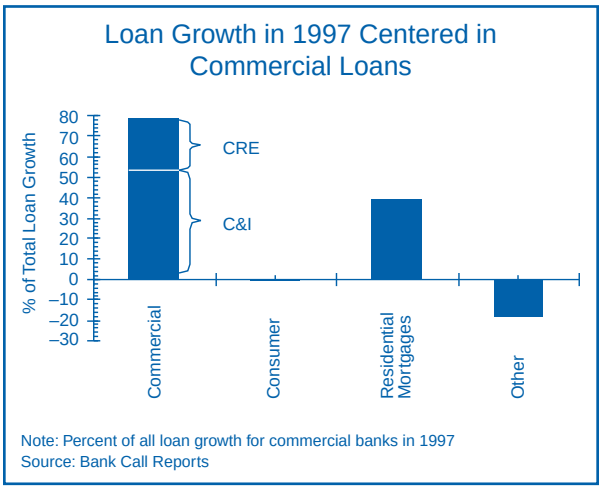
In the FDIC's ***Report on Underwriting Practices*** for April 1997 through September 1997, examiners noted "above-average" risk in current underwriting practices for new loans at almost 10 percent of the 1,233 FDIC-supervised institutions examined. Of the institutions with above-average risk, 12 percent did not adjust pricing for loan risk. Examiners noted that several of the 852 institutions examined that were making business loans had poor underwriting standards, including lack of documentation of the borrower's financial strength

(21 percent) and poor and unpredictable loan repayment sources (14 percent). Also, of the 571 institutions specifically involved in asset-based business lending, 20 percent often failed to monitor collateral. Furthermore, 20 percent of the 398 institutions examined that were actively engaged in construction lending repeatedly failed to consider alternative repayment sources, and 29 percent often funded speculative projects. In contrast, just one year earlier, in the ***Report on Underwriting Practices*** for April 1996 through September 1996, examiners reported that only 11 percent of the institutions examined that were actively engaged in construction lending often funded speculative projects.

The Federal Reserve's ***Senior Loan Officer Opinion Survey*** for November 1997 and February 1998 both indicated some easing of commercial business lending terms and standards. Also, the OCC's ***1997 Survey of Credit Underwriting Practices*** stated that the level of inherent credit risk continues to increase for components of both commercial and consumer loan portfolios. These underwriting trends have resulted in increased risk profiles for some insured institutions, while ALLL ratios at some institutions continue to decline.

In August 1997, the OCC issued an Advisory Letter voicing its concern about declining allowance levels in commercial banks. The OCC cited as primary concerns the apparent increases in credit risk reported by examiners, such as weakening underwriting trends in the syndicated loan market, easing of other commercial underwriting standards, and consumer lending delinquency and charge-off trends. Moreover, the OCC found that some banks were using flawed reserve methodologies for estimating loan loss rates, including an overreliance on historical loss rates.

CHART 3



Factors Affecting Adequacy of the ALLL

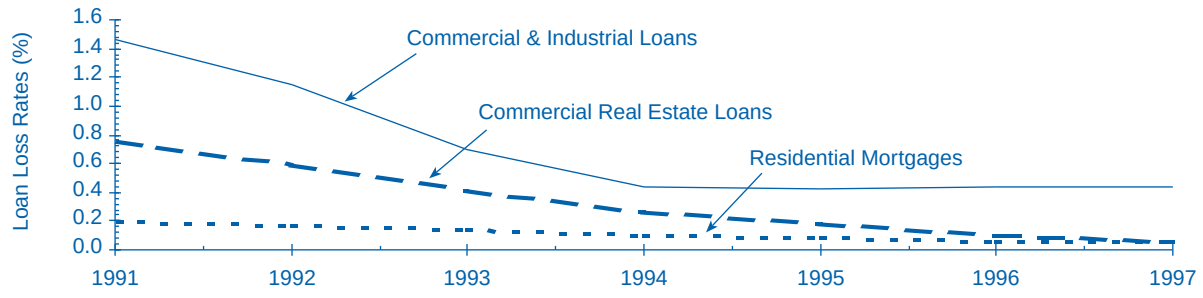
In using offsite data to assess allowance adequacy, analysts consider financial ratios such as the allowance to total loans, reserve coverage (allowance to nonperforming loans), loan loss provisions to charge-offs, and loan delinquency levels. These ratios are evaluated against historical benchmarks. At the same time, however, analysts supplement the analysis with consideration of the potential effects of current industry trends. For example, the banking industry is currently witnessing higher than normal losses in consumer lending spurred by increased bankruptcy filings and the migration of loans from current to charged off without intervening delinquencies. An institution that has a sizable consumer loan portfolio may therefore need to attach more weight to recent loan loss data in setting the allowance, since historical trends may not adequately reflect reserving needs.

Insured institutions exhibit different management and portfolio characteristics that significantly influence the level of the allowance. These characteristics include the diversification of a loan portfolio (diversification by borrower, loan type, geography, or industry), the history and recent trends of credit losses, management's practices in the recognition of losses, trends in past-due and nonperforming loans, underwriting practices, and economic conditions.

New techniques continue to be developed to improve the reliability of allowance estimates. Management information systems, which enable the collection of more refined historical data, coupled with the application of statistical techniques, are helping some institutions formulate more statistically reasoned allowance estimates. Loan management tools such as credit scoring systems, risk rating systems, and consideration of economic cycles in the review of historical loss and delinquency data all are aiding bankers in the reserving process. While these new techniques provide more analytically defensible estimates, they do not diminish the role of judgment in assessing ALLL adequacy.

The role of judgment in setting the ALLL is underscored by the volatility of loan losses over time.

