Regional Outlook

Federal Deposit Insurance Corporation — Second Quarter 1998

FDIC
Dallas
Region

Division of
Insurance

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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 economic crisis could result in slower export growth in 1998, particularly for the Region's producers of livestock and feed grains…the glut of worldwide oil supplies may keep crude oil prices below $20 a barrel this year…economic growth in the Region is expected to slow somewhat from its 1997 pace.** *See page 16.*

By Adrian Rangel Sanchez

◆ ***Regional Banking*****—Insured institutions in the Dallas Region continue to report strong performance…trends in agriculture are presenting challenges to producers and their lenders…tumbling oil prices rekindle concerns about energy-related lending, especially for areas that have concentrations of marginal wells.** *See page 22.*

By Alan C. Bush, Jeffrey A. Ayres

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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.

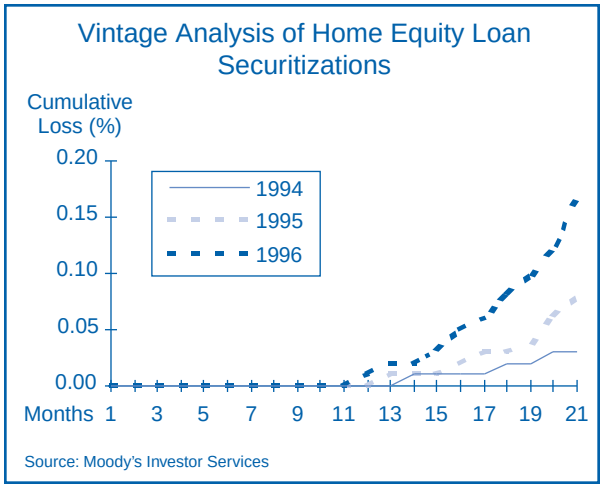
Gain-on-sale accounting is significant to securitizers. To illustrate the significance of the IO account to a securitizer's reported income, consider one major subprime lender. During fiscal year 1997, this company's IO asset grew by over $141 million. Despite a $28 million writedown of the IO asset, 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

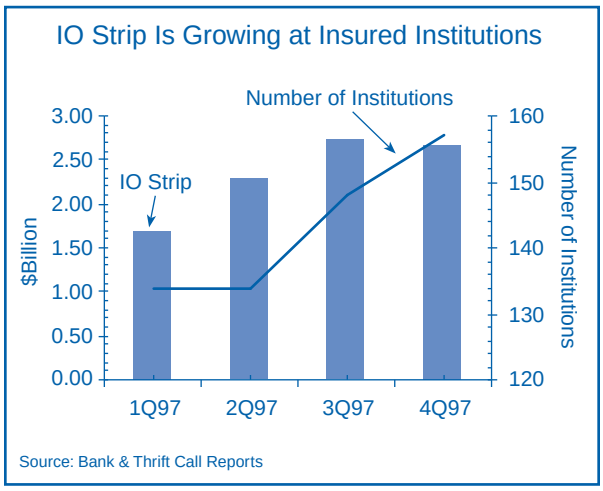
As of December 31, 1997, only 30 institutions reported this IO asset at more than 5 percent of tier 1 capital. However, some institutions have booked gains that should have given rise to a call-reportable IO strip but did not properly report the assets. Therefore, the current reporting may understate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

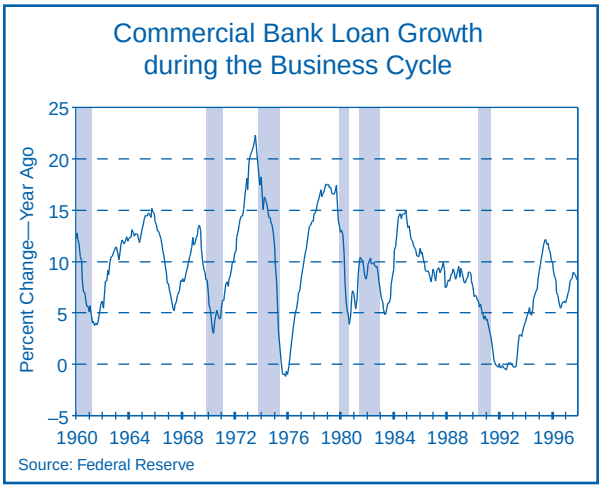
How Have Economic Expansions Usually Ended?

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

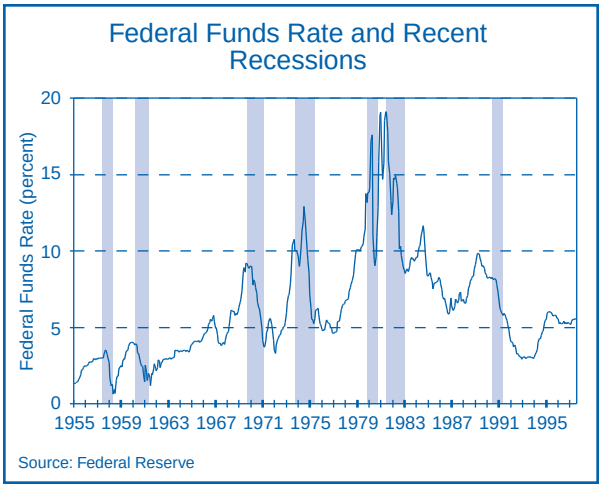
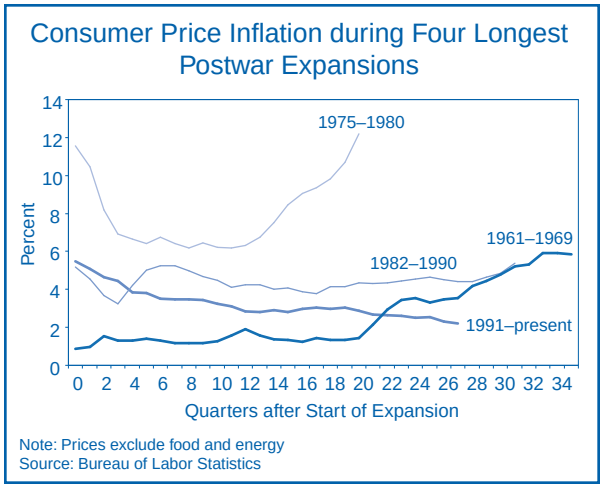


