Regional Outlook

Federal Deposit Insurance Corporation — Second Quarter 1998

FDIC Atlanta 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*****—After flattening throughout much of 1997, job growth in the Atlanta Region rose to 3.3 percent in the fourth quarter…one area of continuing vulnerability within the Region is its exposure to the textile and apparel industries…the Region's insured institutions have both direct and indirect exposure to these industries.** *See page 16.*

By Scott C. Hughes, Jack M.W. Phelps, Pamela R. Stallings, W. Brian Bowling

◆ ***Regional Banking*****—In the fourth quarter, merger-related charges lowered bank profits while thrifts experienced narrow net interest margins and higher overhead…flattening of the yield curve could reduce net interest income in 1998…institutions located in areas where textile and apparel employment is high are expanding their commercial and industrial lending.** *See page 20.*

By Jack M.W. Phelps, W. Brian Bowling, Scott C. Hughes, Pamela R. Stallings

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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.

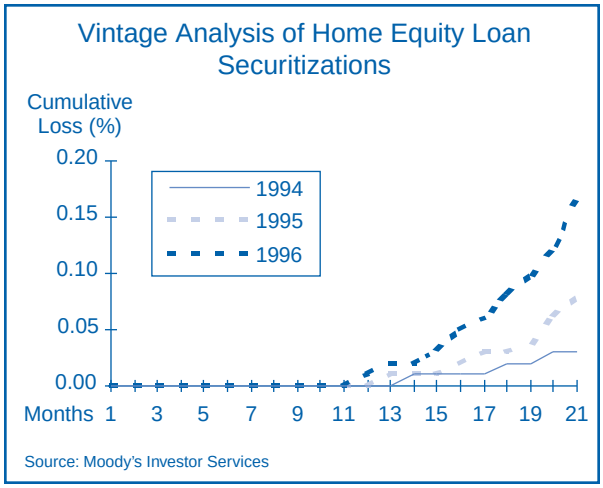
Gain-on-sale accounting is significant to securitizers. To illustrate the significance of the IO account to a securitizer's reported income, consider one major subprime lender. During fiscal year 1997, this company's IO asset grew by over $141 million. Despite a $28 million writedown of the IO asset,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

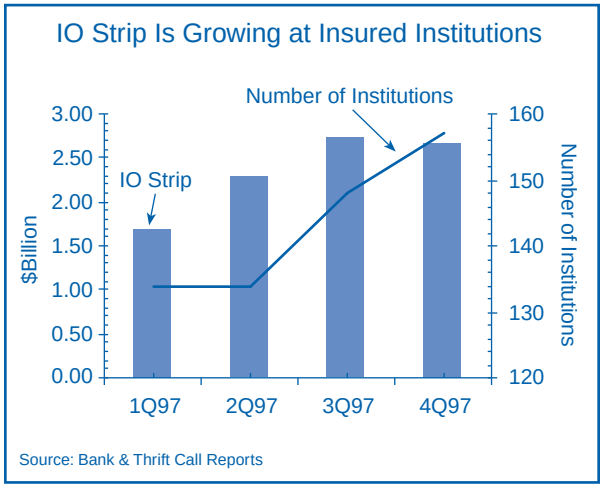
As of December 31, 1997, only 30 institutions reported this IO asset at more than 5 percent of tier 1 capital. However, some institutions have booked gains that should have given rise to a call-reportable IO strip but did not properly report the assets. Therefore, the current reporting may understate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

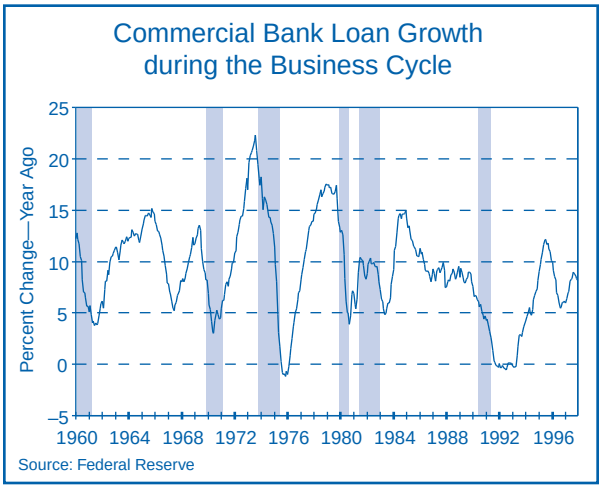
How Have Economic Expansions Usually Ended?