Chart 4



"Volatility" in this context refers to the degree to which loan losses have diverged or might diverge from the long-run averages. Volatility in loan losses can result from changes in the business cycle, local economic events, and major one-time events. For example, a bank relying on a historic average loan loss calculation to derive its reserve level could find itself underreserved if it does not adjust its historical loss rates for deteriorating economic conditions and suddenly incurs greater loan losses than it had anticipated simply on the basis of past performance.

Generally, different types of loans experience varying loan loss rates because of the inherently different risks and varying levels of volatility within each type. Chart 4 shows that commercial loans, such as commercial and industrial loans and commercial real estate, historically have had greater losses than residential loans. Furthermore, the loss rates on commercial loans have not only been higher, they have been more volatile over the years, while average losses on mortgage loans have varied little.

Volatility in loan losses is determined not only by economic events but also by banks' willingness to take risk. Banks that adopt more liberal underwriting policies and high loan growth objectives may experience greater loan default risk and greater volatility in loan loss rates than suggested by their own past experience. For example, Chart 4 shows that mortgage lending has had low and stable loss rates on average. The recent growth in subprime and high loan-to-value mortgage lending, however, may result in increased volatility and losses for some lenders going forward.

All of these factors suggest that ALLLs would be expected to vary considerably both over time and across loan types. Table 2 shows that this has been the case. The ALLL is reported as a single line item on the Call Report. This makes it difficult to estimate how much of the ALLL is attributable to a particular loan type or to compare allowance levels for banks with significantly different loan portfolios. Table 2 shows the results of a statistical regression estimation of commercial bank allowance allocations across the various loan types for

Table 2

ALLL Allocations Have Varied over Time and by Loan Type (Commercial Banks under $1 Billion)*

Loan Type	1997 (%)	1996 (%)	1995 (%)	1994 (%)	1993 (%)	1992 (%)	1991 (%)
C&I	1.71	1.85	1.87	2.06	2.14	2.29	2.45
CRE	1.44	1.54	1.77	1.83	1.97	2.02	1.99
Mortgages	0.92	1.00	1.05	1.19	1.22	1.07	0.91
Credit Cards	4.47	4.42	3.32	3.11	3.20	3.29	3.59

* Estimated regression results
Source: Bank Call Reports

1991 through 1997 for commercial banks with under $1 billion in assets. Not surprisingly, CRE and C&I loans received relatively higher allowance allocations than residential mortgage loans, indicating that banks saw greater risk in these loan types. Also, credit card loans consistently received higher allocations than the other loan categories, and the allocations have increased in recent years owing to the increased delinquencies and charge-offs in this area.

Conclusions

The adequacy of the ALLL is measured not only relative to historical loan loss experience but also relative to current conditions that may cause losses to differ from past experience. Increased losses could result from adverse economic developments, from changes in banks' appetite for taking risk, or both. In this regard, reported weakening in underwriting standards is increasing some banks' risk exposure to an economic downturn. Institutions with high concentrations in riskier loans, significant growth in riskier loans, or weaknesses in underwriting may be most at risk. Especially for such institutions, the adequacy of the ALLL and its methodologies merits close scrutiny.

Andrea Bazemore, Banking Analyst

Asian Financial Crisis Brings Uncertainty to the Region's Agriculture and Aircraft Industries

- **Economic turmoil in Asia affects exports of agricultural products and airplanes.**
- **Dairy farmers in the Region face continuing changes in technology and government policy.**
- **Labor shortages in some of the Region's states may imply slower economic growth.**

The Asian financial crisis will likely reduce exports for key commodities produced in the Region and create price uncertainty. The Asian countries most severely affected by the economic crisis in late 1997—Indonesia, Korea, Malaysia, the Philippines, and Thailand—purchased about 12 percent of U.S. agricultural exports in 1997. (Table 1 shows the importance of Asian countries as export destinations.) In addition, cancellation or delays in delivery of commercial airplanes to Asian airlines dims what has been a bright spot in job creation in Wichita.

Boeing Employed 22,050 Workers in Wichita at the End of 1997

Boeing supplied 77 percent of the commercial aircraft delivered to Asia in 1997. Early in February, Boeing executives announced they expected up to 60 aircraft to be canceled from a backlog of 360 units previously scheduled for delivery over the next three years. Currency devaluations and the economic slowdown have cut into the previously strong demand for air travel in Asia. In addition, devaluations have caused the price of airplanes, as measured in Asian currencies, to rise sharply.

In mid-February, Boeing announced that it would be reducing its workforce by 12,000 people in the second half of 1998, down from the record level of 103,400 workers at the end of 1997. Boeing executives were not specific about the location of the cutbacks but suggested that most reductions would come from the Commercial Aircraft Division, which includes the **Wichita** facility. Reduced demand and continuing reorganization resulting from the McConnell Douglas acquisition were contributing causes.

Table 1

Asia Is a Major Destination for U.S. Agricultural Products

U.S. Agricultural Exports ($Billions)

	1995	1996	1997	1998 (Forecast) Dec	1998 (Forecast) Feb
Asia	24.3	26.0	23.8	23.6	21.5
Japan	10.7	11.9	10.7	10.9	10.3
China	2.4	1.8	1.8	1.6	1.6
Hong Kong	1.4	1.5	1.6	1.7	1.7
Taiwan	2.6	2.9	2.6	2.4	2.4
South Korea	3.6	3.7	3.3	3.3	2.4
S.E. Asia	2.6	3.4	3.1	2.9	2.3
South Asia	1.0	0.7	0.7	0.8	0.8
Other Countries	31.3	33.8	33.5	34.9	34.5
Total	55.6	59.8	57.3	58.5	56.0

Note: All years are fiscal years.
Source: U.S. Department of Agriculture, February 1998

Asia Buys Two-Thirds of U.S. Corn Exports

According to industry analysts, corn prices in 1998 are subject to more than the usual level of uncertainty. In addition to the export picture, poor returns in the livestock sectors may reduce the use of feed corn, and expectations of increased acreage planted in 1998 will continue to contain the price of the 1997 crop. On the supply side, the Commonwealth of Independent States, China, and Eastern Europe are expected to displace demand for U.S. corn. The ***U.S. Department of Agriculture's*** (USDA's) baseline projection for the price of corn in the 1998–99 crop year is $2.60 a bushel versus $2.70 forecasted to be received by farmers in the 1997–98 crop year. The USDA forecasts record plantings of 81.5 million acres in 1998, nearly half of which will be in the Kansas City Region.