Chart 3



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

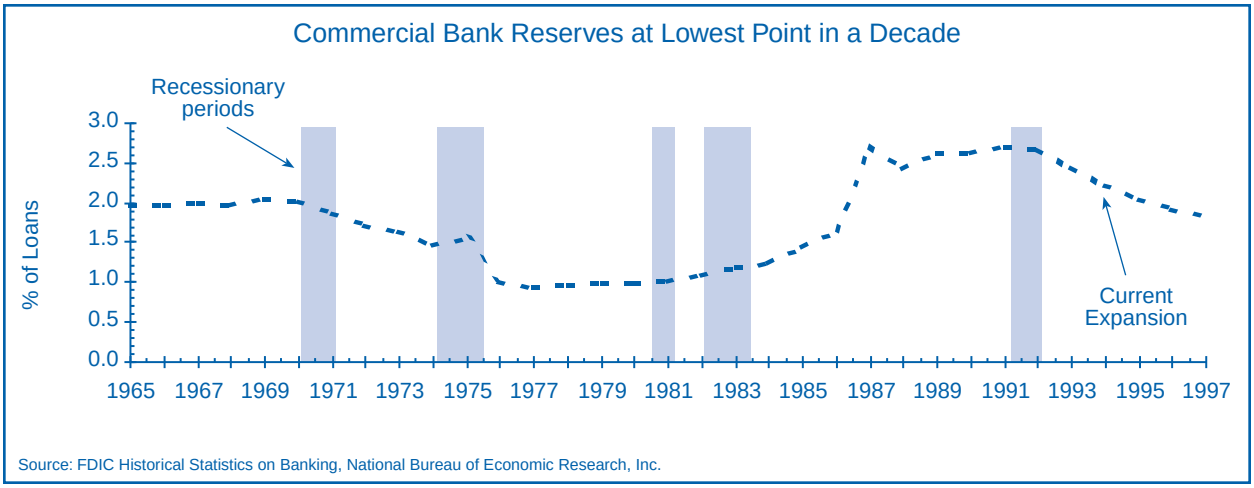


Table 1

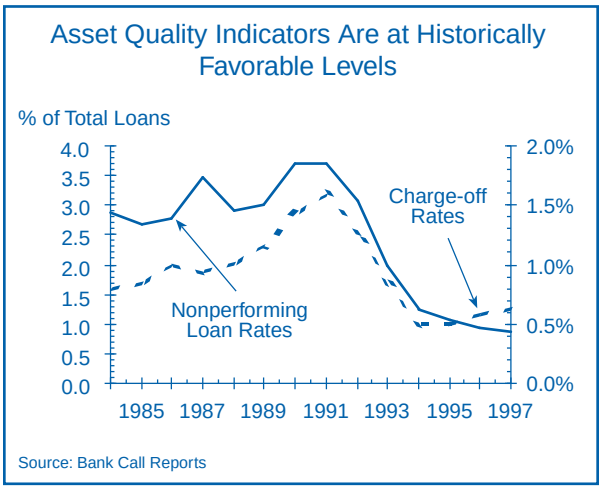
Commercial Bank Allowance for Loan and Lease Losses to Total Loans by Lender Type							
Type of Lender	Number of Banks	Assets ($Billions)	1997	1996	1995	1994	1993
Multinational	11	$1,383	2.14	2.25	2.55	2.83	3.10
Commercial	3,207	$1,915	1.63	1.71	1.90	2.16	2.37
Credit Card	67	$202	4.21	3.48	3.21	2.89	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).

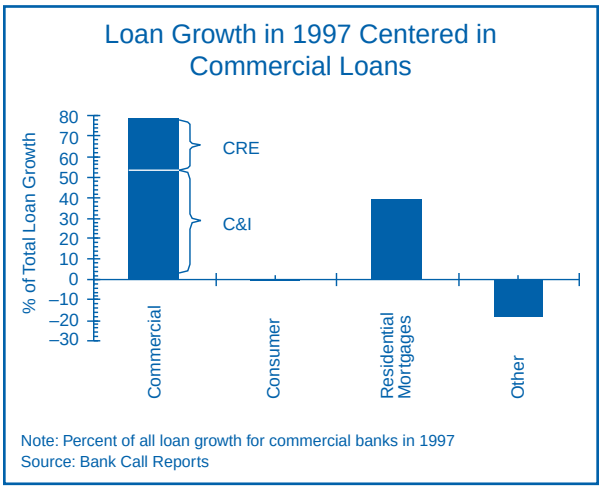
In the FDIC's ***Report on Underwriting Practices*** for April 1997 through September 1997, examiners noted "above-average" risk in current underwriting practices for new loans at almost 10 percent of the 1,233 FDIC-supervised institutions examined. Of the institutions with above-average risk, 12 percent 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

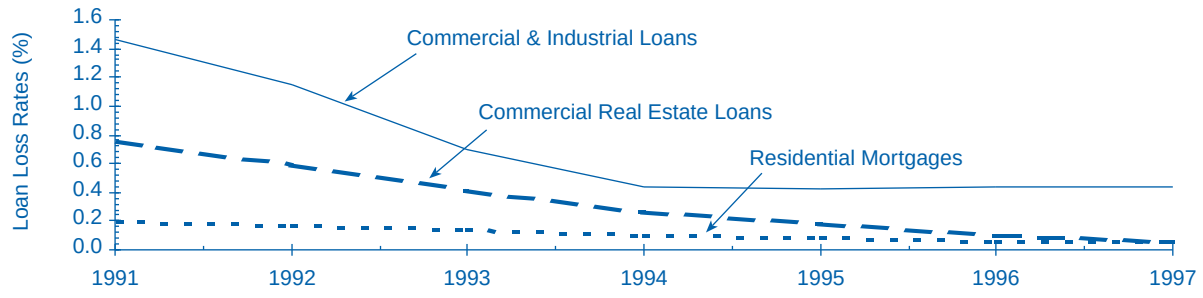
In using offsite data to assess allowance adequacy, analysts consider financial ratios such as the allowance to total loans, reserve coverage (allowance to nonperforming loans), loan loss provisions to charge-offs, and loan delinquency levels. These ratios are evaluated against historical benchmarks. 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

Surpluses and Waning Demand Weigh Heavily on Area Agriculture and Oil in 1998

- **Primarily as a result of Asia's economic crisis, agricultural exports in livestock products and feed grains throughout the Region are almost certain to decline in the face of softening worldwide demand.**

- **Analysts expect the glut of worldwide oil supplies to keep crude oil prices well below $20 a barrel throughout much of this year. Oil companies, oil service firms, independent refiners, and marginal well owners will be affected.**

- **State personal income growth throughout the Region surpassed that of the nation as a whole. However, per capita personal income continues to lag behind the national average.**

- **Although opportunities for further loan growth may continue to exist, some caution is warranted as tight labor markets, a possibly prolonged weakness in the oil patch, and the full impact of the Asian economic crisis—which has yet to be felt—may result in substantially slower growth in the second half of 1998.**

Regional Farmers and Ranchers Feel Some Discomfort from Asian Crisis

Although the causes and effects of the Asian economic crisis have been well chronicled with respect to U.S. economic growth and manufacturing, less has been written about its probable impact on U.S. agriculture. The crisis is expected to result in slower world economic growth, undermining what had been a favorable environment for U.S. agricultural exports. Economists from the ***U.S. Department of Agriculture (USDA)*** project world economic growth of 2.5 percent this year, down from 3.1 percent in 1997.