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

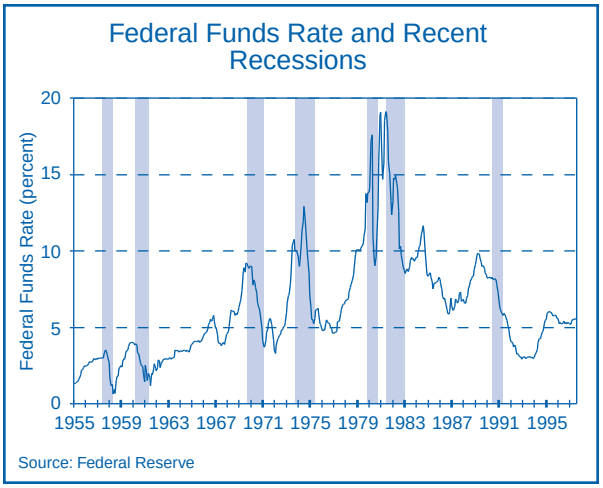
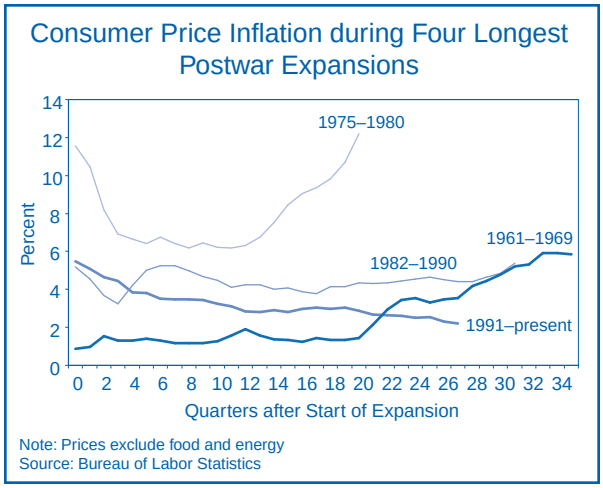


Chart 3



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

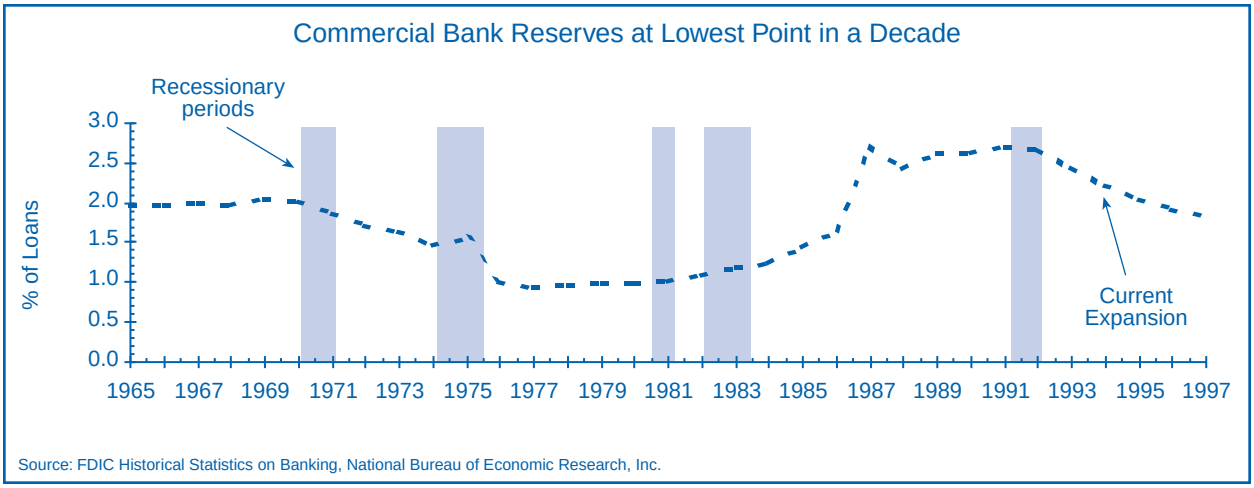


Table 1

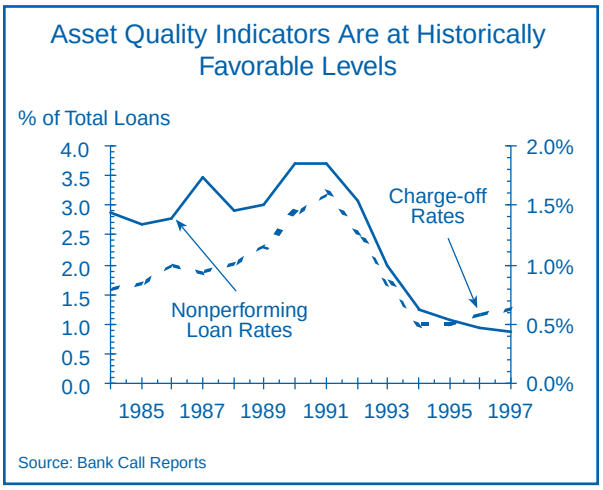
Commercial Bank Allowance for Loan and Lease Losses to Total Loans by Lender Type							
Type of Lender	Number of Banks	Assets ($Billions)	1997	1996	1995	1994	1993
Multinational	11	$1,383	2.14	2.25	2.55	2.83	3.10
Commercial	3,207	$1,915	1.63	1.71	1.90	2.16	2.37
Credit Card	67	$202	4.21	3.48	3.21	2.89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

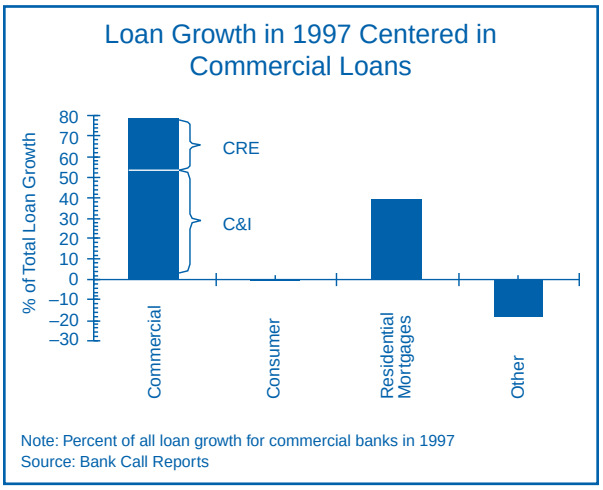
In the FDIC's ***Report on Underwriting Practices*** for April 1997 through September 1997, examiners noted "above-average" risk in current underwriting practices for new loans at almost 10 percent of the 1,233 FDIC-supervised institutions examined. Of the institutions with above-average risk, 12 percent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