Soybean Prices Are Expected to Be Lower

In 1998, soybeans face lower demand from Asia and increasing competition from South American producers in world trade. According to the USDA's April ***World Agriculture Supply and Demand Estimates***, increased stocks and weakening export demand may depress soybean prices during the 1997–98 crop year as much as $0.85 below last year's price of $7.38 a bushel. The USDA's baseline price for soybeans harvested in 1998, the 1998–99 crop year, is $5.70 a bushel. **Iowa** and **Minnesota** will likely account for more than 25 percent of the nation's production in 1998.

Excess Supply Should Keep Wheat Prices Low

Wheat production in 1997 was the highest in the decade, contributing to lower prices. Exports fell short of the previous years', so accumulating stocks will likely continue to depress the market in 1998. In the northern plains' wheat-growing area of **North Dakota** and Minnesota, farmers are faced with the additional concern of scab fungus, which has greatly reduced quality and production during the past few years. The USDA baseline price is $3.50 a bushel for the 1998–99 crop year, compared with $3.45 a bushel in 1997–98 and $4.30 in 1996–97.

Poor Returns Are Expected for the Region's Hog Producers

The December ***Hogs and Pigs*** report showed a 7 percent annual increase in the nation's hog population, as hog producers of all sizes responded to the persistent high prices in the first half of 1997. The USDA forecasts record hog production of 18.6 billion pounds, an 8 percent increase from last year. Exports of pork actually declined in 1997, and the trend of rapid growth appears to have stalled. Returns to farmers in 1998 will be poor, with the greatest stress on the smaller producers, who have higher costs. Iowa, which has 15,000 hog farmers with fewer than 1,000 animals, will likely see more producers leaving the industry.

Cattle Outlook Is Good Despite Asian Crisis

Cattle receipts should improve in 1998 as prices of fed cattle (those being prepared for slaughter) strengthen. The USDA's annual ***Cattle*** report, released in early February, showed a 1.9 percent decline in total inventories from a year ago and a 4 percent decline from the peak of the cattle cycle in 1996. Commercial beef production is predicted to decline 2.2 percent in 1998. Lower inventories of beef cattle should lead to further strengthening of feeder cattle prices in the coming year. The price of fed cattle did not advance significantly in the first quarter, but most industry observers expect an increase in the second quarter. Risks to cattle returns include large supplies of competing meat and poultry and likely deterioration of export markets to Asia. High-priced commodities such as beef have suffered the most from devaluations in Asia. During the first ten months of 1997, beef exports to the countries most severely affected by the economic crisis comprised about 11 percent of total beef exports from the United States. Over the same period, Taiwan and Japan accounted for nearly 57 percent of beef exports.

Region's Dairy Industry Faces Continuing Transformation

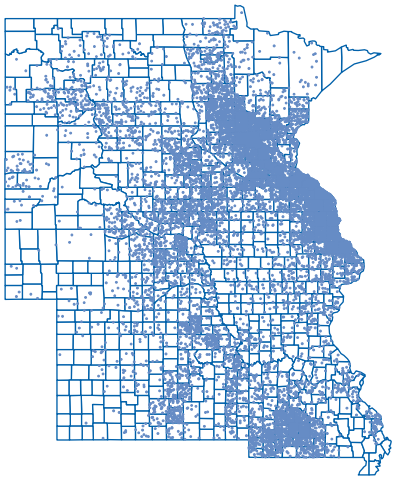
The dairy industry in the Midwest is undergoing a structural transformation driven by technological change, a geographic realignment of the sector, and recent changes in government policy mandated by the Federal Agricultural Improvement and Reform (FAIR) Act of 1996.

Dairy production in the Kansas City Region accounted for $2.9 billion of agricultural cash receipts in 1996, or 12.7 percent of the nation's total dairy cash receipts. In 1997, the Region's milk production comprised 12.8 percent of the U.S. total, compared with a 17.6 percent share for California and a 14.3 percent share for Wisconsin, the first- and second-ranking dairy-producing states. Chart 1 (next page) shows the geographic distribution of the Region's 1.3 million dairy cows. Sixty-five percent of the cows are in Minnesota and Iowa.

Over the past two decades, milk production in the Midwest, including the Kansas City Region, has remained relatively flat. Since 1980, annual production declined 6.4 percent in the Region, was essentially flat in Wisconsin, but grew more than 90 percent in California. The number of dairy farms in the Region has declined from 78,000 in 1980 to 23,600 in 1997, with 10,000 of them in Minnesota. During this period, almost all

Chart 1

Kansas City Region's Dairy Cows Are Concentrated in the Northeast



1997 Milk Cow Population in the Region
1 dot = 100 cows
Total = 1.3 million cows

Source: U.S. Department of Agriculture

growth in U.S. production has come from dairies in the western states, including Arizona, California, Idaho, and Texas.

The dairy industries in the traditional milk-producing areas and the Far West have diverged significantly. Dairies in the Midwest are typically smaller, are dependent on family labor, and usually grow their own feed and forage. Dairies in California are large, use hired labor, specialize in milk production, and buy their feed from outside suppliers. Table 2 compares the size structure of the dairy industry in some midwestern dairy states with California and the nation.