The Extent of the Problem: The five most troubled Asian economies—Indonesia, Malaysia, the Philippines, South Korea, and Thailand—account for 12 percent of U.S. farm exports. Japan and Taiwan account for an additional 25 percent. The total value of U.S. agricultural exports to Asia in 1997 was approximately $24 billion, or 41 percent of the total value of U.S. agricultural products sent overseas. Agricultural exports are a large component of farm income, representing about 30 percent of farm cash receipts. The USDA estimates that U.S. farm exports worldwide may be 3 to 6 percent lower over the next two years than would have been the case if these five countries had maintained their prior rapid growth. Table 1 lists cash receipts, net farm income, and agricultural exports for each of the Region's four states in 1996.

The devaluation of these nations' currencies has reduced their purchasing power substantially. The volume of U.S. agricultural exports began to fall late last year and may continue to do so through this year and possibly into early 1999.

Table 1

Dallas Region Agriculture at a Glance, 1996

State	Cash Receipts ($ Millions)	% of U.S. Total	Net Farm Income ($ Millions)	% of U.S. Total	Agricultural Exports ($ Millions)	% of U.S. Total
Colorado	$4,229	2.1	$844	1.6	$1,099	1.8
New Mexico	1,709	0.8	363	0.7	75	0.1
Oklahoma	3,566	1.8	551	1.1	475	0.8
Texas	13,053	6.5	2,573	4.9	3,566	6.0
Total	$22,557	11.2	$4,331	8.3	$5,215	8.7

Source: U.S. Department of Agriculture

U.S. agricultural exports have averaged between $50 and $60 billion throughout the 1990s. In the most recent year for which data are available (1996), agricultural exports from the Dallas Region totaled $5.2 billion, or about 9 percent of the U.S. total. Chart 1 shows that livestock, cotton, feed grain, and wheat accounted for 60 percent of the Region's agricultural exports in 1996.

Agricultural exports from the United States and the Dallas Region are expected to be negatively affected by the Asian economic crisis for the following reasons:

- The previously fast-growing Asian economies were the primary source of the most rapid growth for U.S. farm exports.

- Meats are extremely price sensitive and are considered luxury items by Asians. Consumers there are likely either to do without or to substitute local meat products for U.S. beef and pork.

- U.S. farm exports to Japan will likely continue to fall as a result of the yen's depreciation against the U.S. dollar, which was occurring even before the financial crisis began in Southeast Asia.

What the Effects Will Be: The immediate effect of the Asian crisis will be to price U.S. agricultural products relatively higher than Asian domestic goods, while making farm exports from these same Asian countries more price competitive with U.S. farm products both here and in other third-country markets. The following is a brief summary of the outlook for several of the Region's major exports:

- *Beef*. Both the weakening Asian demand for beef and a record supply of competing meats (poultry and pork) have pushed cattle prices downward in early 1998 compared with early 1997 (see Chart 2). However, as ranchers continue to liquidate their herds throughout the year, cattle prices by fourth quarter 1998 are expected to be above their year-ago levels. Producers will have to increase the efficiency of their meat operations, including processing and marketing, to maintain profitability. Continued consolidation of firms within the meat industry is expected as more efficient firms acquire or eliminate less efficient firms.

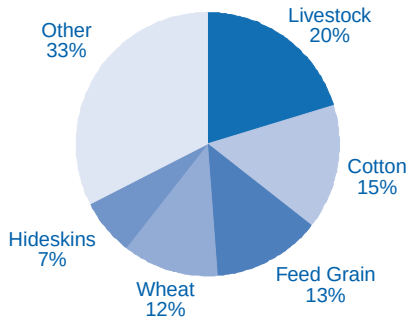
- *Cotton*. High U.S. and world production of cotton, high carryover stocks, and lackluster Asian demand will likely cause cotton prices to fall in 1998. According to the USDA, however, greater use of the U.S. government's export guarantee program will help support sales volume at last year's level.

- *Feed grain*. Asian livestock operators are heavy importers of U.S. feed grains. Their reduced purchasing power, however, has caused them to switch to cheaper substitutes, which could exert downward pressure on prices and U.S. exports.

- *Wheat*. Wheat exports are expected to be well below the average for the 1990s. U.S. stocks are relatively unchanged, and USDA economists predict that prices are likely to remain near their 1997 average if the Asian crisis is moderate and of short duration.

CHART 1

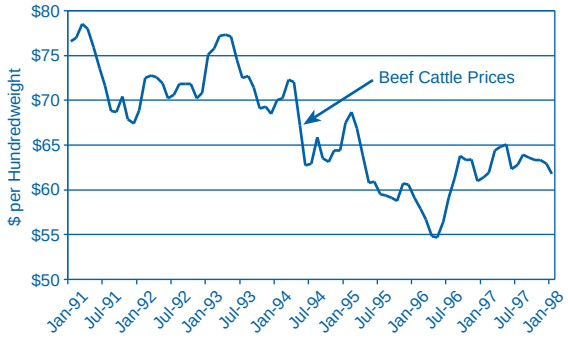
Livestock and Cotton Were the Region's Two Largest Agricultural Exports in 1996



Source: U.S. Department of Agriculture

CHART 2

Weak Asian Demand and Competing Meat Supplies Have Pushed Beef Cattle Prices Downward in Early 1998



Source: U.S. Department of Agriculture, National Agricultural Statistics Service

On a Positive Note: Not all the news will be bad in 1998. Stable to declining prices for many major U.S. commodities should allow U.S. consumers to purchase more food with a smaller share of disposable income. USDA economists are forecasting that food prices will increase 2.6 percent on average in 1998. In addition, the USDA forecasts that farm production expenses will decline this year for only the second time in this decade. Falling energy prices, lower pesticide costs, and stable interest rates are the main factors behind the decline in farm expenses.

Moreover, local economists are hoping Mexico's strong economy will help offset Asia's weakening economies. The USDA is projecting a 14 percent increase in U.S. agricultural exports to Mexico after 1997's record volume.