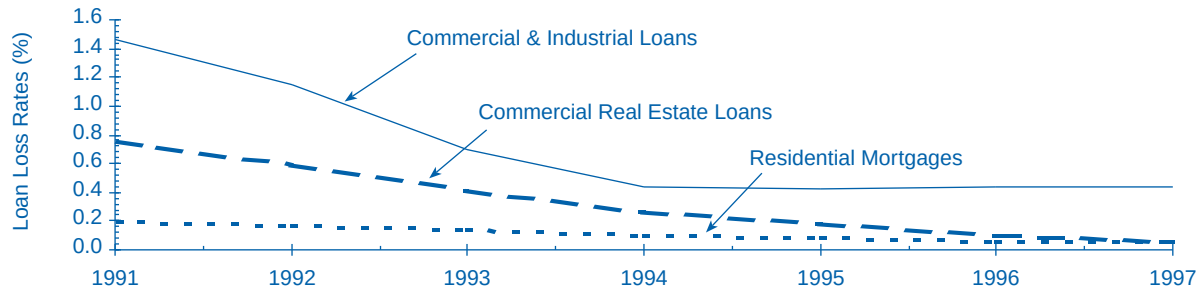
In using offsite data to assess allowance adequacy, analysts consider financial ratios such as the allowance to total loans, reserve coverage (allowance to nonperforming loans), loan loss provisions to charge-offs, and loan delinquency levels. These ratios are evaluated against historical benchmarks.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

Atlanta Region's Economic Expansion Continues

- **Economic growth in the Atlanta Region remained above the national average in 1997.**
- **Heavy rains and adverse weather in southern Georgia place 1998's agricultural crop at risk.**
- **The textile and apparel industries remain an important component of the Atlanta Region's economy despite decades of job losses.**
- **Financial institutions in the Atlanta Region have direct and indirect exposure to the textile and apparel industries.**

After flattening throughout much of 1997, year-over-year job growth in the Atlanta Region rose to 3.3 percent in the fourth quarter, its highest level since early 1995 (see Chart 1). The growth trend in the Region paralleled that of the nation as a whole. Despite strong levels of domestic demand so far in 1998, many analysts believe that regional and national growth will slow later in the year as exports weaken in the face of reduced Asian demand and a strong U.S. dollar. One area of concern, because of its global exposure, is the Atlanta Region's important textile and apparel industries.

Florida's Economy Continues to Expand at an Above-Average Rate

Florida's economic performance during 1997 and the early months of 1998 has been exceptional, with job growth during 1997 approaching 4 percent (see Chart 2). Gains in the state have been led by high levels of construction activity, especially in central Florida, where theme park–related construction continues. Recent reports suggest that damage from March tornadoes in that portion of the state have exacerbated already tight labor markets for construction workers.

North Carolina, South Carolina, and Virginia Turn in Strong Performances in 1997

The Carolinas and **Virginia** saw job growth in excess of the national average during 1997. Economic gains, however, remain confined to metropolitan areas, particularly along interstate highways. In manufacturing, growth is constrained by continued losses in the production of durable goods, particularly textiles and apparel. Even in durable goods the rate of decline moderated throughout late 1997.

CHART 1

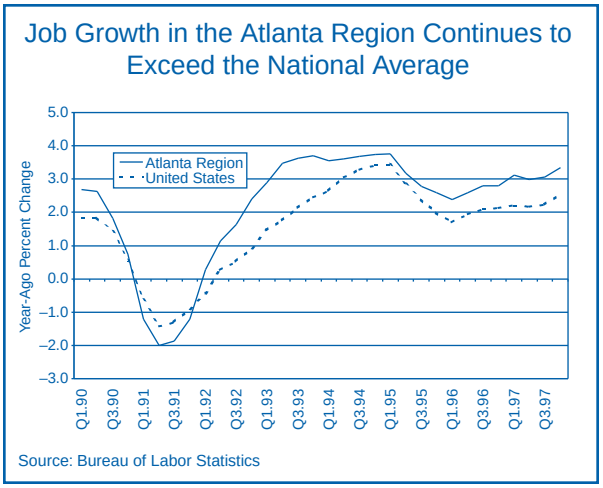
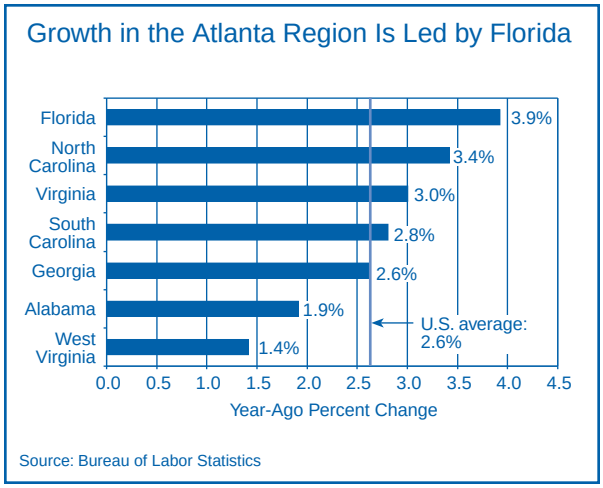


CHART 2



Late-Year Rally Boosts Georgia's Economic Performance, but Agricultural Lenders Face Risks

Georgia's economic performance improved in the latter part of 1997 as the constraining impacts of the 1996 Summer Olympics receded. Growth in the **Atlanta** metropolitan area accelerated, in part because of gains in construction and transportation services. Atlanta's real estate markets also continue to flourish, causing some risk of overbuilding, particularly in multifamily and retail markets.