California's approach to dairying has led to a significant advantage in productivity. According to the USDA's ***Milk Production*** report for 1997, California cows averaged 20,458 pounds of milk produced for the year, compared with 15,786 pounds for Minnesota and 15,442 for Wisconsin. Better use of genetics and reproductive technology and intensive management has led to the wide advantage in California and other western states. In the January 1995 ***Fedgazette***, Edward Lotterman, economist at the Federal Reserve Bank of Minneapolis, suggested two reasons why the Midwest has fallen behind the western states: "[T]he ethos of the family farm is powerful in the region. Long-standing traditions and a broad consensus that society was best served by

Table 2

Small Dairy Farms Are Predominant in the Midwest

Distribution of Dairy Cow Population, 1996

	Number of Cows (thousands)	Size of Operation, by Number of Cows (% of State Total)			
		<50	<100	<200	>200
Minnesota	570	29	41	17	13
Wisconsin	1,380	30	40	22	8
California	1,350	0	1	4	95
U.S. Total	9,191	15	26	20	39

Source: U.S. Department of Agriculture

farms of a size where most labor came from family members mitigated against the establishment of the large units that came to dominate the Southwest…. Even more importantly, federal policies long embodied an implicit promise to support milk prices where most farmers in every region could survive."[1]

Changes in government policy have reduced the amount of support provided, however. Reacting to budgetary pressures and large expenditures by the federal government to buy excess dairy products in the 1970s and 1980s, Congress reduced the support price to $10.10 per hundredweight in 1985. The FAIR Act of 1996 began a phaseout of price supports by 2000. In the traditional dairying areas of the Midwest, the increased volatility of milk prices could accelerate the disappearance of smaller, higher cost dairy operations.

Over the past several years, 500- to 600-cow dairies have begun to appear in Wisconsin and Minnesota, often as partnerships of two farmers, one who manages the dairy and one who produces feed. These midwestern farmers have adopted some of the techniques of western dairymen, with greater emphasis on genetic selection and management of feeding practices.

At the same time, another trend is emerging in the western half of the Kansas City Region. According to a September 1997 report by the USDA, large dairy farms are beginning to appear in **Kansas**, **Nebraska**, and **South Dakota**, areas that have not traditionally been home to milk producers. Many industry observers predict that the area will attract more modern large dairies thanks to

[1] Edward Lotterman. "Ninth District Dairying Faces Dramatic Change." *Fedgazette*, January 1995, pp. 1–7. Federal Reserve Bank of Minneapolis.

access to feed, plentiful land, and sparse populations. In November 1997, the ***Omaha World-Herald*** reported that construction is beginning on dairies of 1,400 and 1,800 cows in western Iowa. The larger facility is reported to cost more than $5 million to build. Dairies of this size are unprecedented in the area and have been financed by equity investors.

Implications: Counties with the heaviest concentration of dairy farming, defined here as the 18 counties that each have more than 1 percent of the Region's dairy cows, contained 73 agricultural banks at the end of 1997, with a total of $3.1 billion in assets. These institutions are heavily concentrated in farm lending; that is, a 41.6 percent of their loans are made for agricultural or agricultural real estate purposes.

The phaseout of price supports will increase the volatility of dairy farmers' income. Greater price volatility will disproportionately affect the riskiness of smaller, higher-cost dairy operations and likely speed the consolidation of the industry.

Changes in production practices needed to keep midwestern dairies competitive will require higher levels of management skill by farmers and more specialized expertise by the lenders that extend them credit. Many banks that currently carry dairy-related loans may have difficulty recruiting or developing the skilled personnel needed to serve the modernizing industry. In addition, the mega-dairies that have begun appearing in the western half of the Region have capital needs beyond the resources of most community banks. Continuing to profitably supply credit to the dairy industry may thus pose challenges for the management of banks in these areas.

Labor Shortages in the Kansas City Region Are More Than a Short-Term Annoyance

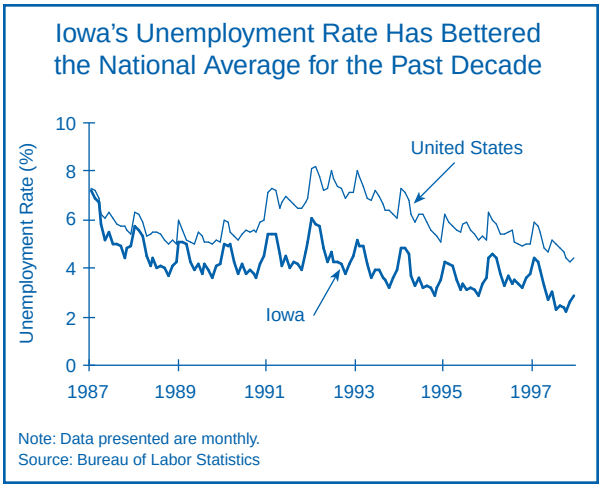
In 1997, all seven states of the Kansas City Region had average unemployment[2] rates below the national average. All the Region's states except **Missouri** have averaged less than the national rate for the past decade. In 1997, as the nation's economic expansion entered its seventh year, the shortage of workers became apparent throughout the Region, as employers in many sectors had difficulty finding workers. Labor shortages became especially acute in Iowa, Nebraska, South Dakota, and North Dakota. This section will examine labor markets in Iowa as a case study of an economy experiencing labor shortages.

Iowa's unemployment rate has been less than the national number since 1987, as shown in Chart 2. With the onset of the expansion in the 1990s, Iowa's rate diverged farther from the national rate.

At the end of 1997, 47 percent of employment in Iowa was in the state's ten metropolitan counties, while 53 percent was in the rural counties. Over the past decade, unemployment in the rural counties has averaged 0.4 percent higher than the rate for metropolitan counties.