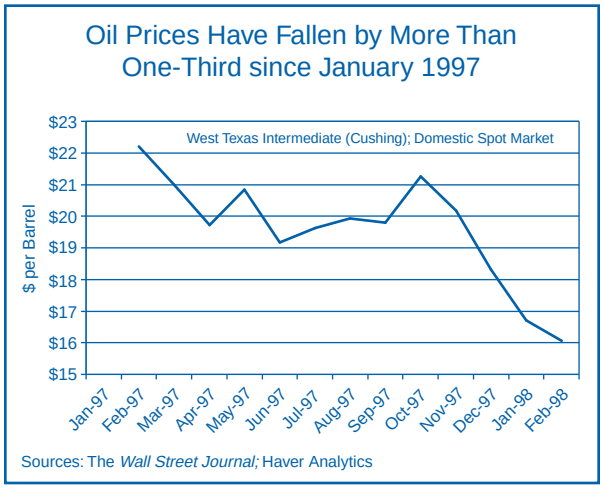
Implications: The price outlook for major crops and livestock products (e.g., beef, cotton, and wheat) are stable to slightly down, although prices could be greatly undermined if economic conditions in Asia deteriorate any further. *Consequently, agricultural lenders may wish to allow for the possibility that commodity prices could soften more than expected.* Moreover, reductions in farm exports and prices are likely to have repercussions on the demand for farm equipment and machinery as well as on the local economy.

What a Difference a Year Makes

In January 1997, a barrel of West Texas Intermediate (Cushing)[1] crude oil fetched about $25 in the domestic spot market. As of February 1998, oil prices had fallen below $15 a barrel. Thus, in 13 months, oil prices declined by more than one-third, with much of the decline occurring since fall 1997 (see Chart 3).

Oil prices have been under downward pressure from a variety of sources. First and foremost, the Organization of Petroleum Exporting Countries (OPEC), in its

CHART 3



November 1997 meeting, voted to raise the production quotas of its members by 10 percent. OPEC is currently producing approximately 27.5 million barrels of oil per day, or about 40 percent of the world's output. This increase comes at a time when non-OPEC nations (e.g., Mexico) are already boosting their production.

Second, Iraq has resumed exporting its oil under strict United Nations guidelines imposed after the 1991 Persian Gulf war. Under the terms of those guidelines, Iraq is allowed to export oil for the sole purpose of raising currency to purchase food and medical supplies. Analysts believe Iraqi production will add approximately 1 million barrels of oil output a day to the world supply.

Third, the Asian economic crisis is causing nations there to reduce their growth estimates for 1998 and cut back on production in key industries, many of which consume large quantities of oil and gas-related energy. Asia accounts for more than a quarter of the world's oil consumption, with 15 percent of world oil demand originating from the most troubled Asian nations. Until recently, industrial oil demand in the Asian region grew 8 percent annually, but analysts are expecting a gain of only 1 percent this year.

The combination of increased oil supplies and reduced oil demand have contributed to a buildup of inventories and downward pressure on oil prices. The capacity utilization rate of refineries is currently at 95 percent, its highest level in 20 years. *New strides in technology—which allow companies to find and produce more oil cheaply—and the continued operation of refineries at high rates have contributed substantially to the present*

[1] The wellhead price is a daily posted price received by producers. This price differs from the price listed in the ***Wall Street Journal,*** which reports the West Texas Intermediate (WTI) (Cushing) spot price for the following month's futures price. For example, the average WTI (Cushing) price for March was $15.02 and represents the average April delivery futures price. Accordingly, expectations of price movement through the contract delivery date as well as transportation and tariff costs are considered in the WTI (Cushing) spot price but are not included in the wellhead price received by producers.

oil glut. According to the ***U.S. Department of Energy***, the cost of finding oil around the world dropped nearly 30 percent between 1990 and 1996. Some industry analysts are predicting that by summer, oil prices will have begun to settle somewhere between $15 and $17 a barrel, where they are expected to remain for the balance of the year.

The Good News: Weak oil prices will help restrain inflation by holding down the energy component of the price index. Already January's consumer price index, although flat overall, revealed a 2.4 percent decline in energy prices, with a 3.5 percent decline in petroleum product prices alone. Chart 4 shows the close relationship between oil price movements and the producer price index, excluding food, for the previous ten years. Downstream producers such as pharmaceutical companies, plastics manufacturers, and electric utilities will benefit from lower energy costs. End users like the airline and trucking industries, homeowners, and drivers will also benefit from lower prices on oil-based products. Inflation-adjusted gasoline prices are at their lowest level since the early 1970s.

The Bad News: Oil analysts argue that if prices stay at $15 a barrel or less, more and more oil companies will trim their capital expenditure budgets in 1998. If this occurs, the downturn in crude oil prices would have its greatest impact on the industry's exploration segment, followed by eventual declines in the sale and manufacture of oilfield equipment and, ultimately, a reduction in oil services.

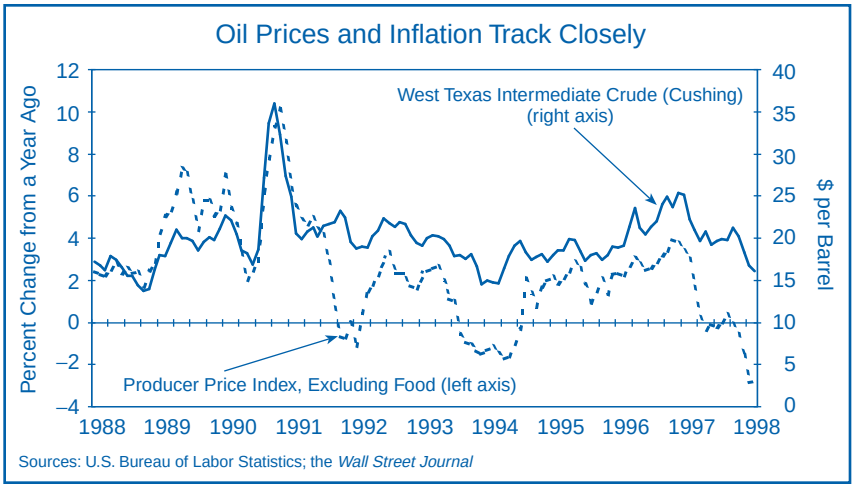
Some oil companies have already announced plans to slash their capital expenditures budget for 1998, and industry analysts believe that widespread cutbacks in drilling activity may follow. Moreover, some projects may be delayed or pulled off production. Owners of marginal or "stripper" wells—wells that typically produce 15 barrels of oil a day or less—may be especially hard hit. If crude oil prices stay below $15 a barrel for an extended period, many of these wells could be plugged and abandoned.