The southern portion of the state has seen record precipitation in recent months, prompting concern about agricultural prospects for 1998. Flooding slowed spring field preparation and planting activity. Conditions were exacerbated further in mid-March 1998 by freezing conditions that threatened the state's peach and blueberry crops, which had seen early growth because of a mild winter. Recent reports have estimated that Georgia farmers could lose as much as $200 million in 1998 because of adverse weather conditions.

Growth in Alabama and West Virginia Continues to Lag the Region and the Nation

Despite strength in some of its metropolitan areas (such as **Mobile, Birmingham, Tuscaloosa,** and **Huntsville**), weakness elsewhere has constrained **Alabama**'s economic expansion. Similar conditions prevail in **West Virginia.** These states remain exposed to their continued dependence on primary industries (textiles, apparel, lumber, and wood pulp in Alabama; energy and metals in West Virginia). Growth is constrained by the states' slow population growth as well.

The Textile and Apparel Industries Are Beset by Competitive Pressures

Although economic growth remains above the national average, one vulnerability in the Atlanta Region is its exposure to the textile and apparel industries. Last year marked the fifth consecutive year of job losses and continued imbalance between imports and exports in these industries. Risks to textile- and apparel-related businesses, as well as the insured financial institutions that actively lend to those businesses, could rise in the future given the industries' vulnerability to cyclical fluctuations in addition to growing pressures from global markets, automation, and industry consolidation.

Atlanta Region Is Vulnerable because of Textile and Apparel Exposure

The decline in the textile and apparel industries has placed a heavier burden on the Atlanta Region than on perhaps any other area of the country. *The Atlanta Region accounts for approximately 73 percent of all textile industry jobs in the nation.* Moreover, the Atlanta Region is a significant player in the apparel industry, accounting for 25 percent of the nation's total apparel employment. In assessing the impact of the continually declining textile and apparel industries, the rural/urban dichotomy must be examined carefully. The rural areas of the Region have felt the deterioration of these two industries most strongly, primarily because of the very limited employment opportunities available as plants are closed or downsizing becomes necessary. Urban areas are less likely to feel severe effects from the declining industries because the healthy economy they have experienced in recent years has allowed displaced employees to move into other jobs.

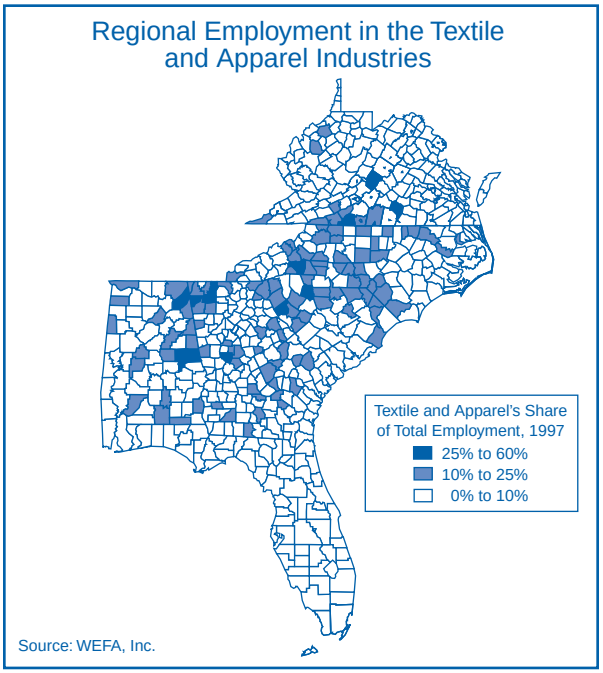
Textile and Apparel Exposure by State

The textile industry comprises approximately 38 percent of all manufacturing jobs in Georgia, with the majority of these jobs in the carpet manufacturing sector. In fact, two-thirds of the nation's carpet manufacturing is done in Georgia. Whitfield, Gordon, Bartow, and Floyd counties in Georgia make up the bulk of the carpet industry for the Region (see Chart 3, next page). These counties in and around the Atlanta metropolitan area have flourished as the real estate market has expanded. In contrast to textiles, Georgia's apparel industry has continued to deteriorate, losing 15,000 jobs since 1995.

North Carolina's textile and apparel industries account for 6.4 percent of total employment in the state, compared with 19.2 percent in 1973. While declines in the industry have become the norm, layoffs and closures in the state have been particularly severe recently. Since 1995, the industry has shed over 30,000 jobs, roughly equivalent to the net loss in employment that occurred from 1985 to 1995. The northern and western portions of the state tend to have the highest concentration of textile and apparel jobs.

South Carolina is dominated by the textile and apparel industries, with employment in most counties exceeding 1,000 workers. The **Greenville-Spartanburg-Anderson** metropolitan area, which has a heavy concentration

CHART 3



of textile and apparel operations, has also felt decline. For example, one company in the area announced in January 1998 that it would cut its workforce in half by spring. Textile workers in metropolitan areas may be absorbed into other sectors of the economy.