The persistent difference between the Iowa and national unemployment rates stems from differences in the structure of their labor markets. The long-run or permanent level of unemployment depends in part on the ease with which workers are able to find and change jobs. Officials at the ***Iowa Workforce Development Agency*** (IWDA) suggest the relatively high educational attainment of non-college-educated workers contributes to the employability of Iowa workers. Additionally, the Iowa economy has less specialized employment needs. According to the ***Claritas*** economic profile, Iowa's workforce has a white collar/blue collar ratio of 1.97, compared with the national ratio of 2.25. The other contributor to the lower unemployment rate is the flexibility of Iowa's labor force. According to the IWDA, Iowa has traditionally had a higher than average female labor force participation rate. Women with work experience

CHART 2



[2] Unemployment is defined by the U.S. Department of Labor as the ratio of the number of currently unemployed persons to the total labor force. The labor force is defined as all persons working plus those who are actively looking for work.

have joined the labor force as demanded, expanding the pool of available workers.

In 1997, a shortage of workers became apparent in the Iowa economy. Press reports of unusual efforts to recruit workers suggest the depth of the labor shortage. According to an October 13, 1997, article in the ***Des Moines Business Record***, employers are recruiting from such non-traditional populations as the disabled who have not been in the labor force, political refugees, and high school students. Temporary employment agencies also cannot fill all their positions. The ***Des Moines Register*** reported in 1997 that several Iowa companies were recruiting at Army bases in Texas to draw new workers to Iowa.

Jeff Nall of the IWDA, as reported by the ***Dow Jones Capital Markets Report*** of February 11, 1998, believes that the shortage of workers may make some companies leery of expanding or locating in Iowa. Nall told Iowa lawmakers that wages in that state have tended to be below the national average but that from 1994 to 1996, the latest year for which figures are available, wage rates in Iowa increased faster than the rate of inflation. Nall commented, "These are long-term trends that will last beyond the economic growth we are experiencing."

The current shortage of workers in Iowa is only highlighting a long-term trend. Since 1980, the U.S. labor force has grown at an annual rate of 1.4 percent, while Iowa's labor force has grown at a rate of 0.6 percent. Iowa's population is relatively elderly, with an average age a full year above the national average, and the proportion of its population older than 65 was 15.9 percent in 1997, compared with the national proportion of 13.3 percent. Looking toward the future, the ***U.S. Department of Education*** forecasted enrollments in public high schools in 2007. While U.S. enrollment was expected to grow 13 percent between now and 2007, Iowa's enrollment was expected to decline 1.8 percent.

The policy responses to Iowa's demographic trends are limited. The use of state-financed economic incentives to attract outside industry has not been a popular strategy in Iowa and has come under criticism at the federal level. The age structure of the population cannot easily be changed in the short or medium term.

The structure of the labor market in Iowa and other states of the Region may constrain growth, both in attracting newcomers and in accommodating expansion in existing businesses. The states of the Kansas City Region were successful in attracting manufacturing employment in the 1980s, as companies sought to take advantage of lower wages in rural areas. The low unemployment rates currently observed suggest that it may be difficult to sustain the recent pattern of growth in the Region.

Jeffrey W. Walser, Regional Economist

1997 Results Are Strong, but Risks Remain on the Horizon

- **Financial results for 1997 continue to indicate satisfactory performance by the Region's banks and thrifts in the aggregate.**
- **Some institutions face risks associated with rapid loan growth, weakening underwriting standards, and tightening liquidity ratios.**
- **Farm banks in the wheat-growing areas of North Dakota report increases in delinquent loans.**
- **Rural banks could face challenges as their competitive landscape changes.**

The Region's financial institutions, in aggregate, ended 1997 in continued satisfactory condition, and in even better financial condition than when the year began. Financial results indicate that in 1997 capital levels increased, earnings improved, and past-due loans remained stable at 2.3 percent of total loans, a low level by historical standards. However, the results also illuminate three areas of potential risk for the Region's institutions: rapid loan growth coupled with weakening underwriting standards, the continued tightening of key liquidity measures, and elevated loan delinquency levels in farm banks in the wheat-growing area of northeast **North Dakota**.

Underwriting Flags Surface in Growing Loan Portfolios

Aggregate loan growth at a large sample of community banks[1] was 12 percent in 1997, marking seven consecutive years of positive, increasing loan growth. According to surveys done by the FDIC, the Office of the Comptroller of the Currency, and the Federal Reserve,[2] the growth comes amid increasing evidence that underwriting standards are easing.

Since December 31, 1990, the 1,993 institutions sampled have increased their loan portfolios 70 percent, from $36.4 billion to $62.1 billion. While increasing loans are expected during an economic expansion, the high growth rates experienced at this stage of what has been a long expansion raise questions about the potential impact on asset quality in the next economic downturn. In that regard, Federal Reserve Chairman Alan Greenspan recently joined a growing list of bank regulators and others in cautioning bankers about the new loans. In February he warned, "All too often at this stage of the business cycle, the loans that banks extend make up a disproportionate share of total nonperforming loans."[3]

Loan-to-Asset Ratios Continue to Increase

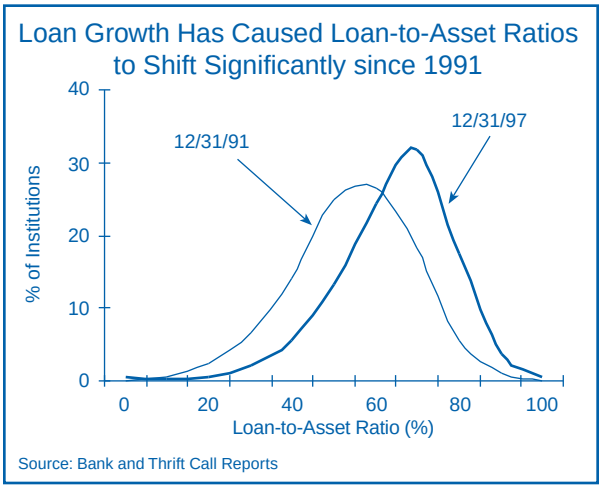
Loan growth contributed significantly to an increase in aggregate loan-to-asset ratios in the Region, from 56 percent as of December 31, 1991, to 67 percent as of December 31, 1997. Chart 1 (next page) shows that this trend is broad-based in the Region, as the percentage of institutions with loan-to-asset ratios in each category has generally shifted to higher levels. Bankers have been resourceful in funding the loan growth. Core deposits have fallen from 74 percent of total assets in 1990 to 68 percent in 1997. Consequently, it is becoming increasingly important for bank managements to understand how the use of nontraditional sources of funding affects their institutions' interest rate risk exposure.