Profits and earnings have come under pressure. Refiners' crack spread—the difference between the price they pay for crude and the spot price of gasoline—fell from an average of $4 during the first nine months of 1997 to $1.70 in early March 1998, according to ***Vector Associates***, a consulting firm to the energy industry. The combination of lower oil prices and lower refining margins has caused energy analysts to cut their earnings estimate for the industry in 1998 and 1999—in some cases by as much as 20 percent below 1997 results.

Many oil companies can still show a profit at $14 a barrel, but they may have difficulty maintaining stable cash flows and earnings streams. Smaller, highly leveraged companies may be forced to sell off their properties or be acquired by larger companies. Oil prices below $15 a barrel could touch off another wave of mergers in the industry, particularly among oil service companies looking to offer integrated services.

Implications: Analysts expect oil prices to remain below $20 a barrel throughout 1998. As a result, oil companies may need to readjust their balance sheets to reflect the diminished value of their undeveloped assets (oil reserves). This downward adjustment in asset values could hinder the ability of oil companies to raise

CHART 4



funding by either bank borrowing or the equities market. Banks look to oil reserves as collateral, and their expected drop in value may put a damper on the aggressive lending to the industry that occurred when crude oil was priced at $20 a barrel.

Despite diversification, the oil industry is still heavily concentrated in the Region. Sustained oil prices at $15 a barrel would probably result in the slowing of employment growth in the Region in line with overall U.S. employment growth. Also, slower job growth may cause ripple effects in other sectors of the economy, resulting, for example, in less demand for housing and office space.

Personal Income Growth Exceeds the National Rate

Despite softening in agriculture and energy, the Region's economic performance remained fairly robust in 1997. Third-quarter personal income figures for 1997 revealed that the Dallas Region's economy outperformed the rest of the United States (see Chart 5). Total personal income—the total income received by households from employment, self-employment, investments, and transfer payments—is a coincident indicator when adjusted for inflation—a useful measure of current economic conditions in the Region.

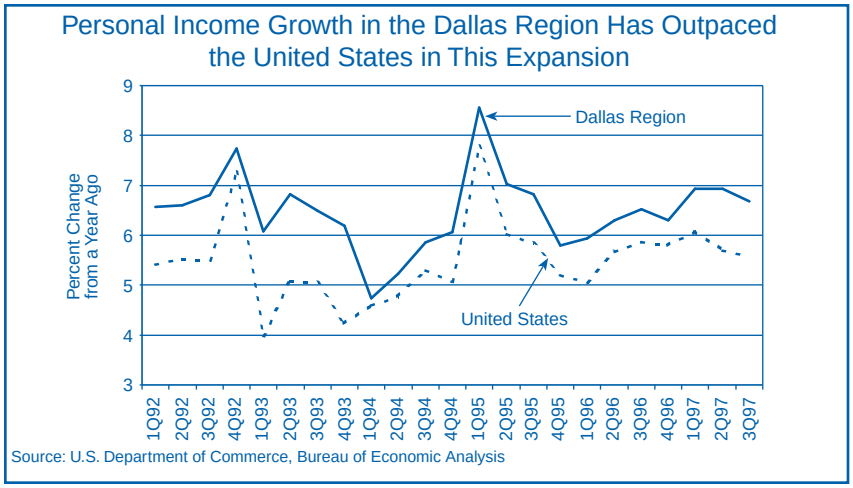
Chart 5 shows the Region surpassing the United States in personal income growth during this expansion. Leading the Region with gains of roughly 7 percent in 1997 were **Texas** and **Colorado**. **Oklahoma** and **New Mexico** are projected to finish the year with personal income growth of about 5.5 percent and 5 percent, respectively, while the United States as a whole finished 1997 with a personal income gain of 5.6 percent. Colorado, Oklahoma, and Texas all ranked among the top 12 states in annualized personal income growth in the third quarter of 1997.

With the exception of New Mexico, strong state economies, robust employment gains, and gradually rising wages have contributed to the Region's better-than-average income growth. In particular, Texas and Colorado—states where wages and salaries account for about 69 to 70 percent of total personal income—have benefited from strong job growth and tight labor markets. Both states achieved 20-year lows in unemployment in December 1997. Moreover, the run-up in the stock market over the past three years has been a substantial source of growth in dividends and interest income for both states.

As measured by industry earnings, the major contributors to income growth in the Region in 1997 were services, durable goods manufacturing, trade, and finance. The weakest areas (below-average contributions to earnings) were concentrated in mining, nondurable goods manufacturing, communications, and the federal government.

Finally, despite the Region's rapid growth in personal income during this decade, three of its four states (the exception being Colorado) continued to rank among the lowest in per capita personal income—a common measure of relative prosperity—in 1996. New Mexico, with

CHART 5



a per capita income of $18,400, ranks forty-eighth in the nation, ahead of only Mississippi and West Virginia. Oklahoma ranks forty-fifth ($19,350) and Texas thirty-ninth ($20,400). Only Colorado, with a per capita income of $25,400, is above the national average of $24,600. It ranks thirteenth among the 50 states.

Implications: The continuing strong growth trend in personal income may portend continued strength in the Region's economy and vigorous growth in bank loans. Although job growth in the Region is expected to moderate in 1998, analysts expect income growth for individual states to continue to advance within a 5 to 7 percent range for another year, surpassing forecasts for national personal income growth.

Income growth drives consumer spending, which typically makes up two-thirds of gross regional product. For now, consumption growth should remain strong. In the current low-inflation environment, consumers will have greater purchasing power, and that should boost spending. Households may take the opportunity to acquire more housing, nondurable and durable goods, and services, while at the same time paying down debt and replenishing savings.

Although opportunities for further consumer loan growth may continue to exist, some caution is warranted, as tight labor markets, a possibly prolonged weakness in the oil patch, and the full impact of the Asian economic crisis—which has yet to be felt—may result in substantially slower growth in the second half of 1998.