South Florida's Dade County is another area to feel the effects of the declining textile industry, although textiles were less than 2 percent of total employment in 1997. Textiles and apparel were among the area's strengths for many years, but by now most plants have moved to Latin America and the Caribbean.

Alabama historically has had a large exposure to the textile and apparel industries, which still account for 20 percent of the state's jobs, even though about 10 percent of the industry's workforce has been eliminated just since 1996. Textiles and apparel account for more than 25 percent of total employment in DeKalb, Chambers, and Tallapoosa counties.

Virginia has several counties that rely heavily on the textile and apparel industries for employment, particularly along the Virginia–North Carolina border. In December 1997, several textile producers in the state indicated that their orders had been trimmed by increased Asian competition. With the exception of Roane and Ritchie counties, West Virginia has a low concentration of employment in the textile and apparel industries.

Industry Drivers

The textile and apparel industries are extremely cyclical and have been driven by consumer income, although the industries have been in secular decline for decades because of other factors as well. From 1993 on, the industry has seen substantial job losses from which it has been unable to recover, despite the overall health of the U.S. economy. A recent study speculates that weakened growth in demand may be linked to demographic changes in the nation. It argues that current plant capacity was developed for the "baby boomer" generation of 77 million people, not the 45 million "Generation X-ers." As such, overcapacity may be a risk for the industry's long-term health.

Seasonality is another important driver, particularly in the apparel industry. Orders for the season's apparel are based on expected demand, which can be strongly affected by factors such as weather, fashion trends, and other unpredictable variables. Because of their lack of product diversity, niche manufacturers are at a higher level of risk from changes in consumer tastes.

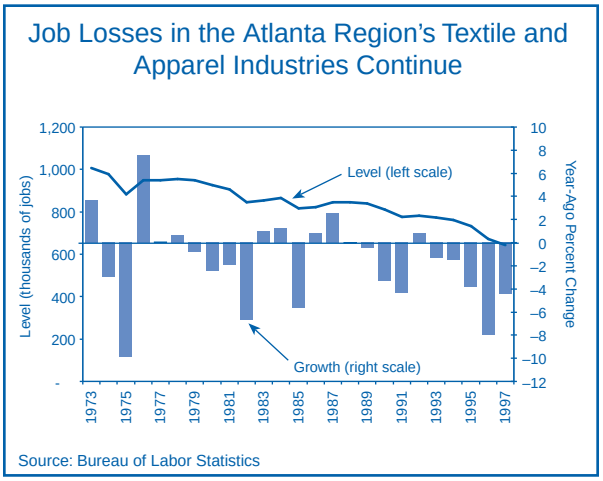
Structural Trends

Employment in the combined textile and apparel sectors is currently about 1.5 million nationwide, although this number is decreasing rapidly. In 1997, the textile and apparel industries shed more jobs than any other industry—45,000 workers were dropped from the apparel industry and 12,000 from the textile industry (see Chart 4).

A changing global environment has been unfolding in the textile and apparel industries and was strengthened by the passage of the Caribbean Basin Initiative (CBI) and the North American Free Trade Agreement (NAFTA). The CBI made it possible for U.S. fabrics to be shipped offshore, made into garments by low-wage workers, and imported into the United States duty-free. While U.S. textile and apparel jobs are dwindling, NAFTA has had some positive effects for the United States in that it has substantially increased U.S. trade with Canada and Mexico, encouraging significant new fabric business.

Although Mexico and Canada are the largest exporters of textiles and apparel to the United States, about 80 percent of the yarns and fabrics used to make the apparel are produced in the United States. The effects of the

CHART 4



General Agreement on Tariffs and Trade will come into play around 2004, when all tariffs on textiles will be phased out in all countries, a situation that is expected to create additional pressure on the U.S. textile and apparel industries.

While the Asian crisis is adding pressure to an already stressed industry, it is but one factor in the decline of the textile and apparel industries. For the Atlanta Region, long-term economic problems in the "Asia 10" could translate into substantial problems for manufacturers who export to those countries[1] as well. According to the Office of Trade and Economic Analysis, the amount of total exports, excluding services, destined for the "Asian 10" from the Atlanta Region could be upwards of $10.4 billion in sales—dollars that could evaporate. Because of continued overseas competition, the layoffs in the textile and apparel industries are expected to continue even if the Asian crisis calms.

Market Risk and Financial Institution Exposure

The volatility in the textile and apparel industries can affect the Atlanta Region's financial institutions at two levels. First, banks face risk through direct lending to manufacturers; second, they have indirect exposure by virtue of their interdependent relationship with the local economy.

Direct Exposure: A key risk to financial institutions that lend to manufacturers in the textile and apparel industries is the fact that they are vulnerable to seasonal and cyclical fluctuations. To meet the fixed cost of salaries and overhead during off-peak seasons, manufacturers often use their inventory as collateral to borrow from insured financial institutions and other lenders, intending to repay the debt during the peak sales season. There is a dual risk in this type of *asset-based lending.* Sales of seasonal wear are highly dependent on weather and economic conditions. A mild winter could severely limit demand for a firm's product. Moreover, there is a high degree of correlation between income and job growth and sales in the textile and apparel industries. Producing now for consumption later in the year, based on assumptions of continued rapid growth, entails risk. If weather is abnormal or economic growth is slower than expected, a manufacturer's peak season may leave it unable to service its debt. A second common type of short-term financing for textile and apparel manufacturers involves *accounts receivable factoring.* Because of slow turnover of receivables into cash, manufacturers often sell their invoices to a factoring agent, which, in turn, collects on the invoice. Here, the risk from defaulted payment by retailers is absorbed by the factoring agent, which can be a bank or nonbank entity. Over the past few years, factoring risk has increased because of consolidation and higher bankruptcy rates among retailers.