[1] The sample for this article included the 1,993 FDIC-insured banks and thrifts in the Region that had under $250 million in assets as of December 31, 1997, and had not been involved in mergers in the previous seven years. The merger exclusion was to eliminate loan growth normally associated with mergers. Only institutions in continuous existence since December 31, 1990, were considered in the sample.

[2] FDIC's ***Report on Underwriting Practices*** for April to November of 1997; the Office of the Comptroller of the Currency's national ***1997 Survey of Credit Underwriting Practices;*** and the Federal Reserve's ***November 1997 Senior Loan Officer Opinion Survey on Bank Lending Practices***.

[3] Speech to Congress, February 24, 1998.

CHART 1



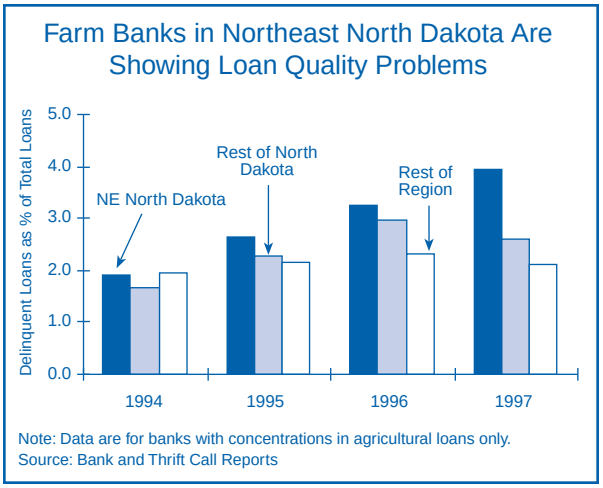
Northeast North Dakota Farm Banks Are Showing Loan Problems

While financial institutions in the Region as a whole continue to experience satisfactory asset quality, banking results from 1997 indicate some weaknesses in loan portfolios in North Dakota's farm banks.[4] Overall, as of December 31, 1997, farm banks in North Dakota had delinquent loans[5] totaling 3.1 percent of total loans, while farm banks in the Region's other six states had an aggregate delinquent loan ratio of 2.1 percent. Further analysis indicates that banks headquartered in the northeast quadrant of North Dakota are experiencing even higher levels of loan delinquency; the 40 farm banks in that area posted an aggregate delinquency ratio of 3.9 percent. Chart 2 illustrates the differences in farm bank delinquency rates in the Region and shows how the loan quality of northeast North Dakota's farm banks has been deteriorating for several years.

[4] A farm bank is a bank with agricultural and agricultural real estate loans of at least 25 percent of total loans.

[5] Delinquent loans are those reported on Call Reports as being 30 or more days past due or on nonaccrual status.

CHART 2



The reason for the farm bank loan problems in that area is not the flooding of 1997, although it surely caused headaches for bankers there. Rather, the problems stem from scab disease, a fungus that infects grain kernels and cuts yields and reduces quality (although increased moisture from the flooding probably contributed to the scab problem in 1997). Scab has adversely affected grain yields in northeast North Dakota in each of the past five years, but it was particularly devastating in 1997. Industry analysts estimate that the disease cost North Dakota wheat and barley farmers $355 million in 1997 alone, and the ripple effect on the state's economy was estimated to be much larger.

As if the poor yields were not enough, grain prices were dramatically lower in 1997 compared with 1996, which only deepened farmers' troubles. Refer to ***Asian Financial Crisis Brings Uncertainty to the Region's Agriculture and Aircraft Industries***, in this issue, for details regarding wheat and its outlook.

Unfortunately, the burgeoning loan problems may deepen in 1998, since the agricultural climate is not expected to improve. Most important, wheat prices are not expected to recover to 1996 levels. In North Dakota, low wheat prices could cause farmers to lose money again in 1998 even if scab abates and they achieve normal yields. For example, an analysis by the ***North Dakota State University*** states that it costs farmers $3.71 to produce a bushel of spring wheat in the area it refers to as Northeast North Dakota.[6] Based on futures prices in April 1998, this year northeast North Dakota's wheat farmers could lose money on each bushel they produce.[7] Second, several poor crop years have

[6] "Projected 1998 Crop Budgets Northeast North Dakota" by Andy Swenson and Ron Haugen, at http://www.ext.nodak.edu/extpubs/agecon/ecquides/ne-pro1w.htm. The area the analysis refers to as Northeast North Dakota is a subset of the northeast quadrant of North Dakota referred to in this article.

[7] The settle price for spring wheat available for September delivery in Minneapolis was $3.73 a bushel on April 17, 1998. The basis, or difference between what local grain elevators pay farmers and the Minneapolis exchange, is approximately $0.50 to $0.60, depending on the elevator's location. This means that if the futures price holds, farmers in northeast North Dakota will receive approximately $3.20 a bushel in September for spring wheat that costs them $3.71 to produce.

increased farmers' debt burden, as can be seen in farm banks through increased levels of carryover debt.[8] Such debt increases farmers' costs through interest expense and may make it more difficult for them to obtain loans in the future.

Rural and Metropolitan Banking Are Different

There are several important differences in the way the Region's small banks[9] earn their money, depending on whether they are located in metropolitan or rural counties. This section will discuss those differences and their implications, particularly for rural banks.