Adrian Rangel Sanchez, Regional Economist

Current Regional Banking Conditions

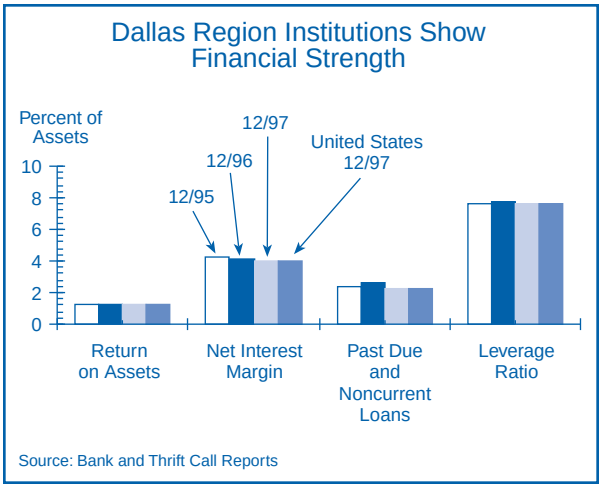
- **The Region's insured institutions continue to report strong earnings and asset quality despite a decline in tier 1 capital ratios at large institutions.**
- **Trends in agriculture may present challenges to the Region's agricultural lenders.**
- **Although oil and gas do not dominate the Region's economy to the same extent as in the past, their influence is still important to many insured institutions.**

Banks and thrifts in the Dallas Region continue to enjoy strong economic conditions, favorable profitability and capital ratios, and low nonperforming asset ratios (see Chart 1). During the fourth quarter 1997, the Dallas Region's institutions:

- improved aggregate return on assets to 1.26 percent;
- maintained total past-due loans at 2.35 percent, compared with a national level of 2.27 percent; and
- sustained a decline of 40 basis points in the aggregate leverage capital ratio to 7.65 percent, driven by asset growth at large banks.

As discussed in past Dallas ***Regional Outlook*** issues, small banks dominate the Region's population more so than in other FDIC Regions. Nonetheless, the asset size of some of the largest banks heavily influences the Region's profile. For example, the Region's assets grew $14.6 billion, or 4 percent, in the fourth quarter of 1997; all but $837 million of this asset growth occurred among the ten largest banks in the Region, which hold $165 billion, or 44 percent, of its assets. This rapid asset growth outpaced earnings retention and caused an aggregate decrease in the tier 1 leverage ratio of 40 basis points to 7.65 percent for all institutions during fourth quarter 1997. However, for all institutions *excluding* the ten largest, the same capital measure averaged a much higher 8.57 percent and declined only 14 basis points during fourth quarter 1997.

CHART 1



The return on assets (ROA) for these two groups of banks is very similar, but over a period of time, the group that excludes the largest banks has had a higher net interest margin, lower overhead, and lower noninterest income. This group of banks relies more on traditional bank lending than the Region's largest banks, which are continuing to develop noninterest income as a core element of their revenue stream.

Two topics addressed in this issue's ***Regional Economy***—oil and agriculture—are particularly relevant to this Region. While issues that are currently unfolding in these industries are driven largely by macroeconomic trends, each has the potential to affect banks in this Region. For many banks in the Dallas Region—particularly smaller or rural banks—these two industries are the primary economic drivers for their trade area and thus may be more vulnerable to the events now taking place. The remainder of this article will address possible risks financial institutions face with regard to these two industries.

Agriculture Is Key

Agriculture is an important sector of the Dallas Region's economy. According to the ***U.S. Department of Agriculture (USDA)***, agricultural cash receipts for the Region's four states totaled $22.5 billion during 1996 and accounted for 11.2 percent of the nation's total. This total reflects only direct farm cash receipts and does not

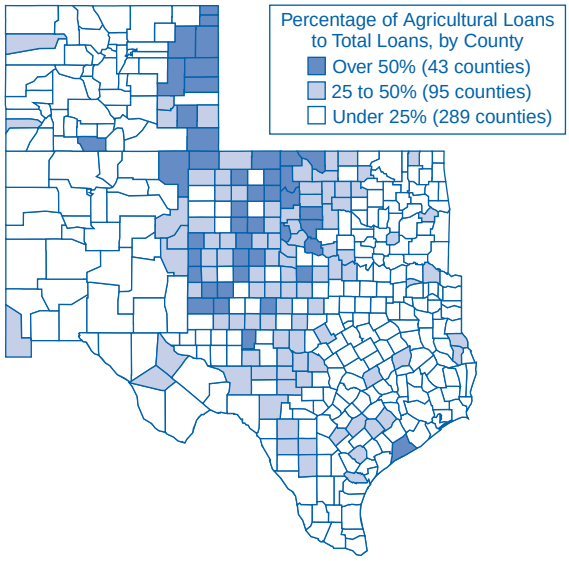
include downstream components (processing, transportation, wholesale, retail, related finance activities, etc.). Texas agriculture, which generated close to $15 billion in cash receipts in 1997, is estimated by the ***Texas A&M Department of Economics Agricultural Extension Service*** to add $50 billion to the state's economy when support businesses are considered.

Agricultural Banks in the Dallas Region Are Influential

In the Dallas Region, 374 banks are classified as "agricultural banks," with combined assets of $20 billion. Agricultural banks are banks in which agricultural real estate and operating farm loans exceed 25 percent of total bank loans. In highly concentrated agricultural areas, the influence of agriculture reaches far beyond the credit quality of farm loans. For banks in these communities, agriculture affects all loan types, other sources of the bank's revenue stream, and the stability of its deposit base. One way to identify banks that may be particularly sensitive to trends in agriculture is to identify which counties have more than 25 percent of total bank loans outstanding in agriculture. There are 138 such counties in the Dallas Region; these serve as headquarters for 332 banks, 55 of which do not meet the agricultural bank criteria (see Chart 2). In this article, these counties are referred to as agricultural counties. In this group, 43 counties have 50 percent or more of their loans directly invested in agriculture.

Chart 2

The Bulk of the Region's Agricultural Loans Are Concentrated in Western Oklahoma, Northern Texas, and Eastern Colorado



Source: Bank and Thrift Call Reports

Both groups of banks that encompass agricultural lending report high capital ratios, an ROA above the national average, and low levels of past-due loans. See Table 1 for a comparison of all agricultural banks, banks in agricultural counties, and other banks in the Region that are not heavily exposed to agricultural lending and that

Table 1

Agriculture Banks and Counties Show Greater Reliance on Traditional Lending

	Ag Banks*	Ag Counties**	Non-Ag Banks < $100 Million
Number of Institutions	374	332	730
Total Assets ($ Millions)	$19,999	$16,867	$35,024
Average Asset Size ($ Millions)	$53	$50	$48
Net Interest Margin	4.49	4.44	5.05
Noninterest Income/Earning Assets	0.78	0.76	1.30
Noninterest Expense/Earning Assets	3.15	3.14	4.17
Return on Assets	1.29	1.27	1.28
Charge-Off Rate	0.37	0.40	0.33
Total Past-Due Ratio	3.17	3.06	2.94
Tier 1 Leverage Ratio	10.59	10.74	9.63
Loan-to-Deposit Ratio	56.86	56.01	60.84

* Ag banks are banks in which agricultural loans exceed 25 percent of total loans.
** Ag counties are defined as counties where agriculture loans exceed 25 percent of total loans.
Source: Bank and Thrift Call Reports

have total assets under $100 million. Because the average asset size of an agricultural bank is $53 million, comparisons were limited to nonagricultural banks with less than $100 million in assets.