Indirect Exposure: The indirect impact of textiles and apparel on the Region's banking industry arises from the ripple effects of plant closures or layoffs on the surrounding community. As workers lose their jobs, their ability to meet financial obligations is jeopardized. This situation may occur even when the financial standing of the company remains sound, as in the case of a firm discharging employees because of plant automation. In areas where the unemployment rate is low or the level of economic diversification is high, economic dislocation may be lower than in a community where the plant is the single largest source of employment and income. In rural areas such as the northwestern corner of Georgia, textile manufacturing plays a dominant role in the local economy. Layoffs or plant closures there could have a more pronounced effect on businesses' and consumers' ability to meet debt obligations than in metropolitan areas such as Greenville-Spartanburg-Anderson, which has other economic drivers such as transportation equipment manufacturing.

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[1] The "Asian 10" are China, Hong Kong, Indonesia, Japan, Malaysia, the Philippines, Singapore, South Korea, Taiwan, and Thailand.

Current Regional Banking Conditions

- **Commercial banks performed well in the fourth quarter, despite margin compression and merger-related charges. Thrift performance, also affected by lower margins and higher overhead, was weaker in the quarter.**
- **Growth in net interest income (NII) in 1997 was driven by growth in earning assets, while interest rate movements actually constrained NII growth.**
- **Assessing the degree of interest rate risk at insured institutions becomes more important because of recent flattening in the yield curve.**
- **Insured institutions headquartered in areas where textile and apparel manufacturing employment is high have performed well since the last recession.**

Fourth-Quarter Regional Bank and Thrift Performance Is Good

Atlanta Region banks performed well in the fourth quarter of 1997, although aggregate earnings were constrained by merger-related charges at some very large banks, as well as by margin compression that affected banks of all sizes. The Region reported an annualized fourth-quarter return on assets (ROA) of 1.01 percent, 31 basis points below the previous quarter and 25 basis points below the fourth-quarter 1996 return. Higher noninterest charges, particularly at four large banks in **Virginia** and **Florida** that were involved in pending mergers, contributed to a sharp increase in the overhead expense ratio during the quarter. The net interest margin fell 13 basis points to 4.29 percent in the period because of higher funding costs but remained above the national average. A modest increase in reserve provisions and a slight drop in noninterest income also affected quarterly earnings. The Region's aggregate leverage capital ratio fell slightly in the quarter, but overall capitalization remained strong. Delinquency, charge-off, and reserve coverage measures all indicated continued strong regional banking conditions. There was further deterioration in the consumer credit sector, however. The Region's credit card loss rate increased throughout the year and was above the national average at 5.54 percent during the fourth quarter. In general, large banks performed better than small ones. The weakness in small-bank earnings was largely seasonal, as overhead and provision expenses for this group tend to be highest in the fourth quarter.

Atlanta Region thrifts underperformed their out-of-region peers during the quarter with an annualized ROA of 0.77 percent. Lower long-term interest rates reduced thrift net interest margins throughout the second half of 1997, and provision expenses and overhead spending were higher in the fourth quarter. The Region's thrifts remained very well capitalized, however, with a year-end aggregate leverage ratio above 9 percent. Delinquencies and charge-offs also remained low, and reserve coverage of nonperforming loans, already above the nationwide thrift average, improved during the quarter.

Interest Rate Risk for Insured Institutions Could Increase

Several forces currently at work in the general economy and the financial services sector could portend higher interest rate risk (IRR) for insured institutions. A flattened yield curve, record refinancing activity, potential devaluation of mortgage servicing assets, a shift in loan demand from adjustable-rate to low-fixed-rate products, and intense competition among financial institutions and nonbank lenders all could affect intermediated earnings. Change in these areas places increased emphasis on identifying the extent of IRR in insured institutions.

IRR can be measured in several ways. Common methods include gap, duration, and simulation analysis, all of which are prospective measurement techniques designed to estimate net interest income (NII) variability or financial instrument price volatility in future periods. Measuring IRR is extremely difficult regardless of the technique used. Typically, most IRR models require estimates of, among other things, the direction of change for several key interest rates over time, the magnitude and timing of those changes, and the average volume and mix of earning assets and interest-bearing liabilities at the time of each change in rates. Embedded optionality in many financial instruments and the increased use of off-balance sheet derivatives and hedging programs add to the complexity of forecasting IRR.

It is even more difficult to apply these forward-looking techniques off site, as the required inputs are not sufficiently detailed in Bank or Thrift Call Reports or other public filings. As discussed below, rate/volume analysis (see Table 1) is one alternative *ex post* method that can be applied off site to measure IRR exposure during a specified period.

Table 1 details how rate/volume analysis decomposes a financial intermediary's period change in NII. NII changes can be attributed to three factors: changes in yields and costs (rate variance), fluctuations in earning asset and interest-bearing liability volume (volume variance), and residual interest income and expense arising from the combination of rate and volume changes (mix variance). Conceptually, rate/volume analysis simply breaks down NII into its component parts and measures the contribution of each component during the period. This method is particularly suitable for off-site monitoring, since the required data are readily obtainable from Call Reports. Note that Table 1 assumes 1997 as the measurement period, but a rate/volume analysis can be applied to any two consecutive time periods.