At first glance, it would appear that the Region's 2,114 small banks, of which 427 are headquartered in metropolitan counties and the remainder in rural counties, are similarly profitable. In 1997, metropolitan banks posted a return-on-assets (ROA) figure of 1.26 percent, while rural banks posted a similar 1.23 percent. Since 1993, when rural banks' ROA exceeded that of metropolitan banks by 17 points, the largest gap in after-tax earnings has been only 8 basis points.

However, if we examine pretax profitability, which is a more stable indicator of income,[10] the variation in earnings between metropolitan and rural banks widens. As Chart 3 shows, *pretax profitability illuminates the increasing profitability of metropolitan banks versus rural banks in recent years.* Since 1992, metropolitan banks have gained 28 basis points over rural banks in the pretax ROA ratio.

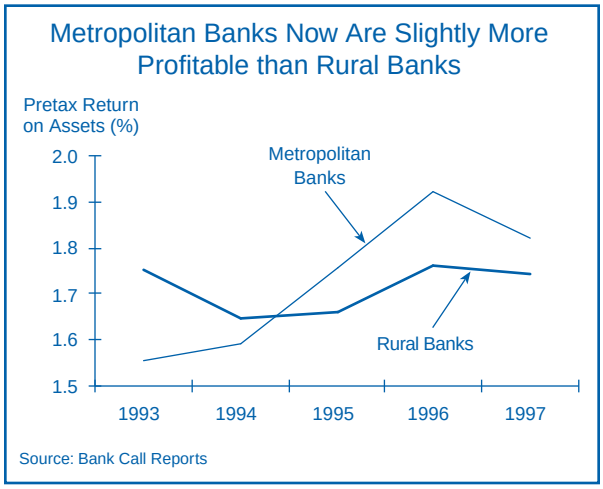
In addition, the apparent earnings parity does not hold if we analyze pretax earnings' components: net interest income, noninterest income, noninterest expense, and provision for loan losses. Metropolitan and rural banks differ in each of these areas.

[8] In North Dakota bank examinations performed by the FDIC between April 1, 1997, and September 30, 1997, examiners noted a "moderate increase in carryover debt" in 32 percent of institutions. This figure is twice that for the Region as a whole, or 16 percent of institutions.

[9] To analyze the differences in earning streams between rural and metropolitan institutions, we gathered banking information for all FDIC-insured commercial banks in the Kansas City Region since 1992. We then focused on only those banks that had less than $250 million in assets as of December 31, 1997, and had been in continuous operation since and including December 31, 1992. No merger adjusting was performed on these institutions.

[10] Because taxes paid by individual banks show great year-to-year volatility and because Subchapter S corporation filers currently post very little tax expense, pretax profits will be the focus of this section.

CHART 3



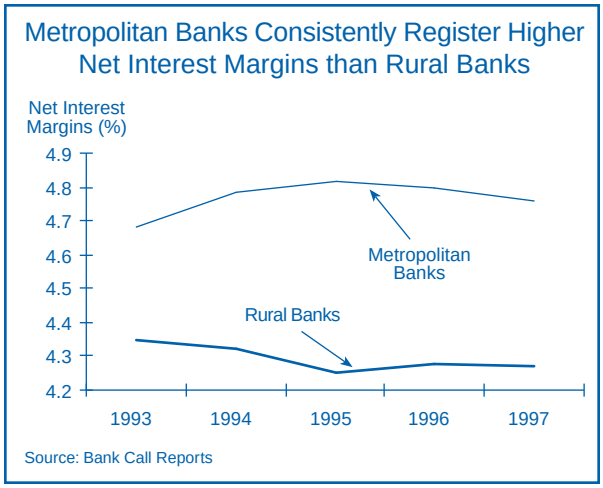
Net Interest Income

Metropolitan banks have higher net interest margins[11] than rural banks. As shown in Chart 4, in 1997 metropolitan banks posted an aggregate net interest margin of 4.76 percent—a level far higher than the 4.27 percent ratio posted by their rural counterparts. This advantage has existed throughout the sample period, rising from a low of 33 basis points in 1993.

Metropolitan banks' advantage in the net interest margin is twofold: They earn more interest on every dollar of earning assets, and they fund them more cheaply than rural banks. First, metropolitan banks earned an average of 18 basis points more on each dollar of earning assets

[11] The net interest margin is calculated by dividing net interest income by the average earning assets figure for the period.

CHART 4



over the analysis period. Because small institutions do not report loan yields by distinct loan type, we do not have data to suggest that metropolitan banks are simply charging more than rural banks on similar credits. This argument does not appear logical anyway, given the more competitive metropolitan banking environment. Still, we can offer two possible explanations for metropolitan banks' yield advantage. First, on similar loan types, metropolitan banks may be lending to riskier borrowers, which would likely result in higher interest rates. As we will discuss later, metropolitan banks provide more to their loan loss reserves, which may indicate higher risk in their loan portfolios. Second, differences in loan composition between metropolitan and rural banks could play a role. As would be expected, rural banks have a much greater proportion of agricultural loans than metropolitan banks do, while metropolitan banks have a commensurately higher level of commercial and nonresidential (i.e., commercial) real estate loans.

Metropolitan banks also have a lower cost of funds than rural banks. As shown in Table 1, metropolitan banks currently have a 13-basis-point advantage in this area, and this advantage has averaged 18 basis points over the analysis period. The reason appears to lie not in the rates paid on deposits, but rather in the composition of deposits. Namely, metropolitan banks have more than a full percentage point more core deposits (in relation to total assets) than rural banks do; rural banks make up this difference in large time deposits, which typically carry higher rates of interest than core deposits. *In addition, the makeup of core deposits differs significantly: Metropolitan banks have the advantage that 4.6 percent more of their assets are funded by demand deposits than those of rural banks.* Since demand deposits carry no interest burden, such a composition is responsible for much of metropolitan banks' advantage in funding costs.