Distinctions between agricultural banks and nonagricultural banks with assets under $100 million are evident in the earning components and the leverage capital ratios. While the ROA is similar for these two groups of banks, agricultural banks show a greater reliance on traditional lending than nonagricultural banks under $100 million do. Agricultural banks have both lower overhead and lower noninterest income. They also have a narrower net interest margin, possibly reflecting the competitive pressures in agricultural lending, particularly from point-of-sale vendor financing and agency-sponsored financing that use lower cost wholesale funding. Higher leverage capital ratios for agricultural banks may reflect in part their geographic concentration of credit.

Agricultural Issues of Interest to Farm and Ranch Lenders Are Many

Several significant changes or events taking place in the agricultural sector could have a direct or indirect effect on banks in the Dallas Region. These changes are likely to increase certain risk factors for agricultural producers and their lenders. Consequently, measuring and managing these risks is becoming increasingly complex, particularly for the smaller producers and lenders with limited resources. A summary of these issues follows.

Waning Demand Amid Strong Harvest Expectations: Principally as a result of the weak Asian economies, previous expectations of strong global demand have been reduced. Concurrently, principal grain and cotton crops are expected to be larger than previously estimated. Consequently, many crop prices have been under heavy downward pressure. For example, from year-end 1996 to February 1998, average prices for cotton have fallen 10 percent; wheat and corn, 23 percent; and cattle—the largest agricultural commodity by dollar value in the Region—9 percent. Despite what is expected to be a significant decrease in Asian demand for cattle this year, ongoing efforts on the part of domestic producers to reduce the aggregate herd population have led the USDA to project a mild price increase in cattle prices by year-end 1998.

Changed Government Policy: The Federal Agricultural Improvement and Reform Act of 1996 delinked income support payments from farm prices by providing for seven annual fixed but declining "production flexibility contract payments." In sharp contrast to previous policy, registered producers receive fixed payments regardless of current prices or what they planted. Two of the most important aspects of this bill for farmers and their credit providers are the eventual elimination of government support payments (in 2003) and the fact that planting decisions will be guided by market forces rather than government. The increasing complexity of farming operations may require bankers to act as advisers and intermediaries for futures contracts and other hedging alternatives.

Crop Alternatives and New Growth Areas: Given fluctuations in crop prices, many farmers are electing to plant different crops than they have traditionally planted. While this capability allows producers to make market-based decisions, many agricultural economists believe it also increases commodity price risk. Accordingly, producers and their lenders will face increased risks from both pricing volatility and venturing into new types of crops.

Significant growth in hog production in the southeastern section of **Colorado** and the panhandles of **Texas** and **Oklahoma** have brought new lending opportunities as well as new risks to participating lenders. A major hog processing plant in **Guymon**, Oklahoma, is now in its fourth year and is producing up to 4 million hogs annually. Another hog processing plant of the same capacity reportedly may be established in the Texas panhandle or central Kansas. While this activity is adding to economic growth, it is not without controversy. Environmental concerns are growing over the smell and the pollution of underground water tables associated with such enterprises. Oklahoma's governor and several legislative leaders have endorsed a one-year moratorium on large hog operations. Additionally, the average price of hogs has declined 38 percent between year-end 1996 and February 1998. Producers, some of them new to hog production, face growing risks from weakened demand, falling prices, and political and regulatory pressures. These issues merit the continued attention of lenders to this industry.

Demographic Trends and Increased Competition: The dynamics of the financial marketplace and demographic trends in rural areas could add up to increased pressure on small agricultural banks. Nontraditional capital providers—such as point-of-sale financing subsidiaries of large agriculture venders—are taking market share from traditional lenders. Meanwhile, the average farm size slowly continues to increase, and the number of small producers is declining, eroding the customer base for small rural banks. While current agricultural conditions have been very favorable and agricultural banks, as a group, have benefited, the confluence of increased competition and an eroding customer base presents some long-term challenges for these banks. In particular, efforts to sustain new loan generation could put pressure on loan pricing, underwriting standards, or both.

Oil's Influence Is Still Widely Felt in the Dallas Region

Historically, the oil industry has been very important to the Dallas Region. The energy-related booms and busts of the 1970s and 1980s were a principal contributor to the crises that shook the Region's banking industry. Today, the states of the Dallas Region are more diversified than they were in the 1980s, and banks do not have the degree of exposure to energy lending they once had. Nevertheless, oil's influence is still widely felt. In aggregate, the Region accounts for 30 percent of the nation's oil production and 46 percent of its gas production. Table 2 shows where each state in the Region stands in terms of oil and gas production, as well as employment. Texas far exceeds the other states in production and employment, but Oklahoma and **New Mexico**'s production levels are more significant in terms of the industry's contribution to their respective gross state products.

The upward trend in oil prices during 1996 and 1997 stimulated increased drilling activity, employment growth in the petroleum industry, and energy-related lending. Overall, the increased oil and gas activity has been a significant contributor to the Region's strong economic showing in both those years. Recently, however, crude oil prices have tumbled, and the industry's economic significance to the Region rekindles concerns about oil and gas lending and risks to banks in areas that rely heavily on that industry.

The falling prices witnessed over recent months affect all segments of the oil industry. Historically, falling oil prices have been a benefit to "downstream" firms that

Table 2

Oil Impact in the Dallas Region

	United States	Colorado	New Mexico	Oklahoma	Texas	Region	% of United States
Oil Production (thousands of barrels)	2,361,915	24,954	64,477	85,379	543,342	718,152	30
Gas Production (thousands Mcf)	19,915,409	528,965	1,646,492	1,815,370	5,162,501	9,153,328	46
Oil Rank		11	8	6	1		
Gas Rank		9	4	3	2		
Stripper %	18	21	21	75	25		
Employment (in thousands)							
Extraction	310	8	10	30	149	196	63
Refining	125	1	1	4	25	31	25
Transportation	162	2	2	7	28	39	24
Wholesale	162	2	2	4	16	24	15
Retail	665	11	6	9	34	60	9
Total	1,424	24	19	53	253	349	25
Average Cost to Drill One Well ($000)	$513	$287	$406	$492	$538		

Circled numbers represent significant positions relative to other Regions or States.
Source: Independent Producers Association of America (IPAA) 1997 Oil and Gas Information

refine crude oil into usable products. However, slower worldwide economic growth, slack demand for heating oil, and abundant supplies of gasoline have caused prices for those petroleum-based products to fall, squeezing profit margins. Oil and gas firms are expected to cut capital spending budgets, employment growth could slow, and job layoffs could occur. Drilling and extraction activities are likely to be the first and most affected segment of the industry. As shown in Table 2, the Region accounts for 63 percent of the nation's oil and gas extraction employment. Because of their heavy concentration of oil production, Oklahoma and Texas stand to be more adversely affected by problems in the petroleum industry than other areas of the country.