Subjecting Atlanta Region commercial banks and FDIC-supervised savings banks[1] to a rate/volume analysis for 1997, we found that *the increase in aggregate NII was driven entirely by strong growth in earning assets relative to interest-bearing liabilities, while rate and mix variations actually constrained NII growth during the year.* Table 2 (next page) summarizes the effects of rate, volume, and mix variance on 1997 aggregate NII. The negative income rate variance and positive expense rate variance reflect the flattening of the yield curve (lower long-term rates and higher short-term rates) during the period. The negative net mix variance also reflects this flattening, as new earning assets yielded progressively less (long-term rates were falling), while marginal funding costs were higher (short-term rates were rising).

For comparison, we conducted a rate/volume analysis on a similar universe[2] of institutions using 1994 data, the latest year in which there was notable volatility in market interest rates. As in 1997, net earning asset growth accounted for the increase in NII in 1994. The net rate variance (NRV) again was negative, although *the rate effect was much larger in 1994 than in 1997, implying higher IRR exposure*. Mix variance was slightly negative in 1994.

Rate/volume analysis indicates that, on average, commercial banks and savings banks exhibited greater sensitivity to interest rate changes in 1994 than in 1997 (measured by NRV as a percentage of prior period NII). The interest rate environments that existed during each of those periods explain this finding. Specifically, in 1994 the Federal Reserve began pushing short-term

[1] Credit card banks are excluded because of their nontraditional balance sheet structure and institutions involved in a merger in 1996 or 1997 because merger accounting can skew average yield and cost data. The universe included 1,055 institutions in 1997.

[2] The 1994 data set included 1,040 commercial banks and FDIC-supervised savings banks.

Table 1

Rate/Volume Analysis Methodology

Variance Measures	Formula Components
Income Rate Variance	(1997 earning asset yield – 1996 earning asset yield) x 1996 average earning assets
Expense Rate Variance	(1997 cost of funds – 1996 cost of funds) x 1996 average interest-bearing liabilities
Income Volume Variance	(1997 average earning assets – 1996 average earning assets) x 1996 earning asset yield
Expense Volume Variance	(1997 average interest-bearing liabilities – 1996 average interest-bearing liabilities) x 1996 cost of funds
Income Mix Variance	(1997 average earning assets – 1996 average earning assets) x (1997 yield – 1996 yield)
Expense Mix Variance	(1997 average interest-bearing liabilities – 1996 average interest-bearing liabilities) x (1997 cost – 1996 cost)

The "net" position for each of the variance measures is the difference between the income and expense variances. For example, the net rate variance is equal to income rate variance – expense rate variance.
The sum of the three net variance measures (rate, volume, and mix) should equal the total change in net interest income during the period.
Source: FDIC Interest Rate Risk Model

Table 2

1997 Rate/Volume Analysis of Atlanta Region Institutions*						
	Year		Total	Change Due to		
Variable	1997	1996	Change	Rate	Volume	Mix
Interest Income (tax equivalent)	14,091,951	12,822,187	1,269,764	(76,970)	1,351,553	(4,819)
Interest Expense	6,296,444	5,628,857	667,587	30,441	619,003	18,143
Net Interest Income	7,795,507	7,193,330	602,177	(107,411)	732,550	(22,962)
Average Earning Assets	169,604,372	153,414,712	16,189,660			
Average Interest-Bearing Liabilities	138,755,506	125,158,551	13,596,955			

* Insured institutions include all commercial banks and FDIC-supervised savings banks.Institutions involved in mergers in 1996 or 1997 are excluded. Credit card institutions are excluded.
Source: Bank and Thrift Call Reports

(federal funds) rates higher very early in the year, so the increased funding costs affected NII throughout most of the measurement period. In 1997, however, the bulk of the decline in long-term rates occurred later in the year, so the detrimental impact on asset yields was felt for a shorter period. Although NRV was negative in both periods, the differing manner in which the yield curve flattened in each period affected how the negative NRV occurred. For instance, 72 percent of the negative NRV in 1997 was due to lower asset yields (declining long-term rates), whereas nearly all (94 percent) of the negative NRV in 1994 resulted from higher funding costs (rising short-term rates).

If we use capitalization, fee income contribution, and the net interest spread as indicators of IRR tolerance, it appears that overall risk-bearing capacity was higher in 1997 than in 1994. The aggregate leverage capital ratio for the previously defined institution universe was 9.26 percent in 1997, up from 8.72 percent in 1994. In addition, institutions had a more diverse income stream in 1997, which reduced reliance on NII to maintain profit stability. For this analysis, reliance on NII was measured by the ratio of noninterest income to total income, where total income was equal to noninterest income plus net interest income. A higher ratio indicates greater diversification of the income stream and, consequently, a higher capacity to withstand negative fluctuations in NII. Noninterest income accounted for 26.3 percent of aggregate total income in 1997, a modest increase from the 1994 level of 25.4 percent. Finally, a comparison of aggregate net interest spreads showed a slight (2 basis points) contraction from 1994 to 1997— not enough to offset the favorable effects of higher capital and greater income diversification.