Table 1

Metropolitan and Rural Banks' Earnings Are Different In Many Ways

	As of 12/31/97	
	Metro	Rural
% of Average Assets		
Net Interest Income	4.37	3.95
Provision Expense	0.21	0.18
Noninterest Income	0.87	0.68
Noninterest Expense	3.21	2.71
Pretax Income	1.82	1.74
Other Ratios		
Net Interest Margin	4.76	4.27
Yield on Earning Assets	8.41	8.19
Cost of Interest-Bearing Liabilities	4.50	4.63
Core Deposits/Assets	78.69	77.04
Demand Deposits/Assets	14.86	10.28

Source: Bank Call Reports

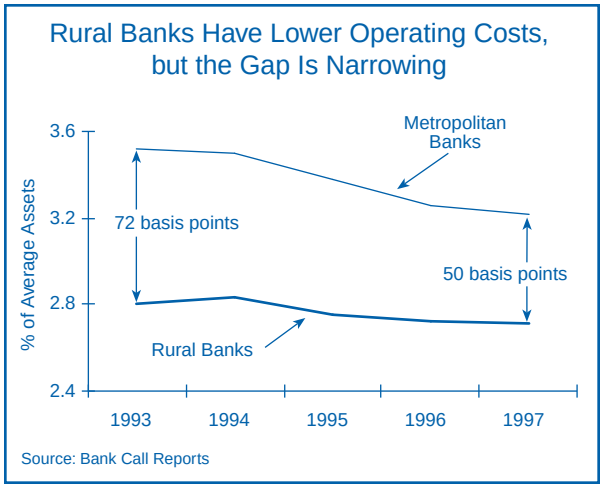
Noninterest Income

Metropolitan banks have a significant advantage in earning funds in other ways as well. As Table 1 indicates, in 1997 metropolitan banks made an average of 19 basis points more noninterest income per dollar of assets than rural banks did. Service charges on deposit accounts are responsible for more than half that difference. Metropolitan banks also earn higher income from trust and trading department activities and "other" fees unrelated to deposits, such as the issuance of letters of credit or mortgage servicing. It should be noted, however, that metropolitan banks' advantage has dwindled from 39 basis points in 1993, as rural banks have incrementally closed the gap in several fee categories.

Noninterest Expense

While metropolitan banks had higher interest and noninterest income, rural banks offset this advantage by having much lower operating expenses. As illustrated in Chart 5, rural banks' noninterest expense was much lower than that of metropolitan banks throughout the analysis period, but that gap is narrowing. As shown in Table 1, rural banks have lower costs in all operating categories: personnel, premises and equipment, and other noninterest expenses (such as data processing and

Chart 5

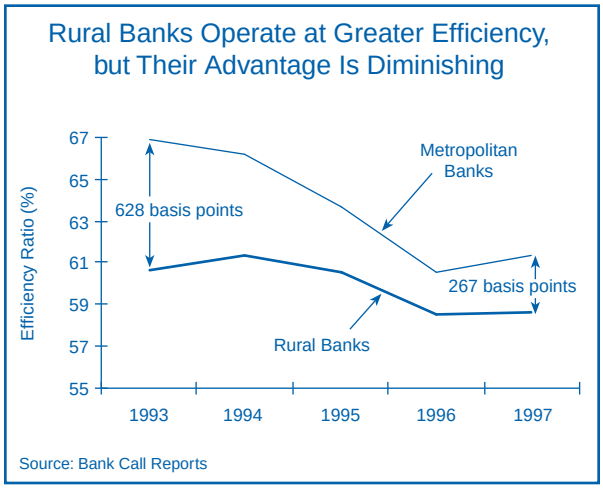


supplies); this fact likely reflects the lower cost of labor, land, and materials in most rural areas. Adding to metropolitan banks' personnel and other expenses is their higher proportion of demand deposits, which reduces interest expense but increases other costs because of the increased personnel and facilities necessary to process such accounts.

The fact that metropolitan banks have narrowed the gap in noninterest expenses considerably over the past four years partly explains how their pretax ROA has improved in relation to that of rural banks. In fact, since 1992, metropolitan banks have reduced their expenditures in all operating expense categories in relation to total assets, while rural banks actually increased their salaries and premises expenses.

A standard industry measure of banks' cost containment is the efficiency ratio,[12] which shows how much it costs for a bank to generate one dollar of income. As shown in Chart 6, rural banks, thanks to their lower operating costs, operate more efficiently than metropolitan banks, but their advantage in the efficiency ratio has diminished from 6.3 percent in 1993 to 2.7 percent in 1997.

CHART 6



Provision Expense

Metropolitan banks have provided slightly more toward loan loss reserves than rural banks in every period analyzed. This fact may indicate that metropolitan banks are making slightly riskier loans, which would benefit their yields but also require higher reserves.

Implications: The most important points made in this analysis have to do with improvement in generating income and cutting operating costs on the part of metropolitan banks compared with rural banks. Metropolitan banks, faced with very strong competition from many financial institutions during this decade, have been forced to find new lending niches, compete actively for cheaper deposits, and reduce costs in order to survive. As a result of their evolution, metropolitan banks are now more profitable than their rural counterparts, even though rural banks have historically faced less competition owing to their geographic remoteness from competing institutions.

However, the geographic insulation of rural banks may erode in the next few years, thereby posing challenges and putting pressure on earnings. The continued migration of large banks into rural areas, coupled with the advent of Internet delivery of financial products and services, could increase competition for the loans and funds that rural banks have depended on throughout their existence. As financial products become more like commodities, rural banks could face significantly more price competition than previously existed. The result for rural banks could include pressures to accept a higher risk profile in order to attract and keep business. Maintaining a profitable niche without undue levels of risk will continue to be an important management challenge for these institutions.

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[12] The efficiency ratio is calculated by dividing noninterest expense by the sum of net interest income and noninterest income.

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