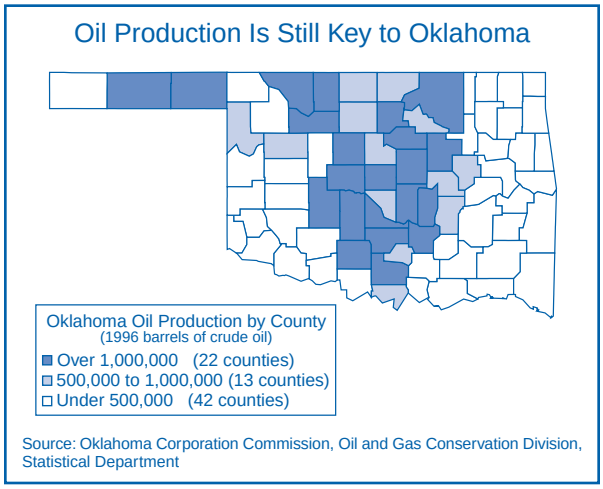
Most affected by the oil price decline are marginal wells—commonly referred to as "stripper" wells—that produce less than 15 barrels of oil a day. With higher overhead and a lower revenue base, these wells are the first to pierce break-even points in a declining price environment. As of 1996, there were almost 69,000 producing stripper wells in Oklahoma, accounting for 75 percent of the state's oil production. While Texas has over 113,000 producing stripper wells, they account for only 25 percent of the state's total production. By comparison, national oil production from stripper wells is only 18 percent.

While the recent oil price decline is a serious issue for all industry participants throughout the Region, Oklahoma appears to be particularly vulnerable because of its high rate of oil and gas employment and the extremely high percentage of its oil production that comes from stripper wells. Chart 3 shows the leading oil producing counties in Oklahoma. There, 35 of 77 counties produce 500,000 or more barrels of oil annually. Small communities with high oil production are more likely to rely on that single industry, and thus be more vulnerable. Of these high-producing counties in Oklahoma, 28 have populations under 50,000.

Different Grades of Oil Mean Different Prices

Different grades of oil vary significantly, as do their prices. For example, the average spot price of West Texas Intermediate (WTI) (Cushing) crude was $12.758 a barrel as of March 1998, while the average price of West Texas Sour was only $9.758 because of its lower quality. The wellhead price is a daily posted price received by producers. This price differs from the price listed in the ***Wall Street Journal,*** which reports the WTI

CHART 3



Source: Oklahoma Corporation Commission, Oil and Gas Conservation Division, Statistical Department

(Cushing) spot price for the following month's futures price. For example, the average WTI (Cushing) price for March was $15.02, which represents the average April delivery futures price. Accordingly, expectations of price movement through the contract delivery date as well as transportation and tariff costs are considered in the WTI (Cushing) spot price but are not included in the wellhead price received by producers. Even with improving efficiency gained through new technologies, the current environment of low prices is below many producers' break-even points, especially those with lower-grade, small-producing wells. Consequently, many producers are shutting down their wells, and others are curtailing their capital spending programs. In some cases, producers are just walking away from wells to avoid the high cost of capping them.

There are 178 banks headquartered in Oklahoma's high oil-producing counties (annual production greater than 500,000 barrels). At year-end 1997, these banks held $23.5 billion in assets, or 58 percent of Oklahoma's banking assets. Financial ratios for these banks,[1] including tier 1 leverage ratio, ROA, charge-off rates, and past-due ratios, are very similar to those for the Region.

Call Report information does not segregate oil and gas lending data; however, ***FDIC Division of Supervision*** staff report very little direct lending to oil production companies by banks in the high oil-producing areas of Texas and Oklahoma. Rather, small bank lending exposure to the oil industry is reportedly geared more toward

[1] Aggregated data for financial ratio calculation excludes one large institution that reported significant losses in 1997. Exclusion of this institution eliminates the non-energy-related losses that would otherwise distort the data.

petroleum service companies. The ***Independent Producers Association of America (IPAA)*** indicates that bank lending to independent producers is increasing. According to ***IPAA***, "bank participation has increased significantly in financing of independent projects. It grew by six percentage points from the 1994 Profile survey and has nearly tripled from the 1992 Profile survey." In 1996, bank financing accounted for 26 percent of capital sources for independent producers, second only to internally generated financing (34 percent). This information does not include lending activities to the large oil conglomerates that are also borrowing from insured institutions. These large companies are typically borrowing from the large regional banks and money center banks or going directly to the capital markets for their funding. While direct energy lending from smaller institutions may not be substantial, many borrowers from these oil-based communities rely on the industry to support their debts, either directly through their employment or indirectly through the economic and commercial vitality of the community.

Implications: An extended period of weak oil prices—below $15 a barrel—would put a strain on energy producers and energy-dependent areas. Banks may feel this strain directly in their oil and gas lending, which has reportedly seen rapid growth over the past four years. Banks in areas that are dependent on the industry may be affected negatively as well if oil-related firms curtail employment and capital spending. Income from royalties used to support consumer debts also may be curtailed, and many of the high oil-producing areas, particularly in western Oklahoma, the Texas panhandle, and the high plains, are large agricultural production areas as well. As discussed earlier in this article, agriculture too is facing changes that may present challenges to producers and their lenders. Combined, oil and agriculture are the major economic underpinnings for large parts of these areas. The confluence of changes in agriculture with the strain that the oil and gas industry is undergoing poses risks and challenges that warrant the continued attention of both bankers and their supervisors.

Alan C. Bush, Regional Manager
Jeffrey A. Ayres, Financial Analyst

Additional Sources of Information

"Banking Problems in the Southwest" in Brian Lamm and John O'Keefe, *History of the Eighties, Lessons for the Future,* Volume 1. Washington, D.C.: FDIC, 1997.

Department of Energy (www.fe.doe.gov)

Energy Information Administration (www.eia.doe.gov)

Independent Petroleum Association of America (IPAA) (www.ipaa.org)

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