The IRR exposure of savings banks was higher, on average, than that of commercial banks in both 1994 and 1997 as measured by the ratio of NRV to the prior year's NII, and their overall risk-bearing capacity was comparatively lower. Savings banks' risk tolerance benefited from higher capital levels in both periods; however, these institutions exhibited significantly lower net interest spreads and had very little income source diversification. In 1997, the savings banks in the data set had an aggregate leverage capital ratio of 13.47 percent, which was well above the commercial bank ratio of 9.17 percent, but noninterest income accounted for only 9.34 percent of savings banks' total income during the year, versus 26.6 percent for commercial banks. Also, savings banks' 1997 net interest spread of 3.02 percent was 77 basis points below that of commercial banks. Given lower net interest spreads and considerably higher mortgage loan concentrations, savings banks may be more vulnerable to an increase in refinancing. As of year-end 1997, residential mortgage loans comprised nearly 84 percent of total loans for savings banks in the data set, compared with 32 percent for commercial banks. Similar results were evident in the 1994 data. The referenced universe of insured institutions did not include traditional thrifts, as average balance and tax-equivalency data were not readily available. It is reasonable to conclude, however, that they would exhibit an IRR posture similar to that of the savings banks in the data set.

Although aggregate IRR exposure as measured by rate/volume analysis was lower in 1997 than in 1994 for the Region's commercial and savings banks, examiners and institution managers should be aware that the ongoing yield curve flattening that began in the second half of 1997 could result in higher IRR in 1998.

Insured Institutions Have Performed Well despite Declines in Textile and Apparel Manufacturing

The secular decline in textile and apparel manufacturing has a disproportionate impact on the Atlanta Region (see ***Regional Economy*** in this issue). While the amount of direct lending by insured institutions to textile manufacturers is not extensive, many local economies in the Region are dependent on this industry sector. Hence, further plant closings or reductions in employment could adversely affect some insured institutions.

Currently, there are 29 rural counties in the Region where textile and apparel employment represents 20 percent or more of total employment. Headquartered in these counties are 53 insured institutions (see Chart 1), which are concentrated mostly in three states: **Georgia** (20), **Alabama** (13), and **North Carolina** (10). Most are commercial banks, but six are traditional thrifts and three are FDIC-supervised savings banks. The performance of these insured institutions has improved since the 1991 recession, as shown in Table 3. Significant improvements have occurred in the weighted-average capital ratio and in noncurrent loans and charge-offs. However, the improvement in noncurrent loans and charge-offs appears to have reached a cyclical low in the past year. In general, the performance of commercial and industrial (C&I) loans has been weaker than the overall loan portfolio. Extensions of credit to textile and apparel manufacturers are reported as C&I loans. Over the past two years, C&I loan growth has been extremely robust, leading to an increase in this type of lending relative to capital and a notable increase in the loan-to-deposit ratio. Because this lending segment performed poorly at these insured institutions during the last economic downturn, attention to the ramifications of a future downturn on loan quality is warranted.

Chart 1

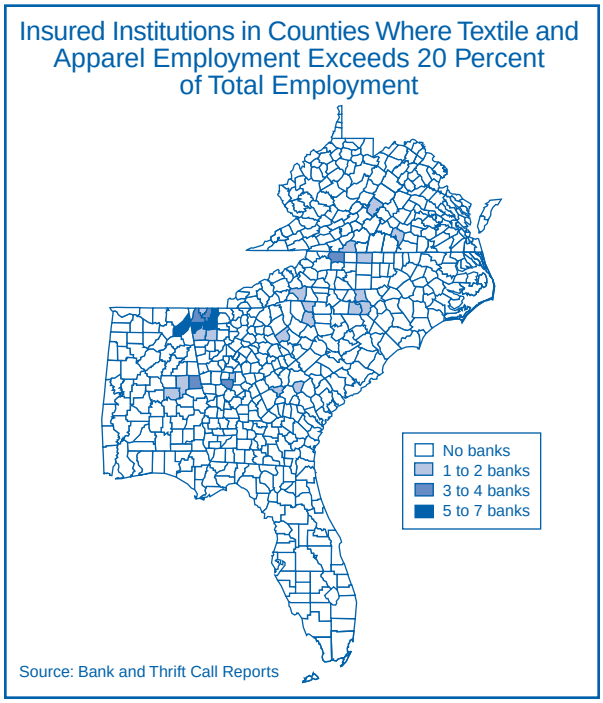

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Table 3

Performance Trends at Institutions Headquartered in Rural Counties with High Textile and Apparel Manufacturing Employment*

Year	Number of Institutions	Average Size ($ Millions)	Capital Ratio	C&I Loans to Capital (x)	Non-current Loans	Noncurrent C&I Loans	Loan Charge-Offs	C&I Loan Charge-Offs	Loans to Deposits	C&I Loan Growth	Return on Assets
1991	49	78.0	9.17	0.98	1.39	2.52	0.43	1.25	67.9	—	0.96
1992	49	82.8	9.52	0.89	1.09	1.76	0.44	1.18	64.7	0.74	1.27
1993	49	86.8	10.01	0.77	0.86	1.92	0.14	0.44	64.4	(4.69)	1.31
1994	50	89.0	9.85	0.80	0.75	1.60	0.14	0.20	67.8	6.90	1.17
1995	50	96.5	10.76	0.72	0.57	0.85	0.14	0.44	69.4	3.61	1.22
1996	53	98.4	10.93	0.76	0.60	0.68	0.23	0.39	74.7	13.22	1.17
1997	53	115.1	10.57	0.95	0.59	0.85	0.19	0.38	77.8	28.57	1.29

* Defined as counties where textile and apparel manufacturing employment is 20 percent or more of total employment.
Source: Bank and Thrift Call Reports; WEFA, Inc.

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